STATE OF OREGON

DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

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GROUND-WATER STUDIES in UMATILLA AND MORROW COUNTIES

by Norman S. Wagner Field Geologist

1949



STATE GOVERNING BOARD

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The Department undertook this investigation requested by the Umatilla County Court after determining that the agencies officially concerned with ground-water supplies in the State - the Ground-Water Division of the U.S. Geological Survey and the State Engineer - could not take on a project of this kind in the near future.

The study as set forth in the text is only a beginning of the work that should be done in a survey of ground-water resources of the two counties, and it is a truism to state that ground-water surveys are greatly needed in this and many other places in the State particularly in eastern Oregon.

The importance of water to our civilization may not be overstressed. It is well known that many things at one time considered luxuries, by increasing use and expanding application, become necessities. Water is an outstanding example, especially in the per capita amount now consumed in cities, in industries, and on farms. Consumption of water is a measure of our so-called progress; abundance of water supplies may be used as a measure of potential growth in all human activities.

In the United States we have been prodigal with our natural resources and some of them are only ghosts of their original abundance. In some arid sections of the country, ground water has been exploited with little or no regard for the principles governing supply. An example that has assumed serious proportions is set forth in a paper titled Water as an Industrial Mineral, by Julian Hinds, General Manager and Chief Engineer, Metropolitan Water District, Los Angeles.* The story of the early depletion of ground-water supplies is related by Mr. Hinds as follows:

* * * * * *

"Many water supply systems have grown more or less piecemeal, starting with a few families and expanding by various expedients with the growing population. In fact, most systems started that way, systematic planning being introduced at some later date to avoid an impending disaster. In this way the great modern water developments of the world have grown.

"A most interesting example is found in the development of water in Southern California. The white man found this an arid region, an excellent place for a few people to live, but subject to severe and prolonged droughts. During wet periods there were lush pastures, springs, and flowing streams, encouraging increased development, expansion of herds, and the introduction of irrigation. Then same the drought. Irrigation ditches ran dry, cattle died, and people moved away. But in spite of these periods of discouragement, there was some permanent development. The climate was good, soil fertile, and all kinds of fruits and crops flourished wherever and whenever there was water.

^{*}Presented at a meeting of the Industrial Minerals Division of the American Institute of Mining and Metallurgical Engineers at Los Angeles in 1947.

"Ground water as a source of irrigation supply was not at first taken seriously, but wells were of course resorted to for domestic supplies, and at times of drought for watering livestock and perhaps for home gardens. The early dug wells merely tapped shallow surface sources, but finally, with the introduction of the drilled well, someone pierced the clay cap and struck a gusher - a bountiful artesian flow. The boom was on! Here were vast expanses of wonderfully fertile lands, with a bountiful water supply just a few hundred dollars beneath the surface. Development went forward at a stupendous rate. Nobody asked where the water came from, how much there was, or how long it would last. There was no organization to ask such questions and the individual farmer was too busy to ask anything. The supply was looked upon as inexhaustible, and wells multiplied.

"Soon outflow began to exceed replenishment. Pressures dropped and wells ceased to flow. But the farmers, now grown wealthy, were loath to walk off and leave their homesteads. Furthermore, they could now afford to pay for water - they could afford to pump it. And so pumps went down as fast as artesian flows stopped. And more pumping wells were drilled, still with the feeling that there were great underground oceans of fresh water, to all intents and purposes inexhaustible. And thus began one of the most stupendous mining operations of all time.

'as geologists later explained, there actually was a vast though not inexhaustible - underground storehouse of water. Practically the entire coastal basin is deeply underlain with porous detrital fills, covered with a blanket of top soil and clay of varying thickness. Each year a small portion of the sparse rainfall and meager mountain runoff around the upper perimeter of the basin sinks into the ground. During prehistoric ages these small percolations completely filled the underlying strata and welled up against the clay cap covering the lower portions, creating an artesian pressure. It was thus revealed that the early settler's herds had died of thirst on the roof of an enormous lake of good water.

"But it was only a lake and not an inexhaustible sea of fresh water, as many wishfully believed. With increased pumping, water levels sank and many wells went dry or lowered levels permitted sea water to flow landward, contaminating the source of supply. Ultimate exhaustion became obvious, but abandonment was by now out of the question. Experts were employed and the problem was studied from all its angles. Steps were taken looking toward complete conservation of all flood waters formerly wasting into the ocean. Spreading works were constructed to encourage percolation into the underground basin, and surface storage was created where possible.

"But these measures were inadequate. An annual rainfall of 15 inches cannot support a semitropical civilization, no matter how thoroughly it is conserved. Importation of water was obviously essential. There is no long river bringing water in naturally from distant sources, and nearby surrounding territory is true desert, producing no worth-while runoff.

"Early in the present century it became evident that an artificial waterway to some distant point must be constructed."

* * * * * * *

The paper goes on to describe the steps taken by the authorities to bring in outside water, but the quotation serves to illustrate what will happen to vital ground-water supplies if they are used in ignorance of the essential facts relating to source, possible extent, and economical production rate. Geological and engineering surveys are essential if knowledge is to be gained of how ground-water supplies may be used beneficially and not "mined." Mr. Hinds goes on to state:

* * * * * * *

"The production of water by mining operations is of course not limited to Southern California. Well waters are used throughout the world for individual supplies, municipal supplies, and irrigation. In many cases production is deliberately undertaken on a pure mining basis - with no hope or expectation of replenishment. Many examples of this have occurred during the past few years. Desert lands underlain by nonreplenishing water bodies have been hurriedly put into cotton or other temporarily high-priced crops, with the hope of a quick return, and with the expectations of abandonment after a few years. Such operations are likely to be detrimental to adjacent lands depending on a perennial underground water crop."

* * * * * * *

Most people are conservation minded and will practice conservation if they realize the need and have the "know how." Conservation of ground-water resources can be practiced intelligently only after information is gained from geological and engineering surveys.

> F. W. Libbey Director

December 15, 1948

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GROUND-WATER STUDIES IN UMATILLA AND MORROW COUNTIES

Introduction

This report is the result of a request by the Umatilla County Court that the Department make a preliminary geologic survey in Umatilla County to determine the possibilities of developing ground water in areas of marginal but potentially valuable, agricultural land. The first studies showed a lack of available technologic data in the areas in question, thus necessitating examination of adjacent areas. The field work at the outset included both making geological observations and collecting log and yield records of water wells. The last phase of the work required conferences with many people including drillers, public officials, and scores of land owners. A widespread and active interest in the subject of ground-water development was found to exist. Reports of occurrences of wells, requests for information, and suggestions in connection with individual water problems obtained from these contacts led to an expansion of the field work. There was a great diversity of information thus obtained. On the one hand the increased importance of ground-water resources and ground-water development to the area was indicated; on the other hand, a lack of understanding of the prevailing conditions from a geological standpoint and a lack of orderly practice of groundwater development were indicated. As the picture took shape, it became clear that the original plan was of far greater scope than could be satisfactorily handled with the time and personnel available. In the absence of geologic mapping, only generalized conclusions could be drawn, usually by way of reports of examination of isolated local areas. Accordingly, all idea of first-hand geologic mapping was given up. Instead, efforts were concentrated solely on what appeared to be the greater problem; that is, the assembling of data from which an overall appraisal could be drawn of ground-water resources and problems in the subject counties. This report presents the assembled data together with such comments and interpretations as seem pertinent. The area covered was expanded to include Morrow County because both Morrow and Umatilla counties lie within the bounds of the same geologic province. In its final form, therefore, this report is offered not as a presentation of geological conclusions, but rather, as an appraisal of the ground-water problems encountered.

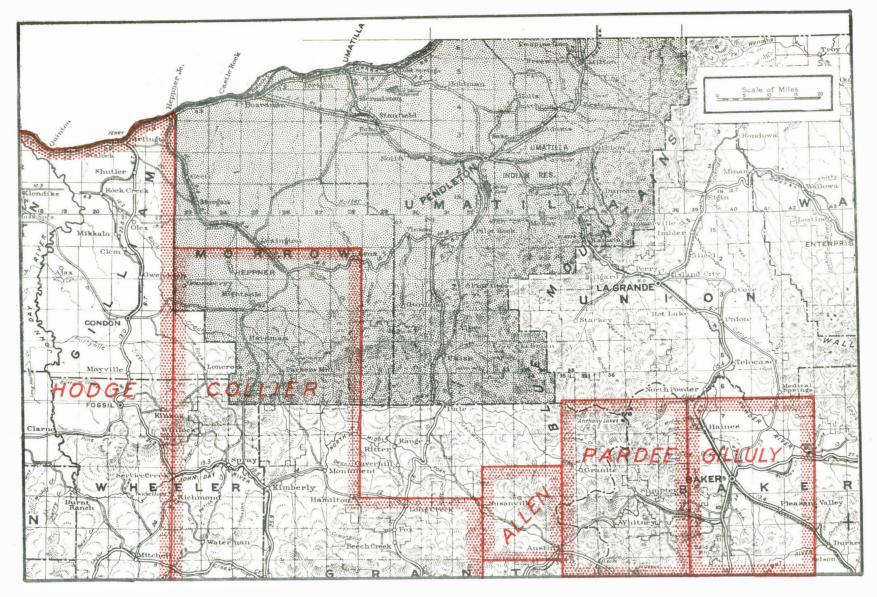


Fig. 1 Index map showing published geologic maps of the Morrow-Umatilla county area of north central Oregon. (See bibliography at end of bulletin.)

Geology of the Area

Introduction

A sequence of volcanic lava flows with sedimentary interbeds covers most of Umatilla and Morrow counties. Although the older sedimentary and intrusive formations which are found in the Blue Mountains occur along the southern boundary of Morrow County and the southern and eastern boundaries of Umatilla County, it is the lava plateau that characterizes the area generally.

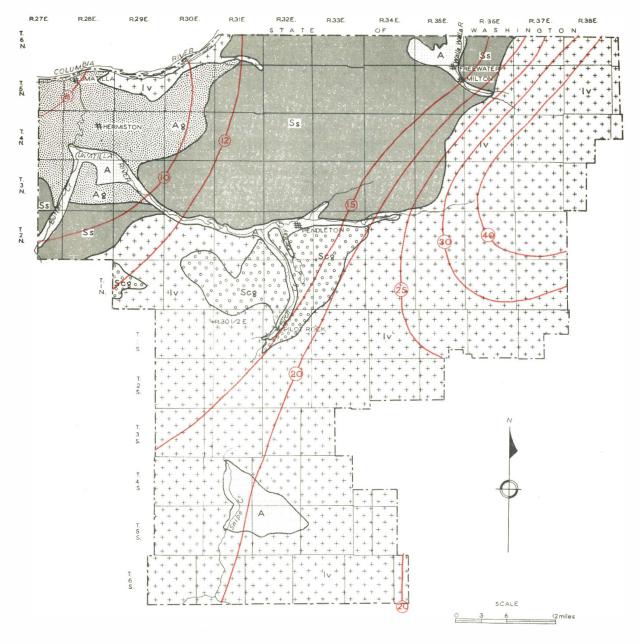
Available reports and maps

Of significance in terms of ground-water geology, bearing on prediction and orderly development, are such details as knowledge of identity and underground extent of porous interbeds; the ability to recognize individual beds, whether aquifers or solid lava flows, for correlation purposes in geologic mapping; and an understanding of the attitude of these beds from the standpoint of geologic structure. Only incomplete knowledge of these factors is at present available.

No single, comprehensive geological report has ever been published covering the whole of the area under discussion here. The geological reports that have been published for this part of north central Oregon are shown on figure 1 on the opposite page. References to these publications may be found in the bibliography. As may be seen from figure 1, mapping done by Collier (1914) includes a portion of Morrow County. Unfortunately, this report has but little direct bearing on the problem at hand in that it is of reconnaissance nature and deals primarily with some of the mineral resources of the Blue Mountains.

Allen (1948), Gilluly (1937), Pardee (1914, 1941), and Thayer (1940) deal with geologic problems entirely foreign to those prevailing in the lava plateau area of Umatilla and Morrow counties. Hodge (1942) describes an area which borders Morrow County on the west and deals with the geology of the lava series as it occurs in that area.

The U.S. Geological Survey Water-Supply Paper series entitled "Water Levels and Artesian Pressure in Observation Wells in the United States" record periodic measurements of water levels, artesian pressure, and other statistical data. Such records are of the utmost importance in the final interpretation of ground-water geology problems, and are fundamental to a sound water-development program from an engineering standpoint. The value of this type of data, however, is usually limited in range, by geologic factors, to a small area surrounding the region in which the observation wells are located. The observation wells referred to in the above papers pertinent to this report are all situated within a small area around Milton-Freewater, which is geologically part of the Walla Walla Basin. Thus, while the data obtained from these wells are of importance to that special area, they are of little importance in terms of the ground-water problems to be faced elsewhere in the wide expanses of Umatilla and Morrow counties.



LEGEND



ALLUVIUM. RECENT GRAVELS, SANDS AND SILTS

PLEISTOCENE TERRACE SANDS AND GRAVELS GENERALLY UNCONSOLIDATED



POORLY CONSOLIDATED SEDIMENTS UNDIFFERENTIATED LOESSIAL AND GLACIAL 50° THICK



MODERATELY WELL CEMENTED GRAVELS OVERLYING LAVA

UNDIFFERENTIATED COLUMBIA RIVER LAVAS AND CONSOLIDATED TUFFS, INCLUDES SMALL EXPOSURES OF GRANITIC AND SEDIMENTARY ROCKS.



AVERAGE ANNUAL PRECIPITATION IN INCHES.

GEOLOGIC MAP and PRECIPITATION BELTS

UMATILLA COUNTY, OREGON

INFORMATION SECURED FROM LAND-WATER INVENTORY OF UMATILLA COUNTY BY THE U.S. SOIL CONSERVATION SERVICE.

Unpublished reports are known to exist. Some of these have to do with specific problems of a very localized nature such as the geologic factors bearing on dam sites investigated by the U.S. Bureau of Reclamation. Other reports of a more generalized nature have
been made by the U.S. Corps of Engineers in connection with studies of the McNary dam site.

However, these reports are not available for general distribution.

Figure 2, on the opposite page, is a hitherto unpublished geologic map of Umatilla County prepared by geologists of the U.S. Soil Conservation Service. As this map was made primarily for the use of that bureau's staff in studies of their own special problems, it features only geologic data bearing directly on those problems. In other words, in so far as a relation exists between soils which are in place and the underlying rock formation from which they have been derived, this map portrays the surface distribution of distinctive bedrock formations.

A report containing information on water resources, both surface and subsurface, was prepared by A. M. Piper of the U.S. Geological Survey in connection with a suit on water rights between the states of Washington and Oregon. This report was published only in the form of a court record. It is entitled: Transcript of Record, Supreme Court of the United States, October Term, 1935; The State of Washington, Complainant, vs The State of Oregon; Stipulations and Exhibits; Filed October 14, 1935. The bulk of the area covered by this report is situated in the State of Washington. The part of Oregon to which attention is given consists of a narrow strip paralleling the state line in the vicinity of Milton-Freewater, Milton being the southernmost point.

Allen (1939, unpublished report) describes the geology and ground-water conditions of the Pendleton area, and is referred to later in this paper.

Currently in preparation by the U.S. Geological Survey, Ground-Water Division, is a ground-water survey of the Walla Walla Basin. Although most of the area being mapped lies in the State of Washington, the natural bounds of the Walla Walla Basin extend into Oregon. As in the case of the Piper report, the area covered in Oregon parallels the state line in the vicinity of Milton. This project has been in progress several years. It represents the type of investigation needed in the area under discussion in order to appraise properly the prevailing ground-water resources.

From the foregoing, it is apparent that a major project of field investigation will be necessary before any comprehensive geologic description can be made. It is thought, however, that the following is warranted from the information that is available.

Geological formations

The lava flows in the two counties are but a small part of the lava area in Washington, Oregon, and Idaho. The flows began to pour out in early to middle. Tertiary time and continued throughout the later Tertiary.

Columbia River lava was the name given to these flows by the earlier geologists. Some workers since have used this term loosely, applying the name to any and all lava flows of the region; consequently, a certain amount of confusion has arisen from this designation. Increased knowledge of the regional geology has shown that there are individual flows or assemblages of flows that are distinct; this is especially true of lavas of the late Tertiary (Pliocene time).

Hodge (1942), in reporting his investigation of the area of north central Oregon bordering on Morrow County to the west, employed the name "Coriba" (derived from the words Columbia River basalt) for the principle basalt group there. The name as so employed refers to the extensive and massive portion of the basalt flood which poured out in Miocene time. Coriba constitutes the largest single formation shown in the entire area mapped by Hodge; it is widespread in the northern half of his area, and this portion of his map lies west of Morrow County as shown on fig. 1 opposite p. 3.

Coriba is known to extend eastward into Morrow and Umatilla counties. It outcrops over large areas and is believed to form the bedrock underlying the whole of the northern portions of these counties. It is not a single lava flow but is a succession of several individual flows of generally dense basalt. Sedimentary interbeds are few and are believed to be of restricted lenticular extent. The sedimentary interbeds, together with porous or fractured horizons in the lavas, are the principal potential aquifers in the formation.

Concurrent with the decrease in magnitude of the basalt outpourings during later Tertiary time there was an increase of sedimentary deposits. Sands, gravels, and clays, together with volcanic ash and other clastic volcanic material, and occasional diatomic and lignitic beds combine to make up these formations. As with the lavas, an overall similarity exists between these sedimentary assemblages. Characteristic and distinctive differences, however, do exist between the sediments accumulated at different places. Thus such names as Shutler, The Dalles, Ellensburg, Payette, Mascall, and Rattlesnake have been given to individual beds or to assemblages of beds. Some of these formations afe undoubtedly equivalent in geologic age but geologically distinctive because of the limit and locale of the geologic mapping, distribution, or because of their lithologic make-up.

Hodge (1942) maps the formations overlying the Coriba in the following chronological order: the Mascall, Rattlesnake, Shutler, Ochoco, Cascan, and the Intracanyon lavas. Noted also with the Pleistocene to Recent alluvial material are areas of ice-rafted debris. Of these formations, what Hodge maps as the Shutler is the most widespread of the overlying

formations in that portion of the area bordering on Morrow County. As this formation is known to extend eastward into Morrow and Umatilla counties, Hodge's description of the formation is summarized here. It is characterized by a basal conglomerate consisting of lime caliche-coated water-raunded pebbles. Overlying this basal conglomerate are bedded sands, silts, and diatomaceous-ash members. The conglomerate is of variable thickness, increasing from essentially nothing on the west side of the area to thicknesses of between 10 and 50 feet in the vicinity of Willow Creek. The overlying series of sands and silts show a maximum thickness of 100 feet.

Beyond the fact that the Shutler formation extends eastward into Morrow and Umatilla counties, little else is known about it. The map of Umatilla County by the U.S. Soil Conservation Service represents the first known attempt to indicate the identity and distribution of this or of any other formations in the area. No such map is known to have been made for Morrow County. That the Shutler occupies large areas in Morrow County is certain, but to obtain information on the nature of the Shutler section would require detailed study. The description by Hodge (1942) shows that the basal conglomerate increases in thickness as the formation progresses to the eastward. Some well logs (the Ordnance Housing Depot well, index and map no. 90-U, for an example) show a surprising thickness of clays and gravels. This indicates either that the entire formation undergoes substantial changes in thickness, or that other similar sedimentary formations may be present.

The ice-rafted debris described by Hodge (1942) was noted by the writer at several places in Morrow County. The characteristic granite boulders are especially conspicuous at several places in the irrigation district southwest of Boardman. Of interest in this connection is the log of the Wilkinson well, index and map no. 158-M. The driller reported encountering a $6\frac{1}{2}$ -foot "granite" boulder underlying weathered basalt at a depth of $37\frac{1}{2}$ feet, and another 5-foot "granite" boulder at a depth of 68 feet. He described the cuttings from these boulders as white. He further reports that the boulders were exceptionally hard and that it was necessary to re-sharpen the bit after every 6 inches of drilling. It is to be regretted that cuttings of these boulders were not available for laboratory examination, for if these boulders are granite, comparable to the erratics typical of the ice-rafted debris, the fact would be of great interest.

Geological structures

On the subject of geologic structure it is again necessary to draw from knowledge of regional scope. From the mapping done of Tertiary to Recent formations in Oregon and elsewhere in the Northwest, it is known that faulting is common and is often expressed as regional or block tilting. Folding is perhaps less conspicuously developed, but is nonetheless important. The general pattern of these structural features, found elsewhere in the region, prevails also in Morrow and Umatilla counties.

The information now available allows the following comments on structural conditions prevailing in the lava-field portions of Morrow and Umatilla counties. There is a regional dip to the north and away from the Blue Mountains. Locally, this dip varies in both direction and magnitude. The formations are cut by a series of faults, some of which parallel the trend of the Blue Mountain foothills. Folding is present. From their work in the vicinity of the MoNary dam site, geologists of the Corps of Engineers* have recognized a broad northeast-southwest-trending trough as the major feature relating to artesian water found in the area. The center of this basin cuts diagonally across the Columbia River in the vicinity of Irrigon. A narrow, shallow, secondary downwarping occurs near the eastern margin of the major basin. Allen (1939) maps another downwarp or syncline between Pendleton and the Blue Mountains to the east. He named this the Agency syncline as the Umatilla Indian Agency is located approximately on the axis. This fold trends north-northeast from a point about midway between Pilot Rock and the MoKay reservoir, through the Indian Agency, and across the Umatilla River nearly to Wildhorse Creek.

Ground-water geology

It is apparent from well-production records (see well logs) that some apparently large, strong aquifers (ground-water horizons) exist in the area under discussion. Also, it is apparent that many seemingly less-important aquifers occur, as would be expected when aquifer existence is dependent upon sedimentary interbeds of restricted extent and upon fractured and permeable horizons in otherwise massive lavas. However, what may seem to be a large-capacity aquifer at first, because a high permeability allows delivery of a large yield, may in reality be of small capacity or may possess a low replenishment rate, so that it can not support additional large-capacity wells. Conversely, what may seem now to be a less important aquifer, due to a relatively low rate of yield, may have sufficient capacity and replenishment to support many moderate-yield wells for years. Until production records can be correlated with such other data as aquifer capacity and permeability, water replenishment and loss (both natural and artificial), water-table and artesian static water levels, chemical analyses and temperatures, etc., no definite appraisal of the aquifers can be made in the absence of both detailed geologic mapping and comprehensive, systematically taken hydrologic information.

The effect on groundwater of the earthquake of July 15, 1936, is of general interest. Damage was most serious around Freewater and Umapine. Springs and deep wells were affected. One deep well which had quit flowing several years before the earthquake was reported by Brown (1937) to have regained a strong flow. The Pendleton airport well (index no. 58-U) quit flowing after the earthquake although previously it had been a small, but consistent producer. This well was originally in excess of 700 feet deep and it was necessary to deepen *Unpublished report, Corps of Engineers, Portland District, Department of the Army, 1948.

it by 250 feet before water was again obtained. However, the water then obtained was reportedly contaminated and the well was abandoned. Reports of springs drying up or being rejuvenated are common in the vicinity of Milton-Freewater and east of Athena. The flow of one spring was reported* as affected at Ukiah in sec. 14, T. 5 S., R. 31 E., a distance of 45 miles from the place of greatest intensity. Here a terrace containing many seepages, some of which had flowed consistently for many years, experienced the usual pattern of change, that is, the flow of some seepages decreased while that of others increased.

Discussion of Well Records

The study of 209 wells forms the basis of this report. A summarized statement of the information obtained for each of these wells is included in the appendix. These well summaries are segregated into groups by county with an individual index number by the well name for each county. Preceding the county groups there is a master index in which all wells are listed by well name regardless of county, and also by the index numbers employed to designate the wells on the map. Following the county groups of well summaries, there are various statistical tabulations.

The information comprising these well summaries was secured from many sources. Oftentimes the data for one well came from three or four different informants - present owners, former owners, drillers, State and Federal agencies, with perhaps the formation log being derived from one, recent production records from another, original test data from another. Principal informants are named on the summary sheets.

Included in this well coverage is the bulk of the municipal and industrial wells in the area. The total for these classes is 58 including 8 wells in Union County. Of these 58 listings 28 are municipal and 30 are industrial wells. Lists of these are included in the appendix. Except for a few wells, whose status is not designated, the remaining wells are domestic or irrigation wells. Domestic wells as classified here are for the most part wells serving ranch dwellings; included also in this category are wells drilled primarily for stock-watering purposes. Fourteen are classed as irrigation wells. It is possible that a few irrigation wells are included in the group classified as domestic.

Evaluation of the well summaries may best be made by first setting forth some statistics. A formation log or production statement was obtained for 174 of the 209 wells. Drillers' logs, or statements pertaining to the formations encountered, were secured for only 128 of the 209. Production records, including in some instances comprehensive test data, were secured for 46 wells for which no formation logs could be obtained. Several important, recently drilled wells are in the group for which the formation logs are lacking. For 35 wells no pertinent information may be offered other than their location and sometimes their depth.

*Personal communication, R. A. Fletcher.

Although additional data are known to exist for some of the wells listed here and for many not listed, the present assemblage probably represents the bulk of the information available for wells in the area.

A large number of existing domestic wells is not included in this coverage because logs or production records could not be obtained. Many of the domestic wells are quite old and in some instances ownership has changed several times since the well was drilled. Almost never does the present owner have a copy of a driller's log. Occasionally present owners do not even know with certainty the depth of the well or identity of the driller. Some of the earlier drillers are deceased, and but few of them ever made or kept logs on the wells they drilled - a practice regrettably followed by some drillers even today. Some drillers maintain a file of their drilling records, but for reasons of their own, refrain from giving the logs to the well owners, and likewise refused to make them available for this investigation. The fact that logs were secured for as many wells as there were is to be credited to the cooperation of other drillers who keep systematic progress records for the wells they drill.

Drillers and geologists each value well logs for different reasons. To the driller (and also the well owner) a well log is primarily of value in connection with casing and pump installation, and future cleaning, reaming, and servicing problems. For these problems, knowledge concerning the number and location of hole reductions, of water horizons, of zones of loosely indurated formation or blocky fractured rock, is important. Furthermore, knowledge of the drilling properties of formations penetrated in a given vicinity may assist a driller in estimating his costs for drilling a new well. A detailed geological classification of the formations penetrated has, generally speaking, little of immediate practical value to him. To the geologist, however, recognition of the formations penetrated by a well is of prime importance in the working out of ground-water problems of regional scope. The formation logs assembled here all rate as drillers' logs. That is, they were made by the driller with the formation classifications based on the driller's experience and judgment. Many of the logs are quite descriptive and comprehensive. Some are vague and generalized. The former record invaluable material of a sort especially helpful to the driller. From a geological standpoint however, these logs have little significance.

Accurate logging of a well is never a simple matter if it is to be of value for subsurface geological correlation. A reasonably good and reliable log featuring formation classification can be made without laboratory study only when the formations are truly distinctive and a substantial backlog of control data from previous studies exists. Even if the geology of the area under discussion has been studied intensively in the past and the results of the investigations are available, the lack of distinctiveness between

individual flows of the Coriba, for example, and between the less abundant interbeds, sometimes renders logs made without laboratory study of the cuttings of little value for geological correlation.

The production data phase of the well summary records includes the results of a few first-class engineering tests such as were made for some of the more important municipal and industrial wells. Otherwise the records usually reflect bail tests or incomplete pump tests. This is understandable when it is considered that many owners, especially those who have wells drilled for domestic or stock-watering use, demand but a small yield. As long as the well produces sufficiently to meet this demand, they are satisfied. The driller has only to demonstrate to the owner's satisfaction that the well delivers the desired production. Thus it is that many wells have never been tested to ascertain their potential yield. It is regrettable that incomplete and slipshed tests are sometimes given to expensive and important municipal and industrial wells, and that filing systems of well records are often maintained with carelessness and indifference. Sometimes no attempt is made to follow a well's progress by maintaining a file of daily operational statistics. For ranch wells this is not surprising or necessarily of great importance, but in the case of municipal and industrial wells where a steady large-volume output is critical, such records are important to future production.

The six dry and six abandoned wells listed here probably represent a disproportionately low percentage of such wells. Owners, when questioned about their wells, naturally think primarily in terms of active producers, and drillers are sometimes reticent about discussing dry holes they may have drilled. The six wells listed as dry holes were definitely dry. Some of those listed as abandoned may have been abandoned because they were dry or because an insufficient amount of water was developed for the owner's requirements. Actually several of them were known producers. At one a pump was lost in the hole under conditions which did not warrant attempting to retrieve it. Reportedly, the Union Pacific Munley no. 1 well was abandoned after years of service because the company's Munley no. 2 well yielded a sufficient amount of water for all the company's requirements. The Elgin City no. I well might be properly classed as abandoned. It was a substantial producer in its day, but it is now capped because it is drained to the point of drying by the normal pumping eperations of the nearby no. 2 well. When no. 2 well is not pumped, both reportedly recover and the no. 1 well when not capped will resume flowing as usual. A crooked or otherwise unsatisfactory hole, and not the lack of water, is reported as the direct cause of abandonment of another well.

The subject of dry holes is further complicated by the fact that some of the technically satisfactory, producing wells might, for all practical purposes, be rated as dry holes.

Reference has already been made to the fact that some potentially large producers may exist in the ranks of the untested domestic wells. The reverse is also true. It is known that some of the "satisfactory" producers are incapable of yielding more than the necessary gallon or two a minute needed to rate them as satisfactory producers for stock-watering purposes. Had such wells been drilled for municipal, industrial, or irrigation purposes they would rate as "dry holes" in the eyes of the owners and drillers. It is worthy of note that many wells drilled expressly for domestic or stock-watering purposes have been sunk to depths of several hundreds of feet, representing a major drilling operation comparable, except for the smaller diameter of the holes, to those conducted on some of the municipal and industrial wells.

Of the 209 wells covered during this investigation, there are 53 which flow, or which did flow at one time. A list of these wells giving their depths and a brief descriptive statement of their flow characteristics has been prepared and is included in the appendix. Eight of these wells are situated in Union County. They are included in the list for the sake of completeness, but the ensuing comments are based/on the 45 wells which occur in Umatilla and Morrow counties.

The well belonging to the city of Pilot Rock yields the largest natural flow. This well was sunk to the comparatively shallow depth of 309 feet. When completed in February 1946 the flow was measured at 1420 gallons per minute. The next-largest flowing well is the Rugg no. 1 well. This well is only 161 feet deep. Flow is reported at 465 gallons per minute. The remaining wells all yield much smaller flows including several that have a very low gallon-per-minute rate. Some of the wells placed in the latter category are claimed to have had larger flows originally. The Rice well (sec. 29, T. 1 N., R. 26 E.) is reported to have had an initial flow of around 600 gallons per minute before the well was lost in an attempt to ream the hole. Flow of unmeasured but reportedly similar proportions is claimed to have been re-established by a new well drilled 5 feet from the original. The latter well was drilled about 1915 and it is understood that this well still flows but at an estimated rate of 40 gallons per minute. The city of Heppner's no. 1 well for many years had a low static water level and a progressively decreasing yield on pumping so that recently it was necessary to drill a second well. No records of measured flow exists on the no. 1 well, but from pictures taken shortly after the completion of drilling, and from various reports, it is apparent that the original flow of this well would rank it between the Rugg and Pilot Rock wells.

Plate 1 on which well locations are spotted shows that a large number of these flowing wells are concentrated in a small area southwest of Boardman. The area is an irrigation district with a family on practically every 40-acre plot in the central portion of the district. Here there are 23 flowing wells of the 32 that were recorded. This does not

include the Boardman city well which lies just outside of the district. Many of these flowing wells are 20 or more years old. All of these wells produce from shallow holes of around 80 to 95 feet in depth. All give low but reportedly dependable year-round yields sufficient for domestic and stock-watering purposes.

Information that was gathered concerning these wells required many days of intensive work. Many owners could give no more than generalized information on a well's production characteristics such as: the natural flow was ample to service a domestic water system without mechanical assistance, or that assistance was needed. Some ewners did not even know the name of the original owner of the tract at the time the well was drilled because some of these tracts have changed hands so many times. The few remaining original settlers in this district often supplied information for their neighbor's well and also the identity of the driller. As the development of these flowing wells was a subject of keen local interest in the pioneer days, many of the early settlers were able to give a substantial amount of information which proved helpful in locating original owners, drillers, and others who knew something about the wells. These older people were also able to provide facts on the flow and depth of neighbors' wells. It is from questioning and cross-questioning these informants and from interviewing or corresponding with some of the drillers that the information for the wells in this district was assembled in its present form.

Some formation logs were obtained direct from the drillers. These can be accepted as reliable. By checking against these drillers' logs it can be seen that the comments on formations encountered in other wells, as supplied by various residents, appear to be reliable within reasonable limits. The over-all yield characteristics obtained from all sources are to be taken as generally reliable if the wells have records of fairly consistent flow.

A casing record has no direct bearing on the interpretation of the geological aspects of a ground-water problem. But casing records are important to both drillers and owners. Some of the otherwise complete logs from which some of the well summaries offered here were taken, contained either no casing statements or incomplete ones. Suggestions as to what should be included in an ideal log will be made later in this report.

Another set of tabulations that was drawn from the well summaries has to do with the range of depths of wells drilled. For the convenience of those who may be interested, a table is included in the appendix listing by depth all wells with depths in excess of 300 feet. The 209 wells fall into depth groups as follows:

The deepest well recorded is the Milton Nursery well which is 2000 feet in depth.

Far too much diversification exists in the nature of the production data gathered to permit the compilation of wells on a production basis. The reader is referred directly to the well summaries for such records. About all that can be said here in describing the production range is that very few wells are pumped in practice at a rate in excess of 1000 gallons per minute, and that the test data assembled indicates that very few wells have capacities of such proportions. Pumping rates for all classes of wells other than domestic appear to range most commonly from about 200 to about 600 gallons per minute.

The subject of well locations merits some comment. Generally, information regarding well location was secured from well owners, usually through personal communication, but sometimes by correspondence. Many locations were obtained from survey records; others represent merely the owner's guess. In the absence of survey records, locations were often taken from tax receipts, or established by the owner spotting the well on a county map. The locations thus secured are sufficiently accurate for the purpose of plotting well distribution on a base map of small scale such as that which accompanies this report. Otherwise accuracy cannot be guaranteed in any legal sense of the word, particularly for wells in the domestic classification and some municipal wells. The location of most industrial and city wells, however, is based on survey records.

Discussion of Spring Data Obtained

Judging from the dry appearance of much of the country during the summer months, a surprisingly large number of springs is to be found in both Morrow and Umatilla counties. Some of these springs have a large flow, although most have a low yield. While many are dry during the peak of summer, many others are known for their reliable year-round yield. Both thermal and cold water springs occur.

Because so great a need for geologic mapping and basic study of other fundamental phases of ground-water geology was seen to exist during the early stages of this investigation, it was soon apparent that the gathering of information on springs would prove of little immediate significance. This conclusion was strengthened by the fact that at best only hearsay was to be secured on the yield characteristics of the springs visited. All attempts to make first-hand examinations of springs, or to gather data thereon, was abandoned in favor of seeking records of ground-water development.

Spring development for stock-water purposes is sponsored by the U.S. Production and Marketing Administration, and reference is made to figure 4 (opposite p. 19) which shows the location of springs developed under its direction in Umatilla County. Similar data are available for Morrow County in the files of this agency in Heppner, but no map has as yet been prepared. Information is not available concerning the yield characteristics of any of these springs. The Umatilla County map is included for the purpose of recording the

location of the springs developed by the U.S. Production and Marketing Administration and the U.S. Forest Service. As natural springs and artificial ones developed by private individuals are not shown, the map probably covers only a small portion of the springs that exist in the county.

Analysis of Data Gathered

The purpose of this section is to present an analysis of the geological and ground-water information which was gathered in the investigation. Deficiencies will be pointed out, and constructive suggestions will be made. It is hoped that the recommendations made here will form a basis for future ground-water studies of the area.

Geologic records

Good base maps are fundamental to geologic mapping, and topographic maps are highly desirable if not essential to the construction of a satisfactory geologic map. Topographic maps greatly reduce the problems and costs of geologic mapping. A topographic base map is required in mapping of structure which calls for a high degree of precision.

Although topographic coverage exists for approximately half of Umatilla County and a somewhat lesser amount of Morrow County (fig. 3, opposite p. 17), it is in the unmapped area that contour coverage would be of the most assistance. This unmapped area includes most of the foothill country where precipitation is the heaviest (fig. 2, opposite p. 5) and where the major zones of intake for confined waters probably occur. While the Coriba is known to dip away (in general northerly) from the Blue Mountains, complex structures, especially faults paralleling the mountains, probably exist in this area. Accurate mapping of such faults may be of critical importance in determining the continuity of such aquifers as occur in the Coriba flows of the northern plateau area.

If any project of geologic mapping should be undertaken for the area where topographic control is lacking, attempts should be made to secure large scale composites of aerial photographs. Even though these photographs lack topographic control, such photographic base maps have distinctive attributes and show topographic details which sometimes render them superior to topographic maps in geologic mapping.

The most important wells in the area produce water originating from aquifers within the Coriba. It is from this source that the development of large-yield producers is to be anticipated in the future. It might be added that most of the large, producing wells situated out of the area also produce from Coriba sources, especially in Washington where many large-yield, irrigation wells have been developed within a few miles of the Oregon boundary. This illustrates the importance of knowledge of the Coriba, its possible aquifers, and its geologic structure.

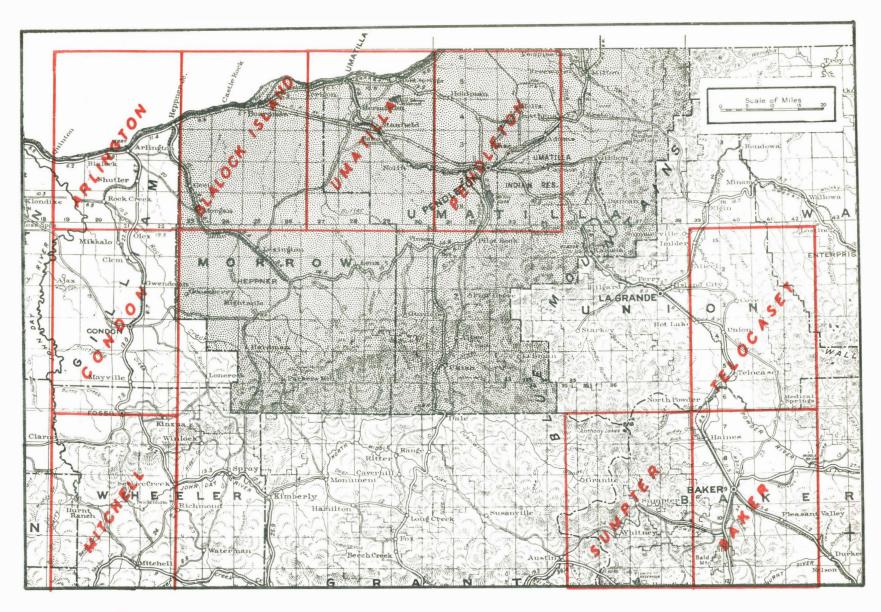


Fig. 3 Index map showing U. S. Geological Survey topographic maps of the Morrow-Umatilla county area of morth central Oregon.

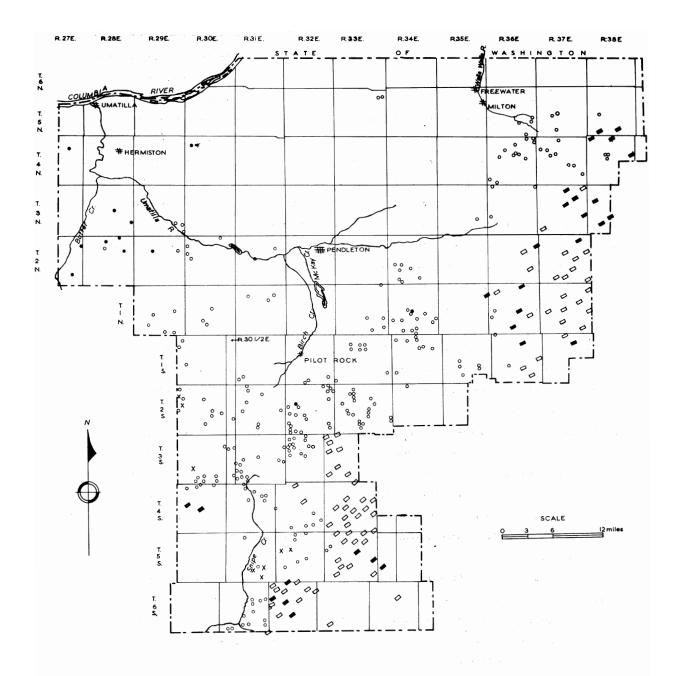
From studies of the Coriba elsewhere, and from what little is known regarding it from reconnaissance study and drill records from within the area, sedimentary interbeds (and hence sedimentary aquifers) appear to be lacking except for small lenses of local extent. Because of this, porous zones between flows and fractured flows probably constitute the chief channels of migration and mediums of storage for water. Many different aquifers, involving both the restricted, sedimentary type and the fractured and porous lava types, are probably represented by the wells in the area. Evidence of this is shown by the difference often noted among the logs of closely spaced wells. That the porous lava types are undoubtedly of restricted extent also, will be shown later. While they may support notably substantial wells, some of these aquifers may be of relatively limited capacity. Recognition of the identity, capacity, and other hydrologic characteristics of these individual aquifers, and of the sources of their water, is the major objective in any project of geologic ground-water mapping in the area.

Of practical value to the gathering of well-log data for mapping purposes would be the setting up of a service through which drillers could obtain semi-technically prepared formation logs by submitting cutting samples from their wells to an established agency. The samples could be taken at arbitrarily fixed intervals, or whenever the formation changed. Service like this has been conducted by other states in order to promote the development of their ground-water resources. Self-addressed sample bags would be furnished the drillers and samples would be submitted to the agency by the driller together with appropriate notations as to the depths from which the samples were obtained. These samples are then studied with the aid of a microscope by a qualified technician and a formation log is furnished the driller upon completion of the hole. Such a system could be expected to standardize formational descriptions even if it only reduced them to a comparative basis locally.

Although a lack of visible distinction between flows of the Coriba limits the degree of refinement and precision attainable in the geologic mapping of Morrow and Umatilla counties, many important structural and correlative data can, nevertheless, be gathered. Such work must be done before any practical understanding of the ground-water resources in the area can be realized.

Hydrologic records

Hydrologic records gathered in connection with the well logs are very incomplete. For instance, water-level figures were given on only 138 of the 209 wells for which logs were obtained. In none of these 138 wells is a water-level reference point given. Presumably, the top of the casing is the reference point, but such is not specified. In relatively few cases is the water level specified as "static" and there is reason to suspect that some of the unspecified water levels are, in reality, operational levels and not true



LEGEND

STOCK WATER DEVELOPMENT

- X STOCK WATER RESERVOIR CONSTRUCTED UNDER U.S. P. MA. PROGRAM-
- STOCK WATER WELL DEVELOPED UNDER U.S. P. & M. A. PROGRAM.
- DEVELOPED SPRING, PRIVATE LAND, DEVELOPED UNDER U.S. P.& M.A. PROGRAM.
- DEVELOPED SPRING, BY U.S. FOREST SERVICE.
- PROPOSED SPRING DEVELOPMENT BY U.S. FOREST SERVICE.

UMATILLA COUNTY, OREGON

INFORMATION SECURED FROM LAND-WATER INVENTORY OF UMATILLA COUNTY BY THE U.S. SOIL CONSERVATION SERVICE.

static levels as they supposedly represent. Furthermore, the water levels reported usually represent the level at the time the driller completed the well. Therefore the levels given may reflect the natural and normal high or low water levels prevailing during the year at the time the well was completed, or abnormal levels due to periodic cycles of excessive precipitation or drought. The log records cover a span of over 25 years. In only two wells (the Pendleton city well and the McNary damsite well) were elevations of the collar reported. For the preparation of water-table maps, whether of free or confined waters, the elevations of the well collars must be known so that the water-level measurements may be referred to a common datum. Water levels must be read simultaneously (that is, within seasonal bounds) to eliminate discrepancies due to natural fluctuations. Records needed for preparation of water-level maps, especially the location of wells by township, range, section, and quarter section, can be best obtained by the driller directly from the well owner at the time the well is being drilled rather than by some field man at a later date after the property may have changed ownership.

Only a few of the logs of flowing wells record measurements of pressure and volume of flow; these measurements are required in order to make hydrologic calculations. Such information must not only be obtained for individual wells before specific conclusions can be drawn concerning them, but before more generalized conclusions regarding aquifers and capacities can be drawn on an area-wide scale. The lack of knowledge as to what the pressure readings may have been for any unreported flowing well at the time it was first drilled, and at progressive intervals thereafter, constitutes a permanent loss of very important data. It should be made mandatory for the best interest of the public at large that all flowing wells be at least capped and their production thus controlled.

Test data of one sort or another are given on 85 of the logs listed here (total 209). This figure is somewhat arbitrary and the only wells counted, in arriving at this figure, were those for which some test was mentioned or indicated by the records. Entries of the gallons-per-minute production and drawdown were not counted as test data unless so specified by the informant, as in the other instances the gallons-per-minute production commonly refers to the normal operational rate at which the well is pumped in practice rather than to an official test figure. Likewise none of the flowing wells in the Boardman irrigation district were considered by the author to have data of test status. The figure does include bail tests or incomplete pump tests which merely indicate that the well produces sufficient water for the owner's requirements instead of the optimum production.

Results from the few wells given more thorough tests, as summarized in the logs, are often so abbreviated that critical data are omitted. For example, logs of several wells known to have been given careful, engineering tests record drawdowns at different pumping rates but fail to give the static water level. Most major pump-test reports do not lend

themselves readily to summary on prepared log forms like those used in this report. Pump-test reports may be many pages in length, and their data shown graphically on charts and tables. Every effort should be made, however, to prepare some kind of an accurate summary for purposes of general recording.

Experience has shown that invaluable test records of far too many of the important municipal and industrial wells have been mislaid or lost. Information of this type commonly changes hands many times between consulting engineers, water superintendents, and equipment-company technicians and thus is often lost.

Development

Several conclusions can be drawn regarding the presence of aquifers in the Coriba. Available geologic evidence points to the fact that no single widespread sedimentary interbed, or even a series of moderately extensive ones, exists within the Coriba in the area considered. It is also probable that no extensive porous or fractured lava horizon exists. Faulting and folding are known to be present even though the geologic structure has not been mapped or studied in detail. On the basis of general geologic knowledge, a vertical succession of porous horizons of restricted lateral extent is to be expected in a thick accountation of lava flows like the Coriba. The log records gathered substantiate this in showing aquifers in vertical succession. They exhibit sometimes a wide variation in depth and hydrologic characteristics from well to well. Thus, the available geologic information indicates that subsurface fracture zones constitute the access channels and storage reservoirs for most of the confined waters and that the pattern (distribution, depth, and hydrologic characteristics) of migration and storage zones is governed largely by structure and by the size of the porous interbed horizons.

Structural attitudes of the Coriba (and hence of the permeable horizons within it) must be studied and mapped before conclusions may be drawn concerning the development potentialities of local areas, but the information available allows the generalization that undeveloped water resources of substantial proportions may exist in Morrow and Umatilla counties.

The well-location map (pl. 1, Yast page) shows that drilling has been concentrated in and around richer agricultural portions of the counties. It is in these areas that many of the larger industrial and municipal wells are situated and the greatest concentrations of population are contained. It should be remembered that the wells shown on the map fall far short of representing the complete coverage. No attempt was made to gather information on shallow domestic wells in urban areas such as Milton-Freewater, and a considerable amount of shallow-well data for this area was disregarded because of the abundance of deep-well records available. The concentration of wells in this area is therefore much greater than is indicated on the map.

Sparsely populated land predominates in both counties. For the most part this land occupies the higher elevations, is short of surface water, and rates as dry agricultural or grazing land. Improvement of such land that is suitable for irrigation or can be rendered suitable by leveling is the concern of those in authority and prompted this investigation. Ground-water possibilities of land of this type have received very little attention except for the drilling of domestic and stock wells. These wells are for the most part widely separated and usually of small diameter. In only a few places have attempts been made to develop large-yield wells. The Cutsforth no. 1 and the Tucker wells, both in Morrow County, were each drilled for irrigation purposes, and are fairly successful. Unexpectedly large-yield wells have been developed occasionally as exemplified by the Rugg no. 1 well which yields an artesian flow of an estimated 465 gallons per minute. The city of Pendleton well and the Smith Canning Company well, also in Pendleton, and various other selected industrial and municipal wells situated at various points in the more central portions of the counties (Umatilla County mostly), are examples of substantial producers drilled to appreciable depths in the Coriba for public or industrial purposes. As these wells demonstrate that substantial, and sometimes artesian production has been developed in the Coriba, similar yields in the relatively untested portions of the area may be considered as possible. The conclusion is warranted that the ground-water resources of Morrow and Umatilla counties are only partially developed.

The available geologic information does not permit detailed classification of the areas which are either potentially possible or probably unlikely for the development of large volumes of ground water. In general, conditions can be considered as favorable in an east-west belt extending through the central portions of the counties. This conclusion is based upon the supposed prevalence of a regional structural dip from the Blue Mountains and is subject to locally adverse conditions caused by faulting, folding, and other unmapped structural conditions. Whether or not large capacity aquifers exist in the Coriba in this area is unknown at the present time. Until their presence is established and structural conditions are worked out in as much detail as is possible, no predictions can be made as to the depths at which the occurrence of ground water may be anticipated. The available log data show large-capacity wells at shallow depth and low-yield wells at great depth occurring at random throughout both counties.

Another subject which merits discussion is the danger of over-production from already developed aquifers. Hodge (1942) in his report on the area comments on the Coriba as follows:

"The flows comprising the formation appear as of such indefinite length that the entire mass has frequently been called a 'basalt flood.' Actually the individual flows are only a few miles long, less wide, and from 10 to 200 feet thick. If these flows came from fissures, there must have been thousands of slits that changed their position rapidly from one place to another."

This description shows the limitations in size of aquifers to be expected. Add faulting to the picture and the result is a small areal extent for potential aquifers of sedimentary, or of the porous or fractured interflow, types. From a production standpoint this situation is doubtless relieved by vertical fracturing which may permit replenishment of a given interbed aquifer from both lateral and deeper sources.

Evidence of well interference (adverse effects upon other wells) is to be noted in the logs here assembled. Also, the history of progressively decreasing water level in some of the former flowing wells is suggestive of overproduction. It is possible that over-development may already exist in some of the areas where wells occur in great numbers.

Overdevelopment means extraction at a rate faster than replenishment. Whether the lack of replenishment is due to the inability of replenishment water to migrate through feeder channels to the storage aquifer at a rate commensurate with extraction, or whether the lack of replenishment is due to a lack of reserves of water for replenishment purposes, are questions to be faced in the study of ground-water problems anywhere. The area under discussion is by no means an exception.

There can be no doubt that water precipitated in the Blue Mountains gains access to subterranean levels and works its way northward through fractured zones in very considerable quantities. Nor can there be any doubt that much ground-water replenishment originates from absorption from the plateau surface itself. Here again the factors controlling the extent and disposition of aquifers must be reckoned with. Faults may assist flow of water by shattering or they may create dams and barriers. Considering these facts and the limited size of the Coriba flows (and hence limited original size of porous interbed aquifers) individual aquifers may exist completely independent of, or only partially connected with, feeder channels draining from the mountains. This condition could be expected in the central to northern portions of Morrow and Umatilla counties.

The significance of such a condition is that a well producing from an aquifer supplied and replenished almost wholly by water from the plateau is producing from a source dependent upon a low yearly precipitation for replenishment (fig. 2, opposite p. 5). Such a well may be a large-yield producer, but if it is producing at a rate faster than replenishment, it is producing water which represents the accumulation of centuries. The development of one good well cannot be taken as evidence that the development of other successful wells - at least long-lived ones - can be expected close to the first one.

Conclusion

To those engaged in farming, or to those acquainted with civic or industrial water problems, the value of water to Morrow or Umatilla counties is well known. To those not acquainted with the counties, it can be said that the potential value of water is tremendous. Evidence of this is to be found in the increased amount of deep drilling done in recent years, not only by municipalities and industries, but also by farm owners. Many substantial, large-yield wells have been developed. These demonstrate that the Coriba may be regarded as a real, although a somewhat unpredictable source of confined ground water. This considered, together with the fact that very large areas of the counties remain relatively untested by exploratory drilling, suggests that the counties' ground-water resources remain largely undeveloped.

Just where, or to what depths, future drilling might be done successfully is a question which cannot be answered because of the lack of basic geologic information. About all than can be said now is that in general the development of large-capacity wells should not be anticipated at shallow depths. How great the undeveloped reserves may be is a question that does not warrant a guess. Both basic geologic information plus specialized ground-water data will need to be gathered before even an approximation can be made on an area-wide basis.

Certain limiting observations, however, can be drawn from existing geologic knowledge and the case histories of some wells. The short lateral extent of individual interbed aquifers plus the dependency upon fractures for interconnection with other aquifers and feeder channels is the reason for occasional, individual aquifers replenished largely by absorption from the plateau surface. Safe rate of production from such aquifers is limited and is probably more critical compared to that from aquifers replenished from the mountain sources where precipitation is greater. Even in the case of mountain-fed aquifers, marked variations in capacity among individual aquifers probably prevail. Conservation practice therefore dictates that care should be taken to guard against overdevelopment by either the development of an excessive number of wells or overproduction from one well. Therefore, well-test and production records are the most diagnostic and the most readily available data to be obtained.

All considerations point to the desirability and the practicability of expending effort and funds for a thorough, scientific investigation of the ground-water resources in the counties. The scope of such an undertaking, however, would be beyond the means of the counties to finance, or of the State Department of Geology and Mineral Industries to condust under the present set-up. Therefore, if the counties wish to promote the development of their ground-water resources, Federal assistance should be sought.

At the present time the most important step that Morrow and Umatilla counties could take would be to build up a file of well data in anticipation of eventual ground-water investigation. A backlog of such data, if of sound technical quality, would be of material assistance in any eventual ground-water investigation, and would doubtless prove of assistance to the many local problems bound to arise during the time preceding the start of a mapping project. Standards should be set up for the preparation of well logs and of well-test and production summaries, and steps should be taken to provide for the recording of such data by both drillers and well owners.

Acknowledgements

The number of people who have contributed their time and effort in connection with the assembling of the material compiled here is so great that it is not practicable to give individual recognition to all of them. To the many not listed the writer wishes to express his gratitude. Messrs. M. E. Cotter, Ione, Oregon; A. A. Durand and Son, Walla Walla, Washington; A. M. Edwards, Lexington, Oregon, and Fred J. Nichoson, Ione, are drillers to whom especial credit is due for the assistance they rendered. The author wishes to express appreciation for furnishing well records to Charles E. Stricklin, State Engineer; Curtiss M. Everts, Jr., State Sanitary Engineer; R. A. Fletcher, Umatilla County office of the U.S. Production and Marketing Administration; A. M. Piper, Staff Scientist, Pacific Northwest, U.S. Geological Survey; and R. C. Newcomb, Ground-water Division of the U.S. Geological Survey. To Messrs. W. A. Rockie and Thos. H. Hite of the U.S. Soil Conservation Service, thanks is extended for permission to reproduce Soil Conservation Service maps. For their assistance throughout the course of this project and in the editing of this report, the writer is especially indebted to the members of the staff of the State Department of Geology and Mineral Industries.

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Water-well Logs

The following pages contain 209 driller's logs of water wells drilled in Umatilla and Morrow counties. Abbreviations used in the logs include:

g.p.m. - gallons per minute

SWL - static water level

F. - Fahrenheit

temp. - temperature

0.D. - outside diameter

I.D. - inside diameter

D C B A
E F G H
M L K J
N P Q R

Dot in section grid shows well location. If no dot is used, exact location is not known.

Adams City Well name	_		Index number 35-U 3N-34E-4-G File number		Aiton Well name			Index number — 159-M 4N-24E-23-C File number
MOTI Dame			(Code: Tp., R., Sec., 2 Sec.)		Mell neme			(Code: Tp., R., Sec., 2 Sec
LOCATION:			D C B A		LOCATION:			D C B A
Umatilla Coun	ty	٠	E F G H		Morrow Co	ownty		E F G H
Pendleton Quadrang	le		M L K J		Blalock Island Quadr	angle		N L K J
3E 34E 4 SW2 of NE2 Tp. Range Section Fractional	section		N P Q R	-	4N 24E 23 ME4 of Tp. Range Section Fraction	nal section		N P Q R
STATISTICS:			and the second property of the second se	30	STATISTICS:			
Well type-Dug Elevation (land sur-	Use st	atus- Well status-		Well type-Dug Elevation Drilled x face)	n (land sur-	Use st	atus- Well status-
Drilled face)	ft.	inau	stic*abandoned		Drivenabove	ft.	iniu	stic* _ z strial _ abandoned_
Final depth 1631 below		muni	gation dry hole cipal x pro ucer x s stock wells		Final depth 861 below_		muni	gation dry hole cipel producer x s stock wells
City of Adams Owners name	Wm. B		lers name		Arthur Aiton Owners name	Origi	nal dril	Drilling Company
Address	Add	iressW	lers name alla Walla, Washington		Address c/o Hugh Brown	Add	lress	Portland, Oregon
· · · · <u>- · · · · · · · · · · · · · · ·</u>	_	te of dri	lling_about 1938		Boardman, Oregon	Dat	e of dri	illing Spring, 1947
This record complied by M.S.W. data recured from the following so	from De	eepened e-cased	-		This record compiled by M.S.W data secured from the following	from De	epened	_
Driller and City Water Waster	c)	leaned	by		Hugh Brown, Boardman.	01	eaned	by
Date compiled January 1948	De	a te			Date compiled March 1948	De	ite	
Naterial	Thicknes (feet)	S Depth (feet)	Remarks	- 1	Naterial	Thickness (feet)	feet)	Remarks
Top soil and sand about	35	35	16" hole to bottom 35" of	1	No leg made	1,,,,,,,	86	6" hole cased 40". First
	58	93	16" casing to bedrock	1			1	water encountered 36'. Second water near bottom of
Black hard basalt about	40	1				- 	i	Well. SML 12.
Soft porous water horizon	i	133				, 1	<u> </u>	I
Black hard basalt about	30	163	2					
	i	†	Bottom of hole, Well began flewing at 931.					
	† .	. 1	Still flows in winter when		Athena City #1			Index number 27-U 4N-35E-19-E
	+		demand is not great. During the season when demand is	ľ	Well name			File number (Code: Tp., R., Sec., 2 Sec
	1	<u> </u>	great, this well is pumped at the rate of 100 g.p.m.	*	LOCATION:	*****		
	-	-	for periods of 12 to 15 hours per day. The water level then					D C B A
					Umatilla C	cunty		E F G H
L			drops to 40 to 45.					
			ladex number 160-M		Unmapped Quadr 45 35E 19 NW4 of	angle		M L K J
Andregg Well mame			ladex number 160-M 6M-25E-7 File number (Gode: Tp., R., Sec., 2 Sec.)		Quadr Quad	angle		M L K J N P Q B
Well name	- -		Index number 160-M 43-278-7 File number (Code: Tp., R., Sec., 2 Sec.)		Unearpred Quedr 48 25E 19 EV of Tp. Range Section Fractio STATISTICS: Well t pe-Dig Elevatio Driven Store	sangle SEA	in irr	M L K J N P Q B tatus- sstic* ustrial abandoned dry hole
Well name LOCATION: ROTTOW Coun			Index number 160-M 63-258-7 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H		Quadra Q	sangle SEA	dom in irr	M L K J N P Q B
Well name LOCATION: Rorrow Coun Blalock Island Quadrang 49 252 7 SW2	le		Index number 160-M 43-278-7 File number (Code: Tp., R., Sec., 2 Sec.)		Unmapped	rangle SEA nsi section on (land surft.	dom in irr mun *include . Durand inal dri	M L X J N P Q E
Well name LOCATION: ROTTOW Coun Blelock Island Quadrang	le		Index number - 160-M		Unnapped Quadr 48 25E 19 Wd of Tp. Range Section Fraction STATISTICS: Well t ps-Dag Elevation Driven Shore below Final depth 680'	nsi section n (land surft. A. A. Original	dom in: irr mun *include . Durand inal dri: iress	M L X J N P Q E
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Moli name LOCATION: Coun	section land surft. Original Add from Deturces: From Deturces:	dome indu irri muni *include in linsl dril liress te of dri eepened	Index number - 160-M 0M-25E-7 File number (Gode: Tp., R., Sec., Sec.) D C B A E F G H M L K J N P Q R N P Q R Holl status- stock abendoned dry hole producer x stock wells ere name Hermiston, Oregon		Unampred Quadr \$\frac{\text{the B}}{\text{ 25E}} \ \ \text{ 25E} \ \ \text{ 19} \ \ \text{ 104} \ \ \text{ of Tp. Range} \ \text{ Section Fractio} \] ### Final text	nancio SEL nal section In (land surft, Original Add Dat from Dat g sources: Fr Dickness (feet) 25 57	domin's irriging and in a sirriging and in a sirrig	M L X J N P Q B Intus- setic* setic* abandoned dgstion dry hole cicipal x producer y so stock wells 4 Son liers name falia Walla, Washington Hiling 1935 by Remarks Cosing
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LOCATION:			(Code: Tp., R., Sec., 2 Sec.)	T.OGATTON:				(Code: Tp., R., Sec., ½
	inty		D C B A	LOCATION:	Count			D C B
Unmapped Quadran	-		E F G H	Blalock Island	Quadrangl	-		E F C
48 358 19 SW1 of SI	E à		M L K J	4N 25N 18	NW tof SW	l		M° L K
Tp. Range Section Fractions	al section		N P Q R	Tp. Range Sect	ion Fractional	section		N P Q
STATISTICS:				STATISTICS:				
Well type-Dug Elevation prilled x face)		Jse sta domes		Well type-Dug Drilled_X	_ Elevation (1	and sur-	Use st	atus- Well statu
Drilled x face)abovebelow	ft.	inas	trial abandoned	Driven_	above	ft.	inau	strial abandone
Final depth 1206	*in	munic	ipal x producer x stock wells	Final depth 981			muni *include	s stock wells
City of Athena Owners name	Original		ers name	Willard A. Baker Owners name		Abe Ha	nal dril	lers name
Address			lla Walla, Washington	Address Board	man, Oregon	•		Goldendale, Washington
	Date o		ling 1937		V 2 V	-	e of dri epened	1111mg 1920
This record complied by M.S.W. data secured from the Following	sources: re-ca clean	sed	by	This record compiled data secured from to	ha collowing sou	rces: re	-cased eaned	_ _ _{by}
Driller and City Water Master	Clean	184	. 09	Mrs. Willard A. Bake	er and sons.	01	ошос	07
Date compiled January 1948	Date_			Date compiled	March 1948	Da	te	
Natorial	Thickness D	epth	Remarks	Mater		Thickness		Remarks
No log available	(feet) (f	eet) 1206	Flowed est. 40 to 50 g.p.m.			(feet)	1	1
20 706 0.0074074	+		According to City water	No log symilah	Le.		- 38	Flows - Pressure stron Considered better than
			superintendent, this well was not pumped till the			İ	İ	Baker #2 well.
			year after it was drilled, but that after it was pumped					6" hole.
			it quit flowing. SWL is now 15' (1948). In practice					
			the well is pumped at the rate of 500 g.p.m. with a drawdown to 230' during the					
			drawdown to 230' during the summer season when the well is used hard.			<u> </u>	<u> </u>	<u> </u>
	\perp		To moon Hain's			<u> </u>	<u> </u>	1
						1	<u> </u>	1
L				•		l	<u> </u>	1
Baker #2 Well name LOCATION:			File number (Code: Tp., R., Sec., 2 Sec.)	Well name				File number (Code: Tp., R., Sec., 2
				BOOK! ION.				D C B
	anty		D C B A	Morrow	Coun	t y		
	•		E F G H	Morrow Blalock Island	Coun			E F G
Morrow Con	ngle			Blalock Island	Quadrang	Le		E F G M L K N P Q
Morrow Con Blalock Island Quadra	ngle		E F G H	Blalock Island	Quadrang	Le		M L K
Morrow Cor	ngle with al section (land sur- U	Jse sta	E 7 0 H N D Q R Tus- Well status-	Blalock Island 4N 25E 2 Tp. Range Sect STATISTICS: Well type-Dur	Quadrangi O NE of NV of ion Fractional	section	Use st	M L K N P Q
Morrow	ngle	inius	E F C H "M L K J N P Q R tus- tio" x Well status- tio" x abandoned	Blalock Island 4N 25E 2 Tp. Range Sect STATISTICS:	Quadrang O NE of NV of	section	dome in a	tatus- satics x abendon abendon
Norrew Oo	ngle With the section (land sur- ft.	inius irrig munic	tus- trial abandoned attion dry hole	Blalock Island AN 25B 2 Tp. Range Sect STATISTICS: Well type-Dig Drilled **	Quadrang O NE of NW of ion Fractional Elevation (: face)	section	dome in u irri	tatus- sstic* X ustrial legation dry hol
Morrow	ngle With all section (land sur- ft.	domes inius irris munio ncludes	Tus- tus- tus- tus- tus- tus- tus- tus- t	Final depth 701	Quadrang O NE of NV of	section	dome in u irri muni *include	tatus- sstic* x sustrial glation dry holicipal produces
Morrow	ngle Wital section (land surft. ft. A. M. Edd Original	domes intus irris munic ncludes wards l drill	Tus- tus- tus- tus- tus- tus- tus- tus- t	Blalock Island AN 25E 2 Th. Range Sect STATISTICS: Well type-big Driled x Driven	Quadrangi 0 ME of NV2 ion Fractional Elevation (: face) above below	section Land surft. Origi	dome in u irri muni *include	tatus- satio* x ustrial igation dry hol citpal produces
Morrow	ngle With all section (land surft. ft. A. M. Edd Original Address	domes intus irrig munic ncludes wards	Tus- tus- tus- tus- tus- tus- tus- tus- t	Blalock Jeland by 25R 2 Th. Range Sect STATISTICS: Well type-Dug Drilled x Driven Final depth 70' Roy E. Bell Omeers name	Quadrangi 0 ME of NV2 ion Fractional Elevation (: face) above below	section iand surft. Original	dome in a irri muni *include nal dril	tatus- sstic* x sustrial glation dry holicipal produces
Morrow	ngle With all section (land surfit. A. M. Edd. Addree Date of	domes intus irrig munic ncludes vards l drill ss of drill	tus- tus- Trial Abandoned dry hole producer x ers name Lexington, Oregon	Blalock Island hH 25E 2 Sect Th. Range Sect STATISTICS: Well type-big Driven Final depth 70! Boy E. Ball Omers name Address Ronriann	Quadrange O NET OF NVT Ion Fractional Elevation (: face) above below	section land surftOrigiAddDat	dome in a irri muni *include nal dril iress de of dri mepened	tatus- satio* Well status- satio* satio* abandon dry hol lorpal produces satiok wells
Morrow	ngle With all section (land surft. A. M. Ed. All Park of Address Date of Trom Deeps sources: Fe-cs	domes inius irrig munic ncludes wards l drill ss of drill ened ased	tus- tus- Trial Abandoned dry hole producer x ers name Lexington, Oregon	Blalock Jeland by 25R 2 Th. Range Sect STATISTICS: Well type-Dug Drilled x Driven Final depth 70' Roy E. Bell Omeers name	Quadrange O NET OF NVT Ion Fractional Elevation (: face) above below	section Land surft. Original Add Dat from De gross: reces: r	dome include include include include and dril iress te of dri	tatus- satio* Well status- satio* satio* abandon dry hol lorpal produces satiok wells
Morrow Quadra Substitute Substitute Substitute	(land sur- ft. (land sur- ft. A. M. Ed Original Addres Date c from Despe	domes inius irrig munic ncludes wards l drill ss of drill ened ased	tus- tus- tito* X Well status- tito* X Abadona dry hole typin dry hole typin stock wells Frequency Test and the status- train Test and	Pilalock Island htt 258 2 Tp. Range Sect STATISTICS: Well type-Dag Drilled E Driven Final depth 70! Boy E. Bell Owners name Address Econdam This record compliands accured from to	Quadrange 0 ME of NV of	land surft. Original Add Add from Detroes: resident of the control of the cont	dome in a irri muni *include nal dril ress te of dri repened -cased -cased	tatus- tatus- satio* well etatus satio* ustrial dightion dry hol produces s stock wells liers hame dilling about 1920
Morrow Quadra Substitute Substitute Substitute	(land surft. (land surft. A. M. Edd Original Addres Deto: from Despe	domes intus irrig munic munic ncludes wards i drill ses of drill ses ened	Tus- tus- trial ation at	Pilalock Island hT 25E 2 Tp. Range Sect STATISTICS: Well type-Dig Drilled z Driven Final depth 70! Roy E. Ball Owners name Address Ronrdsan This record compiled data secured from to owner Date compiled	Quadrange O MEA of NVA Ion Fractional Elevation () face) balow Oregon d by J.S.V. he following son	section section ft. Original Add from Detroes: recorded and of the control of	dome in a irri muni *include nal dril ress te of dri epenedcased eaned	tatus- tatus- satio* X satio* X satio* A satio* S satio*
Morrow Quadra Substitute Substitute Substitute	(land sur- ft. (land sur- ft. A. M. Ed Original Addres Date c from Despe	domes inius irris munic ncludes wards l drill sss of drill ened	tus- tus- tito* X Well status- tito* X Abadona dry hole typin dry hole typin stock wells Frequency Test and the status- train Test and	Pilalock Island htt 25E 2 The Range Sect STATISTICS: Well type-Dig Drilled z Driven Final depth 701 Roy E. Ball Owners name Address Econdana This record compiled data secured from to Owner Date compiled Materia	Quadrange O MEA of NVA Ion Fractional Elevation () face) balow Oregon d by J.S.V. he Following son March 1948	land surft. Original Add Add from Detroes: resident of the control of the cont	dome in the irrivation of the control of the contro	tatus- tatus- satio* x satio* x satio* dry hol icipal produce satiok wells Here mase thing about 1920
Morrow Go State S	(land surft. (land surft. A. M. Edd Original Addres Detec from Despessors: re-ct. c) by owner Date Thickness D (feet) from the land of	domes invis irrig munic ncludes vards l drill ss of drill ened ened ened hed	Tus- tus- trial ation at	Pilalock Island hT 25E 2 Tp. Range Sect STATISTICS: Well type-Dig Drilled z Driven Final depth 70! Roy E. Ball Owners name Address Ronrdsan This record compiled data secured from to owner Date compiled	Quadrange O MEA of NVA Ion Fractional Elevation () face) balow Oregon d by J.S.V. he Following son March 1948	section section ft. Original Add from Detroes: recorded and of the control of	dome in a irri muni *include nal dril ress te of dri epenedcased eaned	tatus- satio* x satio* x satio* a satio* dry hol icipal produce so stook wells Hemarks Well flows.
Morrov Go Plalock Island Quadra \$N 295 18 Wtors Typ. Bangs Section Fraction STATISTICS: Well type-Dug Liber Accept Driven above below Final depth 86' Mr. Baker Owners name Madress Boardman, Oregon Adress Boardman, Oregon This record compiled by N.S.V. date secured from the Jollowing Yerbal log report by the driver Froduction comments and location Date compiled March 1948 Material Top soil and hardpan (estim Bard basalt (estim	(land surft. (land surft. A. M. Edd Original Addres Detoc from Despensources: re-ct clean by owner Thickness D (feet) fr	domes invise munic	tus- tus- trial ation at	Pilalock Island htt 25E 2 The Range Sect STATISTICS: Well type-Dig Drilled z Driven Final depth 701 Roy E. Ball Owners name Address Econdana This record compiled data secured from to Owner Date compiled Materia	Quadrange O MEA of NVA Ion Fractional Elevation () face) balow Oregon d by J.S.V. he Following son March 1948	section section Original surft. Original Add Add Add Pat from De prices: re Da Thickness (feet)	dome in the irrivation of the control of the contro	tatus- tatus- satio* x satio* x satio* x satio* dry holicipal satios dry holicipal lers mass llers mass Hemarks Well flows. Plows continuously year around, but less in wint satio to the services of the
Morrow Go State S	(land surft. (land surft. A. M. Edd Original Addres Detoc from Despensources: re-ct clean by owner Thickness D (feet) fr	domes invis irrig munic ncludes vards l drill ss of drill ened ened ened hed	Tus- tus- tus- tric* X D R Yell status- tric* xtion	Pilalock Island htt 25E 2 The Range Sect STATISTICS: Well type-Dig Drilled z Driven Final depth 701 Roy E. Ball Owners name Address Econdana This record compiled data secured from to Owner Date compiled Materia	Quadrange O MEA of NVA Ion Fractional Elevation () face) balow Oregon d by J.S.V. he Following son March 1948	section section Original surft. Original Add Add Add Pat from De prices: re Da Thickness (feet)	dome in the irrivation of the control of the contro	tatus- satio* x satio* x satio* a satio* dry hol icipal produce so stook wells Hemarks Well flows.
Morrov Go Plalock Island Quadra \$N 295 18 Wtors Typ. Bangs Section Fraction STATISTICS: Well type-Dug Liber Accept Driven above below Final depth 86' Mr. Baker Owners name Madress Boardman, Oregon Adress Boardman, Oregon This record compiled by N.S.V. date secured from the Jollowing Yerbal log report by the driver Froduction comments and location Date compiled March 1948 Material Top soil and hardpan (estim Bard basalt (estim	(land surft. (land surft. A. M. Edd Original Addres Detoc from Despensources: re-ct clean by owner Thickness D (feet) fr	domes invise munic	tus- tus- trial ation at	Pilalock Island htt 25E 2 The Range Sect STATISTICS: Well type-Dig Drilled z Driven Final depth 701 Roy E. Ball Owners name Address Econdana This record compiled data secured from to Owner Date compiled Materia	Quadrange O MEA of NVA Ion Fractional Elevation () face) balow Oregon d by J.S.V. he Following son March 1948	section section Original surft. Original Add Add Add Pat from De prices: re Da Thickness (feet)	dome in the irrivation of the control of the contro	tatus- tatus- satio* x satio* x satio* x satio* dry holicipal satios dry holicipal lers mass llers mass Hemarks Well flows. Plows continuously year around, but less in wint satio to the services of the
Morrov Go Plalock Island Quadra \$N 295 18 Wtors Typ. Bangs Section Fraction STATISTICS: Well type-Dug Liber Accept Driven above below Final depth 86' Mr. Baker Owners name Madress Boardman, Oregon Adress Boardman, Oregon This record compiled by N.S.V. date secured from the Jollowing Yerbal log report by the driver Froduction comments and location Date compiled March 1948 Material Top soil and hardpan (estim Bard basalt (estim	(land surft. (land surft. A. M. Edd Original Addres Detoc from Despensources: re-ct clean by owner Thickness D (feet) fr	domes invise munic	tus- tus- tus- tus- tito* X	Pilalock Island htt 25E 2 The Range Sect STATISTICS: Well type-Dig Drilled z Driven Final depth 701 Roy E. Ball Owners name Address Econdana This record compiled data secured from to Owner Date compiled Materia	Quadrange O MEA of NVA Ion Fractional Elevation () face) balow Oregon d by J.S.V. he Following son March 1948	section section Original surft. Original Add Add Add Pat from De prices: re Da Thickness (feet)	dome in the irrivation of the control of the contro	tatus- tatus- satio* x satio* x satio* x satio* dry holicipal satios dry holicipal lers mass llers mass Hemarks Well flows. Plows continuously year around, but less in wint satio to the services of the
Morrov Go Plalock Island Quadra \$N 295 18 Wtors Typ. Bangs Section Fraction STATISTICS: Well type-Dug Liber Accept Driven above below Final depth 86' Mr. Baker Owners name Madress Boardman, Oregon Adress Boardman, Oregon This record compiled by N.S.V. date secured from the Jollowing Yerbal log report by the driver Froduction comments and location Date compiled March 1948 Material Top soil and hardpan (estim Bard basalt (estim	(land surft. (land surft. A. M. Edd Original Addres Detoc from Despensources: re-ct clean by owner Thickness D (feet) fr	domes invise munic	tus- tus- Tell status- tito* X	Pilalock Island htt 25E 2 The Range Sect STATISTICS: Well type-Dig Drilled z Driven Final depth 701 Roy E. Ball Owners name Address Econdana This record compiled data secured from to Owner Date compiled Materia	Quadrange O MEA of NVA Ion Fractional Elevation () face) balow Oregon d by J.S.V. he Following son March 1948	section section Original surft. Original Add Add Add Pat from De prices: re Da Thickness (feet)	dome in the irrivation of the control of the contro	tatus- tatus- satio* x satio* x satio* x satio* dry holicipal satios dry holicipal lers mass llers mass Hemarks Well flows. Plows continuously year around, but less in wint satio to the services of the
Morrov Go Plalock Island Quadra \$N 295 18 Wtors Typ. Bangs Section Fraction STATISTICS: Well type-Dug Liber Accept Driven above below Final depth 86' Mr. Baker Owners name Madress Boardman, Oregon Adress Boardman, Oregon This record compiled by N.S.V. date secured from the Jollowing Yerbal log report by the driver Froduction comments and location Date compiled March 1948 Material Top soil and hardpan (estim Bard basalt (estim	(land surft. (land surft. A. M. Edd Original Addres Detoc from Despensources: re-ct clean by owner Thickness D (feet) fr	domes invise munic	tus- Tell status- tics x N P Q R Tell status- tics x Abadona dry hole ipal producer x stook wells Remarks Flow - estimated at 20 g.P.P. Botton of hole Well flows, but requires mechanical pressure to service domestic hot respected to the service of the	Pilalock Island htt 25E 2 The Range Sect STATISTICS: Well type-Dig Drilled z Driven Final depth 701 Roy E. Ball Owners name Address Econdana This record compiled data secured from to Owner Date compiled Materia	Quadrange O MEA of NVA Ion Fractional Elevation () face) balow Oregon d by J.S.V. he Following son March 1948	section section Original surft. Original Add Add Add Pat from De prices: re Da Thickness (feet)	dome in the irrivation of the control of the contro	tatus- tatus- satio* x satio* x satio* x satio* dry holicipal ses stook wells llers mass titing about 1920 Benarks Well flows. Flows continuously year around, but less in win
Morrov Go Plalock Island Quadra \$N 295 18 Wtors Typ. Bangs Section Fraction STATISTICS: Well type-Dug Liber Accept Driven above below Final depth 86' Mr. Baker Owners name Madress Boardman, Oregon Adress Boardman, Oregon This record compiled by N.S.V. date secured from the Jollowing Yerbal log report by the driver Froduction comments and location Date compiled March 1948 Material Top soil and hardpan (estim Bard basalt (estim	(land surft. (land surft. A. M. Edd Original Addres Detoc from Despensources: re-ct clean by owner Thickness D (feet) fr	domes invise munic	Tell status- tics x Fell status- tics x Sell s	Pilalock Island htt 25E 2 The Range Sect STATISTICS: Well type-Dig Drilled z Driven Final depth 701 Roy E. Ball Owners name Address Econdana This record compiled data secured from to Owner Date compiled Materia	Quadrange O MEA of NVA Ion Fractional Elevation () face) balow Oregon d by J.S.V. he Following son March 1948	section section Original surft. Original Add Add Add Pat from De prices: re Da Thickness (feet)	dome in the irrivation of the control of the contro	tatus- tatus- satio* x satio* x satio* x satio* dry holicipal satios dry holicipal lers mass llers mass Hemarks Well flows. Plows continuously year around, but less in wint satio x satio*

Barnett Well name			Index number 42-U 3M-35E-19-K File number (Code: Tp., R., Sec., & Sec.)	Bartley 2N-90K-17 Well name File number
OCATION:				(Code: Tp., R., Sec., 2 Sec.
Umatilla County	у		D C B A	Imptile
Unmapped Quadrangle			E F G H	Umatilla Quadrangle M L K J
N Not 19 NW of SE			N P Q R	2H 30E 17 center
Pp. Range Section Fractional s	section			Tp. Range Section Fractional Section
FRATISTICS: fell type-Dug Elevation (la		Use sta	atus- Well status-	STATISTICS:
fell type-Dug Elevation (la Drilled x face) Driven above	and sur- ft.	dome		Well type-Dug Elevation (land sur- Drilled x face) ft. domestic* x shendomed
Final depth 9681		irri	gation dry hole	below irrigation dry hole
Just gehen 300.		*include	s stock wells	Final depth 1581 municipal producer pro
Harold Barnett	A. A.	Durand a	& Son	Cunningham Sheep Company Owners name Original drillers name
Address 103 N. E. Ellis			Walla Walla, Washington	Address Pendleton, Oregon Address
Pendleton, Oregon	-	te of dri	lling 1946	Date of drilling
This record compiled by N.S.W. lata secured from the following sour	from Dec	eepened e-cased	-	This record compiled by N.S.V. from data secured from the following sources: re-cased
U. S. G. S. Ground-Water Division	ole	Leaned	by	Company officials
Date compiled December 1947	Thickness			Date compiled July 1947 Date
Material	(feet)		Remarks	Haterial Thickness Depth Remarks (feet)
Soil	7	7	Casing 10-inch set to 22 ft.	No log made 158 Pumped for stock use only
Boulders	21	28	depth. 8-inch set to 22 ft.	
Boulders, basalt, gray	12	40	depth.	
Basalt, gray, hard	2	42		
Basalt, porous	26	68		
Baselt, gray	8	76	'	
Basalt, black, porous	24	100		
Basalt, black Basalt, gray	14 88	114		
			16 ft. (static) to 80 ft.	
Bailer test 45 g.p.m. for 7 min	ntes uras	4 own ire	loft. (static) to do it.	
Recovered in 3 hours	16	218		
Baselt, gray, hard Baselt, black creviced and	-			Index number - 70-U
porous with soapstone	94	312		Beckner 2N-30R-32 Well name File number
Basalt, black	87	425		(Code: Tp., R., Sec., 2 Sec.
Rock, soft, red	20	445		LOGATION:
Basalt, black	48	493		Umatilla County E F G H
Basalt and clay	14	507		Umatilla Quadrangle M L K J
Rock, decomposed, hard, caving	11	518		ZN 30E 32 Tp. Range Section Fractional section
Basalt, and clay	20	538		
Basalt, gray, hard	18	538 556		STATISTICS:
	18	556 562		Well type-Dug Elevation (land sur- Use status- Well status- Drilled x face) ft. domestic* x
Basalt, gray, hard Basalt and clay Basalt, gray, hard	18 6 9	556 562 573		Well type-Dug
Basalt, gray, hard Fasalt and clay Basalt, gray, hard Basalt and some clay	18 6 9 28	556 562 573 601		Well type-Dug
Basalt, gray, hard Basalt and clay Basalt, gray, hard Basalt and some clay Basalt, hard	18 6 9 28 24	556 562 573 601 625		Well type-Dig
Basalt, gray, hard Rasalt and clay Basalt, gray, hard Basalt and some clay Basalt, hard Basalt, decomposed	18 6 9 28 24 15	556 562 573 601 625 640		Well type-Dug Elevation (land sur- Dritled x Energy Final depth 175
Basalt, gray, hard Pasalt and clay Basalt, gray, hard Basalt and some clay Basalt, hard Basalt, decomposed	18 6 9 28 24 15	556 562 573 601 625 640 653		Well type-Dig Elevation (land sur- Drilled x face) ft. domestic x Driven above ft. inustrial abandoned dry bole municipal produces x Final depth 1751 "includes stock wells Cunningham Sheep Company Original drillers name Address Pencieton, Oregon Address Dete of drilling
Basalt, gray, hard Rasalt and clay Basalt, gray, hard Basalt and some clay Basalt, hard Basalt, decomposed (water static law Not reported (dropped from 16 (200 ft. Basalt (SML dropped	18 6 9 28 24 15 15 13 9	556 562 573 601 625 640 653' 662		Well type-Dig
Basalt, gray, hard Basalt and clay Basalt, gray, hard Basalt and some clay Basalt, hard Basalt, decomposed (water static law Not reported (dropped from 16 (200 ft. Basalt (SML droppes Basalt, decomposed (to 272)	18 6 9 28 24 15 13 9 10 10	556 562 573 601 625 640 653 662		Well type-Dug
Basalt, gray, hard Basalt and clay Basalt, gray, hard Basalt and some clay Basalt, hard Basalt, decomposed Wot reported (aropped from 16- (200 ft.) Basalt Basalt, decomposed (SML dropped Basalt, decomposed (to 272	18 6 9 28 24 15 15 13 9 10 6	556 562 573 601 625 640 653 662 672		Well type-Dig
Basalt, gray, hard Rasalt and clay Basalt, gray, hard Basalt and some clay Basalt, hard Basalt, decomposed Exter static law Not reported (dropped from 16 (200 ft. Basalt, decomposed (to 272' Basalt, decomposed (to 272' Basalt, decomposed (to 272' Basalt, decomposed (to 272')	18 6 9 28 24 15 to 13 9 10 6 24	556 562 573 601 625 640 653 662 672 678 702		Well type-Dug
Basalt, gray, hard Basalt and clay Basalt and some clay Basalt hard Basalt, decomposed (vater static law Not reported (acopped from 16 CACO 'Ti. Basalt (SVL droppes Basalt, decomposed to 272' Basalt, hard Basalt, aray Basalt and red clay	18 6 9 28 24 15 15 10 6 6 24 28	556 562 573 601 625 640 653 662 672 678 702		Well type-Dig
Basalt, gray, hard Rasalt and clay Rasalt and some clay Basalt, hard Basalt, decomposed (Water Static law Not reported (dropped from 16 COO'T. Basalt (SML dropped Basalt, decomposed (to 272 Basalt, decomposed (to 272 Basalt, decomposed (to 272 Basalt, decomposed (to 272 Basalt, black	18 6 9 28 24 15 15 10 6 24 28 14	556 562 573 601 625 640 653 662 672 678 702 730 744		Well type-Dug
Basalt, gray, hard Basalt and clay Basalt, gray, hard Bosalt and some clay Basalt, hard Basalt, decomposed Water static lew Not reported (gropped from 16 (200 ft. Basalt (SML dropped Basalt, decomposed (to 272) Basalt, pray Basalt, pray Basalt and red clay Basalt, black Basalt, broken	18 6 9 28 24 15 10 6 24 28 14 39	556 562 573 601 625 640 653 662 672 678 702 730 744 783		Well type-Dig
Basalt, gray, hard Basalt and clay Basalt, gray, hard Basalt and some clay Basalt, hard Basalt, decomposed (vater static lew Not reported (dropped from 16 (200 ft.) Basalt Basalt, decomposed (to 2722 Basalt, hard Basalt, pray Basalt, pray Basalt, black Basalt, black Basalt, black, hard	18 6 9 28 24 15 15 10 10 6 24 28 14 39 58	556 562 573 601 625 640 653 662 672 678 702 730 744 783		Well type-Dig
Basalt, gray, hard Basalt and clay Basalt, gray, hard Basalt and some clay Basalt, hard Basalt, decomposed (water static lew Not reported (dropped from 16 (200 ft.) Basalt Basalt, decomposed (to 272' Basalt, hard Basalt, dropped (to 272' Basalt, hard Basalt, broken Basalt, black Basalt, broken Basalt, broken Basalt, soft, brown	18 6 9 28 24 15 10 10 6 24 28 14 39 58 5	556 562 573 601 625 640 653 662 672 678 702 730 744 783 841		Well type-Dig
Basalt, gray, hard Basalt and clay Basalt, gray, hard Basalt, gray, hard Basalt, decomposed (water static lew Not reported (aropped from 16 (200 ft.) Basalt Basalt, decomposed (to 272' Basalt Basalt, decomposed (to 272' Basalt, hard Basalt, black Basalt, black Basalt, black Basalt, broken Basalt, soft, brown Basalt, soft, brown Basalt, porous	18 6 9 28 24 15 15 10 6 24 28 14 39 58 5 33	556 562 573 601 625 640 653 662 672 678 702 730 744 783 841 846		Well type-Dig
Basalt, gray, hard Rasalt and clay Basalt, gray, hard Basalt and some clay Basalt, hard Dasalt, decomposed You reported (aropped from 16 1200 ft. Basalt Basalt, decomposed (aropped from 16 1200 ft. Basalt, decomposed (aropped from 16 Basalt, decomposed (aropped from 16 Basalt, decomposed (aropped from 16 Basalt, black decomposed from 16 Basalt, black Basalt, black Basalt, broken Basalt, black, hard Basalt, soft, brown Basalt, porous Basalt, prous	18 6 9 28 24 15 10 10 6 24 28 14 39 58 5	556 562 573 601 625 640 653 662 672 678 702 730 744 783 841		Well type-Dig
Basalt, gray, hard Basalt and clay Basalt, gray, hard Basalt, gray, hard Basalt, decomposed (water static lew Not reported (aropped from 16 (200 ft.) Basalt Basalt, decomposed (to 272' Basalt Basalt, decomposed (to 272' Basalt, hard Basalt, black Basalt, black Basalt, black Basalt, broken Basalt, soft, brown Basalt, soft, brown Basalt, porous	18 6 9 28 24 15 15 10 6 24 28 14 39 58 5 33	556 562 573 601 625 640 653 662 672 678 702 730 744 783 841 846 879		Well type-Dig
Basalt, gray, hard Rasalt and clay Basalt, gray, hard Basalt and some clay Basalt, hard Dasalt, decomposed You reported (aropped from 16 1200 ft. Basalt Basalt, decomposed (aropped from 16 1200 ft. Basalt, decomposed (aropped from 16 Basalt, decomposed (aropped from 16 Basalt, decomposed (aropped from 16 Basalt, black decomposed from 16 Basalt, black Basalt, black Basalt, broken Basalt, black, hard Basalt, soft, brown Basalt, porous Basalt, prous	18 6 9 28 24 15 15 10 6 24 28 14 39 58 5 33	556 562 573 601 625 640 653 662 672 678 702 730 744 783 841 846 879		Well type-Dig
Basalt, gray, hard Rasalt and clay Basalt, gray, hard Basalt and some clay Basalt, hard Basalt, decomposed You reported (aropped from 16 1200 ft. Basalt decomposed (aropped from 16 1200 ft. Basalt, hard Basalt, and red clay Basalt, black Basalt, black Basalt, broken Basalt, soft, brown Basalt, soft, brown Basalt, prous Basalt, prous Basalt, prous	18 6 9 28 24 15 15 10 6 24 28 14 39 58 5 33	556 562 573 601 625 640 653 662 672 678 702 730 744 783 841 846 879		Well type-Dig

Code+1 Typ. R. Part Code+1 Typ. Part Code+1 Typ. R. Part Code+1 Typ. R. Part Code+1 Ty	Birchman			Index number 79-U 5E-29E-13 File number	Boardman City			Index mmber 96-W 4E-25E-8-F File number
Description Description	-							(Code: Tp., R., Sec., 2 Sec.
Section Sect	OCATION:				LOCATION:			
March Marc	Umatilla County	, .			Morrow County			
Married 1964 1975								<u> </u>
The part of parties frestrian services		•		M L K J				M L K J
Married Date		section		N P Q R		ection		N P Q R
	Drilled x face)				Well type-Dug Elevation (lan	ft.		
Think depth Sept	Drivenabove				Drivenabove			
A. North A. Second Second A. Second A. Second A. Second A. Second Second A. Second			mun1	cipal producer x	Final depth 178		muni	cipal x producer
Compared Control Springer, Control			*include	s stock wells			*include	s stock wells
### Address Ad					Boardman City	A. A.	Durand	& Son
Date of drilling	wners name Address Cold Springs, Oregon	Origi Add	nal dril ress W	lers name alla Walla, Washington	Owners name Address	Origi Add	nal dril ress	lers name Walla Walla, Washington
This recent complicity						Dan		114 Mary and Jane 1966
Driller			e or wir	11118 Aug. 1747 to Feb. 1740			9 OI UI-1	iling May aum oune, 1740
Detailer Calcada March 1986 Date D	his record compiled by N.S.V.	from De	epened_	· ·	This record complied by N.S.W.	from De		_
Name		cl	eaned	by	ł	ces: re	eaned	by
Material Thickness (1914) Bosaries Seat S	Driller				Driller			
Material Thickness (1914) Bosaries Seat S		_		-	Page 11200 1 1 1212	_		
Section Ceart Part Section Section Convert	ate compiled March 1948							
Description Process and sead 5 20 10 Seating	Material	Thickness (feet)	(feet)	Remarks	Material	Thickness (feet)	(feet)	Remarks
Bright heats and send 5 20	C4				1			i
Read Describ Leadit								T
Process basels	Boulders and sand	5	20		Nigger heads, gravel and sand	3	22	10" cemented in rock at 41
Fricken basalt	Hard basalt	14	34] .]	Running sand	22	24	10" hole to bottom
Review brown basalt		 					 	
Beauly, very hard		 	 				 	
Black baselt, very bard 26 76	Broken brown basalt	4	42		Nigger heads and running sand	30	40	Well flows 115 g.p.m.
Roseycomb basealt	Basalt, very hard	8	50		Solid rock	40	68	
Roseycomb basealt		26	76		Hard black basalt	68	71	
Bard black baselt 100 105			+	4 34432			+	C
Honeycomb baselt 106 110	noneycomb basalt		 	A little water at 901				crevices at 100 to 104
Fire clay	Clay and soapstone	4	94		Hard black basalt	104	106	
Fire clay	Basalt	109	203		Honeycomb basalt	106	110	
Bosyconb basalt with hard streaks 26 254 Bosyconb basalt 16 175 178 Vater Basalt broken Black basalt 20 278 200 Black basalt 20 360 Black basalt 130 490 Vary hard basalt 15 475 Boston of hole Vater encountered between 185 and 195 od tested as follows:			 				1	
Shale					Blue clay			
Solution of hole Solution of hole	Dark basalt with hard streaks	46	254		Honeycomb basalt	164	175	Water - basalt broken badl;
Solid Soli	Black basalt	24	278		Shale	175	178	Vater
Black baselt 20 360	2	62	340					B-44-2 -6 3-3-
Passelt 190 490			1		<u> </u>		1	Doctom of Hote
Very hard baselt 5 495	Black basalt		360					
10 505	Basalt	130	490					
Solid Soli	Very hard basalt	5	495					
Bottom of hole File number Codes: Tp., R., Sec.		10	505		Boylen #1			Index number 136-U 2N-27E-25-J
Vater encountered between 1899 and 1999 and test d as follows: SNL 361			1-		Well name			File number
SNL 36'. At 190 g.p.m.			1	Bottom of hole				(Code: Tp., R., Sec., 2 Sec.
SVL 36'. At 190 g.p.s. Grawdows to 1,32' With regal recovery. Pinal pump test at 505' as follows: SVL 39'. Vater temp. 63'7. Drawdows 108' at 1869 g.p.s. Drawdows 108' at 1869 g.p.s. Drawdows 108' at 1869 g.p.s. Provided at 1869 g.p.s. Well type-Dag Drilled x face) ft. domestic in numerical above in numerical in numerical above in numerical in regation dry Final depth Fin	Water encountered between 185	and 1951	and test	d as follows:	LOCATION:			
Dantilla Quadrangle				SWL 361. At 190 g.p.m.	Ummatills County			
Final pump test at 505° as follows:			i	drawdown to 132, with Labid				E F G H
Tp. Range Section Fractional section Drawdown 76' at 859 g.p.s. Drawdown 108' at 1089 g.p.s. Drawdown 108' at 1089 g.p.s. SEATISTICS: Well type-Dug Marve above fri domestic above innustrial intrinstiton dry municipal prod Final depth show inringition dry prod Final depth Thomas Boyles, Jr. Owners name Original drillers name Address Address Date of drilling 1938 This record compiled by M.S.V. from Despensed date secured from the Following sources: re-cased olsaned by U. S. Freduction and Marketing Administration Date compiled March 1948 Material Thickness Doyth Remarks		<u> </u>	1	recovery.	4			M L K J
SVI. 39'. Nature temp. 639's. Drawdown 108' at 1089 g.p.s. Drawdown 108' at 1089 g.p.s. Well type-Dug	Final pump test at 505 as fol	OM8:			28 27E 25 HE of SE			N P Q R
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Well type-Dag				Drawdown 76' at 869 g.p.m.	STATISTICS:			
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LOCATION:		D C B A	LOCATION:		СВ
	unty	E F G H	Umatilla Com Umatilla Quadran	.	F G
<u>Umatilla</u> Quadra 2H 27H 12 HE2 of 1		M L K J	Umatilla Quadran 2E 28E 4 SE	<u>*</u>	LK
ZH 278 12 HE2 of 1 Tp. Range Section Fraction	nal section	N P Q R	Tp. Range Section Fractiona	l section N	P Q
STATISTICS:			STATISTICS:		
Well type-Dug Elevation Drilled x face)	(land sur- Use status- ft. domestic*	Well status-	Well type-Dug Elevation Drilled x face)	(land sur- Use status- Well ft. domestic* x	l status-
Driven above below	iniustrial irrigation	abandoned dry hole	Driven above below	inhustrial	abandoned dry hole
Final depth	municipal *includes sto	producer x	Final depth	municipal *includes stock wells	producer
Thomas Boylen, Jr. Owners name	Original drillers	паль	Thomas Boylen, Jr. Owners name	Original drillers name	
Address	Address		Address	Address	
	Date of drilling from Deepened	1938	The second countries W.S.W.	Date of drilling 1938	
This record compiled by N.S.W. data secured from the Following	Bources: re-cased		This record compiled by M.S.W. data secured from the following se	Ources: re-cased	
U. S. Production and Marketing	administration c		U. S. Production and Marketing Add	cleanedby ministration	
Date compiled March 1948	Date		Date compiled March 1948	Date	
Material	Thickness Depth	Remarks	Material	Thickness Depth	
	(feet) (feet)			(feet) (feet) Remarks	
No data available			No data available	 	
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Well name		number	Boylen #5 Well name	Index number 1 2N-29E- File number (Code: Th. R. S.	9-N
Boylen #3 Well name		38-26E-15-J number e: Tp., R., Sec., 2 Sec.)	LOCATION:	ZH-29E- File number (Code: Tp., R., S	
LOCATION: Umatilla Co	(Code	number e: Tp., R., Sec., 2 Sec.)	LOCATION: Umatilla Cou	ZN-27E- File number (Code: Tp., R., S	9-H ec., ½ 54
LOCATION: Umatilla Co Umatilla Quadro	ounty (Code	D C B A E F C H M L K J	LOCATION: Umatilla Cou Umatilla Quedran	File number (Code: Tp., R., S	9-N c., 2 Se C B F G L K
LOCATION: Umatilla Co	(God.	p. Tp., R., Sec., Sec.) D C B A F G H	LOCATION: Umatilla Cou	File number (Code: Tp., R., S	9-N ec., ½ 54 C B F G
Unatilla Co.	(God.	D C B A E F C H M L K J	Umatilla	File number (Code: Tp., R., S	9-N c., 2 Se C B F G L K
LOCATION: Unantilla	(Ood punty angle kt hal section	D C B A E F G H M L K J N P Q R	Unatilla Cou Unatilla Quadran 2N 29N 9 Nvi of Svi Tp. Range Section Fractions STATISTICS:	File number (Code: Tp., R., S	9-N c., 2-Se c B F C L K P Q
Unatilla	ounty angle \$\frac{1}{4}\$ al land sur- t. domestic* injustria.	D C B A E F C H M L K J N P Q R	Unatilla Cou	2E-23E-3E- File number (Code: Tp., R., S Code: Tp., R., S D D D D D D D D D	GC B F G L K P Q
Description Column Colum	ounty angle kt al section (land sur- ft. domestic* inustria irrigation sunicipal	Tell status— Bandoned dry hole volumer x	Unatilla Cou	Cland sur- (consticution)	9-N C B F G L K P Q
DOMING Continue	ounty angle \$\frac{1}{2}\$ and sur- t. domestic* injustria irrigation	Tell status— Bandoned dry hole volumer x	Unatilla Quadran	File number (Code: Tp., R., S	9-N C B F G L K P Q
Description Column Colum	ounty angle Lial section a (land surft, domestic injustria irrigation sunicipal includes sto	Tell status- Well status- Well status- A manufacture of works of the status- Well	Unatilla Cour Unatilla Quadran 28 278 9 SW2 of SW2 Tp. Hange Section Fractions STATISTICS: Well type-Dug Driven face) Driven bolow Tinal depth Thomas Scylen, Jr. Owners name	Cland sur- tinesction Cland sur- tinesction Cland sur- tinesction Cland sur- tinesction Cland sur- tinesction Comments Fig. 12 Fig	9-N C B F G L K P Q
DOMINION DOMINION	ounty angle \$\frac{1}{2} \text{ al. section} a (land sur- Use status- ft. domestic* in:ustria irrigation *includes sto Original drillers Address	D C B A E F C H M L K J H P Q R Well status— abandoned dry hole produces: a	Unatilla Cou	The number (Code: Tp., R., State Price numbe	GCBFGCLK PQ 1 status- abandoneddry hole producer
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LOCATION:			LOCATION:		(Code: Tp., R., Sec., 2 Sec
	County	D C B A E F G H		unty	D C B A
Umatilla Quadr	angle	M L K J	Pendleton Quadra	ngle	M L K
Tp. 27E 11 EF of Fraction	SW1	N P Q R	Tp. Range Section Fraction	al section	N P Q I
STATISTICS:			STATISTICS:		
Well type-Dug Elevation Drilled x face)	on (land sur- Use st ft. dome	atus- Well status-	Well type-Dug Elevation Drilled x face)	(land sur- Use s	tatus- Well status-
Driven above below	in h	str al abandoned gation dry hole	Driven above below	in'.	instrial abandoned igation dry hole
Final depth	anni anni	cipel producer x	Final depth	mun	icipal producer_
Thomas Boylen, Jr. Owners name	Original dril	lers name	Marvin Cargill Owners name	C. E. Original dri	Lewis llers name
Address	Address		Address Route 1	Address	Pendleton, Oregon
	Date of dri	111ing 1939	Pendleton, Cregon	Date of dr	illing
This record compiled by N.S.W. data secured from the following	from Despend sources: re-cased	_	This record compiled by W.S.W. data secured from the following	from Deepened_ sources: re-cased_	_
U. S. Production and Marketing	cleaned	by	Mr. J. R. Hanna, Pendleton, Orego	cleaned	ру
v > 10/0			7 10kg		
Date compiled Harch 1948	Date		Date compiled January 1948	Date Thickness Depth	
Katerial	(feet) (feet)	Remarks	Material	(feet) (feet)	Remarks
No data available			No log made	165	SWL 1151
					Low g.p.m. yield and pumps dry.
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<u></u>	_			1 1	1
		 	<u> </u>	1 1	1
•				+ +	1
	- · - 				1
				+ +	1
L			L		<u> </u>
LOCATION:		(Code: Tp., R., Sec., 2 Sec.)	LOCATION:		(Code: Tp., R., Sec., 2 Se
	Sounder	k	T Co	unty	
Morrow C	County	E F G H		unty	E F G
	rangle SE4	k	Romov Co <u>Blalock Island</u> Quadra <u>4H 25E 7 SE</u> of S Tp. Range Section Fraction	ingle	E F G M L K N P Q
Blalock Island Quadr by 25E 18 SV2 of Tp. Range Section Fraction	rangle SE4	E F G H	Blalock island Quadra 48 25E 7 SE2 of S Tp. Ennes Section Fraction	ingle	M T K
Rorrow C Slalock Island Quedr 45 25E 18 Swi or Th. Range Section Fraction STATISTICS:	rangle SE4 onal section	E F G H M L K J N P Q R	Blalock Island Quadre hg 25E 7 Skh of S Tp. Bangs Bection Fraction STATISTICS:	nngle Eğ al section	M L K
Source	on (land sur-	E F G H M L K 7 N P Q R tatus- stic x stric x stand dry hole		ingle Education I (land surft. domining	M L X N P Q : Tratus— mentic* well status— mintfal ingstion dry hole
Norrow Quadra Q	on (land sur- ft. in: man include	Entus- status-		angle Ei (land sur- ft. angle in (land sur- ft. angle in in in in in in in in in in in in in i	RELIEF TO THE PROPERTY OF THE
Norrow Quedra Q	on (land sur- ft dom in relude Beck Toriginal dri	E F G H M L K 7 N P Q R Well status- status- status- status- status- status- producer x producer x status- status		mgle Ei lal section It (land sur- ft. door in: irr mu sinclut A. H. Edward alar O'tiginal dri	Tratus Well status- montics while shandoond dry hile interpal producer is the stock walls is
Source	on (land sur- on (land sur- ft. dom irr inrilud Beck OTiginal dril	E 7 G H N L K J N P Q R tatus— stice x sustrial dry hole— so stock wells there name		mgle (Ei al section (Ind sur- ft. do in: irr municum finclu A. M. Zduran. Original lri Address	Tratus— with P Q with the control of the control
State		E F G H M L K 7 N P Q R Well status- status- status- status- status- status- producer x producer x status- status		magle Egical section I (land sur- Use a ft. domining in it) A. H. Edward Original Aria Advess Date of do	Tratus— with P Q with the control of the control
Norrow Quedr Station Island Quedr Sy 258 18 5% of Fraction Fraction Fraction STATISTICS: Well type-Dag Driven above Final depth 96' E. H. Sriggs Owners name Mdress Boardman, Orego This record complied by E.S.W. date secured from the following	on (land sur- on (land sur- ft. dom ft. dom in: ann section Beck Original dri Address Dete of dr from Depened, g sources: re-cased	Tatue Well status- statue Well status- statue Statue Well status- statue Ary hole dry hole ses stock wells liters name liting prior to 1928	Blalock Island Quadre hH 25E 7 Sk of S Tp. Bangs 7 Sk of S Tp. Bangs Paction Fraction FIATISTICS: Well type-Dug Heretion Drilled 1 face) Driven above Final depth 85: Mike Casaldy Comers name Mdress Boardman, Oregon This record compiled by M.S.V. data secured from the following	Mail Section	W L X N P Q Tratus— mentic X mistrial abandoned dry hole icitation dry hole producer is Diers mane Lotington, Oregon
State	on (land sur- on (land sur- ft. dom ft. dom in: ann section Beck Original dri Address Dete of dr from Depened, g sources: re-cased	E 7 G H N L K J N P Q R tatus— stice x sustrial dry hole— so stock wells there name		magle Egical section I (land sur- Use a ft. domining in it) A. H. Edward Original Aria Advess Date of do	Tratus— with P Q with the control of the control
Norrow Quedr Station Island Quedr Sy 258 18 5% of Fraction Fraction Fraction STATISTICS: Well type-Dag Driven above Final depth 96' E. H. Sriggs Owners name Mdress Boardman, Orego This record complied by E.S.W. date secured from the following	on (land sur- on (land sur- ft. dom ft. dom in: ann section Beck Original dri Address Dete of dr from Depened, g sources: re-cased	Tatue Well status- statue Well status- statue Statue Well status- statue Ary hole dry hole ses stock wells liters name liting prior to 1928	Blalock Island Quadre hH 25E 7 Sk of S Tp. Bangs 7 Sk of S Tp. Bangs Paction Fraction FIATISTICS: Well type-Dug Heretion Drilled 1 face) Driven above Final depth 85: Mike Casaldy Comers name Mdress Boardman, Oregon This record compiled by M.S.V. data secured from the following	Mail Section	W L X N P Q Tratus— mentic X mistrial abandoned dry hole icitation dry hole producer is Diers mane Lotington, Oregon
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Cockburn Well name	-		Index number 3-U 68-342-35-E File number (Code: Tp., R., Sec., 2 Sec.)	Corres #1 Well name	Index number 130-U 3M-28E-25 File number (Code: Tp., R., Sec., 2 Sec.
LOCATION:			<u> </u>	LOCATION:	F-1-T-1
Umatilla Count	ć v		D C B A	Umatilla County	D C B A
Pendleton Quadrangle			E F G H	Umatilla Quadrangle	E F G H
68 34E 35 SW2 of HW2			M P Q R	3N 28E 25 NE	N P Q R
Pp. Range Section Fractional	section		A - X A	Tp. Range Section Fractional section	[#]*[%]*
STATISTICS:				STATISTICS:	
Well type-Dug Elevation (1: Drilled x face)	land sur- ft.	Use sta dome	stic*	Drilled x face) ft.	Use statue- Well status- domestic* x
below		inuu irri	gation x dry hole	Driven above below	injustrial abandoned irrigation dry hole
Final depth still drilling.		*include	cipal producer x s stock wells	Final depth	municipal producer x ncludes stock wells
Marion Cockburn	<u>A. A.</u>	. Durand dinal drill	% Son	Frank Correa	
Owners name Address Umapine, Oregon	Origi Add	nal drii	lers name Walla Walla, Washington	Owners name Original Address Address	l drillers name
	Dat	te of dri	lling Sept. 1947 to	Date of	of drilling 1938
This record compiled by M.S.W. data secured from the following sou Driller	from De irces: re cl	eepenede-cased leaned	- by	This record complied by M.S.W. from Deep data secured from the Following sources: re-ctus. U. S. Production and Marketing Administration	ased
Date compiled March 1948	_	ate		Date compiled Narch 1948 Date	
Material	Thickness (feet)	(feet)	Remarks	Naterial Thickness D (feet) (f	Septh Remarks
Soil and yellow clay	11	11		No data available	
Cernent gravel	26	37			
Brown basalt	11	48			
Gravel	3	51			
Clay and gravel	7	58			
Cement gravel tottom 4')	17	75	ļ		
Brown basalt (crevice in	31	106			
Honeycomb basalt	2	108			
Hard brown basalt	12	120			
Gray cement gravel	5	125			
Blue clay and pea gravel	15	140		<u> </u>	
Brown basalt	20	160			Index number 131-U
Gray basalt - hard	10	178		Correa #2 Well name	2N-28E-2
Gray basalt - soft	22	200			(Code: <u>Tp</u> ., R., Sec., 2 Sec.
Broken brown basalt	20	220		LOGATION:	D C B A
Blue basalt	35	255		Umatilla County	E F G H
Brown honeycomb	5	260		Umatilla Quadrangle	M T K 1
Blue basalt	10	270		Tp. Range 2 NW1 Tp. Range Section Fractional section	N P Q R
Gray basalt	10	280		Thintentac.	
Honeycomb basalt	24	304		STATISTICS: Well type-Dug Elevation (land sur-	Use status- Well status-
Blue basalt	50	354		Drilled x face) ft. Driven above	domeetic* x in lustrial abandoned
Black basalt	17	371		Final depth	irrigation dry hole municipal producer x
Blue basalt	7	378		*ir	ncludes stock wells
Black basalt	10	388	<u> </u>	Frank Correa Owners name Original	l drillers name
Blue basalt	39	440		AddressAddres	88
	3	443			of drilling 1939
Sandy basalt Basalt	132	575		This record compiled by N.S.W. from Deepe data secured from the following sources: re-ce	nsed
Brown shale	5	580		Clear U. S. Production and Marketing Administration	nedby
Basalt	56	636	Drilling still in progress.	Date compiled March 1948 Date	
Well flowing:	+	+	Temp. 58°F. Hole 14".	Material Thickness D (feet) (n	
Driller's flow record as	ncounter	ed	16mp. 30 11 moze		eet) Remarks
At 31'	SWL	15'		No data available	_
II 1401	SVL	111		 	
		Pump t at 576	est here gave 177 drawdown	 	
# 3021	1	01		 	
	SWL				
II 3021	SWL	Flowin	- no rates given		
# 3021 # 3941	SWL		ate noted at 150 g.p.m.		
# 302 ¹ # 394 ¹ # 403 ¹	SWL	Flow r	1 1		
# 3024 # 3941 # 4031 # 4901	SWL	Flow r	ste noted at 150 g.p.m.		

Rorrow Count	Le		(Code: Tp., R., Sec., 2 Sec.) D C B A E F G H M L K F N P Q R	Acrow County Ornapped Section Fractional se	action		D C F E F C M L N P C
### STATISTIOS: Well type-Dug	and sur- ft.	irrie munic includes	tus- tito* X attrial abandoned gation dry hole	### STATISTICS: Well type-Dug	nd sur- ft.	in un irric muni	
Corrigal Ranch Owners name Address	Origine Addre	of dril	ers name exington, Oregon lling 1938	Clarence Warren Owners name Address Ione, Oregon	Origi: Add Dat	T088	lers name Ione, Oregon Started Aug. 24, 1 lling Finished Oct. 7, 1
This record complied by M.S.W. data secured from the Pollowing sou	from Deep	pened cased aned	by	This record complied by H.S.W. 1 data secured from the Following source Mr. Cotter, original owner and drill	cl	-casedeaned	by
Date compiled October 1947	Date	θ		Date compiled November 1947	Da	t0	
Material	Thickness (feet)	Depth (feet)	Remarks	Material	Thickness (feet)	Depth (feet)	Remarks
Top soil and sandy soil	40	40		This well was first drilled to date. The composite log follow	a depth o		nd then deepened at a le
Cement gravel	60	100		Soil	12	12	6 ⁸ hole
Clay - yellow	20	120		Blue başalt	73	85	
Cement gravel	80	200		Honeycomb with some shale rock	60	145	
Clay - red	10	210		Blue basalt	80	225	A little water at 225
Blue - clay	7	217		Gray basalt	56	281	
Cement gravel	67	284		Rock with yellow and white sha	e 39	320	
Broken and seamy brown rock	4	288		Hard blue and gray rock	70	390	
Solid brown rock	62	350		Cracked rock and caving	66	456	
Blue basalt rock	42	392		Hard blue and gray basalt	222	678	
Gray basalt rock	21	413		Cracked and seamy rock		690 <u>k</u>	Bottom of hole
Black basalt rock	14	427	Water course			<u> </u>	Plenty of water at 69
Hard basalt rock - grey	20	447					180° of water in hole
Well cased - 300 Ft. Water ve	ey warm. V	ater lev	el - 280 Ft. Bailer test,				
	by warm. V	ater le		Crow Well name			Index number 53-U 2N-32E-32-B File number (Code: Tp., R., Sec.,
	ay warm. V		el - 280 Ft. Bailer test, Index number 66-U 18-302-11-E File number (Code: Tp., R., Sec., Sec.)	Well name			2N-32E-32-B File number (Code: Tp., R., Sec.,
Cox Well name	эу мага. Ч		Index number 66-U 1M-302-11-E	Well name			ZN-32E-32-H File number (Code: Tp., R., Sec., 2
Cox Well name LOCATION: Unatilla Count Contilla Quadrangi	у		Index number 66-U 1N-90X-11-E File number (Code: Tp., R., Sec., Sec.) D C B A E 7 G H M L K 7	Well name LOCATION: Unatilla County Fendleton Quadrangle 2N 322 32 Sk of Nk Tp. Range Section Fractional se	ection		ZN-32E-32-H File number (Code: Tp., R., Sec.,) D C 1 E F (
Cox Well name LOCATION: Unatilla Count	y le		Index number 66-U 1N-302-11-E File number (Code: Tp., R., Sec., Sec.) D C B A E F G H a	Well type-Dug Driven Dri			2H-32x-32-32-8 File number (Code: Tp., R., Sec., D C 1 E F 0 M L 1 N P 0 atus- atus- atus- attrial ebanda
LO g.p.a.	y se of Mag	Use sta domer in us	Index number 66-T IN-JOS-11-E File number Godet Tp., R., Sec., Sec.) D C B A E F G H M L K J N P Q R tus- Well name LOCATION: Unatilla County	nd sur- ft.	dome in iu irri muni *include:	23-32-32-2 22-32-32-32-32-32-32-32-32-32-32-32-32-3	
Cox Well name LOGATION: Usantilla Usantilla Usantilla Usantilla Usantilla Usantilla Usantilla Usantilla Usantilla Usantilla Usantilla Usantilla STATURTICS: Well typs-Dug Drillad X Drillad X Driven Delow Usantilla Us	y e of Mag section and sur- ft.	Use sta domes in unu irria munic includes	Index number 66-U 1N-90Z-11-E File number (Code: Tp., R., Sec., 2 Sec.) D C B A E 7 O H M L K 7 N P Q R tus- tus- tus- tus- tus- tus- tus- tus	Moll name	origi	dome in in irri muni *include C. E. nal drill ress	ZH-JZZ-JZ-Z File number (Oode: Tp., R., Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE Sec.,
Cox Woll name LOGATION: Usastilla U	y of ME2	Use std domein includes al drill design of dri	Index number 66-U 1F-30K-11-K File number Gode: Tp. R., Sec., Sec.) D C B A E 7 O H M L K 7 N P Q R Triel Well status- triel abandoned dry hole producer x ers name	Well name LOCATION: Unatilla Pendleton 2M 32Z 32 SM of MPk Tp. Range Section STATISTICS: Well type-Dug Drilled X Driven Drilled X Driven Final depth 240 John Crow Owners name Address Route 1 Pendleton, Oregon	Origi Add Dat	dome in in irri muni *include: C. E.	ZH-JZZ-JZ-Z File number (Oode: Tp., R., Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE F C N. Sec., JE Sec.,
Cox Well name LOGATION: Usatilla Count Dastilla Quadrang IM 30E 11 SE corner Typ. Range Section Fractional STATUMTICS: Well typs-Dug Drilled X face) Driven below Final depth 300! Cunningham Sheep Company Commers name Address Fendleton, Oregon	y e of RE section and surft. Origina Addr Date from Deepiroes: re-originates	Use std domein includes al drill dri	Index number 66-U 18-30X-11-E File number (Gode: Ty., R., Sec., Sec.) D C B A E y G H M L K y N P Q R Lucs Well status- trical abandoned dry hole ipin producer x escok wells ers name	Well type-Dog Elevation (lar face) John Crow Owaers name Address Pendleton Quadrangle Sk of Mk Fractional st School Fractional	origi Add Dat from Deces: recl	dome in him irri muni *include: C. E. nal dril: ress e of dri: epened cased eaned te	ZH-JZE-JZ-Z File number (Oode: Tp., R., Sec.,) D C I E F C M L 3 N P C M L 3 N P C String action Actio
Cox Well name LOCATION: Usantilla Count Usantilla Quadrangi IN 30E 11 SE corner Type Range Section Fractional STATURICS: Well type-Dag Drilled Face) Driven above below Final depth 300' Connaingham Sheep Company Country name Address Fendleton, Oregon This record compiled by E.S.V. data secured from the following sectomenty officials	of Magastion and surft. Original Addre Addre from Deepiroes: re-clet	Use stated domestic d	Index number 66-U IN-90s-11-H File number Godet Ty., R., Sec., Sec.) D C B A E F G H H L K J N P Q R Tus- wite x well status- tus- strick x abandoned dry hole producer X stock wells	Well type-Dag String from County Final depth 240' John Crow County John Crow Address Feadleton, Oregon Mr. J. R. Hanna, Fendleton, Oregon Date compiled January 1948	Original Additional Determination of the Column December 1 and 1 a	dome in him irri muni *include: C. E. nal dril: ress e of dri: epened cased eaned te	ZH-JZZ-JZ-Z File number (Code: Tp., R., Sec., JE File number (Code: Tp., R., Sec., JE File number (Code: Tp., R., Sec., JE File number (Code: Tp., R., Sec., JE File number (Code: Tp., R., Sec., JE File number (Code: Tp., N
Cox Well name LOCATION: Umatilla Count Destilla Quadrangi IN 30E 11 St corner Ty. Rence Section Fractional STATUTIOS: Well typs-Dag Elevation (1 face) Driven above below Final depth 300! Cunningham Sheep Company Cunningham Sheep Company Cunningham Sheep Company This record compiled by K.S.V. data secured from the Following soil Company officials	y of EN-2 section and surft. Origina Addr pate from Deep cled	Use stated domestic d	Index number 66-U IN-90s-11-H File number Godet Ty., R., Sec., Sec.) D C B A E F G H H L K J N P Q R Tus- wite x well status- tus- strick x abandoned dry hole producer X stock wells	Well type-Dug	origi Add Dat from Deces: recl	dome in au irri muni *include C. E. nal drill ress e of dril epened -cased eaned Depth (feet)	ZH-JZZ-JZ-Z File number (Oode: Tp., R., Sec., D C E F C M L 1 N P C M L 1 N P C Story Autis- setto
Cox Well name LOCATION: Umatilla Quadrangi IN 30E 11 St corner Ty. Rence Section Fractional STATUTION: Well typs-Dag Elevation (1 face) Driven above below Final depth 300! Cunningham Sheep Company Cunningham Sheep Company Address Fendleton, Oregon This record compiled by K.S.V. date secured from the Following sou	y of EE2 of EE2 of Text section and surft. Origin Addr pate from Deep irces: cled Date Thickness	Use stated domestic includes and drill includes al drill includes of drill includes and drill includes and drill includes and drill include and drill includ	Index number 66-U IN-30E-11-E File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H M L K J N P Q R tua- tua- tua- tua- tua- tua- tua- tua	Well type-Dug	origi Add Dat from Deces: recl	dome in au irri muni *include C. E. nal drill ress e of dril epened -cased eaned Depth (feet)	ZH-JZZ-JZ-Z File number (Code: Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec.,
Cox Well name LOCATION: Umatilla Count Destilla Quadrang IN 30E 11 SE corner Typ. Range Section Fractional STATUMICS: Privan above below Final depth 300¹ Cunningham Sheep Company Commany name Address Fendleton, Oregon This record compiled by E.S.V. data secured from the Following sections Company officials Date compiled July 1947 Material	y of EE2 of EE2 of Text section and surft. Origin Addr pate from Deep irces: cled Date Thickness	Use std domesed in usual interest of drill season of drill sea	Index number 66-U 18-30E-11-E File number (Code: Tp., R., Sec., Sec.) D C B A E y G H M L X J N P Q R Itus- tus- tus- tus- tus- tus- tus- tus-	Well type-Dug	origi Add Dat from Deces: recl	dome in au irri muni *include C. E. nal drill ress e of dril epened -cased eaned Depth (feet)	ZH-JZZ-JZ-Z File number (Code: Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec., Tp., R., Sec.,
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		#N-24E-24-D File number (Code: Tp., R., Sec., Sec.)	Well name	*******			File number (Code: Tp., R., Sec., 2 Se
LOCATION:		D C B A	LOCATION:	Count	_		D C B
Korrow Count		E F C H	Morrow	Quadrangl	•		Z F G
Blalock Island Quadrangl		M T K 1	Unmapped 1S 25E	14 NW3	.9		M L K
Tp. Range Section Fractional	section	N P Q R	Tp. Range		section		п Р Q
STATISTICS:			STATISTICS:				
Well type-Dug Elevation (1 Drilled x face) Driven above	ft. don	tatus- Well status- mestic* x mustrial abandoned	Well type-Du	Elevation (1 face)	and sur- ft.	Use st	atus- Well status- estic* estrial abandoned
Final depth 851	ir:	dry hole ictpal producer x	Final depth_	288'		irri muni	gation X dry hole cipal producer s stock wells
C. M. Crowder			Mr. Cutsfor	th.	A. A	. Durand	& Son
Owners name Address Boardman, Oregon	Original dri	llers name	Owners name Address	Lexington, Oregon	Origi Add	nal dril	& Son lers name Walla Walla, Washington
	Date of di	illing	_				lling Spring 1947
This record compiled by N.S.V. data secured from the Following sou	-		This record	compiled by M.S.W.		epened	
data secured from the Following sou	rces: re-cased_	by			rces: re	-cased eaned	by
Owner			Driller and	owner			
Date compiled March 1948	Date		Date compile	d September 1947	De	te	
Material	Thickness Depth	Remarks		Katerial	Thickness	Depth	Remarks
	(feet) (feet)		Soil ma		Included entry be:	with	Hole, 10 ⁸
No log available about	85	Well flows. No rate or pressure test figures avail-		ock besalt	entry be.	268	Noie, 10" SWL 2001
		able. Yield reported to be good and consistently so, but a mechanical pressure	i	and green clay	455	276	265 g.p.m. yield stabilize
	 	boost is needed to operate domestic water system.		and green clay	3	276	on test pump.
		wowself water system,	Yellew		8	287	
	 		Basalt		1	288	1
	l i	1	2		<u> </u>	1 200	
						 	Owner reports subsequent sustained pump run of 24
1	i i	1				i	hrs, per day for 5 days at
<u> </u>	i i	+				 	
L			<u> </u>		l .	<u> </u>	
		File number	Cutsforth #2 Well name				File number
Well name		(Code: Tp., R., Sec., & Sec.)	***************************************				(Code: To., R., Sec., 2 Se
LOCATION:		(Code: Tp., R., Sec., & Sec.)	LOCATION:		***********		(Code: To., R., Sec., & Se
LOCATION: Umatilla Count	•		LOCATION:	Count	•		
LOCATION: Umatilla Count Umatilla Quadrangl	.0	D C B A	LOCATION: Morrow Unmapped	Quadrangl	•		D C B
LOCATION: Umatilla Count	.0	D C B A E F C H	LOCATION:	Quadrangl	9		D C B A
LOCATION:	.0	D C B A E F C E	LOCATION: Morrow Unmapped 1S 26E	Quadrangl	9		D C B A
LOCATION: Count	section	D C B A E F G E M L K J N P Q R	LOCATION: Morrow Unnapped 1S 26M TP. Range STATISTICS: Well type-Du	9 Section Fractional Slevetion (1	section	Use st	D C B Z T G I W L X N P Q I
Counting	section and sur- Use s ft. dom in'	D C B A E F C K M L K J N P Q R Well status- seatic x sustrial deption dry hole	LOCATION: Morrow Unnumped 1S 26K Tp. Range STATISTICS: Well type-De	Quadrangi	section	dome iniu irri	D C B Z F G I W L X N P Q I String x string abandoned for hole
Counting	and sur- Use a door in irr mur	D C B A E F G E M L K J N P Q R tatus- realis	LOCATION: Norrow Unnapped 18 268 Tp. Range STATISTICS: Well type-Du	Quadrangi	section and sur- ft.	dome iniu irri muni	D C B E F G I M L X : N P Q I I stus- stic* x shadoned
Counting	section and sur- ft. don inr irr mulu *includ	D C B A E F O E M L K J N P Q R tatus- cectic X custrial depth of a bendoned digation dry hole circle about the control of th	LOCATION: Morrow Unnapped 15 268 Tp. Range STATISTICS: Well type-De Final depth Mr. Cuteforti	Guadrangi - 9 SM4 Section Frectional E Hieration (1 face) two below doi:	section section and sur- ft.	dome indu irri muni *include	atus- stic* x strial gation of photoset of
Counting Counting Counting	and sur- Use s ft. dom in irr mur *includ	D C B A E F O E M L K J N P Q R tatus- cectic X custrial depth of circle abendoned dry hole cir	LOCATION: Morrow Unnapped 1S 26% Tp. Range STATISTICS: Well type-Du Dr Final depth	Guadrangi - 9 SM4 Section Frectional E Hieration (1 face) two below doi:	section and sur- ft.	dome indu irri muni *include	D C B E F G I E F G I E F G I E L K E F G I E L K E F G I E F F F G I E F F F G I E F F F F G I E F F F F G I E F F F F F F F F F F F F F F F F F F F
Counting	and sur- Use : ft dom in in mu included C. E. Original dri Address Date of dr	tatus- cestic X ustrial dation dry hole gradua producer X estock wells D	LOCATION: Morrow Unnapped 1S 26K Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cutefortl Cwaers name Address	Quadrangle 9 SW4 Section Frectional ### Havetion (1 free hose) ### Havetion (1 free hose) #### Havetion (1 free hose) #### Havetion (1 free hose) ####################################	section and surfft. Original	dome indu irri muni *include	D C B E F G G I M L K L K L K L K L K L K L K L K L K L
Counting	and sur- Use : ft dom in in mu included C. E. Original dri Address Date of dr	tatus- cestic X ustrial dation dry hole gradua producer X estock wells D	LOCATION: Morrow Unnapped 1S 26K Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cutefortl Cwaers name Address	Quadrangle 9 SW4 Section Frectional ### Havetion (1 free hose) ### Havetion (1 free hose) #### Havetion (1 free hose) #### Havetion (1 free hose) ####################################	section and surfft. Original	dome indu irri muni *include nal dril ress	D C B E F G G I M L K L K L K L K L K L K L K L K L K L
Counting	and sur- Use : ft dom in in mu included C. E. Original dri Address Date of dr	tatus- cestic X ustrial dation dry hole gradua producer X estock wells D	LOCATION: Morrow Unnapped 1S 26E Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cuteforth Owners name Address This record data secured	Quadrangi 9 SNI Section Fractional E Hieration (1 illod x face) trum bolow 461	and surft. Original Date from Decrees: reces: rece	dome in nu irri muni *include nal dril ress e of dri epened	D C B E F G G I M L K L K L K L K L K L K L K L K L K L
LOCATION: Unetilla Count Count Count	and sur- Use s ft. do ft. do in ir sinute Address Dete of dr froes: re-eased	tatus- cestic X control dry hole cicipal cicipal cicipal producer X control dry hole cicipal producer X control dry hole cicipal cicip	LOCATION: Morrow Unnapped 1S 26E Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cuteforth Owners name Address This record data secured Owner	Quadrangia 9 SW Section Fractional Elevation (1 illed 1 face) ivan above 46: Lexington, Oregon complied by N.S.W. from the following son	and surft. Original Date from Decrees: reces: rece	dome indu irri mini *include nal dril ress e of dri epened -cased	atus- atics
Counting	and sur- Use : ft. dom in irr finclud	Tatus- Ta	LOCATION: Morrow Unnapped 1S 26E Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cuteforth Owners name Address This record data secured Owner	Quadrangle 9 SW4 Section Frectional ### Havetion (1 free hose) ### Havetion (1 free hose) #### Havetion (1 free hose) #### Havetion (1 free hose) ####################################	and sur- ft. Original Add Date from Decrees: re-	dome inzu irri muni *include nal dril ress e of dri epened -cased eaned	atus- atics
LOCATION: Usefulla Count Usefulla Quadrang W 29E 21 Wh of My Ty. Range Section Fractional STATISTICS: Well type-Dig face) Driven above below Final depth 250! Nr. Cursh Owners name Address This record compiled by M.S.W. date secured from the Joliowing sou	and sur- Use : ft. dom in irr finclud	Tatus- Ta	LOCATION: Morrow Unnapped 1S 26E Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cuteforth Owners name Address This record data secured Owner	Quadrangia 9 SW Section Fractional Elevation (1 illed 1 face) ivan above 46: Lexington, Oregon complied by N.S.W. from the following son	and surft. Original Add Dat from Decrees: received all	dome intu irri muni *include nel dril ress e of dri epened -cased eaned Depth	atus- atics
Count Coun	and our— Use : ft. dom ft. in in in in in in in in in in in in in i	D C B A E F G E M L K J N P Q R tatus- reatic T abandoned dry hole ricipal producer T levis liers mans Fondiaton, Oregon 11ling Remarks	LOCATION: Morrow Unnapped 1S 26E Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cuteforti Owners name Address This record data secured Owner	Quadrangle 9 SW Section Practical 2 Heratical 111164 A face) 1461 Lexington, Oregon Lexington, Oregon 1 Lexington the following sou	and surft. Original Addition of the Control of the	dome intuition irrii *include nel dril ress e of dri epened -cased eamed Depth (rest) 46	atus- atus- atrial abandoned dry ble producer a stock while producer Benarks Benarks Well flows if not pusped.
Count Coun	and sur- Use : ft. dom in irr included C. E. Original ari Address Date of dr from Deepened cleaned Date Thickness Depth (feet) [feet]	Tatus- Ta	LOCATION: Morrow Unnapped 1S 26E Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cuteforti Owners name Address This record data secured Owner	gandrangi 9 SW2 Scotion Fractional E Heration (1 illnd x face) trum above 46: Lexington, Oregon Lexington, Oregon occupiled by N.S.W. from the following sou	and surft. Original Addition of the Control of the	dome intuition irrii *include nel dril ress e of dri epened -cased eamed Depth (rest) 46	D C B E F F G I E F F G I E F F G I E F F G I E F F G I E F F G I E F F G I E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F G E F F G E F
Counting	and sur- Use : ft. dom in irr included C. E. Original ari Address Date of dr from Deepened cleaned Date Thickness Depth (feet) [feet]	D C B A E F G E M L K J N P Q R tatus- reatic T abandoned dry hole ricipal producer T levis liers mans Fondiaton, Oregon 11ling Remarks	LOCATION: Morrow Unnapped 1S 26E Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cuteforti Owners name Address This record data secured Owner	gandrangi 9 SW2 Scotion Fractional E Heration (1 illnd x face) trum above 46: Lexington, Oregon Lexington, Oregon occupiled by N.S.W. from the following sou	and surft. Original Addition of the Control of the	dome intuition irrii *include nel dril ress e of dri epened -cased eamed Depth (rest) 46	atus- atus- atrial abandoned dry ble producer a stock while producer Benarks Benarks Well flows if not pusped.
Count Coun	and sur- Use : ft. dom in irr included C. E. Original ari Address Date of dr from Deepened cleaned Date Thickness Depth (feet) [feet]	D C B A E F G E M L K J N P Q R tatus- reatic T abandoned dry hole ricipal producer T levis liers mans Fondiaton, Oregon 11ling Remarks	LOCATION: Morrow Unnapped 1S 26E Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cuteforti Owners name Address This record data secured Owner	gandrangi 9 SW2 Scotion Fractional E Heration (1 illnd x face) trum above 46: Lexington, Oregon Lexington, Oregon occupiled by N.S.W. from the following sou	and surft. Original Addition of the Control of the	dome intuition irrii *include nel dril ress e of dri epened -cased eamed Depth (rest) 46	D C B E F F G I E F F G I E F F G I E F F G I E F F G I E F F G I E F F G I E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F G E F F G E F
Count Coun	and sur- Use : ft. dom in irr included C. E. Original ari Address Date of dr from Deepened cleaned Date Thickness Depth (feet) [feet]	D C B A E F G E M L K J N P Q R tatus- reatic T abandoned dry hole ricipal producer T levis liers mans Fondiaton, Oregon 11ling Remarks	LOCATION: Morrow Unnapped 1S 26E Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cuteforti Owners name Address This record data secured Owner	gandrangi 9 SW2 Scotion Fractional 2 Heration (1 illad x face) trum above 46: Lexington, Oregon Lexington, Oregon 1 Lexington the following sout 4 July 1947 Material	and surft. Original Addition of the Control of the	dome intuition irrii *include nel dril ress e of dri epened -cased eamed Depth (rest) 46	D C B E F F G I E F F G I E F F G I E F F G I E F F G I E F F G I E F F G I E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F F G E F G E F F G E F
Count Coun	and sur- Use : ft. dom in irr included C. E. Original ari Address Date of dr from Deepened cleaned Date Thickness Depth (feet) [feet]	D C B A E F G E M L K J N P Q R tatus- reatic T abandoned dry hole ricipal producer T levis liers mans Fondiaton, Oregon 11ling Remarks	LOCATION: Morrow Unnapped 1S 26E Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cuteforti Owners name Address This record data secured Owner	gandrangi 9 SW2 Scotion Fractional 2 Heration (1 illad x face) trum above 46: Lexington, Oregon Lexington, Oregon 1 Lexington the following sout 4 July 1947 Material	and surft. Original Addition of the Control of the	dome intuition irrii *include nel dril ress e of dri epened -cased eamed Depth (rest) 46	atus- atus- atrial attrial a strock wells Benarks Well flows if not pusped. When pusped at 75 g.p.s. water level stands at 263
Count Coun	and sur- Use : ft. dom in irr included C. E. Original ari Address Date of dr from Deepened cleaned Date Thickness Depth (feet) [feet]	D C B A E F G E M L K J N P Q R tatus- reatic T abandoned dry hole ricipal producer T levis liers mans Fondiaton, Oregon 11ling Remarks	LOCATION: Morrow Unnapped 1S 26E Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cuteforti Owners name Address This record data secured Owner	gandrangi 9 SW2 Scotion Fractional 2 Heration (1 illad x face) trum above 46: Lexington, Oregon Lexington, Oregon 1 Lexington the following sout 4 July 1947 Material	and surft. Original Addition of the Control of the	dome intuition irrii *include nel dril ress e of dri epened -cased eamed Depth (rest) 46	atus- atus- atrial attrial a strock wells Benarks Well flows if not pusped. When pusped at 75 g.p.s. water level stands at 263
Count Coun	and sur- Use : ft. dom in irr included C. E. Original ari Address Date of dr from Deepened cleaned Date Thickness Depth (feet) [feet]	D C B A E F G E M L K J N P Q R tatus- reatic T abandoned dry hole ricipal producer T levis liers mans Fondiaton, Oregon 11ling Remarks	LOCATION: Morrow Unnapped 1S 26E Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cuteforti Owners name Address This record data secured Owner	gandrangi 9 SW2 Scotion Fractional 2 Heration (1 illad x face) trum above 46: Lexington, Oregon Lexington, Oregon 1 Lexington the following sout 4 July 1947 Material	and surft. Original Addition of the Control of the	dome intu irri mani *include nel dril ress e of dri epened -cased eamed Depth (rest) 46	atus- atus- atrial attrial a strock wells Benarks Well flows if not pusped. When pusped at 75 g.p.s. water level stands at 263
Count Coun	and sur- Use : ft. dom in irr included C. E. Original ari Address Date of dr from Deepened cleaned Date Thickness Depth (feet) [feet]	D C B A E F G E M L K J N P Q R tatus- reatic T abandoned dry hole ricipal producer T levis liers mans Fondiaton, Oregon 11ling Remarks	LOCATION: Morrow Unnapped 1S 26E Tp. Range STATISTICS: Well type-Du Dr Final depth Mr. Cuteforti Owners name Address This record data secured Owner	gandrangi 9 SW2 Scotion Fractional 2 Heration (1 illad x face) trum above 46: Lexington, Oregon Lexington, Oregon 1 Lexington the following sout 4 July 1947 Material	and surft. Original Addition of the Control of the	dome intu irri mani *include nel dril ress e of dri epened -cased eamed Depth (rest) 46	atus- atus- atrial attrial a strock wells Benarks Well flows if not pusped. When pusped at 75 g.p.s. water level stands at 263

LOCATION:				LOCATION:				
Unatilla Com	nty		D C B A	Rorrow	Count	· y		D G B
Umtilla Quedran			E F G H	Blalock Island	d (nadrane)			N L E
1# 30# 19 S# of St	14		N P Q R	4H 24H 7p. Bangs	24 HE2 of HW2 Section Fractional			7 2 9
Tp. Range Section Fractions	1 section			Ty. nange	Section Fractional			
STATISTICS:				STATISTICS:				
Well type-Dug Elevation Drilled x face)	(lend sur- ft.	Use st	ntus- Well status- stic* x	Well type-Dug Dri	Elevation ()	and sur- ft.	Use st	atus Well status
Drivenabove below		indu irri	strial abandoned gration dry hole	Dri	below		irri	strial abandone gation dry hole
Final depth 3001			cipal producer x s stook wells	Final depth_	1201		#include	es stock wells
Cunningham Sheep Company				Hugh Brown		A. X.	Edward	lers mass
Owners name Address Pendleton, Oregon		nel dril	lers name	Adress	Boardman, Orègon	Add	ress	Lexington
-	Da1	e of dri	lling	<u> </u>		-	e of dr	111ing 1941
This record compiled by H.S.W. data secured from the following a	from De	epened	-	This record o	from the following sou	from De	persod_	-
Company officials	el	eaned	- ру	1	by the driller	0.1	_bense.	рх
	_				T 10/5	-		
Date compiled July 1947	Thickness	Danth		Date compiled		Thicknes		
Material	(feet)	(feet)	Remarks		Material	(feet)	(feet)	Bearks
No log available		300	Pumped for stock use only		hardpan	<u> 8</u> 	<u> 8</u>	
		<u> </u>		1 1	ock - soft	12	20	
		ļ		1	salt, some black streak	16	36 90	
		 		Clay	alt, very hard	30	120	
		 		1 014		1 ,0		Water encountered at 901
		 				i	i	bottom of gray basalt. Pumping necessary but SVI
						1		almost at surface.
•		İ				İ	İ	
		i					İ	
				1				
Davis Well name			Index number36-U 3E-34E-3-C File number (Code: Tp., R., Sec., 2 Sec.)	Dillon Well name		-		Index number 168-M 4H-24E-13-R File number (Code: Tp., R., Sec., 2 S
LOCATION:	_		File number	Mell name				4N-24E-13-R File number
LOCATION: Unatilla Cou			3H-34E-3-C File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H	Moll name	Count	•		48-24E-13-R File number (Code: Tp., R., Sec., 2 S
Well name LOCATION: Usatilla Cou Pendleton Quadran 3H 34K 3 MF4 of NV	gle		#10-9/E-3-C File number (Code: Tp., R., Sec., 2 Sec.) D	LOCATION: Morrow Blalock Islan 4E 24E	d Quadrangl	•		48-24E-13-2 File number (Code: Tp., R., Sec., 2 S D C B E F C M L K
Well name LOCATION: Unatilla Cou Pendleton Quadran	gle		3H-34E-3-C File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H	Moll name LOCATION: Morrow Elalock Islan	d Quadrang)	•		48-24E-13-R File number (Code: Tp., R., Sec., 2 S
Well name LOCATION: Usatilla Cou Pendleton Quadran 3H 34K 3 MF4 of NV	gle		#10-9/E-3-C File number (Code: Tp., R., Sec., 2 Sec.) D	LOCATION: Morrow Blalock Islan 4E 24E	d Quadrangl	•		48-24E-13-2 File number (Code: Tp., R., Sec., 2 S D C B E F C M L K
Well name LOCATION: Umatilla Cou Pendleton quadran 3M 34E 3 MEA of NV Ty. Range Section Fractiona STATISTICS:	gle l section	Use st:	##:9/#2-3-C File number (Code: Tp., R., Sec., 2 Sec.) D	Foll name LOGATION: Morrow Blalook Julan 4N 24E Tp. Benge GRATIFICE: Fill Name 2.	d Quadrangi 13 SE of SE SE SECTIONAL	section	Use st	#12-05-13-2 File number (Code: Tp., R., Sec., 2 5 D C B E F C C M L E M P Q
	gle	dome indu irri		Norrow Elalock Island 4H 24E 75. Emnes STATISTICS: Well type-Dag Dri		section	dome	#12-05-13-2 File number (Code: Tp., R., Sec., 2 5 D
	gle I section (land surft.	dome in iu irri muni	### 1	Foll name LOCATION: Norrow Blalock Islan 4M 24E TD. Banep STATISTICS: Well type-Dag Drive Statement Statemen		section and surft.	dome into irri muni	#12-05-13-2 File number (Code: Tp., R., Sec., 2 5 D
	gle 1 section (land surft.	dome in iu irri muni *include:	File number (Code: Tp., R., Sec., 2 Sec.) D C B A Z F C H H L K F R P Q R Will status- stic* strial stock wills burand & Son	Morrow Blalock Julan	13 SE1 of SE2	section and surft.	dome iniu irri muni *include	### - 20 E-13-R File number (Code: Tp., R., Sec., 2 S D C B R F C O M L K N F Q #### P Q ##########################
DOINTION: Course	(land surft.	dome in iu irri muni *include:	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E T C H M L K J N F Q R The status- tite a station dry hole gitlen stock wells	Norrow Elalock Island 4H 24E 75. Emnes STATISTICS: Well type-Dag Dri	13 SE1 of SE2	section and surft. Beck	dome iniu irri muni *include	## 205-13-2 File number File number (Code: Tp., R., Sec., 5 D
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Well name LOCATION: Umatillia Cou Fendieton Quadran 19 3/18 3 EM; of Mile o	Original Add on Determination of the Courses: results of the Courses: results of the Courses: results of the Courses: results of the Courses: results of the Courses: results of the Courses: results of the Course	dome in au irri, muni *include. A. A. nal dril. ress e of dri: spened -cased eaned to Depth (cot) 10 21 62 72 87	File number (Code: Tp., R., Sec., 2 Sec.) D	Foll name LOGATUS: Norrow Blalook Jelan 4N 248 To. STATUSTICS: Well type-Due Dri Pinal depth Charles Pillo Omners name Address This record of data secured: Owner Dete compiled Soil Barden Bard	d Gasdrangi 13 SE\$1 of SE\$1 Bootion Provided Index (111ed X face) rea below 100' Boardsen Orseon Capiled by N.S.V. from the following sou March 1948 Naterial	Back Original Add Date from De Thickness (feet)	dome iniu irri muni rinclude inniu muni dril ress e of dri epened eased eased bette less to less the less to less the le	All-OUE-13-R File number (Code: Tp., R., See., S D C B R F O N L R N P Q And L
Well name LOCATION: Umatilia Cou Fendieton Quadran JH Jun S High of Nel The Range Section Fractions STATISTICS: Well type-Dag Drilled I face) Drilled I face) Driven above below Final depth 1601 B. A. Davis Commers name Address Fendieton, Oregon Ranch near Adam, Oregon This record complied by M.S.V. data secured from the following s U. S. O. S. Ground Water Division Date compiled December 1947 Material Soil "Boulders and hardpan" Basalt, gray SWL 201 Basalt, gray SWL 201 Basalt, bard SWL 251 Basalt, bard SWL 251 Basalt, bard SWL 251 Basalt, seft, SWL 301	Original Add Add Add Add Add Add Add Add Add Ad	dome in au irri, muni *include. A. A. nal dril. ress e of dri: spened -cased eaned to Depth (cot) 10 21 62 72 87	File number (Code: Tp., R., Sec., 2 Sec.) D	Foll name LOGATUS: Norrow Blalook Jelan 4N 248 To. Bange STATUSTICS: Well type-Due Dri Pinal depth Charles Pillo Omnere name Address This record of date secured: Owner Dete compiled Soil Barden Bard	d Gasdrangi 13 SE\$1 of SE\$1 Bootion Provided Index (111ed X face) 100' Boardsen Orseon Capiled by N.S.V. from the following sou Narch 1948 Naterial	Back Original Add Date from De Thickness (feet)	dome iniu irri muni rinclude inniu muni dril ress e of dri epened eased eased bette less to less the less to less the le	### OBF-13-R File number Gode: Tp., R., See., 5 D C B E F C O M L E H P Q ### P Q #### P Q ###############
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Well name LOCATION: Umatilia Cou Fendieton Quadran JH Jun S High of Nel The Range Section Fractions STATISTICS: Well type-Dag Drilled I face) Drilled I face) Driven above below Final depth 1601 B. A. Davis Commers name Address Fendieton, Oregon Ranch near Adam, Oregon This record complied by M.S.V. data secured from the following s U. S. O. S. Ground Water Division Date compiled December 1947 Material Soil "Boulders and hardpan" Basalt, gray SWL 201 Basalt, gray SWL 201 Basalt, bard SWL 251 Basalt, bard SWL 251 Basalt, bard SWL 251 Basalt, seft, SWL 301	Original Add Add Add Add Add Add Add Add Add Ad	dome in au irri, muni *include. A. A. nal dril. ress e of dri: spened -cased eaned to Depth (cot) 10 21 62 72 87	File number (Code: Tp., R., Sec., 2 Sec.) D	Foll name LOGATUS: Norrow Blalook Jelan 4N 248 To. Bange STATUSTICS: Well type-Due Dri Pinal depth Charles Pillo Omnere name Address This record of date secured: Owner Dete compiled Soil Barden Bard	d Gasdrangi 13 SE\$1 of SE\$1 Bootion Provided Index (111ed X face) 100' Boardsen Orseon Capiled by N.S.V. from the following sou Narch 1948 Naterial	Back Original Add Date from De Thickness (feet)	dome iniu irri muni rinclude inniu muni dril ress e of dri epened eased eased bette less to less the less to less the le	### OBF-13-R File number File number Folder Tp., R., See., S D C B E 7 0 H L E H P Q ### P Q ### A P

		File number (Code: Tp., R., Sec., Sec.)	Dudley #2 Well name			File number (Code: Tp., R., Sec., 2 S
LOCATION:		D C B A	LOCATION:			D C B
Morrow Coun	•	E F G H	Umatilla Coun	ty		E F G
Blalock Island Quadrana		M L K J	Quadrang	le		MLK
Tp. Range Section Fractional	section	N P Q R	Tp. Range Section Fractional	section		N P Q
STATISTICS:			STATISTICS:			**************************************
Well type-Dug Elevation (Drilled_x face)	land sur- Use s ft. dom	tatus- Well status- estic* x	Well type-Dug Elevation (land sur-	Use st	
Drilled x face) above below	in	ustrial sbandoned dry hole	Drivenabove	ft.		strial abandoned
Final depth 1041	mun	icipal producer x es stock wells	Final depth 2601 below		muni	gation dry hole cipal producer stock wells
Neil Doherty Owners name	Original dri	llers name	Dean Dudley Owners name	Origin	Durand	lers name
Address	_ Address	43.4	Address Athena, Oregon			alla Walla, Washington
This record complied by N.S.V.		illing about 1915		_		lling Sept. & Oct. 1945
This record comptied by M.S.W. data secured from the following so	urces: re-cased cleaned	by	This record complied by M.S.W. data secured from the rollowing so	_from Decurces: re-	epened -cased eaned	
Date compiled July 1947	Date		Date compiled January 1945	Da	te	
Naterial	Thickness Depth (feet) (feet)	Remarks	Naterial	Thickness	Depth	Remarks
No log available	(feet) [feet]	6" hole reduced to 2" at		(feet)		No.
20 205 0.0210010	104	bottom section of hole. Water stands at -30'. Has	Soil	55	63	`
***************************************	- 	ne wer pumped dry with a	Sandy clay Gravel and sand	11	74	
		windmill pumping unit.	Cemented gravel	6	80	
			Hard brown cand	10	90	
			Cemented gravel	14	104	
			Hard brown sand and rock	7	111	
			Hard basalt	99	210	
			Soft baselt	10	220	
			Blue clay	5	225	
			Brown clay	10	235	
			Gravel	2	237	
Doherty #2		Index number 101-H 2N-25E-20-N	Gray shale	23	260	SWL 2001
Well name	-	File number (Code: Tp., R., Sec., Sec.)		-	-	Bails 20 g.p.m., but als
NOIL REED			i I			bails dry.
LOCATION:	**********			+ -	1	
	ty	D C B A				
LOCATION:		E F G H				
LOCATION:	le of SW l	E F G H				
LOCATION: Morrow Coun Slalock Island Quadrang	le of SW l	E F G H	Bulden			Index number 147-9
LOCATION:	le of SW l	E F G H	Hulden Well name			Index number 147-0 File number (Code: TD. R., Sec., & Sc
LOCATION: **Cornor** **Country* **Spinor** **Paleck leland** **Quadrang** **The Country*	of SWA section	E F G H M L X J W P Q R	Hulden Woll name LOCATION:			File number (Code: Tp., R., Sec., 2 Se
LOCATION: Morrow South Stand Country Ty. Hange Section Frectional STATISTICS: Well type-Dag Elevation (1) Drillad 2 face) Driven Balow	of SWA section	E F G H M L X J N P Q R Totals Strial shandoned ary noise	Well name	ty		File number (Code: Tp., R., Sec., & Se
LOCATION: Country	led of SWA section Use at ft. down in a frrian mun	E F G H N L X J N P Q R Tatus- setion x bandoned	Well name	•		File number (Code: Tp., R., Sec., & Se
LOCATION: Country	land sur- ft. dom in a irri suni *include	E F G H N L X J N P Q R Religion abandoned dry hole digal producer x status— strial shandoned dry hole digal producer x	Well name LOCATION: Count Co	le		File number (Code: Tp., R., Sec., & Sc. B B B F G M L K
LOCATION: Country	led of SWA section Use at ft. down in a frrian mun	E F G H N L X J N P Q R Religion abandoned dry hole digal producer x status— strial shandoned dry hole digal producer x	Well name	le		File number (Code: Tp., R., Sec., & Sec.)
LOGATION: Country	section Land sur- ft. dom in: sinclude Original dril	E F G H N L X 7 N P Q R White the status- writing abndoned and approducer x setton dry hole clipal producer x lers name	Well name LOCATION: Count Co	le		File number (Code: Tp., R., Sec., & Sec.)
LOCATION: Morrow Morrow Thillock Island 28 22 20 30 SW corner Tp. Hange Section Frectional STATISTICS: Well type-Dig Section Privan below Final depth 125' Bell Deherty Owners name Address	of Svi section asction ft dom fr dom in a in a includ Original dril Address Date of dri	E F G H N L X 7 N P Q R White the status- writing abndoned and approducer x setton dry hole clipal producer x lers name	Well name LOCATION:	section	Use st:	File number (Code: Tp., R., Sec., 2 St. Se
LOCATON: Morrow Shalock leland Dadrang Ty. Range Section Fractional STATISTICS: Well type-Dag Drilled x face) Driven Driven Driven Driven Final depth 125' Beil Deberty Owners name Address This record complise by N.S.W. date secured from the following sec	of Svi section asction ft dom fr dom in a in a includ Original dril Address Date of dri	E F G H N L X 7 N P Q R White the status- writing abndoned and approducer x setton dry hole clipal producer x lers name	Mell name LOCATION: Count	section	in u	File number (Code: T)., R., Sec., 2 St. Se
LOCATION: Morrow Morrow Thillock Island 28 22 20 30 SW corner Tp. Hange Section Frectional STATISTICS: Well type-Dig Section Privan below Final depth 125' Bell Deherty Owners name Address	of Swit section and sur— Use at fix dome in a in a in a in a in a in a in a in	TE F G H N L X J N P Q R Well status- stics abandoned dry hole cipal producer X lers name 111ng about 1918	Well name LOCATION: Coun Arlimeten Coun	section and sur- ft.	dome: in:u: irri; muni:	File number (Code: Tp., R., Sec., 2 Se
LOCATON: Morrow Shalock leland Dadrang Ty. Range Section Fractional STATISTICS: Well type-Dag Drilled x face) Driven Driven Driven Driven Final depth 125' Beil Deberty Owners name Address This record complise by N.S.W. date secured from the following sec	of Sva section of Sva section ft. dom ft. dom fine section framin include Original dril Address Date of dri from Deepened cleaned cleaned	TE F G H N L X J N P Q R Well status- stics abandoned dry hole cipal producer X lers name 111ng about 1918	Mell name LOCATION: Count	section iand surft.	domes inclusi irri munic fincludes Wilburn	File number (Code: Th., R., Sec., 2 St. Se
LOCATION: Morrow County Space Section Success Statistics: Well type-Dag Drilledx Drillex	le of SWA section Land sur Use of the domestic of the domesti	TE F G H N L X J N P Q R Well status- stics abandoned dry hole cipal producer X lers name 111ng about 1918	Mell name LOCATION: Out	section iand surft.	domes inclusi irri munic fincludes Wilburn	File number (Gode: Tp., R., Sec., 2 Sc Pp., R.
LOCATION: County Count	of Swit section and sur- Use at fix dome in a fix in a f	Remarks F G H L X J N P Q R Well status- stic* sabadosed dry hole cipal producer x Beauty by Remarks F* hole - Strong flow en-	Well name LOCATION: Out	section iand surft. H. H. Origin Add:	domes inclusi irri munic fincludes Wilburn	File number (Gode: Tp., R., Sec., 2 St. St. St. St. St. St. St. St. St. St.
LOCATION: Morrow Dislock Island Justing Typ. Hange Section Fractional STATISTICS: Well type-Dug Drilled X Driven Driven Driven Beil Doherty Ornore name Address This record compiled by X, S, V, data secured from the Jollowing socours Date compiled July 1947 Material	and sur den fr. den fr. den fr. den der den fr. den der den fr. den der den fr. den der den den den den den den den den den den	Remarks S* hole - Strong flow en- pountered with no noted passage of the status- strict x Well status- status- strict x Well status- status- strict x Well status- standonsed dry hole dry hole stock wells Producer x S* hole - Strong flow en- pountered with no noted seasonal variation. Water	Well name LOCATION: Oillion Arlington 2H 21H 18 Ty. Range Section Fractional STATISTICS: Well type-Dag Elevation Drilled Tacel Driven shows below Final depth 2001 Bulden Eanch Owners name Address Usatilla, Oregon	section Land surft. Ft. R. B. Origin Add:	domer in duri irri, muni: *includes *includes *ilburn nal drill ress s of drill spened	File number (Gode: Tp., R., Sec., 2 St. St. St. St. St. St. St. St. St. St.
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LOCATION: Morrow Dislock Island Justing Typ. Hange Section Fractional STATISTICS: Well type-Dug Drilled X Driven Driven Driven Beil Doherty Ornore name Address This record compiled by X, S, V, data secured from the Jollowing socours Date compiled July 1947 Material	and sur den fr. den fr. den fr. den der den fr. den der den fr. den der den den den den den den den den den den	E F G H N L X J N P Q R Well status- setics x shandoned dry hole of clail producer x les stock wells strong flow en- by Remarks 5" hole - Strong flow en- pountered with no noted deseasonal variation. Water spouts to a height of about 191 with well full open, in	Well name LOCATION: Oilliam Coun Arlington 2uedrang ZE 2IE 18 Th. Range Section Fractional STATISTICS: Well type-Dag Elevation (face) Dritled X Driven below Final depth 2001 Bulden Eanch Owners name Address Umatilla, Oregon This record complied by Dole date secured from the Following son Letter from driller, Jan. 19, 1946	section Land surft. H. E. Origin Adding Adding Detrices: receives: receives: Thickness	domer in Autoria in Au	File number (Jode: Th., R., Sec., 2 St. St. St. St. St. St. St. St. St. St.
LOCATION: Morrow Dislock Island Justing Typ. Hange Section Fractional STATISTICS: Well type-Dug Drilled X Driven Driven Driven Beil Doherty Ornore name Address This record compiled by X, S, V, data secured from the Jollowing socours Date compiled July 1947 Material	and sur den fr. den fr. den fr. den der den fr. den der den fr. den der den den den den den den den den den den	E F G H N L X J N P Q R Well status- setics x shandoned dry hole of clail producer x les stock wells strong flow en- by Remarks 5" hole - Strong flow en- pountered with no noted deseasonal variation. Water spouts to a height of about 191 with well full open, in	Well name LOCATION: Oilliam Coun Arlimeton 2uedrang The Range Section Fractional STATISTICS: Well type-Dug Elevation (Land surft. H. H. Original Addition of the Control	domer in Autoria in Au	File number (Gode: Tp., R., Sec., 2 St (Gode: Tp
LOCATION: Morrow Dislock Island Justing Typ. Hange Section Fractional STATISTICS: Well type-Dug Drilled X Driven Driven Driven Beil Doherty Ornore name Address This record compiled by X, S, V, data secured from the Jollowing socours Date compiled July 1947 Material	and sur den fr. den fr. den fr. den der den fr. den der den fr. den der den den den den den den den den den den	E F G H N L X J N P Q R Well status- setics x shandoned dry hole of clail producer x set strial abandoned dry hole of clail producer x set stock wells set stock wells set stock wells set stock wells set stock wells by Shandoned dry hole of claim producer x Remarks B' hole - Strong flow en- bountered with no noted deseasonal variation. Water spouts to a height of about 1918 with well full open, in	Well name LOCATION: Oilliam Coun Arlington 2uedrang 2E 21E 18 Th. Range Section Fractional STATISTICS: Well type-Dug Elevation (section Land surft. H. E. Origin Adding Adding Detrices: receives: receives: Thickness	domer in Autoria resident	File number (Gode: Tp., R., Sec., 2 St Code:

Dune Well name	-1		Index number 144-6 38-228-16-2 File number (Code: Tp., R., Sec., 2 Sec.)	Index number 169-M 595-28-13-L Tell name Tilo number (Code: Tp., R., Sec., Sec.)
County			D C B A	LOCATION: D C B
Arlington Quedrangle 3H 22E 16 SW2 of HW2 Tp. Range Section Fractional			N P Q R	
### STATISTICS: Mell type-Dig	nd sur- ft.	in au	stic* x strial abandoned	### STATISTICS: Well type-Dug
Final depth 2631 below		muni	gation dry ole_ cipal producer x s stock wells	Final depth 72 below irrigation dry hole municipal municipal producer
J. W. Krebs Owners name	Fred Origin	M. Mulle	er lers name Ontario, Oregon	C. D. Eades Owners name Original drillers name
Address Cecil, Oregon		ress e of dri		Address Boardman, Oregon Address Lexington, Oregon
This record complied by N.S.W.	from De	e of dri epened_	11118	
data secured from the Following sour	rces: re	-cased	by	data secured from the following sources: re-cased cleaned by
Log recorded by Wirgil Starr and f by R. S. Bennett, U. S. Bureau of Management, Baker, Oregon	urnished Land			Verbal log report by the driller with production comments by R. A. Eades
Date compiled November 1947	Da Thickness		Daniel Control	Date compiled March 1948 Date Thickness Depth
Material	(feet)	(feet)	Remarks	(feet) (feet) Remarks
Top soil Moderately hard, black	1 2	18	Casing 6" to -161	Soil and hardpan 10 10 Well flows.
porous basalt Hard blue basalt	16	18		Elue basalt (streaks of black) 13 23 Strong pressure no volume data.
Moderately hard, black porous basalt	8	40		Gray basalt 32 65
Soft gray shale and clay	64	104		Pressure sufficient to
Moderately hard, black basalt variously nara,	10	114		operate domestic water an garden sprinkling system simu faneously without
dark conglomerate	20	134		similaneously without mechanical boosting.
Hard black basalt	61	201	Water, 50 gal. 1 day	
Unusually hard, gray basalt Moderately hard, brown	61	-		
porous basalt	7 20	208		
Soft, gray shale and clay Soft brown lava and sand	6	234	Water, 17 g.p.m.	
Soft brown clay	11	245		Index number 170-M
Very soft, darker gray soapstone and clay	18	263		Endem (R. A.) #1-20E-13-M Well name (Dode: Tp., R., Sec., & Se
	Ì			LOCATION: D C B
			Index number 171-M	Aprov County E F G
ly Well name			4H-25E-18-E File number	Elalock Island Quadrangle W L K 4W 24E 13 WW of SW
TOCATION:			(Code: Tp., R., Sec., & Sec.)	4H 24E 13 NV2 of SV2 N P Q
LOCATION: Lorrow County	,		D C B A	STATISTICS:
Blalock Island Quadrangle			E F G H	Well type-Dug Elevation (land sur- Use status- Well status- Drilled x face) ft. domestic* x
Fractional of Range Section Fractional of Research	section		N P Q R	Driven above in unstrial ebandome in right of the product of the p
STATISTICS:				R. A. Eades Abe Hansen
Well type-Dug Elevation (1: Drilled r face)	and sur- ft.		stic* x	Owners name Address Boardman, Oregon Address Goldendale, Vashington
Driven above below Final depth 90'		irri	strial abandoned gation dry hole producer x	Date of drilling 1928
		*include	s stock wells	This record compiled by E.S.V. from Deepened data secured from the following sources: re-cased
Elvin L. Ely Owners name	Origi	nel dril	lers name	Owner cleaned by
Address Boardman, Oregon	Add	ress e of dri		Date compiled March 1948 Date
This record compiled by N.S.W.	from De		111 mag 1924	Material Thickness Depth Remarks (feet) (feet)
data secured from the Pollowing sour		-cased eaned	by	No log available 93 65 hole - cased to bottom Whether this well flowed
	_			was cased out is not know Eades, Pumped for domest:
Date compiled March 1948	Da Thickness			uss. SWL 7 [†] .
Material	Thickness (feet)	1	Remarks	
No log available		90	Well flows very lightly, originally flowed strong	
	ļ	 	enough to service domestic water system without mechani-	
			rump nocessary	
			cal boost. Pump necessary now. Wasmer well believed to have affected pressure. With	
			now. Wasmer well believed to have affected pressure. With a deep well pump this well can be pumped dry in about 20 minutes at the rate of	

Hastern Oregon Food Co-op #1	-		Index number 23-U 4F-35E-15-P
	-		(Code: Tp., R., Se c., 2 Sec.
LOCATION:			D C B A
Usatilla Count			E F G H
Unsapped Quedrang	le .		M I K J
Fp. Range 15 SE2 of SW2 Renge Section Fractional	section		N P Q R
STATISTICS:			,
Mell type-Dug Elevation (I Drilled x face)	and sur- ft.	Use st dome	atio*
Drivenabove		iniu	strial z abandoned gation dry hole
Final depth 7371		muni	cipal producer x s stock wells
Eastern Oregon Food Co-op	A. A.		
Owners name Address Weston, Oregon	Origi	nal dril	lers name Walla Walla, Washington
Audion wooden orogon			lling finished Spring 1946
This record compiled by M.S.V.		epened_	TIME TIME TO THE TOTAL
This record compiled by H.S.V. lata secured from the following sou	rces: re	-cased eaned	- - h
U. S. G. S. Ground-Water Division company officials	and		
Date compiled Jan. and Feb. 1948	_	+4	
Naterial	Thickness	Depth	Perceire
	(feet)	(feet)	Remarks
Soil	8	8	
Gravel	4	12	
Gravel and clay	4	16	
Pasalt, hard gray	10	26	
Basalt, medium hard	52	78	
Basalt, hard	55	133	
Basalt, hard gray	3	136	
Basalt, medium hard	48	184	
Basalt, hard	32	216	
Basalt, gray, hard	20	236	
Pasalt, medium	49	285	
Basalt, hard gray	25	310	
Basalt, hard	70	380	
Clay, brown sticky	5	385	
Basalt, medium hard	56	441	
Basalt, hard	i,ii,	485	
Basalt, dark	22	507	
Basalt, soft	11	578	
Basalt, dark	22	550	
Basalt, gray	28	578	
Basalt, dark, black	72	650	
Basalt, gray and hard	5	655	
Basalt, dark	18	673	
Basalt, gray	20	693	
Basalt, dark	25	718	
Basalt, brown, medium hard	13	731	
Basalt, gray	6	737	Bottom of hole
Casing 20" set to 20"; 16" se	to 541;	12" hole	from 471 to 737'.
Pumped 1574 g.p.m. with 161'			
Water Temp. 60°F.			
Company officials report SWL	at 30' and	a 168' d	rawdown in a 48 hour test
Company officials report SWL at 1000 g.p.m. In usage, this was adversely affected by a part a depth of about 7201	well is y	the #2	ound 850 g.p.m. This well well when it was tested
	1	i	
	İ	i	
	1	i	

Elgin City #1			Index number 191-Un 1N-39E-15-J
MOTI DEDO			File number (Code: Tp., R., Sec., & Sec.)
COCATION:			D C B A
Union Count			E F G H
Unmapped Quadrangl			M T K 1
P. Range 15 HE2 of SE2 Pp. Range Section Fractional	section		N P Q R
TATISTICS:			
(ell type-Dug Elevation (1 Drilled x face)	and sur- ft.	Use sta dome	stic*
Driven above		in au irri	strial shandoned gration dry hole producer x
final depth 290		Include	S STOCK MOLLS
City of Elgin	A. A.	Durand &	k Son
Address	Add	ress	k Son lers name Walla Walla, Washington
			lling May to July 1940
This record complied by N.S.W. lata secured from the following sou	rces: re	pened	-
Driller and city officials	el	benned	by
ate compiled January 1948	Da	te	
Naterial	Thickness	Depth	Remarks
Top soil	(feet)	(feet)	8# hole
Gravel and boulders	6	12	Well flows 125 g.p.m.
Gravel and clay	12	16	Temp. 52°F.
Gravel and sand	16	18	
Boulders and clay	18	20	Pump installed delivers
Blue clay	20	23	400 g.p.m drawdown 1061
Clay	23	70	
Sandy, gray shale	70	75	According to City officials this well is capped. The pumping of the No. 2 Elgin
Gray shale	75	109	
Shale	109	118	the point of drying it. Both this and the No. 2
Sand and gravel	118	123	well will flow, however, given a sufficient period
Blue shale	123	127	of recovery.
Gray shale	133	170	
Blue clay	170	197	
Coarse sand	197	201	
Water sand	201	212	
Black sand and clay	212	232	
Gray shale	232	275	
Black basalt	275	283	,
Hard, black basalt	283	290	Bottom of hole
			,

Eastern Oregon Food Co-op #2			Index masher 24-U 4#-35E-15-P
Well name			File number (Code: Tp., R., Sec., 2 Sec.)
LOCATION:			D C B A
Unatilla Count	7		E F G H
Unmapped Quadrangle	•		N I X J
4H 35B 15 SE2 of SW2 Tp. Range Section Fractional			N P Q R
Tp. Range Section Fractional			
STATISTICS:			
Well type-Dug Elevation (le prilled race) above below	nd sur- ft.	Use sta domea indus irria	strial abandoned gration dry hole
Final depth 1218			cipal producer x stock wells
Bastern Oregon Food Co-Op	A. A.	Durand	å Son
Owners name Address Weston, Oregon	Origi:	mal drill	lers name Valla Valla, Vashington
	Date	of dri	11img 1947
This record compiled by H.S.W. data secured from the following sour	from Dec	pened	
	ale	cased_	ъу
U. S. G. S. Ground-Water Division Driller from 539' to bottom of hol- Also company officials			
Date compiled Jan. and Feb. 1948	Da		
Material	Thickness (feet)	Depth (feet)	Remarks
Soil	18	18	i
Gravel	3	21	
Rock, brown	5	26	
Basalt, dark hard	45	71	
Basalt, porous	14	85	
Basalt medium to hard	35	120	
Basalt porous and with green c	ay 10	130	
Basalt soft gray	13	143	
Basalt hard black	4	147	
Basalt porous	11	158	
Basalt black	12	170	
Basalt hard gray	20	190	
Basalt black	2	192	
Basalt gray	5	197	
Basalt hard black	14	211	
Basalt gray (SWL 11')	3	208	,
Basalt, black, hard, caves	17	225	
Basalt, porous	17	242	
Basalt, hard black	2	244	
Basalt, porous gray	26	270	·
Basalt, hard gray Basalt, hard black	16	272	
Basalt, hard black Basalt, hard gray	16	301	
Basalt, hard gray Basalt, porous black	20	301	
Basalt, black	30	351	
Basalt, porous	5	356	
Shale, brown	8	364	
Shale, brown and blue	8	372	
Basalt, porous	38	410	
Basalt, medium	13	423	
Basalt, porous	12	435	
Basalt, hard black	4	439	
Basalt, porous	2	441	
Basalt, medium	39	480	
Basalt, hard gray	12	492	
Basalt, porous - water	35	527	
Basalt, hard black	12	539	
Basalt, hard gray	25	564	
Basalt, medium black	5	569	
Basalt, hard gray	34	603	Lost water at 600'
Basalt, hard black	45	648	
Basalt, hard black Basalt, brown, porous			Some water here

Basalt, black, hard	. 17	678	
Basalt, brown, porons	3	681	
Basalt, black, medium	71	752	
Basalt, gray, hard	3	755	
Basalt	5	760	
Basalt, black, hard streaks	25	785	
Basalt, gray, hard	10	795	
Basalt, black, hard	52	847	
Basalt, soft blue	13	860	
Basalt, hard blue	20	880	
Basalt, soft blue	8	888	
Basalt, hard blue	2	890	
Basalt, hard black	1	891	
Basalt, blue - hard streaks	244	1135	
Basalt, blue - hard, broken	6	1141	
Basalt, blue, hard	74	1215	
Basalt, soft formation	3	1218	
			Bottom of hole
Pump test of #1 well with #2 w	ell at dep	h of 76	affected a drawdown of
well #2. #1 pumped at around #2 showed a final drawdown of	1200 g.p.m 1041. Tes	showed Dec. 4	a final drawdown of 171. to 27, 1946.
Water temperature at beginning	of pump t	est — 5	or. Temp. increased with
pumping to 70°F. at which it r SWL 52'4". At 673 g.p.m. draw	cown was 7	o'. At	Final pump test Sept. 5, 194 012 g.p.m. drawdown was 130
Casing record 20" OD to 17'	4=		
16" OD to 112	8"		

B.E. C B F G L K P Q 1 statu abandon dry hol	A H J R
C B F G L K P Q l statu	A H J R
F G L K P Q	H J R
F G L K P Q	H J R
L K P Q	J R
P Q	R
l statu	
abandon dry hol	.5-
abandon dry hol	8-
dry hol	
dry hol	
produce	rI
17	
water press	
	are.
-	

Eche City			Index number 77-U 3H-29H-16-E
Well name			File number (Code: Tp., R., Sec., 2 Sec.)
LOCATION:			
Umatilla Count			D C B A
Omatilla Quadrangl			B F G H
30 298 16 SE2 of KE2			M L K J
Tp. Range Section Fractional	section		41114
STATISTICS:			
Well type-Dig Elevation (1 Drilled face)	and sur-	Use st	atus- Well status-
Drilledx face) Driven above below	ft.		strial abandoned
Final depth 5201		muni ebulant	gation dry hole cipal x producer x stock wells
411			
City of Echo Owners name	Origi	nal fil	lers name Lexington, Oregon
Address	Dat	o' dri	lling Oct. 1945 to Sept. 1947
This record compiled by N.S.V.		epened	
This record compiled by E.S.W. data secured from the Following sou	rces: re	-cased eaned	
Driller			
Date compiled October 1947	Da:	te	
Naterial Naterial	Thickness	Depth	Remarks
	(feet)	(feet)	
Soil	26	30	Casing log and pump test
Gravel and hardpan	5		data entered on last log
Dirt	2	35	sheet.
Loose sand and gravel	7	37*	
Loose gravel	2	46	
Hardpan	6	52	
Rock	4	56	
Red clay	6	62	
Soft red rock	10	72	70 - some water
Soft red_rock	5		at 75 last most out.
Pea gravel	11	78 à	at 75 - lost most water
Red clay	5	831	
Tellow rock with boulders	141	98	
Blue rock, broken and mud	12	110	Some water
Blue rock	5	115	
Hard rock, sud and blue clay			
between layers of boulders	10	125	
Solid rock	8	133	
Broken "cube" basalt	9	142	Very slow drilling
Blue gray basalt Broken "cube basalt" 8"	10	152	
followed by very hard basalt	14	166	
of brown shale followed by	18	184	
Blue and gray basalt	30	214	
Shale and rock in 6" ave. laye	s 18	232	
Hard, solid clay	7	239	
Green shale	. 2	241	
Green shale, hard	16	257	Water at 257
Basalt	6	263	
Basalt - extremely hard Blue basalt - alternate soft	11	274	
and hard layers	4	278	
Brown rock	8	286	
Hard basalt Alternate hard rock and clay	4	290	
in 6" to 8" layers	6	296	
Crevices	4	300	Water dropped 281
Blue rock and some clay layers	28	328	
Hard basalt	62	390	
Extremely hard basalt	16	406	
Seams and crevices in basalt	4	410	Water dropped 50°
Very hard basalt	1	411	
Shale .	1	412	
Blue rock with crevices	8	420	
Very hard gray basalt	5 (cont	425 med)	

Medium soft blue rock	12	437	
Black basalt	5	442	Vater at 442
Boulder and crevice	1	443	Water and some sand, Drill
			5 hours with no penetration
Black basalt (and water course)	17	460	Water dropped to 2201 level
Hard boulders and soft spots	30	490	
Green clay seams a few inches thick between basalt layers	8	498	
Hard basalt	22	520	Bottom of hole
Casing log:			
123" hole to 169"			
10** hole to 169' to 336' 82" hole 336' to 520'.			
Cased 1691 with 10s casing.			
Pump test with 6" deep well pur	p at capa	ity out	nt gave yield of 200 g.p.m.
Drawdown with above equipment	ma 60' at	100 g.p	m No difference noted w
greater yield.			
Temp. E ₂ 0 is 67°F.			

Gabert Well name			File number	S-231	- /-		
			(Code: Tp.,	R.,	Sec.		ec.
LOCATION:				Г	c	В	A
Morrow Count	9			E	,	G	н
Unmapped Quadrangle	9			×	I.	ĸ	J
2S 23E 32 NB2				N	_	-	\vdash
Tp. Range Section Fractional	section			Ľ	P	Q	R
STATISTICS:							
Well type-Dug Elevation (le	and sur-	Use st	atus-	We	11 5	tatus	3 -
Drilled x face) Driven above	ft.	dome	stic* x			ndone	
below					Ann	hold	
Final depth 276		muni include*	cipals stock wells		pro	luces	
Gabert Holmes	Fred 1	Nichoson					
Owners name	Origi	nal dril	lers name				
Address Portland, Oregon			Ione, Orego				
			lling Sum	er,	1947		
This record compiled by N.S.W. data secured from the following sour	from De	epened_	_				
	cl	-cased eaned	by				
Driller and Morrow County Recorder							
Oate compiled October 1947			· · · · · · · · · · · · · · · · · · ·				
		Depth	Re	mark			
Oate compiled October 1947	Da Thickness	Depth	Re 5 5/8" hole.				
Oate compiled October 1947	Da Thickness (feet)	Depth (feet)					
Oats compiled October 1947 Naterial Top soil	Da Thickness (feet)	Depth (feet)					
Date compiled October 1947 Naterial Top soil Shelly boulder formation	Da Thickness (feet)	Depth (feet) 2½ 27		•		et.	
Naterial Top soil Shelly boulder formation Soft formation with little clay	Da Thickness (feet) 21/2 24/2 8	Depth (feet) 2½ 27 35	5 5/8" hole.	•		et.	
Naterial Top soil Shelly boulder formation Soft formation with little clay	Da Thickness (feet) 21/2 24/2 8	Depth (feet) 2½ 27 35 69	5 5/8" hole.	•		et.	
Naterial Top soil Shelly boulder formation Soft formation with little clay Elue besalt Hard gray basalt	Da Thickness (feet) 21/2 24/2 8 34 13	Depth (feet) 2½ 27 35 69 82	5 5/8" hole.	•		et.	
Naterial Top soil Shelly boulder formation Soft formation with little clay Elue basalt Hard gray basalt Frown porous rock	Da Thickness (feet) 2½ 24½ 8 34 13	Depth (feet) 2 1/2 27 35 69 82 89	5 5/8" hole.	•		et.	
Naterial Top soil Shelly boulder formation Soft formation with little clay Flue besalt Hard gray basalt Brown porous rock Hard blue rock	Da Thickness (feet) 2½ 24½ 8 34 13 7	Depth (feet) 2½ 27 35 69 82 89 96	5 5/8" hole.	•		et.	
Naterial Top soil Shelly boulder formation Soft formation with little clay Elice besalt Hard gray basalt Brown porous rock Mard blue rock Black to brown porous rock	Da Thickness (feet) 2½ 24½ 8 34 13 7 7	Depth (feet) 2½ 27 35 69 82 89 96 110	5 5/8" hole.	•		et.	
Naterial Top soil Shelly boulder formation Soft formation with little clay Slue basalt Hard gray basalt Brown perous rock Hard blue rock Dlack to brown perous rock Moderately hard blue rock	Da Thickness (feet) 21/2 24/2 8 34 13 7 7 14	Depth (feet) 2½ 27 35 69 82 89 96 110 136	5 5/8" hole.	•		et.	
Naterial Top soil Shelly boulder formation Soft formation with little clay Flue basalt Hard gray basalt Frown porous rock Hard blue rock Dlack to brown porous rock Koderately hard gray rock	Da Thickness (feet) 2½ 24½ 8 34 13 7 7 14 26	Depth (rest) 2 1/2 27 35 69 82 89 96 110 136 155	5 5/8" hole.	•		et.	
Naterial Top soil Shelly boulder formation Soft formation with little clay Blue basalt Hard gray basalt Frown porous rock Hard blue rock Black to brown porous rock Moderately hard gray rock Hard blue porous basalt	Da Thickness (feet) 21/2 24/2 8 34 13 7 7 14 26	Depth (feet) 2½ 27 35 69 82 89 96 110 136 155 160	5 5/8" hole.	•		et.	
Naterial Top soil Shelly boulder formation Soft formation with little clay Blue beselt Bard gray baselt Brown porous rock Hard blue rock Black to brown porous rock Moderately hard blue rock Very hard gray rock Hard blue porous baselt Hard solid blue baselt	Da Thickness (feet) 2	Depth (feet) 2½ 27 35 69 82 89 96 110 136 155 160 166	5 5/8" hole.	•		et.	
Naterial Top soil Shelly boulder formation Soft formation with little clay Blue basalt Bard gray basalt Frown porous rock Hard blue rock Mack to brown porous rock Noderately hard blue rock Very hard gray rock Hard blue porous basalt Hard solid blue basalt Rrewn poreus rock	Da Thickness (feet) 2½ 24½ 8 34 13 7 14 26 19 5 6	Depth (feet) 2½ 27 35 69 82 89 96 110 136 155 160 166 172	5 5/8" hole.	•		et.	
Naterial Top soil Shelly boulder formation Shelly boulder formation Soft formation with little clay Elue besalt Hard gray basalt Frown porous rock Hard blue rock Moderately hard blue rock Very hard gray rock Hard solid blue besalt Hard solid blue besalt Rrewn porous rock Moderately hard blue besalt	Da Thickness (feet) 2½ 24½ 8 34 13 7 14 26 19 5 6 6 8	Depth (reet) 2 1/2 27 35 69 82 89 96 110 136 155 160 166 172 180	5 5/8" hole.	•		et.	

Blgin City #2			Index number 192-Win 1E-39E-15-J File number
			(Code: Tp., R., Sec., 2 Sec.)
LOCATION:			D C B A
Union Count			E F G H
Unmapped Quadrangl			M T K 1
Tp. Range Section Fractional	section		H P Q R
STATISTICS:			
Well type-Dug Elevation (1 Drilled _ face)	and sur-	Use st	atio*
Driven helow		4 month	strial shandoned
Final depth 3501		muni include	gation dry hole oipal x producer x stock wells
City of Elgin	A. A.	Durand	& Son lers name
Owners name Address	Origi:	nal dril ressW	lers name alla Valla, Vashington
	Dat	e of dri	lling April to June 1941
This record compiled by E.S.V. data secured from the following sou	from Dec	pened_	_
data secured from the Following sou Driller and City Officials	rces: re	-cased_	by
Driller and City Officials			
Date compiled Jamary 1948	Da	te	
Material	Thickness (feet)	Depth (feet)	Remarks
Clay, sand and gravel	0	6	Casing:
Gravel	6	8	12" over all length 287'6",
Heavy boulders	8,	15	seated at 286 extending
Gray shale	13	34	13 above ground surface.
Clay and heavy boulders	34	48	
Gray shale	48	104	Pump test 6/21/41
Sandy gray shale	104	120	300 g.p.m. at 38' drawdown
Sand and gravel	120	125	438 g.p.m. at 50 drawdown
Blue shale	125	145	590 g.p.m. at 62' drawdown
Gray shale	145	175	
Sticky blue clay	175	198	At time of setting, well
Sand ,	198	213	flowed 85 g.p.m. over casing
Blue clay and sand	213	234	head.
Green shale	234	267	
Gray sandy shale	267	278	
Black basalt	278	283	
Porous basalt Black basalt	283	284 301	
Brown basalt	301	303	
Brown basalt Hard black basalt	303	303	
Brown basalt	323	327	
	1	<u> </u>	Patter of hele
Black baselt	327	350	Bottom of hole
by a 5 to 8 day pumping period	During	ne Vint	r and Spring, however, yield
According to City officials, to by a 6 to 6 day pumping period is strong. This well is situated well drains the 50.1 Well. B a sufficient long period for r	covery.	a the s	. I well flow however given
Tong posses for a			
			, .

Elgin City #3			1E-39E-22-B
 			(Code: Tp., R., Sec., 2 Sec.)
OCATION:			D C B A
Union Count	7		E F G H
Unmapped Quadrangl			K I K J
18 398 22 We of MB	section		N P Q R
TATISTICS:			
Drilled Elevation (1 face)	and sur-	Use st	stic*
Drivenabove		iniu	strial abandoned gation dry hole
final depth 6551		muni include	cipal X producer X
City of Blgin	A. A.	Durand .	4 Son
Muners name Address	Origi	nal dril	& Son lers name Valla Valla, Vashington
			lling March - June 1947
This record compiled by H. S. V.		pened	
his record compiled by H. S. W. ata secured from the following sou	roes: re-	cased_ ened_	by
Driller and city officials			
ate compiled January 1948	Da	te	
Naterial	Thickness		Remarks
Gravel and boulders	0	38	Casingt
Blue clay and gravel	38	65	Bottom, of 20" at 61' 10"
Gravel	65	70	Bottom of 16" at 429 0" Bottom of 12" at 620 0"
Clay and gravel	70	115	DOPTOM OI 12" at 620' U
Brown clay and gravel Tellow clay, some gravel	115	145	Well flowing 350 g.p.m.
Yellow sticky clay	145	201	
			Temp. 53°F.
Shell rock	201	298	Drawdown 27' at 552 g.p.m.
	298	306	Draw down 87' at 1095 g.p.m.
Blue clay	306	335	City Officials report that
Tellow and green clay	335	364	excepting for a couple days shutdown for pump repairs,
Greenish blue clay	364	390	this well has been pumped for 24 hours per day ever since
Nica, silt and sandy slime	390	394	25 hours per day ever since its completion. No change in yield has been observed.
Sticky blue clay	394	410	Excess water pumped is discharged into the river.
White clay	410	417	
Blue clay	417	428	
Sandy blue clay	428 480	480	
Sticky blue clay Basalt rock	560	560 568	
Blue clay	568	618	
Basalt (flowing water)	618	643	
Cinder rock (flowing water)	643	651	
Hard basalt	651	655	Bottom of hole
ama pasare	1		20002 01 1010
	-	_	

Freewater City #1		5E-35E-2-0E 11e number Code: Tp., R., Sec., 2 Sec.)	Freewater City #2			5H-35H-2-H File number (Code: Tp., R., Sec., 2 5
LOCATION:		D C B A	LOCATION:			D C B
Umatilla C	ounty	E F G H	Umatilla County			Z P G
Unmapped Quadr	angle	M T K 2	Unmapped Quadrangle			N L K
5H 35H 2 Sh of H Tp. Range Section Fraction	nal section	N P Q R	Tp. Range Section Fractional se	etion		N P Q
STATISTICS:	n (land sur- Use stat	us- Well status-	STATISTICS:		Use sta	itus- Well Status
Drilled x face)	ft. domest	ic*	Well type-Dug Elevation (lan Drilled x face)	ft.	domes	stic*
Pinal depth 3741 88 below	industries munici	tion dry hole	Driven above below Final depth 502	= .	irri	strial sbandone gation dry hole pipal x producer s stock wells
City of Freewater Owners name	A. A. Durand & Original drille	Son	City of Freewater	A. A.	Durand &	t Son lers name
Address	Address	Walla Walla, Washington	Address			alla Walla, Washington
	Date of drill	ing		Date	of dri	lling
This record compiled by E.S.W. data secured from the Pollowing	from Deepened sources: re-cased		This record compiled by H.S.W. f data secured from the following source	rom Des	pened	-
City officials	cleaned	ρλ	Driller and City Water Master	cle	eaned	
•				_		
Date compiled January 1948	Date		Date compiled January 1948	Dat Thickness		
Material	(feet) (feet)	Remarks	Material	(feet)	(feet)	Remarks
No log available	3741 81	According to City Officials this well is used as the	Soil and gravel	3	3	Hole 12 ⁸ to bottom
		principal source of water supply, with the #2 well	Loose boulders and gravel Gravel and boulders partly	17	20	
		used only as an auxiliary	cemented	15	35	Casing: 40' of 18" and
		In practice, this well is pumped at the rate of about	Loose boulders and gravel	5	40	172' of 12"
		280 g.p.m. 24 hours/day.	Cement boulders and gravel	40	80	
	1 1		Clay	10	90	
			Heavy boulders and gravel	45	135	
	+ + +		Clay and sand Gravel and boulders, loose	10	145	
	+ + +	-	Basalt rock, black and very hard		245	
	1 1 1				290	
			Red porous basalt rock (extra	70	360	
	:	nder number 62-U	Blue basalt porous rock (hard) Black basalt rock	45	405	· · · · · · · · · · · · · · · · · · ·
French #1 Well name		3H-31H-8 ile number	Red basalt rock	30	435	
		Code: Tp., R., Sec., 2 Sec.)	Black basalt rock, lots of water		502	Bottom of hole
LOCATION:		D C B A	Surface water struck in the seve			
	ounty	E F G H	was found in the next forty feet	in cemer	t grave	and boulders. There was
Pendleton Quadr	angle	H L K J	were light flows. The heavy flow were light flows. The heavy flow we the black hassit rock. The water so been previously. Pumping 705 s.p.s. Pumping 1025 g.p.s. the level was a	as obtaine	d in the	last sixty-seven feet of er to the surface than it
Tp. Range Section Fraction	nal section	N P Q R	been previously. Pumping 750 g.p.m. Pumping 1025 g.p.m. the level was at	the wat	r lower	the ground surface.
COLUMN TAR.			According to City officials this 850 g.p.m. but it is used as a			
STATISTICS: Well type-Dug Elevation	r (land sur- Use stat	us- Well status-	850 g.p.m. but it is used as a s summer season only for stretches	of about	4 hour	per day.
Drilled z face)	ft. domest	ic* x				
Final depth 416	irriga munici	tion dry hole			1	1
	*includes	stock wells			1	1
Brnest T. French Owners name	Original drille	rs name			1	
Address Pendleton, Oregon	Address					
	Date of drill	ing 1916			-	
This record compiled by H.S.V. data secured from the Following	from Deepened Sources: re-cased	•			-	
Owner	cleaned	by			l I	
Date compiled July 1947					<u> </u>	1
	Date Thickness Depth	9			l	
Material	Thickness Depth (feet) (feet)	Remarks				
No log available	416	3WL 901			İ	
	+ + +				İ	
-	+ + +				İ	İ
	j i i					

	-		Index number — 64-U 2E-31E-31 File number	Greener Well name	_		Index number — 118-4 28-268-34 File number
LOCATION:			(Code: Tp., R., Sec., 2 Sec.)	LOCATION:			(Code: Tp., R., Sec., 2 S
Unatila Com			D C B A		ownty		D C B
Pendleton Quadran	•		Z 7 G H	Unmapped Quadr	•		E F G
2m 31m 31 mv2 -7	.g.u		M L K J			f Heppner	M L X
Tp. Range Section Fractions	al section		N P Q R	28 268 34 within Tp. Range Section Fraction	nal section		N P Q
STATISTICS:				STATISTICS:			
Well type-Dug Elevation Drilled x face)	(land sur- ft.	Use sta	atus- Well status- stic* x	Well type-Dug Elevatio Drilled x face)	n (land sur- ft.	Use st dome	stic* x
Driven above below		iniu irri	strialabandoned gationdry hole	Driven above		irri	strial abandoned gation dry hole
Final depth 6241		muni *include	cipal producer x s stock wells	Final depth 133'		mun: *include	s stock wells
Brnest T. French				Mm. Greener	<u> </u>	Durand	& Son lers name
Owners name Address Pendleton, Oregon	Add	dress	lers name	Owners name Address Box 233	AA	dress	Valla Valla, Vashington Started December 19
		te of dri	lling	Heppner, Oregon		te of dr	lling Finished February 1
This record compiled by H.S.W. data secured from the following s	from De	eepened e-cased	<u>-</u>	This record compiled by M.S.W. data secured from the following	from Do	eepened_ e-cased_	<u>-</u>
Owner	63	leaned	by	Driller	0.	leaned	
Date compiled July 1947	_	ato		Date compiled January 1	948 n	ate	
Meterial	Thickness	s Depth	Remarks	Material Material	Thicknes	s Depth	Remarke
	(feet)	1			(feet)	1	
No log available	+	624	Normal pumping practice	Soil Gravel and boulders	9	1 9	Casing 6" to 111' -
	+	†	6 g.p.m.	Broken basalt	17	71	
	i –	t		Hard blue basalt	50	81	
	1	†		Hard broken basalt	5	86	·
		1	•	Hard blue basalt	37	123	
				Hard gray basalt	10	133	SWL 481
		 					2 hour bail test indicates 28 g.p.m. with 13 drawdo
						<u> </u>	and recovery in 11 minute
			Index number — 47-11 18-352-3	Hadley		1	Index number - none -N
Oillanders Well name				Well name			Index number - none -N File number (Gode: Tp., R., Sec., 2 Sec.)
Well name			IS-35E-3 File number (Gode: Tp., R., Sec., Sec.) D C B A	Well name			File number (Code: Tp., R., Sec., 2 Se
Well name LOCATION: Umatilla Cou	inty		18-35E-3 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H	Well name LOCATION: Morrow C	nunty		File number (Code: Tp., R., Sec., & S
Well name LOCATION: Umatilla Cou Umapped Quadran 1H 352 3	ngle		IS-35E-3 File number (Gode: Tp., R., Sec., Sec.) D C B A	Well name LOGATION: Motrow C	angle		File number (Code: Tp., R., Sec., 2 Se
Well name LOCATION: LIMALILIA COU Unmapped Quadran 13 32 7 Tp. Range Section Frections	ngle		IS-5/SE-5 File number (Gode: Tp., R., Sec., 2 Sec.) D C B A Z F O H H L K J	Well name LOCATION: MOSTOW Quadr Tp. Bange Section Fractio	angle		File number (Gode: Tp., R., Sec., & S.
Well name LOCATION: LMMatilla Cou Unnapped Quadra: 19 32 3 Tp. Range Section Frections STATISTICS:	ngle		IS-5/SB-5 File number (Oode: Tp., R., Sec., 2 Sec.) D C B A E F O H M L K 7 N P Q R	Well name LOCATION: Morrow C Quadr Tp. Range Section Fraction STATISTICS:	angle		File number (Code: Tp., R., Sec., 2 S
Mall	ngle	Use str dome	IS-35B-3 File number (Odde: Tp., R., Sec., 2 Sec.) D C B A E F O H M L X 7 N P Q R	Well name LOCATION: ROTTOW Quadr Tp. Range Section Fractio STATISTICS: Well type-Dug Elevatio Drilled x face)	angle	Use st dome	File number (Code: Tp., R., Sec., Se
Mall name	(land sur-	dome iniu irri muni	IS-5/SR-5 File number (Jode: Tp., R., Sec., 2 Sec.) D C B A E F O H H L X 7 N P Q R attis- attis- attis- attis- attis- attis- attis- patton dry hole olpal producer x	Nell name LOCATION: ROTTOW Quadr Tp. Range Section Fractio STATISTICS: Well type-Dug Elevation Driven School Schoo	nal section	dome iniu irri muni	File number (Code: Tp., R., Sec., S. S. D C B E F G N L X F P Q atus- stic Z shadone getion getion dry bole closel
Mell name Countries	al section (land surft.	dome iniu irri muni *include	IS-5/SE-5 File number (Gode: Tp. R. Sec. 2 Sec.) D C B A E F G H H L X 7 N P Q R stus- stus- stics x stical dandoned dry hole opal strail st	LOGATION: Rottow Quadr Tp. Range Section Fraction STATISTICS: Well type-Dug face) Drilled X face) Driven above Final depth 1961	nal section (land surft.	dome iniu irri muni *include	File number (Code: Tp., R., Sec., S. Se
Well name LOCATION: Limatilla Cou Unmapped Quadran 18 32 7 Top. Range Section Frections STATISTICS: Well type-Dag Elevation Driven boore Brinal depth 383' Final depth 383' Concrete hame Concrete hame Concrete hame	(land surft.	dome: in:u irri muni: *include: Durand & inal dril:	IS-358-7 File pumber (Odde: Tp., R., Sec., 2 Sec.) D C B A E F O H H L K 7 H P Q B atua- a	Well name LOGATION: Rostow Quadr Tp. Range Section Fraction STATISTICS: Well type-Dug	angle nal section (land surft.	dome iniu irri muni *include . Edwards inal dril	File number (Code: Tp., R., Sec., Se
Well name LOCATION: Limatilla Cou Unnapped Quadran 13 32 3 Top. Sange Section Fractions STATISTICS: Well type-Dag Elevation Driven above below Final depth 383' Earl Gillanders Concers name Address c/o Gillanders & Barron	(land surft. A. A. Original	dome indu irri muni *include Durand & inal dril dress	IS-578-7 File number (Code: Tp., R., Sec., X Sec.) D C B A E F O H M L X 7 N P Q R Attan- attan-	Noll name LOCATION: ROTTOW Quadr Tp. Range Section Fractio STATISTICS: Well type-Dag Driven Driven Final depth 1961 Olen Hadley Record Section Fraction One Hadley	angle nel section nel section ft. A. M. Orig	dome indu irri muni *include . Edwards inal dril iress	File number (Code: Tp., R., Sec., 2 St. St. St. St. St. St. St. St. St. St.
Mell name LOCATION: Limatilla Cou Unnapped Quadrar Tp. Range Section Frections STATISTICS: Well type-Dag Elevation Driven above above below Final depth 383' Earl Gillanders Owners name Co Gillanders & Barrot 403 S. Main St., Fendle	(land surft. A. A. Original Addesion Determination	dome indu irrigmuni *include: Durand & inal drill dress to of drill	IS-578-7 File number (Code: Tp., R., Sec., X Sec.) D C B A E F O H M L X 7 N P Q R Attan- attan-	Well name LOGATION: Roffow Quadr Tp. Range Section Fraction STATISTICS: Well type-Dug Drilled X face) Driven Final depth 1961 Glen Radley Owners name Address	angle nal section n (land surft. A. M. Orig	dome indu irri muni *include . Edwards inal dril iress te of dri	File number (Code: Tp., R., Sec., 2 St. St. St. St. St. St. St. St. St. St.
Well name LOCATION: Limatilla Cou Unnapped Quadran 13 32 3 Top. Sange Section Fractions STATISTICS: Well type-Dag Elevation Driven above below Final depth 383' Earl Gillanders Concers name Address c/o Gillanders & Barron	(land sur- ft. A. A. Original Addition Determined to Determine Determined to Determine Determined to Determine Determined to Determine Determined to Determine Determined to Determine Determined to Determine Determined to Determine Determined to Determine Determined to Determine Determined to Determine Determined to Determine Determined to Determine Determined to Determine Determined Determine	dome in fur irri muni *include Durand & inal dril dress te of dril eepened e-cased	IS-578-7 File number (Code: Tp., R., Sec., X Sec.) D C B A E F O H M L X 7 N P Q R Attan- attan-	Well name LOGATION: Rostow Quadr Tp. Range Section Fraction STATISTICS: Well type-Dug	angle nal section (land surft. A. M. Original Add Date Sources: research	dome indu irri muni *include . Edwards inal dril iress te of dri sepened	File number (Code: Tp., R., Sec., Se
Mell name LOCATION: Limatilla Cou Unnapped Quadrar Tp. Range Section Frections STATISTICS: Well type-Dag Elevation Driven above above below Final depth 383' Earl Gillanders Owners name Co Gillanders & Barrot 403 S. Main St., Fendle	(land surft. A. A. A. A. A. A. Crigin Added to Det from Det grow	dome in the irrigation of the	IS-578-5 File number (Code: Tp., E., Sec., 2 Sec.) D C B A E 7 0 H H L K 7 N P Q R The status- extra striat a shandomed for hole oipal producer x Son lers nace (Sec. Mails Vashington ling 1945	Well name LOGATION: Roffow Quadr Tp. Range Section Fraction STATISTICS: Well type-Dug Drilled X face) Driven Final depth 1961 Glen Radley Owners name Address	angle nal section (land surft. A. M. Original Add Date Sources: research	dome intu irri muni *include . Edwards inal dril iress te of dri eepened	File number (Code: Tp., R., Sec., 2 St. St. St. St. St. St. St. St. St. St.
Well name Inatilia	A. A. Original Angles And Angles And Angles And Angles And Angles And Angles An	dome in fur irri muni *include Durand & inal dril dress te of dril eepened e-cased	IS-578-5 File number (Code: Tp., E., Sec., 2 Sec.) D C B A E 7 0 H H L K 7 N P Q R The status- extra striat a shandomed for hole oipal producer x Son lers nace (Sec. Mails Vashington ling 1945	Well name LOGATION: Rottow Quadr Tp. Range Section Fraction STATISTICS: Well type-Dug Interaction Driven Final depth 196' Gles Hadley Owners name Address This record compiled by N.S.V. data secured from the following	angle nal section a (land surft. A. M. Original Additional Parts of the Sources: resour	dome indu irri muni *include . Edwards inal dril iress te of dri sepened	File number (Code: Tp., R., Sec., Se
Well name LOCATION: Unnapped Quedren IN 522 3 TO Ramey Section Frections STATISTICS: Well type-Dag Elevation Drilled Face) Driven above below Final depth 363' Earl Gillanders Formers mans 6/0 Gillanders & Barrot 400 S. Main St., Feedle This record compiled by M.S.V. data secured from the Following s U. S. O. S. Ground-Water Division	(land surft. (land surft. A. A. Criginal Address Add	dome in a control of the control of	IS-578-5 File number (Code: Tp., E., Sec., 2 Sec.) D C B A E 7 0 H H L K 7 N P Q R The status- extra striat a shandomed for hole oipal producer x Son lers nace (Sec. Mails Vashington ling 1945	Well name LOCATION: Rorrow Quadr Tp. Range Section Fraction STATISTICS: Well type-Dag Face Drilled Tace Prinal depth 196 Olea Hadley Chears name Address This record compiled by M.S.V. data secured from the following Verbal report by the driller	angle nal section a (land surft. A. M. Drigger Add from De sources: r.	dome iniu irri muni *include . Edwards inal dril iresstte of dri eepenedateate	File number (Code: Tp., R., Sec., Se
Well name Inatilia	(land surft. A. A. Original Add state of the state of th	dome in a control of the control of	IS-578-7 File number (Code: Tp., E., Sec., X Sec.) D C B A E F O H M L K 7 N P Q R Attis- attis-	Well name LOCATION: Rorrow Quadr Tp. Range Section Fraction STATISTICS: Well type-Dag Facel Drilled Y Facel Final depth 196 Olea Endley Chears name Address This record compiled by M.S.V. data secured from the 7011cwing Verbal report by the driller Date compiled March 1948 Material	angle and section a (land surft. A. M. Original Add. Date of the sources: r. r. c. c. c. c. c. c. c. c. c. c. c. c. c.	dome iniu irri muni *include . Edwards inal dril iresstte of dri eepenedateate	File number (Code: Tp., R., Sec., Se
Well name LOCATION: Unnapped Quedran IN 323 3 TO. Range Section Frections STATISTICS: Well type-Dag Face) Drilled x Driven above below Final depth 363 Earl Cillanders Owners name Address c/o Sillanders & Barrot 403 S. Main St., Fendle This record compiled by N.S.W. data secured from the Following s U. S. C. S. Ground-Water Divisio Date compiled December 1947 Material	(land surft. A. A. Original Additional Addi	dome incurrent and incurrent and included burned & included burned & included dress to of dri: seepened second leaned ats	IS-578-7 File pumber (Gode: Tp., E., Sec., 2 Sec.) D C B A E 7 0 H M L K 7 N P Q R Well status- strial strong ston dry hole oipal producer x strong ston wills Son lers name by Benarks Casing, 6-inch set to 65 fest. Fupped 17 g.p.s. ct for control of the control of t	Well name LOCATION: Rottow Quadr Th. Range Section Fraction STATISTICS: Well type-Dug Elevation Drilled X face) Driven below Final depth 1961 Glen Hadley Owners name Address This record compiled by M.S.V. data secured from the following Verbal report by the driller Date compiled March 1948	angle section a (land surft. A. M. M. Original Section Secti	dome iniu irri muni *include . Edwards inal dril iress te of dri eepened e-cased leaned . Edwards inal dril iress to of dri eepened e-cased leaned . Edwards in the feet)	File number (Code: Tp., R., Sec., 2 St. Se
Well name LOCATION: Unnapped Quedran IN 323 3 TO. Range Section Frections Fratistics: Well type-Dag Face) Driven above below Final depth 363 Earl Cillanders Owners name Address c/o Cillanders & Barrot 403 S. Main St., Fendle This record compiled by N.S.W. data secured from the Following st. U. S. O. S. Ground-Water Division Date compiled December 1947 Material Soil	(land surft. A. A. Original Action A. A. Original Action From Det from Det from Det from Det (feet) Thickness (feet) 3	dome incurrent and a control of the	IS-5/SE-7 File pumber (Gode: Tp., R., Sec., 2 Sec.) D C B A Z F O H H L K J N P Q R Autoritic abandoned dry hole griton griton griton griton griton griton griton griton griton griton griton lives nace walls Valle, Vashington liling 1945 Benarks Casing, 6-inch set to C55 feet. Fumped 17 g.p.m.	Well name LOCATION: Rotrow Quadr Th. Range Section Fraction STATISTICS: Well type-Dug Elevation Drilled X face) Drive below Final depth 1961 Glen Healey Owners name Address This record complied by M.S.V. data secured from the following Verbal report by the driller Date compiled March 1948 Naterial Soil, sand and gravel	angle section a (land surft. A. M. M. Original Additional Additi	dome iniu irri muni *include . Edwards inal dril iress to of dri eepened -cased leaned be peth feet) 40	File number (Code: Tp., R., Sec., S. S. S. S. S. S. S. S. S. S. S. S. S.
Well name LOCATION: LIBRALILIA COU Unneyped Quadran The Banes Section Fractions TATISTICS: Well type-Dag Drillad x face) Drillad x face) Driven Bane Bane Address c/o fillanders & Barrot Address c/o fillanders c/o fillanders & Barrot Address c/o fillanders c/o fillanders c/o fillanders c/o fillanders c/o fillanders c/o fillanders c/o fillanders c/o f	A. A. Original Action A. A. Original Action A. A. Original Action Determined Actio	dome in: in: imuni include: Durand & inal dril: dress e-cased leaned ate B Depth (set) 3	IS-578-7 File pumber (Oode: Tp., R., Sec., 2 Sec.) D C B A E F O H H L X 7 H P Q B Attantation attantation attantation attantation attantation attantation attantation attantation attantation abandoned dry hole producer x stock wells Son Son Son Hing 1945	Well name LOGATION: Rottow Quadr Tp. Range Section Fraction STATISTICS: Well type-Dug Face Section Fraction Drillad I face Section Final depth 196' Gles Radley Owners name Address This record compiled by S.S.V. data secured from the following Verbal report by the driller Date compiled March 1948 Natorial Soil, sand and gravel Sand and gravel	angle and section a (land surft. A. M. Original Add Add Dat from De Columns of the section of	dome initial minitial	File number (Code: Tp., R., Sec., S. S. S. S. S. S. S. S. S. S. S. S. S.
Well name LOCATION: Unampped Quedran IN 322 3 Trections Fratistics: Well type-Dag Elevation Drilad x face) Driven above below Final depth 383' Earl Gillanders Address c/o Gillanders & Barrot Address c/o Si Main St., Fendle This record complied by N.S.W. data escured from the Following s U. S. G. S. Ground-Water Divisio Date compiled December 1947 Material Soil Clay and shale	(land surft. (land surft. A. A. Original Additional	dome in: imuni finclude: Durand & inal dril: dress e-cased leaned ate Depth (set) 3 16 20	IS-578-7 File pumber (Oode: Tp., R., Sec., 2 Sec.) D C B A E F O H H L X 7 H P Q B Attantation attantation attantation attantation attantation attantation attantation attantation attantation abandoned dry hole producer x stock wells Son Son Son Hing 1945	Well name LOCATION: Rottow Quadr Th. Range Section Fraction STATISTICS: Well type-Dag Elevation Drilled X face) Driven above balow Final depth 1961 Glen Hadley Owners name Address This record complied by M.S.V. data secured from the following Verbal report by the driller Date compiled March 1948 Material Soil, sand and gravel Sand and gravel Elme bassalt - solid Gray basalt - bard Broken seamy basalt	angle section a (land surft. A. M. M. Original Additional Additi	dome initial dome in a constant of the constan	File number (Code: Tp., R., Sec., S. S. S. S. S. S. S. S. S. S. S. S. S.
Well name LOCATION: LIBRALILIA COU Unneyped Quadran 18 325 Top. Range Section Fractions STATISTICS: Well type-Dag Elevation Drillad x face) Driven Drillad x face) Final depth 383 Earl Gillanders Abarror Address c/o Gillanders A Barror Address c/o Gillanders A Barror Address c/o Sillanders A Barror Address c/o Sillanders A Barror Address c/o Gillanders c/o Gillanders A Barror Address c/o Gillanders c/o Gillanders c/o Gillanders c/o Gillanders c	(land surft. (land surft. A. A. Original Addition Date of the December of th	dome invail irri; muni: *include: Durand & inal dril: dress the of dril: eepened e-cased leaned ate B Depth feet) 3 16 20 32	IS-578-7 File pumber (Oode: Tp., R., Sec., 2 Sec.) D C B A E F O H H L X 7 H P Q B Attantation attantation attantation attantation attantation attantation attantation attantation attantation abandoned dry hole producer x stock wells Son Son Son Hing 1945	Well name LOGATION: Rostow Quadr Tp. Range Section Fraction STATISTICS: Well type-Dug	angle and section a (land surft. A. M. Original Add. Add. Add. Determination of the section of	dome initial dome in a constant of the constan	File number (Code: Tp., R., Sec., 2 St. St. St. St. St. St. St. St. St. St.
Well name LOCATION: Unnapped Quadran Unnapped Quadran IN 352 3 Typ. Range Section Frections STATISTICS: Well type-Dag Elevation Drilled Tace Driven above below Final depth 383' Marl Gillanders Comers name Address of Gillanders & Barrot 403 S. Main St., Fendle This record complice by M.S.V. data secured from the Tollowing s U. S. O. S. Ground-Water Divisio Date compiled December 1947 Material Cobbles and clay City-blue and pea gravel Basil, Frown and blue, de- composed.	A. A. Original Additio	dome in au irri muni *include Durand & incl dril dress to of dri sepend -cased leaned ate Depth (rest) 3 16 20 32 80 274 306	IS-578-7 File pumber (Oode: Tp., R., Sec., 2 Sec.) D C B A E F O H H L X 7 H P Q B Attantation attantation attantation attantation attantation attantation attantation attantation attantation abandoned dry hole producer x stock wells Son Son Son Hing 1945	Well name LOGATION: Rorrow Quadr Tp. Eange Section Fraction STATISTICS: Well type-Dug Drilled X Driven Final depth 196 Glen Eadley Owners name Address Address This record compiled by N.S.W. data secured from the following Verbal report by the driller Date compiled March 1948 Material Soil, sand and gravel Send and gravel Elne basait - solid Gray basait - hard Broken seamy basait This blue basait laper sitt	angle and section a (land surft. A. M. Original Add. Add. Add. Determination of the section of	dome inau irri muni "include " Edwards (inal dril irress to of dri espened - cased leaned 40 65 140 162 174	File number (Code: Tp., R., Sec., 2 St. Code: Tp., R., Sec., 2 St. Code: Tp., R., Sec., 2 St. Code: Tp., R., Sec., 2 St. Code: Tp., R., Sec., 2 St. Code: Tp., Code:
Well name LOCATION: Unnapped Quedran IN 323 3 TO Rames Section Frections Well type-Dag Flower Britan above below Final depth 363 Earl Cillanders Owners mass Address of Collanders & Barrot 400 S. Main St., Fendle This record compiled by N.S.W. data escured from the Fallowing s U. S. C. S. Ground-Water Divisio Date compiled December 1947 Material Soil Clay and shale Cobbles and clay Clay-bles and pea gravel Resalt, brown and Stue, de- composed Basalt, brown and gray Basalt, red Basalt, gray	A. A. Original Action A. A. A. Original Action A. A. A. Consideration of the Action Detention	dome in au de la composition del composition de la composition de la composition del composition de la composition de la composition de la composition de la composition de la composition de la composition del composition del composition del composition del composition del composition del composition del composition del composition del	IS-578-7 File pumber (Oode: Tp., R., Sec., 2 Sec.) D C B A E F O H H L X 7 H P Q B Attantation attantation attantation attantation attantation attantation attantation attantation attantation abandoned dry hole producer x stock wells Son Son Son Hing 1945	Well name LOCATION: Rotrow Quadr Tp. Ennge Section Fraction STATISTICS: Well type-Dag Drilled X Driven Final depth 196 Glen Radley Owners name Address This record compiled by N.S.V. data secured from the Tollowing Verbal report by the driller Date compiled March 1948 Naterial Soil, sand and gravel Elies baselt - solid Gray baselt - hard Broten seamy baselt Thin thus meant tayer att	A. M. Date of the sources: reference of the sources: reference of the sources: reference of the sources: reference of the sources: reference of the sources: reference of the sources: reference of the sources: reference of the sources: reference of the sources of the sources of the sources of the source of the	dome inau irri muni irri m	File number (Code: Tp., R., Sec., 2 St. D
Well type-Dag Section Frections TATISTICS: Well type-Dag Driven above below Final depth 383' Earl Gillanders Concers name Address c/o Gillanders & Barrot 407 S. Main St., Feedle This record compiled by W.S.V. data secured from the Jollowing s U. S. S. Ground-Mater Division Date compiled December 1947 Material Soil Clay-blue and pea gravel Easalt, brown and blue, de-composed Dassalt, brown and gray Basalt, red	A. A. Original Action of the Control	dome in au irri muni *include Durand & include Durand & include dress to of dri sepend -cased leaned ate spect sepend feet) 3 16 20 32 80 274 306	IS-578-7 File pumber (Oode: Tp., R., Sec., 2 Sec.) D C B A E F O H H L X 7 H P Q B Attantation attantation attantation attantation attantation attantation attantation attantation attantation abandoned dry hole producer x stock wells Son Son Son Hing 1945	Well name LOCATION: Rotrow Quadr Tp. Ennge Section Fraction STATISTICS: Well type-Dag Drilled X Driven Final depth 196 Glen Radley Owners name Address This record compiled by N.S.V. data secured from the Tollowing Verbal report by the driller Date compiled March 1948 Naterial Soil, sand and gravel Elies baselt - solid Gray baselt - hard Broten seamy baselt Thin thus meant tayer att	A. M. Date of the sources: reference of the sources: reference of the sources: reference of the sources: reference of the sources: reference of the sources: reference of the sources: reference of the sources: reference of the sources: reference of the sources of the sources of the sources of the source of the	dome inau irri muni irri m	File number (Code: Tp., R., Sec., 2 St. Code: Tp., R., Sec., 2 St. Code: Tp., R., Sec., 2 St. Code: Tp., R., Sec., 2 St. Code: Tp., R., Sec., 2 St. Code: Tp., Code:

Well name			Index number 117-M 18-248-28 File number (Code: Tp., R., Sec., 2 Sec.)	Hanna Well name		-		Index number — 51-U 1N-32E-1-D File number (Code: Tp., R., Sec., 2 Se
Morrov Countries	gle	e about a	D C B A E F G H M L K J E miles N P Q R	LOCATION: Umatilla Pendleton IN 3/28	Count Quadrangl	.0		D C B A B A B A B A B B A B B B B B B B B
	section	south of	lone	1N 32S Tp. Range	Section Fractional	section		1,1,1,1,
### STATISTICS: Well type-Dug	ft.	in u irri muni	stic* x strial abandoned gation dry hole x cipal producer	STATISTICS: Well type-Dug Drille Driver Final depth 27	above below	and sur- ft.	inu	atue- Well status- stic* x strial abandoned gation x dry hole- cipal producer
Delbert Ernest	Fred N	*include ichoson nal dril	s stock wells	Mr. J. R. Hanna Owners name			*include	s stock wells
Address Ione, Oregon	_	resse of dri	Ione, Oregon	1	oute 1 endleton, Oregon	•	ress s of dri	lling
This record complied by N.S.W. data secured from the rollowing se	ources: re	epened_x -cased_ eaned_	by Fred Nichoson	This record come data secured from		_from De iroes: re	epened -cased .eaned	- by
Date compiled November 1947	 Da	ta .	Ione, Oregon	Owner	January 1948	De	+0	
Naterial	Thickness		Remarks	Date compiled_	aterial	Thicknes		Remarks
Crushed brown "dice" rock - soft	150	150	Dry hole	Sandy loam		(feet)	(Feet)	SWL 19'.
Hard blue rock, crevices Crushed brown "dice" rock -	15	165		Black basalt	ic sand	2	8	Yield sustained flow of 20 g.p.m. At 33 g.p.m.
soft - much caving	535	700	Water at -700' about 1 g.p.m.	Hard gravel	- free clay	19	27	well pumps dry in 5 hr. periods. Recovery time 3 hrs.
Hard gray basalt Brown porous basalt	290 80	1020			imal skull was found	l a a a a a a	1 00 251	When found the skull was
Hard gray basalt	20	1040	- Bottom of hole -	essentially for identifi	complete but the fr cation purposes.	agments re	maining	t present are insufficient
	+	1	Hole size:					
	+-		5 5/8" to -740' 4 1/4" to -1040'		•	1	1	
1	+	1	- 1/4- 00 -1040,	1		+	1	1
Halvorsen \$2		1	Index number 116-N 15-24g-73	Haynes				Index number 38-U 33-345-20-5
Halvorsen \$2 Well name LOCATION:		<u> </u>	1S-24E-33 #2 File number (Code: Tp., R., Sec., 2 Sec.)	Haynes Well name LOCATION:		_		33-34E-20-E File number (Code: Tp., R., Sec., 2 Se
Well name LOCATION: KOFFOM Cou Unsupped Quadran,	gle	Jaran	13-20E-33 \$2. File number (Code: Tp., R., Sec., Sec.) D C B A E F G H M L K J	Well name LOCATION: Umatilla Pendleton	Count Quadrangi	-		31-34E-20-E File number (Gode: Tp., R., Sec., Se
Well name LOCATION: KOFFOM Cou Unsupped Quadran,	gle	Jorian I	13-20E-33 \$2. File number (Code: Tp., R., Sec., Sec.) D C B A E F G H M L K J	LOCATION: Umatilla Pendleton		Le		33-34E-20-E File number (Gode: Tp., R., Sec., Se
Well name LOCATION: KOFFOM Cou Unsupped Quadran,	gle	Jorian lile south	13-20E-33 \$2. File number (Code: Tp., R., Sec., Sec.) D C B A E F G H M L K J	LOCATION: Umatilla Pendleton	Quadrangl 20 SW1 of NW1	Le		31-34E-20-E File number (Gode: Tp., R., Sec., Se
Moli Name Location:	gle ith slope of section m [land sur_ft.	Use st. dome intu	15-24E-73	Well name LOCATION: Umatila Pendlaton 38 34E Tp. Range	Quadrangl 20 SW1 of NW1 Section Fractional Elevation (1 ad X face) n above helow	section	in au irri muni	31345-20-25 Tile number (Code: Tp., R., Sec.,
Mell name	gle ith slope of I section m (land surft. G. P. Original	Use st. dome in au irri, muni *include Ritchie nal dril	Tion number (Code: Ty., R., Sec., 2 Sec.) D C B A E F O H M L K J outte one of well #1 N P Q R strial aston aston astock wells ers name fore, Orrow	Well name LOCATION: Umailla Rendleton 38 302 Tp. Range STATISTIOS: Well type-Dag Drill Drive Final depth 15 Bert 0. Haynes Owners name	Quadrangl 20 SW1 of NW1 Section Fractional Elevation (1 ad X face) n above helow	section and surft. A. A. Originate Added	dome in au irri muni *include Durand dril ress	33.391-20-20-8 710 number
Moli Name Courtion: Courtion: Courtion: Quadran S 20E 33-1 On the solor Fractions Courtion Cour	gle th slope of lection m (land surft. 3. F. Original Add pate of proper or proper	Use st. dome in au irri, muni *include Ritchie nal dril	15-20E-33 \$2.	Well name LOCATION: Unatilla Funciston N 302 Th. Range STATISTICS: Well type-Dag Drille Drive Final depth 15 Bert G. Haynes Ownere name Address 51	Quadrangl 20 SWi of SWi Section Frectional Mad X face) above below 6 S. W. Garden Streenalleton, Oregon	section and surft A. A. Originate Add Date from Detroes: From The Surface Add from Detroes: From	dome in au irri muni *include Durand dril ress	33.391-20-20-8 710 snames
Courtion: Cour	gle the slope of Lection m (land surft. G. P. Original Add Add Add From De Courses: reconstructed to those of the sources: reconstructed to the sources of the sources of the sources of the sources of the sources of the sources of the sources of the sources of the sources of the sources of the sources of the sources of the sources of the sources of the sources of the sources of the source	Use st. dome in au irri muni *include Ritchie nal dril ress e of dri epened z -cased eaned	13-20E-33 \$2.	Well name LOCATION: Danilla Fundlaton 2N 348 Th. Rance STATISTICS: Well type-Dig Drille Drive Final depth 15 Bert O. Haynes Owners name Address Final depth 25 Print record com data secured fr	Quadrange 20 Swid of Swid Frectional Elevation (1 face) above below 6 H. W. Garden Streen addeton, Oregon piled by M.S.W. on the following see	and surft A. A. Originate Add from Detroes: roos: ol	dome in au irri muni *include Durand d inal dril ress e of dri epenedcased eaned	Tile number Tile number Tile number Toda: Tp., R., Sec.,
Courtion: Cour	gla th slope of section m (land surft. 3. F. Original Add Add Add Charles of the columns of t	Use st. dome inau irri, muni *include Ritchie mel dril ress e of dri epened x -cased eaned	15-20E-33 \$2.	Well name LOCATION: Danilla Fundlaton 3M 34E Th. Rance STATISTICS: Well type-Dug Drille Drille Sint 0. Haynes Owners name Address	Quadrangle 20 SM2 of SM2 Section Fractional Elevetion (1 face) above below 6 H. W. Garden Street midleton, Oregon ptied by H.S.W. on the Jollowing soc	and surft. A. A. Originate Additional Control of the Control of t	dome in au irri muni *include Durand d inal dril ress ie of dri epened -cased leaned	Tile number File number For the number For
Courtion: Cour	gle titt slope of lection m (land surft. 3. P. Original Add from De before of lection before of lection before of lection before of lections of le	Use st. dome inau irri, muni *include Ritchie nel dril reas e of dri epened x -cased ened Depth (reet)	15-20E-33 \$2.	Well name LOCATION: Danilla Fundlaton 3M 34E Th. Rance STATISTICS: Well type-Dug Drille Drille Sint 0. Haynes Owners name Address	Quadrange 20 Swid of Swid Frectional Elevation (1 face) above below 6 H. W. Garden Streen addeton, Oregon piled by M.S.W. on the following see	and surft. A.A.A. Originate Add from Detroes: reconstruction	dome in au irri muni *include Durand d nal dril ress te of dri eppened -cased teaned	Tile number Tile number Tile number Toda: Tp., R., Sec.,
Courtion: Cour	gle the slope of section m (land surft. 3. P. Original Add Date from Date clusters: recibeson 7. Da Thickness (feet) unb to a depunt on a depunt o	Use st. dome inva irri, winclude Ritchie mel dril ress e of dri e-cased eaned Depth (rest)	Tion number (Code: Ty., R., Sec., 2 Sec.) D C B A E F G H Butte one of well fl N P Q R sturation of well fl Status strict aboundoned x dry hole produces stock wells For name Jone, Oregon Jone, Oregon Jone, Oregon Jone, Oregon About 1922 Remarks 61 when Nichoson took over	Well name LOCATION: Danilla Fundlaton 3H 3M; Th. Range Th. Range Final depth 15 Derive Final depth 15 Bert O. Haynes Owners name Address Address This record com data secured fr Driller Date compiled M	Quadrangle 20 3M2 of NM2 Section Frectional Elevation (1 face) above below 6 N. V. Sarden Streemelten, Oregon ptied by N.S.V. on the following sec	and surft A. A. Originate Add Dat From De From De Thickness (feet)	dome in au irri muni finclude Durand d inal dril ress te of dri epened -cased teaned Depth (rest)	Tile number File number File number Folde: Tp., R., Sec.,
Month Mont	gle th slope of section m (land surft. G. P. Original Add Add Add Add Add Add Add Add Add Ad	Use st done in au irri muni include Ritchie nel dril ress e of dri epened x -cased eaned Depth (rest) h of -5; driller	File number (Code: Ty., R., Sec., 2 Sec.) D C B A E F G H M L K J Sec. of the second	Well name LOCATION: DRAVIIIa Funciated	Quadrange 20 SMi of SWi Section Frectional Mad	and surfit A. A. Original Thickness (feet) 4 3	dome in a direct of the control of t	Tile number File number File number Folde: Tp., R., Sec.,
Month Mont	gle th slope of section m (land surft. G. P. Original Add Add Add Add Add Add Add Add Add Ad	Use st done in au irri muni include Ritchie nel dril ress e of dri epened x -cased eaned Depth (rest) h of -5; driller	File number (Code: Ty., R., Sec., 2 Sec.) D C B A E F G H M L K J Sec. of the second	Well name LOCATION: Unatilla Funciaton N 302 Th. Range STATISTICS: Well type-Dag Drille Drive Final depth 15 Bert 0. Haynes Ownere name Address 51 This record com data secured fr Driller Date compiled Soft brown b Hard blue ba Brown basalt	Quadrang) 20	and surfit Add Original Property of the Add O	dome in au irri muni muni muni muni muni muni muni mun	Tile number File number File number Folde: Tp., R., Sec.,
Courtion: Courtion:	gle th tlope of section m (land surft. 2. P. Original Add Add Add Det from De purces: re- choson Thickness clubes of the control of the c	Use std dome in an array and it is a control of the	File number (Code: Ty., R., Sec., Sec.) D C B A E F G H M L K J Sec. of the second se	Well name LOCATION: Unatilla Funciston JN 302 TD Range TD Range STATISTICS: Well type-Dag Drille Drille Jiman Address Address Address Jiman Address Address Address Address Location Location Address A	Quadrangl 20 SWi of SWi Section Tractional Mad X face) n above below 6 H. W. Garden Streenableton, Oregon pried by H.S.W. January 1948 January 1948 January 1948 January 1948 January 1948 January 1948	and surfit A.A. Original et Add Det from De froes: rices Thicknes (feet) 4 3 4 14	dome in Au irri auni auni auni auni auni auni auni aun	Tile number File number File number Folde: Tp., R., Sec.,
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Countion: Countion: Countion: Countion: Countion: Countion: Counting Cou	cland surfit. Consider the stope of testion metric testion metric testion metric testion metric testion metric testion metric testion metric testion to a depth testion to a depth testion te	Use stidents and the second of	The number (Code: Ty., R., Sec., Sec.) D C B A E F G H M L K J Sec. of the second sec	Well name LOCATION: Unatilla Funciston JH 300 Th Range Th Range STATISTICS: Well type-Dag Drille Drille Jiman Address Address Address Address Location Date compiled M Soil Soft brown b Hard blue ba Erown basalt Medium blue Erown basalt	Quadrangle 20 SW2 of SW2 Section Fractional Elevation (1 face) above above below 16 H. W. Sarden Street 16 H. W. Sarden Street 17 January 1948 Laterial Assalt Assalt Assalt Assalt Assalt Assalt Assalt	and surfit Add Original Prom De Iroces: rrom De Iroces: rrom De Iroces: rrom July 14 20 21	dome invasion in in in in in in in in in in in in in	Tile number File number File number Folde: Tp., R., Sec.,
Countion: Countion: Countion: Countion: Countion: Countion: Counting Cou	cland surfit. Consider the stope of testion metric testion metric testion metric testion metric testion metric testion metric testion metric testion to a depth testion to a depth testion te	Use stidents and the second of	The number (Code: Ty., R., Sec., Sec.) D C B A E F G H M L K J Sec. of the second sec	Well name LOCATION: Danilla Fundlaton 3N 3NP The Range in the print of the pri	Quadrangle 20 3M2 of NM2 Section Frectional Elevation (1 face) above below 55; 6 N. V. Sarden Streen midleton, Oregon piled by N.S.V. on the following sector January 1948 sasalt sasalt basalt and clay salt basalt	and surft A. A. A. Original Surft And Surf	domestin	Tile number File number Folder Tp., R., Sec.,

			6H-34E-14-H File number (Code: Tp., R., Sec., 2 Sec.)	Heppner City #2 Well name	***		3S-28E-29-J # File number (Code: Tp., R., Sec., S
LOCATION:			D C B A	LOCATION:			D C B
Umatilla C	ounty		State Line	Morrow Cou	inty		E F G
Pendleton Quadr	angle		MLKJ	Unmapped Quadrat			MLK
65 348 14 SEt of Fraction	nal section		N P Q R	Tp. Range Section Fractions	d section		N P Q
STATISTICS:				STATISTICS:			
Well type-Dug Elevation Drilled x face)	n (land sur- ft.	Use st	atus- Well status-	Well type-Dug Elevation Drilled x face)		Use st	atus- Well status
Driven above below Final depth 871		iniu irri muni	strial abandoned gation X dry hole cipal producer X s stock wells	Driven above below Final depth 3521	ft.	in i irri	sstrial abandone gation dry hole cipal x producer s stock wells
O. J. Hellberg	•			Heppmer City	я. Л		Drilling Company
Owners name Address Lowder, Washingto	Origi n Add	inal dril iress	lers name	Owners name Address	0r1	ginal dril	lers name E. 82nd St., Portland, Or
		te of dri	lling Jan. and Feb. 1947				lling between 1931 and 19
This record compiled by U.S.W. data secured from the following State Engineer	from De	eepened	by	This record complied by M.S.W. data secured from the collowing : Mr. Ramus, City Water Completion	from sources:	Deepened_ re-cased_ cleaned_	by
Date compiled Feb. 1948	De .	ıte .		Date compiledJuly 1947		Date	
Material	Thickness	Depth	Remarks	Material	Thickne	ss Depth	Remarks
Sand	(feet) 45	(feet) 45	Hole diameter 8 ^a . Water		(feet)	(feet)	
-Gravel	42	87	encountered first at 45'. SWL 16'. Maximum rate of	Log lost		352	10" casing. A 300 g.p.m production is maintained
MINUTE		+	yield during 1947 season reported at 350 g.p.m.		1	+	given a herd 500 g.p.m.
	+	† 	Drawdown to 321.			+	pump from which it shows ill-effects. Elev. water -47
		†			1	 	Temp. 680
	\neg	†				İ	
					1	İ	
		İ				i	
						İ	
Heppner City ∲1 Woll name			Index number 125-M 35-268-23-J #1	Heppner Lumber Company #1			Index number 127-M 2S-26B-21-ML
LOCATION: Morroy Co	punty		35-258-2) - 4 1 File number (Code: 7p., R., Sec., 2 Sec.)	Woll name LOCATION: Morrow Cou	-		
Well name	angle		35-26R-29-J #1 File number (Gode: Tp., R., Sec., 2 Sec.) D C B A	Well name	gle		ZS-26B-21-ML File number (Code: Tp., R., Sec., 2 S
Mell name LOCATION: KOTTOW CC Unmagned Quadre	angle		35-235-23-7 #1 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H M L K J	Well name LOCATION: Morrow Cou Unmapped Quadran 25 26E 21 18 of SW	gle		2S-26B-21-ML File number (Gode: Tp., R., Sec., & S. D C B E F G M L K
Well name LOCATION: HOFFOY O Unescriped Quadr 38 280 29 Ust of 5 Tp. Eange Section Frection	angle	Use st.	35-235-23-7 #1 File number (Gode: 7p., R., Sec., 2 Sec.) D C B A E F G H H L K J N P Q R	Well name LOCATION: Cou Unmapped Quadran 25 268 21 Ha of SW, The Range Section Fractions STATISTICS: Well type-Dug Elevation	gle l section (land sur-	Use st	28-268-21-ML File number [Code: Tp., R., Sec., 2 S D
Woll name LOCATION: Morroy Quadr 38 28 29 194 of 5 The Range Section Frection STATISTICS: Wall true-Due	angle Bi nal Section n (land surft.	iniu irri munic	35-235-23-7 #1 File number (Gode: 7p., R., Sec., 2 Sec.) D C B A E F G H H L K J N P Q R	Unmapped Quadran 25 268 21 14 of SV The Range Section Fractions	gle l section	dome iniu irri muni	28-268-21-ML File number [Code: Tp., R., Sec., 2 S D C B E F C N L K N P Q
MOII name LOCATION: KOFFOY Unmspped 38 28 27 85/c 5 8 7 8 8 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8	angle Ei nal section I (land surft.	dome: inqui irri munic *include:	35-235-23 41	Moll name	gle l section (land surft.	dome indu irri muni *include	Tile number (Code: Tp., R., Sec., 2 St. Code: Tp
	n (land surft. A. A. Origin	domer industria munic *includes Durand & nal drilliness	Soc Soc	LOCATION: Cou	gle 1 section (land surft. A. M. Ori	dome into irri muni *include . Edwards ginal dril idress	Tile number File number File number Folder Tp., R., Sec., S D C B E F C N L K N P Q The states States
MOII name LOCATION: KOUTOW CO Unmemped Quadr 38 281 29 HB of 5 TPD. Bange Section Frection STATISTICS: Well type-Dig feed bove above above below Final depth 2111 Heppner City Domera name Address	angle EA nal section a (land surft. Original Additional Date	dome: indu irri munic *include: Durand & nal drill	Son Son	Moll name	(land surft. A. M. Ori	dome into irri muni *include . Edwards ginal dril idress ate of dri	Tile number File number File number Folder Tp., R., Sec., S D C B E F C N L K N P Q The states States
Morrow Co Unmemped Quadre 35 28 29 80½ of 5 The Range Section Frection STATISTICS: Well type-Dug Elevan below Pinal depth 211 Reppose City Denote name Address Address This record complied by M.S.W. Bata secured from the Ellowing	A. A. Origin Add. patt from Decsources: re-	domeringumine includes *includes Durand & nal drilliness te of drilliness	Soc Soc	Morrov Course	gle 1 section (land surft. A. M. Ori A. D. D. from 1	dome into irri muni *include . Edwards ginal dril idress	Tile number File number File number Folder Tp., R., Sec., S D C B E F C N L K N P Q The states States
Moli name LOCATION: Morrow Quadra 38 28 27 SMb of S The Range Section Frection STATISTICS: Well type-Dag Environ Section Final depth 211 Response City Demand Range Address Address This record compiled by M.S.W. data secured from the Ellowing This record compiled by W.S.W. data secured from the Ellowing Werbal log report by the drille City Water Commissioner, Rams.	A. A. A. Cristi Addadadadadadadadadadadadadadadadadadad	dome: injunities injunities includes Durand & nal drill ress e of dril epenedcased eaned	Second S	Moll name	gle (land surft. A. M. Ori	dome inau irri zuni *include . Edwards ginal dril idress ate of dri Deepened re-cased	28-268-21-ML File number Flooder Tp., R., Sec., S D C B E F G M L K N P Q to be a considered and a considered articles art
Moli name LOCATION: Morroy Quadr 38 28 29 88½ of 5 The Range Section Frection STATISTICS: Well type-Dag Face below Final depth 2111 Heppner City Department of the section of the	A. A. Cristian Determine and Park Park Park Park Park Park Park Park	domes domes domes intui irri muni *include Durand & nal drill ress de of dril epened -cased eaned Depth	Second S	Moil name	(land surft. A, M Ori Arom 1 purchase of the control of the contr	dome inva irri *include *Include *Zdwaris ginal dril idress ate of dri Decemed re-cased cleaned	Tile number File number File number Folder Tp., R., Sec., S. D C B E F C M L K N P Q atua- atu
Moli name LOCATION: Morrow Quadra 38 28 27 EMP of S The Range Section Frection STATISTICS: Well type-Dag Environ face) Drillad Environ below Final depth 211 Reppear City Demars Dame Address Address This record compiled by M.S.W. atta secured from the Ellowing Atta secured from the Ellowing This record compiled by M.S.W. atta secured from the Ellowing Elyvater Commissioner, Ramms. Bate compiled July 1947 and July 1948 and July 19	A. A. A. Crigit Add to the sourcest r and annary 1948 Determinant Thickness (See).	dome: inium irri; zuni: *include: *i	Second S	Moll name LOCATION: Countrol	gle (land surft. A. M. Ori from 1 Ources: Thickne (feet)	dome into irri muni *include . Idwards ginal dril idress ate of dri Deopened re-cased cleaned Date Date Date Date Depth (feet)	28-268-21-ML File number File number Foode: 7p., R., Sec., S. D C B E F G M L K N P Q M L K
Moliform LOCATION: Morrov Quadr 38 28 29 89½ of 5 The Range Section Frection STATISTICS: Bell type-Dag Elevation Brillad face below Final depth 2111 Heppner City Densee name Address	### AA AA Original Part ### AA AA Original Part ### AA AA Original Part ### AA AA AA Original Part ### AA AA AA Original Part #### AA AA AA Original Part #### AA AA AA Original Part #### AA AA AA Original Part #### AA AA AA Original Part #### AA AA AA Original Part #### AA AA AA Original Part ##### AA AA AA Original Part ###################################	dome: innum irri; muni: *include: Durand & nal drill ress e of drill epened -cased eaned Depth (feet)	Son Son	Moil name	gle I section	dometinau inru irri muni *include . Edwards ginal dril ddress ate of dri Deepened ce-cased cleaned Date	Tile number File number File number Folder Tp., R., Sec., S. D C B E F C M L K N P Q atua- atu
MOII name LOCATION: Morroy Quadr 38 38 29 39 4 5 5 The Range Section Frection STATISTICS: Well type-Dig Elevation Driven above below Final depth 2111 Heppner City Demore name Addrese	### AA AA AA AA AA AA AA AA AA AA AA AA	dome: dome: domein: do	Son Son	Morrov Cou	gle 1 section (land surft. A. M. Ori A. D. Ori A. D. Ori A. M. Ori A. D. Ori A. M. Ori A. M. Ori A. M. Ori A. M. Ori A. M. M. M. Ori A. M. M. M. Ori A. M. M. M. M. M. M. M. M. M. M. M. M. M.	dome intu irriumni *include . Edwards ginal dril ddress ate of dri Ocepened	Tile number File number File number Folder Tp., R., Sec., S. D C B E F C M L K N P Q atua- atu
Woll name LOCATION: Morrow Quadr Quadr 38 28 29 88½ of S TD. Range Section Frection STATISTICS: Well type-Dig Face Driven Above below Final depth 211 Heppac City Driven Acta secured from the Jollowing Workel agreement Secured from th	angle Binal section In (land surfit. A. A. Original Addition From Death From Death From Death From Death From Death From Death Additioned From Death January 1948 Death Takkness Takk	dome: dome:	Second Second Second	Morrov Cou	gle I section	dometinau inru irri muni *include . Edwards ginal dril ddress ate of dri Deepened ce-cased cleaned Date	Tile number File number File number Folder Tp., R., Sec., S. D C B E F C M L K N P Q atua- atu
MOII name LOCATION: Morroy Quadr 38 38 29 39 4 5 5 The Range Section Frection STATISTICS: Well type-Dig Elevation Driven above below Final depth 2111 Heppner City Demore name Addrese	### AA AA AA AA AA AA AA AA AA AA AA AA	dome: innum irri. munic finclude: fi	Title number (Code: Tp., R., Sec., 2 Sec.) D C B A Z F O H W L K J N P Q R D C C C C C C C C C C C C C C C C C C	Well name LOCATION: Morrow Gou Unmapped Quadran 25 268 21 Hi of Swi Th. Hamps Section Fractions Well type-Dug Elevation Driven above below Final depth 3191 Reppar Lumber Company Owners name Address Repmant. Oregon This record compilied by J.S.V. data secured from the following s Company officials and driller Date compilied October 1947 Material Top soil Proken rock Soild blue rock Crushed and sloping rock and	gle 1 section (land surft. A, M Old And And And And And And And And And An	dome invariant in it is in it in in it in	Tile number File number File number Foode: Tp., R., Sec., S D C B E F C M L K N P Q atua- a
Woll name LOCATION: Morrow Quadr Quadr 38 28 29 88½ of S TD. Range Section Frection STATISTICS: Well type-Dig Face Driven Above below Final depth 211 Heppac City Driven Acta secured from the Jollowing Workel agreement Secured from th	angle Binal section In (land surfit. A. A. Original Addition From Death From Death From Death From Death From Death From Death Additioned From Death January 1948 Death Takkness Takk	dome: dome:	Second Second Second	Well name LOCATION: Country: Coun	A M Ori	dome innument of the control of the	Tile number File number File number Folder Tp., R., Sec., S. D C B E F C M L K N P Q atua- atu
Woll name LOCATION: Morrow Quadr Quadr 38 28 29 88½ of S TD. Range Section Frection STATISTICS: Well type-Dig Face Driven Above below Final depth 211 Heppac City Driven Acta secured from the Jollowing Workel agreement Secured from th	angle Binal section In (land surfit. A. A. Original Addition From Death From Death From Death From Death From Death From Death Additioned From Death January 1948 Death Takkness Takk	dome: dome:	Title number (Code: Tp., R., Sec., 2 Sec.) D C B A Z F O H W L K J N P Q R D C C C C C C C C C C C C C C C C C C	Moll name LOCATION: Counapped Quadran	A M Ori	dome innument of the control of the	Tile number File number File number Folder Tp., R., Sec., S D C B E F G N L K N P Q Well status- estica es
Woll name LOCATION: Morrow Quadr Quadr 38 28 29 88½ of S TD. Range Section Frection STATISTICS: Well type-Dig Face Driven Above below Final depth 211 Heppac City Driven Acta secured from the Jollowing Workel agreement Secured from th	angle Bi and section In (land surfit. A. A. Original Additiona	dome: dome:	Title number (Code: Tp., R., Sec., 2 Sec.) D C B A Z F O H W L K J N P Q R D C C C C C C C C C C C C C C C C C C	Well name LOCATION: Merrov Quadran 25 26 2 1	A. M	dome inau irri irri irri irri irri irri irri ir	Tile number File number File number Folder Tp., R., Sec., S. D C B E F C M L K N P Q atua- atu
Woll name LOCATION: Morrow Quadr Quadr 38 28 29 88½ of S TD. Range Section Frection STATISTICS: Well type-Dig Face Driven Above below Final depth 211 Heppac City Driven Acta secured from the Jollowing Workel agreement Secured from th	angle Bi and section In (land surfit. A. A. Original Additiona	dome: dome:	Title number (Code: Tp., R., Sec., 2 Sec.) D C B A Z F O H W L K J N P Q R D C C C C C C C C C C C C C C C C C C	Moll name LOCATION: Counapped Quadran	A M Ori	dome innument of the control of the	Tile number File number File number Folder Tp., R., Sec., S D C B E F G N L K N P Q Well status- estica es

Heppner Lumber Company #2			Index number 128-M 28-26E-21-ML #2	Index number 91-U ### 49-282-10-P
name			File number (Code: Tp., R., Sec., Sec.)	Well name File number (Code: Tp., R., Sec., 2 Se
TION:				LOCATION:
rrow Count:			D C B A	D C B
			E F G H	Unatilla County E F G
mapped Quadrangl	•		M L K J	Umatilla Quadrangle M L K
Range Section Fractional	section		N P Q R	4N 28E 10 SE of NV N P Q
TISTICS:				
ll type-Dig Elevation (1: Drilled x face)	and sur-	Use st	ntus- Well status-	STATISTICS: Well type-Dug
Drilled x face)	ft.	dome in u	stic*strial shandoned	Drilled x face) ft. domestic* Driven above in matrial abandoned
nal depth 229'		irri	gation dry hole cipal producer x	Final depth 1601 below irrigation dry hole municipal x producer
		*include	s stock wells	*includes stock wells
eppner Lumber Company	Fred	J. Nicho	son	City of Hermiston A. A. Durand & Son
ddress Heppner Oregon	Add	ress	lers name Ione, Oregon	Owners name Original drillers name Address Address Walla Walla, Washington
	Dat	e of dri	lling Oct. 1940 to Feb. 1941	Date of drilling about 1920
is record complied by N.S.W. ta secured from the Following sour	from De	epened		
		-cased	by	data secured from the following sources: re-cased
ompany officials and driller.			-	versal log report sy the driller. cleaned by Yield comments and location by Mr. Taylor, City Recorder.
e compiled October 1947	Da	te	· ·	Date compiled Nov. 1947 & Jan. 1948 Date
Material	Thickness		Remarks	Vatorial Thickness Depth Barrier
		(feet)		(feet) (feet) Remarks
Dirt and gravel	16	16	6" hole - cased to -20"	Sand and gravel - about 60 60
Blue rock hard and boulders	7	23		Blue clay - about 30 90
Soft streak	2	25	Constant flow 55 g.p.m.	Basalt - about 70 160
Basalt with crevices common			Intermittent pumping of	Bottom of hole. Pumped
and nigger heads	56	81	75 g.p.m. good for 1 hour	275 g.p.m. originally but has decreased.
Blue basalt	27	108	and 25 minute periods.	
Gray basalt	46	154	Flow figures from lumber	
Dark gray basalt	20	174	company officials	
Light gray basalt	4	178		Index number 87-U Hermiston City #2 41-283-10-P
Very light gray and very hard	3	181		Hermiston City #2 4M-283-10-P
-				
Darker gray and blue basalt	12	193		LOCATION: D C B
Dark blue basalt, seams	12	205		Umatilla County E F G
Boulders and nigger heads	9	214		Umatilla Quadrangle M L K :
Hard gray basalt	4	218		4N 28E 10 Set of SW 1 Tp. Range Section Fractional section
Shelly and broken basalt	1	219	Some Water	
Hard basalt	10	229		STATISTICS:
				Well type-Dug Elevation (land sur- Use status- Well status- face) ft. domestic*
				Driven above in astrial abandoned below irrigation dry hole
				Final depth 500 municipal x producer
				*includes stock wells
				City of Hermiston Owners name Original drillers name
				Address Address
				Date of drilling 1924
		ĺ		This record compiled by M.S.W. from Deepened data secured from the following sources: re-cased
		Ì	i	cleaned by E. A. Dodds, Hermiston, City Officials
		İ		and State Engineer
		-		Date compiled Nov. 1947, Feb. 1948 Date
		 		Material Thickness Depth Remarks
				This well was drilled by a stock company prospecting for oil. The
		<u> </u>		original log made for the nil dompany has been lest but Mr. E. A Rodds. Hermiston, one of the principals in the company supplied the following information from recollection. In this respect, Dodds is quite positive
		<u> </u>		that the thickness intervals given are correct because the repetition of
		1	ı İ İ	80' intervals made the figures easy to remember.
		<u> </u>		Sand and gravel 20 20
				Basalt 20 40
				Basalt 20 40
				Basalt 20 40 Alluvial material 80 120
				Basalt 20 40
				Basalt 20 40
				Basalt 20 40

LOCATION: Unatilla Co Unmapped Quadra	unty	File number (Code: Tp., R., Sec., 2 Sec D C B A E F G H	LOCATION: Umatilla	County		68-352-21 File number (Code: Tp., R., Sec., 2 Sec., 2 Sec., 2 F., G. 1
On 35E 34 Tp. Range Section Fraction		M L K J	Unmapped 6E 35E 21 Tp. Range Section	main of NWi Fractional section		M L K
STATISTIOS: Well typs-Dag Drilled Case Service Selection of Selection	*inc A. A. Dure Original Address Date of		Drilled x f	Oregon Date	in au irri muni *include	stic* strial abandoned gation x dry hole cipal producer : s stock wells
Driller	cleane	d by	State Engineer	e1 —	.eaned	
Date compiled January 1948	Date	nth	Date compiled Februar	y 1948 De	d Denth	
Naterial	(feet) (re-	et) Repuiras	Naterial	(feet)	(feet)	Remarks
Dug pit	46 46		Dug well	37	37	Hole 8
Boulders Cement gravel	6 52 35 81		Cenent gravel	84	121	Bottom of hole.
Cement gravel and clay	10 97				1	SWL when completed was 22
Loose gravel (coarse)	6 10					Yield stabilized after 4 :
			<u> </u>		<u> </u>	
			-		<u> </u>	
-	- -	-	+		<u> </u>	
			J			
LOGATION: Co Refree	r i	(Code: Tp., R., Sec., 2 Sec D C B A E F G H M L K J N P Q R	LOGATION: Unatilla Pendileton 18 322 1	County Quadrangle Bi		Code: Ty., R., Sec., 2 Sec.
*						
Drilled face)	ft.	se status- domestic* x intustrial abandoned irrigation dry hole municipal producer x ludges stock wells	Drilled X f	levation (land surace)ft.	iniu irri muni	atus- stic* x strial abandoned gation dry hole cipal producer s stock wells
Final depth ?	inc		1			
		drillers name	Roy Horn Owners name Address Route 1	C. E. Orig	inal dril	lers name Pendleton, Oregon
Final depth ? Harvey Metlic Owners name	Original Address	drillers name	Owners name Address Route 1	Orig:	inal dril	Pendleton, Oregon
Final depth ? Harvey Metlic Owners name	Original Address	drillers name drilling led led	Owners name Address Route 1	on, Oregon Dat N.S.W. from De N.S.W. from Co.	inal dril	Pendleton, Oregon
Harvey Methic Owners name Address Portland, Oregon This record compiled by M.S.W. data secured from the Following	Original Address: Date of from Deeper re-cast cleaned	drillers name drilling drilling and and bd by	Omers name Address Boute 1 Pendiet This record compiled by data secured from the 75 Mr. J. R. Hanna, Pendlet	Original Additional Control on Co	inal dril iress te of dri eepened e-cased	Pendleton, Oregon
Harvey Netlic Compare name Address Fortland, Oregon This record complied by H.S.V. data secured from the following R. B. Rice, Seppear, Oregon	Original Address: Date of from Deeper re-cast cleaned	drillers name drilling drilling and and bd by	Omers name Address Boute 1 Pendist This record compiled by data secured from the 10 Mr. J. R. Hanna, Fendlet	on, Oregon Det N.S.V. from De Ilowing sources: ro on, Oregon ry 1948 De	inal dril iress te of dri eepened cased leaned	Pendleton, Oregon
Harvey Netlic Covars name Address Fortland, Oregon This record complied by M.S.V. data secured from the following R. B. Rice, Heppear, Oregon Date compiled October 1947	Original Address Date of from Despet sources: re-ces cleans Date Thickness De (feet) (re-	drillers name drilling drilling and and bd by	Omers name Address Boute 1 Pendiet This record compiled by data secured from the 75 Mr. J. R. Hanna, Pendlet Date compiled Janua	on, Oregon Det N.S.W. from Det N.S.W. from Det N.S.W. from Det On, Oregon Ty 1948 De	inal dril iress te of dri eepened cased leaned	Pendlaton, Oregon lling by
Harvey Netlic Covars name Address Fortland, Oregon This record complied by H.S.V. data secured from the Callowing R. B. Rice, Seppner, Oregon Date compiled October 1947 Material	Original Address Date of from Despet sources: re-cas cleans Date Thickness De (feet) (re-	drillers name f drilling and by pth Researce tt) Flowing well, with small consistent yield of warm	Omers name Address Boute 1 Pendist This record compiled by deta secured from the To Mr. J. R. Hanna, Fendlet Date compiled Janua Material	on, Oregon Det N.S.V. from De Ilowing sources: ro on, Oregon ry 1948 De	te of dri eepened cased leaned	Pendleton, oregon lling by Remarks SWL 401. Pumped for domes
Harvey Netlic Covars name Address Fortland, Oregon This record complied by H.S.V. data secured from the Callowing R. B. Rice, Seppner, Oregon Date compiled October 1947 Material	Original Address Date of from Despet sources: re-cas cleans Date Thickness De (feet) (re-	drillers name f drilling and by pth Researce tt) Flowing well, with small consistent yield of warm	Omers name Address Boute 1 Pendist This record compiled by deta secured from the To Mr. J. R. Hanna, Fendlet Date compiled Janua Material	on, Oregon Det N.S.V. from De Ilowing sources: ro on, Oregon ry 1948 De	te of dri eepened cased leaned	Pendleton, oregon lling by Remarks SWL 401. Pumped for domes
Harvey Netlic Covars name Address Fortland, Oregon This record complied by H.S.V. data secured from the Callowing R. B. Rice, Seppner, Oregon Date compiled October 1947 Material	Original Address Date of from Despet sources: re-cas cleans Date Thickness De (feet) (re-	drillers name f drilling and by pth Researce tt) Flowing well, with small consistent yield of warm	Omers name Address Boute 1 Pendist This record compiled by deta secured from the To Mr. J. R. Hanna, Fendlet Date compiled Janua Material	on, Oregon Det N.S.V. from De Ilowing sources: ro on, Oregon ry 1948 De	te of dri eepened cased leaned	Pendleton, oregon lling by Remarks SWL 401. Pumped for domes
Harvey Netlic Covars name Address Fortland, Oregon This record complied by H.S.V. data secured from the Callowing R. B. Rice, Seppner, Oregon Date compiled October 1947 Material	Original Address Date of from Despet sources: re-cas cleans Date Thickness De (feet) (re-	drillers name f drilling and by pth Researce tt) Flowing well, with small consistent yield of warm	Omers name Address Boute 1 Pendist This record compiled by deta secured from the To Mr. J. R. Hanna, Fendlet Date compiled Janua Material	on, Oregon Det N.S.V. from De Ilowing sources: ro on, Oregon ry 1948 De	te of dri eepened cased leaned	Pendleton, oregon lling by Remarks SWL 401. Pumped for domes
Harvey Netlic Covars name Address Fortland, Oregon This record complied by H.S.V. data secured from the Callowing R. B. Rice, Seppner, Oregon Date compiled October 1947 Material	Original Address Date of from Despet sources: re-cas cleans Date Thickness De (feet) (re-	drillers name f drilling and by pth Researce tt) Flowing well, with small consistent yield of warm	Omers name Address Boute 1 Pendist This record compiled by deta secured from the To Mr. J. R. Hanna, Fendlet Date compiled Janua Material	on, Oregon Det N.S.V. from De Ilowing sources: ro on, Oregon ry 1948 De	te of dri eepened cased leaned	Pendleton, oregon lling by Remarks SWL 401. Pumped for domes
Harvey Netlic Covars name Address Fortland, Oregon This record complied by H.S.V. data secured from the Callowing R. B. Rice, Seppner, Oregon Date compiled October 1947 Material	Original Address Date of from Despet sources: re-cas cleans Date Thickness De (feet) (re-	drillers name f drilling and by pth Researce tt) Flowing well, with small consistent yield of warm	Omers name Address Boute 1 Pendist This record compiled by deta secured from the To Mr. J. R. Hanna, Fendlet Date compiled Janua Material	on, Oregon Det N.S.V. from De Ilowing sources: ro on, Oregon ry 1948 De	te of dri eepened cased leaned	Pendleton, oregon lling by Remarks SWL 401. Pumped for domes

	Index number 72-U 2N-30E-19-H File number (Code: Tp., R., Sec., 2 Sec.)	Johnson Well name	_		Index number 7-U 6N-35N-21-H File number (Code: Tp., R., Sec., 2 Sec
LOCATION:	D C B A	LOCATION:			D C B A
Umatilla County	E F G H	Umatilla Cour	•		в у с н
Umatilla Quadrangle	M L K J	Unmapped Quadrang			M L K J
ZH 30E 19 SE corner of HE2 Tp. Range Section Fractional section	N P Q R	6N 35E 21 SE2 of ME Tp. Range Section Fractional	section		N P Q R
STATISTICS:	sur- Use status- Well status-	STATISTICS: Well type-Dug Elevation (land our	Use st	atus- Well status-
Well type-Dug Drilledx Driven Driven Driven	ft. domestic* x injustrial abandoned	Drilled x face) Driven above	ft.	done	stic* abandoned
Final depth 180'	irrigation dry hole municipal producer x	Final depth 171		irri	gation x dry hole cipal producer s stock wells
Cunningham Sheep Company	Original drillers name	Matilda Johnson Owners name			lers name
Owners name Address Pendleton, Oregon	Address	Address Route 2		ress	Tels name
	Date of drilling 1939	Freewater, Oregon		e of dri	lling Nov. and Dec. 1946
This record compiled by E.S.W. from data secured from the following sources:	n Despened	This record complied by N.S.W. data secured from the following so	from De	epened -cased	_
Company officials	cleaned by	State Engineer	e1	beaned	
			_		
Date compiled July 1947	Date	Date compiled February 1948	De		
Natorial Tric	ckness Depth Remarks	Material	Thickness (feet)	(feet)	Remarks
No log available	180 Pumped for stock use only	Top soil	11	11	3" hole
		Loose gravel and sand	15	26	SWL 41'.
		Boulders and gravel	10	36	Naximum rate pumped in
		Cement gravel	16	52	1947 was 165 g.p.m.
		Open gravel	1	53	
		Cement gravel	31	84	
		Open gravel	3	87	ļ
		Cement gravel	34	121	
		Open gravel	5	126	1
		Cement gravel	18	144	1
		Open gravel	3	147	1.
	tadan anaton as m	Cenent gravel	1 6	153	1
Jones-Scott Well name	Index number 35-U 5N-28E-17-J File number	Open gravel	2	155	
	(Code: Tp., R., Sec., 2 Sec.)	Cement gravel	2	163	
LOCATION:	D C B A	Open gravel Cement gravel	3	166	
	E F G H	Open gravel	2	168	
Umatilla County		Cement gravel	1	169	İ
Umatilla Quadrangle	M L K J		1		Bottom of hole
Umatilla Quadrangle 5N 28E 17 HE# of SE#	M L K J	Open gravel	2	171	MOTOR OF HOLE
Unatilla Quadrangle 5	M L K J	Open gravel	-i	171	1 200002 07 2020
Unatilla Quadrangle SE 28E 17 EFt of SEt Tp. Range Section Fractional sections	M L K J ION ION N P Q R	Open gravel	-i	171	1 2000 07 2010
Umatilla Quadrangle SH 25E 17 Ed of SE1 Th. Range Section Fractional secti STATISTICS: Well type-Dug	M L K J N P Q R Sur- Use status- ft. domestic abandoned	Jones #2	-i	171	Index number 73-U 2F-30E-19-E
	SUT Use status— ft. domestic through the property of the pr		-i	171	Index number - 73-U
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LOCATION:			D C B A	LOCATION:			D C B
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Umatilla Quadrang	дө		M T K 1	Umatilla Quadrangl 2N 27E 22-7 West 2	0		M I K
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Final depth		muni	gation dry hole cipal producer x stock wells	Final depth 1701 below		mun	lgation dry hole icipal producer es stock wells
D. L. Johnson				Bill Kilkenney	0.18.	Levis	
Owners name Address	Origi Add	nal dril ress	lers name	Owners name Address Echo, Oregon	Origi	nal dri	llers name Pendleton, Oregon
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data secured from the following so U. S. Production and Marketing Adm	cl	-cased		data secured from the Following sou Driller	rces: re	-cased_ eaned	by
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Date compiled March 1948	Da			Date compiled July 1947	De		
Material	Thickness (feet)		Remarks	Naterial	Thickness (feet)		Remarks
No data available	1			All hard rock to a total depth		<u> </u>	6" hole - Artesian flow, encountered but said flow
	1		· ·	depth of either -	or	140	periodic. Well is normall pumped with a large centri
	1					170	gal pump.
	+	-					
	+		 				
							Index number 115-M
	+	-		Kincaid Well name			2S-23E-11-M
							(Code: Tp., R., Sec., 2 Se
		<u> </u>		LOCATION:			D C B
		•		Morrow Count	y		E F G
				l			
				Unmapped Quadrangl	0		M L K
			Index number 51-U	Unmapped Quadrangl 2S 23E 11 SW2 of SW2 Tp. Range Section Fractional			M L K
Kik Well neme			5H-2SE-23-H File number	2S 23E 11 SW4 of SW4 Tp. Range Section Fractional			
Well name			5H-28E-23-N	2S 23E 11 SW2 of SW2 Tp. Range Section Fractional STATISTICS:	section	Uga at	N P Q
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Wantilia Cour Quadrans SE 28E 23 M4 of W4 Tp. Range Section Fractional STATISTICS: Well type-Dug Elevation	section	Use st.	### SH-25E-23-N File number (Code: Tp., R., Sec.,) Sec.)	28 278 1 Ski of Ski Tp. Range Section Fractional STATISTICS: Well type-Dug Drilled x face) Driven above below Final depth 6851 Lindsay Kincald Owners name Address lone, Cregon	M. E. Origi	dome in a irri muni *include Cotter nal dril ress e of dri	M P Q Well status- natio" x ustrial shandoned dry hole loipal producer as stock wells Lore name lone. Orecon
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Manual M	section	dome intu irri muni *include	SH-25E-2-N File number (Oode: Tp., R., Sec.,) Sec.) D	28 238 11 Ski of Ski Typ. Range Section Fractional STATISTICS: Well type-Dug Drilled x Face) Driven above Final depth 6851 Lindsay Kincald Owners name Address Ione, Oregon This record complied by J.S.W. data secured from the collowing sou	M. E. Original And Surfrees: received the column of the co	dome in: ir: mun. *include Cotter nate ress e of dri epened -cased eened	M P Q Well status- satio* x statis* abandoned dry hole cipal producer stock wells likers name lone, Gregon lone, Gregon likers name l
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Well name Location: Unatilla Cour	and surft. A. A. Origi Add Dat from De uroes: re cand also th Thickness (feet) 15	dome intu irri muni *include: Durand & nal dril ress e of dri epened -cased eaned de drille Depth (feet) 15	File number (Code: TD., R., Sec., Sec.) D C B A E F G H M L K J N P Q R This is abandoned getting attack at the stock while stock stock while stock stock stock while stock	28 278 11 SV\$ of SV\$ Tp. Range Section Fractional STATISTICS: Well type-Dug	M. E. Original Add Date from Date of Thickness (feet) 20 95 30 35; 193 67 40	domesina in a sun in	stus- stics - Well status- stics - Second - Seco
Well name Location: Umatilla Cour Bmatilla Quadran SH 26E 23 Wh of We Top. Range Section Fractional STATISTICS: Well type-Dug Elevation (Deriven 160' W. C. Kik Dairy Comers name Address Route 2 Hermiston, Cregon This record complied by M.S.W. data escured from the Jollowing sc U. S. G. S. Ground-Water Division Duts compiled Dec. 19h7 and Jan. Material Sand Sasalt, broken Basalt, water 87-95 feet	land surft. A. A. Original Add Add Add Add Add Add Add Add Add Ad	dome in a dome in a dome in a dome in a dome in a dome in a dome in a dome in a dome and dril reas e of dri eaned cased cased cased cased ite Depth (reet) 15 17	File number (Code: TD., R., Sec., Sec.) D C B A E F G H M L K J N P Q R This is abandoned gation of the bills stock while st	28 278 11 SW\$ of SW\$ Tp. Range Section Fractional STATISTICS: Well type-Dug face) Drived above Final depth 685t Lindsay Kinceld Owners name Address lone, Oregon This record compiled by J.S.V. data secured from the rollowing sou Driller Date compiled November 1947 Material Top soil and hardpan Gracked seasy rock Gray basalt Cracked rock with shale Hard, solid gray and blue basal Red rock with sease Sike basalt Cracked rock - no water Hard gray and blue rock Graydard or or no water Hard gray and blue rock Cracked rock - no water	M. E. Original Parisis re- ol. Thickness (reet) (reet) 30 35 193 67 40	dose inw inw inw inw inw inw inw inw inw inw	stus- stics - Well status- stics - Second - Seco
Well name Location: Unatilla Cour	and surft. A. A. Origi Add Dat from De uroes: re cand also th Thickness (feet) 15	dome intu irri muni *include: Durand & nal dril ress e of dri epened -cased eaned de drille Depth (feet) 15	File number (Code: Tp., R., Sec., Sec.) D C B A E F G H M L K J N P Q R Well status- stic* stock wells stock wells Son lere name L V V V Walla walla, Vnchington ling Nov. 1, 1944 Remarks Casing, 6-incn, set to 27 feet. Static level Gaire schoulere letween 637 to -57 . Driller reports that ca a hall test to ballers made	28 278 1 SV\$ of SV\$ Tp. Renge Section Fractional STATISTICS: Well type-Dug	M. E. Original Add Date from Date of Thickness (feet) 20 95 30 35; 193 67 40 15 55	document document	stus- stics - Well status- stics - Second - Seco
Well name Location: Umatilla Cour Bmatilla Quadran SH 26E 23 Wh of We Top. Range Section Fractional STATISTICS: Well type-Dug Elevation (Deriven 160' W. C. Kik Dairy Comers name Address Route 2 Hermiston, Cregon This record complied by M.S.W. data escured from the Jollowing sc U. S. G. S. Ground-Water Division Duts compiled Dec. 19h7 and Jan. Material Sand Sasalt, broken Basalt, water 87-95 feet	land surft. A. A. Original Add Add Add Add Add Add Add Add Add Ad	dome in a dome in a dome in a dome in a dome in a dome in a dome in a dome in a dome and dril reas e of dri eaned cased cased cased cased ite Depth (reet) 15 17	File number (Code: TD., R., Sec., Sec.) D C B A E F G H M L K J N P Q R This is abandoned gation of the bills stock while st	28 278 1 SV\$ of SV\$ Tp. Range Section Fractional STATISTICS: Well type-Dug	M. E. Original Add Add Add Add Add Add Add Add Add Ad	does in a final defination of the content of the co	stus- stics - Well status- stics - Second - Seco
Well name Location: Umatilla Cour Bmatilla Quadran SH 26E 23 Wh of We Top. Range Section Fractional STATISTICS: Well type-Dug Elevation (Deriven 160' W. C. Kik Dairy Comers name Address Route 2 Hermiston, Cregon This record complied by M.S.W. data escured from the Jollowing sc U. S. G. S. Ground-Water Division Duts compiled Dec. 19h7 and Jan. Material Sand Sasalt, broken Basalt, water 87-95 feet	land surft. A. A. Original Add Add Add Add Add Add Add Add Add Ad	dome in a dome in a dome in a dome in a dome in a dome in a dome in a dome in a dome and dril reas e of dri eaned cased cased cased cased ite Depth (reet) 15 17	File number (Code: Tp., R., Sec., Sec.) D	28 278 1 SV\$ of SV\$ Tp. Range Section Fractional STATISTICS: Well type-Dug	M. E. Original Add Surfit Add Add Surfit Add Add Surfit Add Add Surfit Add Add Surfit Ad	dose in a first in a f	stus- stics - Well status- stics - Second - Seco
Well name Location: Umatilla Cour Bmatilla Quadran SH 26E 23 Wh of We Top. Range Section Fractional STATISTICS: Well type-Dug Elevation (Deriven 160' W. C. Kik Dairy Comers name Address Route 2 Hermiston, Cregon This record complied by M.S.W. data escured from the Jollowing sc U. S. G. S. Ground-Water Division Duts compiled Dec. 19h7 and Jan. Material Sand Sasalt, broken Basalt, water 87-95 feet	land surft. A. A. Original Add Add Add Add Add Add Add Add Add Ad	dome in a dome in a dome in a dome in a dome in a dome in a dome in a dome in a dome and dril reas e of dri eaned cased cased cased cased ite Depth (reet) 15 17	File number (Code: Tp., R., Sec., Sec.) D	28 278 1 SW of SW of SW of Pr. Renego Section Fractional STATISTICS: Well type-Dug	M. E. Original Add Surfit Add Add Surfit Add Add Surfit Add Add Surfit Add Add Surfit Ad	does in a first in a f	Well status- nation x strial shadoned dry hole shoke wells lores oregon Started willy, 1916 lling Finished Feb. 1517 by Remarks 65 hole
Well name Location: Umatilla Cour Bmatilla Quadran SH 26E 23 Wh of We Top. Range Section Fractional STATISTICS: Well type-Dug Elevation (Deriven 160' W. C. Kik Dairy Comers name Address Route 2 Hermiston, Cregon This record complied by M.S.W. data escured from the Jollowing sc U. S. G. S. Ground-Water Division Duts compiled Dec. 19h7 and Jan. Material Sand Sasalt, broken Basalt, water 87-95 feet	land surft. A. A. Original Add Add Add Add Add Add Add Add Add Ad	dome in a dome in a dome in a dome in a dome in a dome in a dome in a dome in a dome and dril reas e of dri eaned cased cased cased cased ite Depth (reet) 15 17	File number (Code: Tp., R., Sec., Sec.) D	28 278 1 SW of SW of SW of Pr. Renego Section Fractional STATISTICS: Well type-Dug	M. E. Original Add Surfit Add Add Surfit Add Add Surfit Add Add Surfit Add Add Surfit Ad	does in a first in a f	N P Q

King Well name	_		Index number 61-U 4N-32E-3 File number	Krebs #2 Well name	_		Index mumber 145-0 3N-22E-20 File number
			(Code: Tp., R., Sec., 2 Sec.)				(Code: Tp., R., Sec., & Sec.
LOCATION:			D C B A	LOCATION:			D C B A
Omatilla Coun	ty		г у с н	Gilliam Com	inty		E F G H
Umatilla Quadrang	le		и ц к т	Arlington Quadran	ngle		M L K J
4N 3ZE 3 SET Tp. Range Section Fractional	section		N P Q R	N 22E 20 Tp. Range Section Fractions	l section		N P Q R
wante poteton tractional	20011011			the wante decrion algertous	500.01011		
STATISTICS:				STATISTICS:			
Well type-Dug Elevation (I face)	land sur- ft.	Use st	atus- Well status- stic* x	Well type-Dug Elevation Drilled x face)	(land sur- ft.	Use st dome	atus- Well status-
Driven above below		inat	strial abandoned gation dry hole	Driven above below	***************************************		strial abandoned gation dry hole
Final depth 168'		aun i	cipal producer x s stock wells	Final depth 6091		auni	cipal producer x
Lester King		Durand		_ Xrebs Bros.	V		
Owners name Address Helix, Oregon	Origi	inal dril	lers name Walla Walla, Washington	Owners name Address Cecil, Oregon			lerson lers pame Walla Walla, Washington
			lling Oct. 1947 to Nov. 1947	55521			lling finished Dec. 1947
This record complied by S.S.W.	_	eepened		This record compiled by M.S.W.	_	epened	
This record complied by E.S.W. data secured from the following so	urces: re	e-cased_ leaned	_ _{by}	This record compiled by M.S.W. data secured from the collowing s	sources: re	-cased eaned	
Driller				Driller			
Date compiled January 1947	De	ate		Date compiled January 1948	De	te	
Material	Thicknes	s Depth	Remarks	Naterial	Thickness	Depth	Remarks
	(feet)	T			(feet)	T	
Soil Tark	10	10	SWL 321	Top soil and clay	90	90	
Hardpan and brown clay	12	22	Bail test at 32 g.p.m. for	Green rock	36	126	
Brown basalt	4	32	30 minutes. Gave an initial	Clay and rock	74	200	
Hard blue basalt	11	32 43	trawdown to 58'. This came	Gray rock, hard	65	265	
Brown basalt Hard blue basalt	40	83	back to 44' and stayed constant.	Brown clay	55	320	at 3701 water horizon
Soft brown basalt	16	99	Recovered to 32' static level	Blue clay	141	461	yielding about 2 g.p.m.
Slue basalt	1 1	100	an to minutes.	Brown clay	53	483	
Brown basalt	19	119	Casing, 8" to 46	Green clay	58	594	
Blue basalt	8	127		•		509	Water here, apparently str
	1 2	T		Black rock, water bearing	15		i
Brown basalt	10	132		This well was drilled 8" to 9 where the first cavey clay wa	as encountere	e causir	ugus to run a 4" string of,
Blue basalt Medium brown basalt	3	145		formation was again encounter level in the amount of 2 g.p.	ng at the 540	offt. let	tel where a rock
Very hard brown basalt	19	164		level in the amount of 2 g.p. strong flow was struck in the	.m. This wat	er is no	ov cased out as an apparently
Hard blue basalt, broken	14	168	 				Index number 103-M
				Krebs #1 Well name			3N-24E-12-D
	1						(Code: Tp., R., Sec., Sec
				LOGATION:			D C B A
				Morrow Cou	inty		E F G H
			Index number 71-U	Blalock Island Quadran	ngle		M L K J
Kirk Well name	-		2N-30E-28 File number	Tp. Range Section Fractions	al section		N P Q R
			(Code: Tp., R., Sec., & Sec.)				·
LOCATION:			D C B A	STATISTICS:			
Unatilla Count			E F G H	Drilled x face)	(land sur- ft.		stic* x
Jmatilla Quadrangl	re		M L K J	Drivenabove below		irri	strial abandoned gation dry hole
ZN 30E 28 NW2 Tp. Range Section Fractional	section		N P Q R	Final depth 3041			cipal producer x s stock wells
				U. S. War Department	Fred M	. Muller	
				Owners name Address	Origi	nal dril	lers name Ontario, Oregon
STATISTICS:	and a::-	Her **					
FIATISTICS: fell type-Dug Elevation (1 Drilled T face)	land sur-	Use st	stic* x		Det	e of dri	lling
FIATISTICS: Nell type-Dug		dome in iu irri	stic* x strial abandonad agation dry hole	This record compiled by N.S.W.			lling
FIATISTICS: Nell type-Dug	ft.	dome in iu irri muni	stic* x strial abandonad_	This record complied by M.S.W. data secured from the following s	from De	epened	llingby
FATISTICS: fell type-Dug	ft.	dome in iu irri muni *include	stic* x strial shandoned strial dry hole sipal producer x s stock wells	Log recorded by Virgil Starr and by R. S. Bennett, U. S. Bureau of	from Decources: re-	epened	_
TATISTICS: [cll type-Dug	ft.	dome in iu irri muni *include	stic* x strial abandonad gation dry hole sipal producer x	Log recorded by Virgil Starr and	from Decources: re-	epened -cased eaned	_
TATISTICS: fell type-Dug face) Drives below final depth 114' Dunningham Sheep Company NEETE name	Origi:	dome in:iu irri muni *include	stic* x strial sbandoned spation dry hole spital producer X stock wells	Log recorded by Virgil Starr and by R. S. Hennett, U. S. Bureau of Management, Baker, Oregon	from Decources: re- of Land Da Thickness	epenedcased_eanedte	_
FAITIFICS: fell type-Dig	Origi: Add Dat	dome in in irri muni *include nal dril iress e of dri	stic* x strial sbandoned spation dry hole spital producer X stock wells	Log recorded by Wiggl Starr and by R. G. Bennett, U. S. Enraeu o Munagement, Enker, Oregon Date compiled November 1947 Material	from Decourses: re- infurnished of Land Da Thickness (feet)	epened	by
FATISTICS: fell type-Dug	Origi: Add Dat from De irces: re	dome in in irri muni *include: nal dril iress e of dri	stic* x strial sbandoned spation dry hole spital producer X stock wells	Log recorded by Virgil Starr and by A. S. Bennest, U. S. Brean o Kunngement, Saker, Oregon Date compiled Hovember 1947 Material Soft brown send	from Decourses: re- if furnished of Land Da Thickness (feet)	epened	by
Well type-Dug Elevation (1 face) Drilled E face) Final depth 114 Duningham Sheep Company Markets name Pendleton, Oregon This record compiled by M.S.W. Late secured from the Following sou	Origi: Add Dat from De irces: re	dome in lu irri muni *include nal dril ress e of dri epened -cased	stic* x standoned spation dry hole spital producer X s stock wells lers name	Log recorded by Virgil Starr and by A. S. Bennett, U. S. Arreau o Runagement, Saker, Oregon Date compiled Rovember 1947 Material Soft brown sand Soft light Gray shale	from Decourses: re- cl furnished Da Thickness (feet)	te	by
### ATISTICS: Mell type-Dug	Origi: Add Dat from De irces: re	dome in:u irri muni *include nal dril ress e of dri epened -cased	stic* x standoned spation dry hole spital producer X s stock wells lers name	Log recorded by Virgil Starr and by A. S. Bennest, U. S. Mareau o Runagement, Saker, Oregon Date compiled Roreaber 1947 Katerial Soft brown sand Soft light gray shale Very hard blue basalt	from Decourses: re- cl furnished Da Thickness (feet) 10 90 73	pened	Remarks Remarks
### ATISTICS: Well type-Dug	Origi: Add Dat from De irces: re cl	dome in au irri muni *include nel dril ress e of dri epened -cased eaned te	stic* x standoned spation dry hole spital producer X s stock wells lers name	Log recorded by Wirell Starr and by R. S. Rennett, U. S. Brreau or Nanagement, Baker, Oregon Date compiled Hovember 1947 Material Soft brown sand Soft light gray shale Very hard blue baselt Soft red lava	from Decrees: re- re- re- re- re- re- re- re- re- re-	epenedcased eaned te	by
FATISTICS: Well type-Dig	Origi: Add Dat from De irces: re cl	dome in an irri muni *include nel dril ress e of dri epened -cased eaned Depth (feet)	stic* x strial shandonad strial gration dry hole sijnal producer X stock wells producer X lers name	Log recorded by Wirell Starr and by R. S. Rennett, U. S. Breen Nanagement, Baker, Oregon Date compiled Hovember 1947 Material Soft brown sand Soft light gray shale Yery hard blue basnlt Soft red lawa Soft blue shale	from Decrees: re- re- re- re- re- re- re- re- re- re-	te	Remarks Remarks
FATISTICS: Well type-Dug	Origi: Add Dat from De irces: re cl	dome in an irri muni *include nel dril ress e of dri epened -cased eaned Depth (feet)	stic* x strial shandonad strial gration dry hole sijnal producer x stock wells.	Log recorded by Wirell Starr and by R. S. Bennett, U. S. Breau or Nanagement, Baker, Gregon Date compiled Hovember 1947 Material Soft brown sand Soft light gray shale Very hard blue basalt Soft red lava Soft blue shale Soft red lava	from Decourses: re- in furnished I furnished Thickness (feet) 10 90 73 22 35 10	te	Remarks Remarks Water encountered at -180' 50 g.p. hour.
### STATISTICS: Well type-Dug	Origi: Add Dat from De irces: re cl	dome in an irri muni *include nel dril ress e of dri epened -cased eaned Depth (feet)	stic* x strial shandonad strial gration dry hole sijnal producer X stock wells producer X lers name	Log recorded by Wirell Starr and by R. S. Rennett, U. S. Breen Nanagement, Baker, Oregon Date compiled Hovember 1947 Material Soft brown sand Soft light gray shale Yery hard blue basnlt Soft red lawa Soft blue shale	from Decrees: re- re- re- re- re- re- re- re- re- re-	te	Remarks Remarks

LaGrande #1 Well name		Index muber 151-Un 35-38E-6-E File number	Lexington City Well name			Index number 111-N 18-25E-23-L File number
LOGATION:		(Code: Tp., R., Sec., 2 Sec	LOCATION:			(Code: To., R., Sec., 2 Se
Union Count	•	D C B	Norrow Coun	tv		D C B
Unmapped Quadrangl		E F G I	Unmapped Quadrang	•		E F G
38 38 6 512 of 1132		N P Q F	18 25% 23 MM2 of SW2	:		M L K
Pp. Range Section Fractional	section	[N P V	Tp. Range Section Fractional	section		N P C I
TATISTICS:			STATISTICS:			
Mell type-Dug Elevation (1: Drilled I face) Driven above	ft.	s status- Well status- iomestic*injustrial abandoned	Well type-Dug Elevation (Drilled x face) Driven above	land sur-		atus- Well status- estic*strial abandoned
Final depth 1093'		irrigation dry hole municipal x producer x ludes stock wells	Final depth 420		irri	gation dry hole cipal x producer s stock wells
LaGrande City	A. A. Dur	and & Son	Lexington City	_ <u>A. A</u>	Durand	å Son lers name
Address	Address	Walla Walla, Washington	Address			Walla Walla, Washington
		drilling_about 1925		Da	te of dri	lling Spring 1939
This record compiled by M.S.W. data secured from the following sou	from Deepen		This record compiled by W.S.W. data secured from the following so	from De	epened	_
R. L. Stockman Sr., and City Water	cleane	by	State Department of Health and dr	•	eaned	
March 1948			also City Recorder	-		
Date compiled November 1944	Date		Date compiled January 1948	_	te	
Material	Thickness Der (feet) (fee	th Remerks	Material	Thicknes (feet)	(feet)	Remarks
We log available	10		Soil	10	10	Casing 10" to 87' 11"
Flow - reportedly 500 g.p.m. when well was first drilled.			Soil and cement gravel	13	23	
Rate meganred at 300 g.n.m.			Black rock	13	36	
th 1947. This well is capped when not in use. Strong press	re		Boulders, caving	11	47	
builds up resulting in stronge than average flow for periods			Cement gravel	16	63	
of several hours after well is opened. Marked seasonal varia	ion		Gray rock	2	65	SWL - 601
noted with flow strongest in the Spring and tapering to Fal	l.		Clay and rock	5	70	Stabilized water level
was made in the Fall. This we	.m. 1		Cavey rock	5	75	183 at yield of 90 g.p.m
and the #2 well are situated about 75' apart.			Blue limestone	10	85	
			Blue lime, black rock	. 10	95	Temperature 540
			Elack shale rock, caving	15	110	
			Blue and black rock	15	125	
T		Index number 152-Un	Black and gray rock	10	135	
LaGrande City #2		3S-36E-6-E File number	Black rock	75	210	
		(Code: Tp., R., Sec., Sec	Volcanic rock	15	225	
LOCATION:		D C B A	Volcanic rock mixed with lime and gray rock	10	235	
Union Count	7	Z F G 1	Volcanic ash rock and clay	30	265	T
Unmapped Quadrangl	9	M L K J	Volcanic and seams of harder		315	
38 38 6 SEt of NEt Tp. Range Section Fractional	section	N P Q F	Black rock	20	335	
			Gray basalt	18	353	
STATISTICS:			Gray basalt and iron ore	7	360	Cuttings so heavy they pack in hole.
Well type-Dug Elevation (1 Drilled r face)	and sur- Us	s status- Well status-	Gray basalt	24	384	1
Driven above		infustrial abandoned irrigation dry hole	Gray basalt and iron ore	4	388	T
Final depth 13701		nunicipal x producer_	Gray basalt	27	415	Heavy from 400 to 410
Oltre of Toffmondo			Gray basalt with soft	5	420	
City of LaGrande Owners name	A. A. Dur Original	irillers name	and hard streaks	1 ,		Bottom of hole
Address	Address			+	1	100 FOR OI HOIG
		drilling about 1926		+		
This record compiled by N.S.W. data secured from the following sou	from Deepen	•d		1	 	
R. L. Stockman, Sr., and City Water	cleane Master	1 by		1	1	
Karch 1948		· · · · · · · · · · · · · · · · · · ·		+	_	<u> </u>
Date compiled November 1944	Date	th I		1	\vdash	1
Material	(feet) (fee	th Remarks		1	 	
No log available	13			+	+	
		when well was first drille Rate measured at 600 g.p.m	<u> </u>	+	1	1
		in 1947. Water temperatur 81°F. Pressure measured a	<u> </u>	1	1	1
		51 lbs. Hefer to Well #1 for additional comments on		1	1	1
		pressure and seasonal vari ations of flow.	· ·	1	1	
		1	1	1	1	1
	i					
				+	 	
			-			

Lundell			Index number 121-M 3S-23E-14-H File number	Lewis Well name			Index number 132-U 2N-31E-16 File number
			(Code: Tp., R., Sec., 2 Sec.)				(Code: Tp., R., Sec., 2 Sec.)
OCATION:			D C B A	LOCATION:			D C B A
Korrow Count	,		E F G H	Umatilla Count	7		E F G H
Unmapped Quadrangl	•		M L K J	Pendleton Quadrangle	•		и г к л
38 23E 14 SE of ME			N P Q R	2N 318 16 SW			N P Q R
p. Range Section Fractional	section			Tp. Range Section Fractional	section		[-1-131-1
TATISTICS: ell type-Dug Elevation (1 Drilled x face)	ind sur-	Use st		STATISTICS: Well type-Dug Elevation (1st	and sur-	Use sta	atus- Well status-
Drilled x face) Driven above	ft.	dome:	stic* x strial abandoned	Well type-Dug Elevation (1c Drilled x face) Driven above	ft.	dome	stic* x strial abandoned
inal depth 574		zuni	gation dry hole producer x stock wells	Final depth		irri	gation dry hole
Algot Lundell	н. е.	Cotter		Clint Lewis			
wners name Address Ione, Oregon	Origi:	nal dril ress	ers name Ione, Oregon	Owners name Address	Origin Addi	nal dril. ress	lers name
	Dat	of dri	Started Oct. 28, 1919 ling Finished Oct. 30, 1926		Date	of dri	lling 1940
his record complied by U.S.W.		epened		This record countled by N.S.V.			-
his record complied by H.S.W. ata secured from the rollowing sou	rces: re	-cased	by	This record compiled by N.S.W. data secured from the following sou	roes: re-	cased_	by
Driller	*-			U. S. Freduction and Marketing Admi	nistration		_ ~
ate compiled November 194?	Da	te		Date compiled March 1948	Dat	te	
Naterial	Thickness (feet)	Depth (feet)	Remarks	Material	Thickness (feet)	Depth	Remarks
This well was drilled to a dep	th of 491'	in 1919	and was a good producer for	No data avallable	(1000)	*2001	
several years, but then failed	In 1926	it was	deepened to 5741.	No data available			
The composite log follows:	35	35	Cemented				
Cracked and caving rock	80	115		<u> </u>		·	l
Hard gray rock				<u> </u>			,
Brown rock with light brown so	1	153 287					
Hard blue and gray basalt	134			Mann			Index number 39-U 3N-34E-22-E
Medium hard gray rock	30	317 340		Well name	•		File number (Code: Tp., R., Sec., 2 Sec.
Soft red rock	23 81	340 421					10040. IP., R., Dec., 2 Sec.
Gray and blue basalt			Water here	LOCATION:			D C B A
Red rock, honeycomb	59	480	water here	Unatilla Count	•		E F G H
Blue basalt	11	491		Pendleton Quadrangl	е		M L K J
Hard gray basalt	59	550		Tp. Range Section Fractional	section		N P Q R
Gray rock with brown seams	10	560					
Brown rock with yellow sompsto	pe 14	574	Bottom of hole	STATISTICS:			
	1	<u> </u>	Water at 5741. Water	Well type-Dug Elevation (1 Drilled x face)	and sur- ft.	Use st dome	stic* x
			stood 52½ feet in hole.	Driven above below			strial abandoned gration dry hole
		<u> </u>		Final depth 315		muni include*	cipal producer x s stock wells
				Irvine Mann		Durand	
				Owners name	Origi	nal dril	lers name
				Address Adam, Oregon			Walla Walla, Washington
				m44	•	e of dri	11ing 1944
				This record compiled by N.S.W. data secured from the Following sou	rces: re-	epened -cased	
				U. S. G. S. Ground-Water Division	cle	ened	by
		ļ		Date compiled December 1947	Da	te	
		-		Material	Thickness (feet)	Depth	Remarks
	-			Soil	3	3	Casing, 8-inch, set to 63
				"Hard-pan"	7	10	ft. cement plug 310-315.
		-		Gravel	3	13	Static level 18 ft.,
		1		Shale, red, hard	3	16	bailed 40 g.p.m. with
	-			Basalt, broken	24	40	30 ft. drawdown, 5/8/44.
	1	-		Basalt, soft, red	20	60	
	-	-		Basalt, blue, hard	78	138	
		-		Basalt, broken	22	160	
	<u> </u>	ļ			 	-	
		<u> </u>		Basalt	20	180	
				Basalt, soft	15	195	
		<u> </u>		Basalt, hard	33	228	
		<u> </u>	,	Shale	17	245	
				Basalt	60	305	
				Basalt, crevice dry at 315	15	1 22.5	I
				Basait, erevice dry at 313	1 10	315	-
				Dasait, crevice dry at 313	15	(15)	
				Easait, Crewice dry at 515	15	315	,

Marple #1 Well name	-		File number
LOCATION:			(Code: Tp., R., Sec., 2 Sec.)
Morrow Count			D C B A
Quadrangl			B F G H
			N P Q R
Tp. Range Section Fractional	section		N P Q R
STATISTICS:			
Well type-Dug Elevation (1 Drilled x face)	and sur-	Use st	
Drivenabove	ft.	ini	strial abandoned
Fihal depth 71		נתנובב	lgation dry hole producer x
Jack Marple			
Owners name Address Ione, Oregon	Origi	Durand nal dril	llers name alla Walla, Washington
Marion Marion Marion	-		illing Aug. to Sept. 1946
This record compiled by M.S.W. data secured from the following sou			
	rces: re	-cased	by
Driller	,		
Date compiled January 1948	. De	te	
Material	Thickness (feet)	Depth (feet)	Remarks
Dug pit	9	9	Garing 6" set to 321.
Silt	5.	14	
Gray basalt	38	52	
Gray basalt and red rock	18	70	Some water here,
Gray basalt	1	71	
			SWL 13' 3". 25 min. bail test at 21,4 g.p.m. gave an
			initial drawdown to 26'.
l		1	3 min. and to 15' in 1 hour.
			No check for full recovery.
	ļ		We check for full recovery.
			Index number — 32-U
McIntyre Well mame			Index number — 32-U 48-942-25 File number
Well name			Index number — 32-U 4x-9x2-25
Mell name			Index number — 32-U ##-942-25 File number (Code: Tp., R., Sec., 2 Sec.)
Well name LOCATION: Umatilla Count:	-		Index number — 32-U 4H-94F-25 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H
Well name LOCATION: Unatilla Count: Pendleton Quadrangl	•		Index number — 32-U 4H-94H-25 File number (Code: Tp., R., Bec., Sec.) D C B A E F O H M L E 7
Well name LOCATION: Unstilla Count Pendleton Quadrangl	•		Index number — 32-U 4H-94F-25 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H
Well name LOCATION: Unatilla Count: Pendleton Quadrangl	•		Index number — 32-U 4H-94H-25 File number (Code: Tp., R., Bec., Sec.) D C B A E F O H M L E 7
Mell name LOCATION: Unatilla Count Fendleton Quadrengl AN NE 25 SV4 TP. Range Section Fractional STATISTICS:	section	Use at dome	Index number — 32-U 4H-94H-25 File number (Gode: Tp., R., Sec., Sec.) D C B A E F O H M L K 7 H P Q R
LOCATION: County	section	dome	Index number — 32-U 83-343-25 File number (Code: 79. R. Sec.) Sec.) D C B A E F O H M L K T H P Q R atus- stic x
Mell name LOCATION: Unatilla Count Fendleton Quadrengl AN NE 25 SW4 TP. Range Section Fractional STATISTICS: Well type-Dat face)	section and sur- ft.	dome iniu irri muni	Index number — 32-U AN-342-35 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H N L K J N P Q R while the status- etic* x
	section and sur- ft.	dome indu irri muni *include	Index number — 32-U ME-303-25 File number (Code: Tp., R., Sec., Sec.) D C B A E F G H M L K J H P Q R atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- well status- atus-
Well name LOCATION: Unatilla Count Pendleton Quadrangl AN 36E 25 SW Trp. Range Section Fractional STATISTICS: Drivea Drivea Drivea Final depth 200' Mointyre Hell	section and sur- ft.	dome indu irri muni *include	Index number — 32-U ME-303-25 File number (Code: Tp., R., Sec., Sec.) D C B A E F G H M L K J H P Q R atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- well status- atus-
Well type-Dug pring pring pring program above below bold program of the principle of the program of the principle of the prin	section and surft. A. A. Original	dome indu irri muni *include Durand nal dril ress	Index number — 32-U ### 342-35 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H M L K J H P Q R #### 22 #### 401 status- #### attus- ##### attus- ##### attus- ##### attus- ##### attus- ##### attus- ##### attus- ##### attus- ##### attus- ###### attus- ###################################
Mell name LOCATION: Unatilla Count: Francisco Typ. Hange Section Fractional STATISTICS: Well type-Dug Driven Driven Driven Station (Lagrange) Final depth 200' Mointyre Well Counts name Address Athena, Oregon	section and surft. A. A. Original	dome indu irri muni *include Durand nal dril ress e of dri	Index number — 32-U ME-303-25 File number (Code: Tp., R., Sec., Sec.) D C B A E F G H M L K J H P Q R atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- well status- atus-
County	A. A. Original Det	dome indu irri muni *include Durand nal dril ress e of dri	Index number — 32-U ### 342-35 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H M L K J H P Q R #### 22 #### 401 status- #### attus- ##### attus- ##### attus- ##### attus- ##### attus- ##### attus- ##### attus- ##### attus- ##### attus- ###### attus- ###################################
Mell name LOCATION: Unatilla Count: Francisco Typ. Hange Section Fractional STATISTICS: Well type-Dug Driven Driven Driven Station (Lagrange) Final depth 200' Mointyre Well Counts name Address Athena, Oregon	A. A. Original Det	dome iniu irri muni *include Durand nal dril ress e of dri epened -cased	Index number — 32-U \$H_942-32-5 File number — \$12-342-35 File number — \$12-342-32-35 File number — \$12-342-32-35 \$12-342-32-32-32-32-32-32-32-32-32-32-32-32-32
County	A. A. A. Original Add	dome indu irri muni *include . Durand nal dril ress e of dri espened cased eaned	Index number — 32-U \$H_942-32-5 File number — \$12-342-35 File number — \$12-342-32-35 File number — \$12-342-32-35 \$12-342-32-32-32-32-32-32-32-32-32-32-32-32-32
County C	A, A. A. Original Add Date from Decrees: recipied of the Decrees recipied of the Decrees recipied of the Decrees recipied of the Decrees recipied of the Decrees recipied of the Decrees recipied of the Decrees recipied of the Decrees recipied of the Decrees recipied of the Decrees recipied of the Decrees recipied of the Decrees recipied of the Decrees recipied of the Decrees recipied of the Decree recipied of t	dome indu irri muni *include . Durand nal dril ress e of dri epened cased eaned Depth	Index number — 32-U \$H_942-32-5 File number — \$12-342-35 File number — \$12-342-32-35 File number — \$12-342-32-35 \$12-342-32-32-32-32-32-32-32-32-32-32-32-32-32
County C	A. A. A. Original Add	dome indu irri muni *include . Durand nal dril ress e of dri epened cased eaned Depth	Index number — 32-U AN-342-325 File number — (Code: Typ., R., Sec.) D C B A E F O H N L E T T N P Q R Well status- ette' X abandoned gation cipal aproducer X et to to to to to to to to to to to to to
County C	A. A. Original Add Dat from De ross: recipied add Thickness (feet)	dome individual irri muni include Durand nel dril ress e of dri epened cased eaned Depth (rest)	Index masher 32-U AN 313-25 File number (Code: 39. R. Sec.) D C S A E F O H M L E F M P Q R AN P Q R Stur- ettle abadoned dry hole of pal producer x abadoned dry hole while while Wells Well
County C	A. A. A. Original Add Dat from De ross: recolumn of the front of the f	dome indiu irri muni *include . Durand nal dril ress e of dri epened -cased eaned Depth (rest) 34	Index number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II D C B A #II T O H #II L I T #II P Q R #II L I T #II P Q R #III Number — 32-U #III P Q R #III Number — 32-U #III Numbe
Moli name LOCATION: Unatilla Count: Fendleton AND AND AND Count: Guadrangle AND AND Count: Guadrangle Section Fractional Statistics: Mell type-Dag Driven Driven Final depth 200' Mointyre Bell Mointyre Bell Athena, Oregon This record compiled by F. S. W. data secured from the Collowing sou U. S. G. S. Ground-Vater Division Date compiled December 1947 Material Dag pit Old hole	A. A. A. Original A. A. A. Original A. A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. A. Original A. A. A. Original A. Original A. A. A. Original	dome indu irri muni *include Durand nal dril ress e of dri epened cased eaned Depth (rest) 34	Index number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II D C B A #II T O H #II L I T #II P Q R #II L I T #II P Q R #III Number — 32-U #III P Q R #III Number — 32-U #III Numbe
Mell name LOCATION: Unatilla Count: Fendleton Justilla Justi	A. A. Original Add Add Pat from De recess: Cl. Thickness (feet) 34 31 12	dome indu irri muni *include con dri la ress e of dri epened cosed eased eased	Index number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II D C B A #II T O H #II L I T #II P Q R #II L I T #II P Q R #III Number — 32-U #III P Q R #III Number — 32-U #III Numbe
Moli name LOCATION: Unatility Count: Franciston Sylva 25 SW Ty. Samps Section Fractional STATISTICS: Well type-Dug Drilled I SW Fractional Statistics Well type-Dug Drilled I Sw Sylva Sw Mointyre Hell Commers name Address Athena, Oregon Mointyre Hell Commers name Address Athena, Oregon U. S. G. S. Ground-Vater Division Date compiled December 19 th 7 Material Dug pit Old hole Shale, brown SWL 30 ^t	A. A. Original Add Add Pat from De Color (feet) Thickness (feet) A. A. A. A. Original Add Pat Add Add Pat Add Add Pat Add Add Pat Ad	dome indu irri muni *include Durand nal dril reas e of dri espened eased eased 54 55 77 87	Index number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II D C B A #II T O H #II L I T #II P Q R #II L I T #II P Q R #III Number — 32-U #III P Q R #III Number — 32-U #III Numbe
County C	A. A. A. A. Original Add Add Pat Add P	dome indu irri muni "include Durand nal dril reas e of dri espened cased eaned be be be be be be be be be be be be be	Index number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II D C B A #II T O H #II L I T #II P Q R #II L I T #II P Q R #III Number — 32-U #III P Q R #III Number — 32-U #III Numbe
County C	A. A. A. A. Original And Surface of the Control of	dome indu irri muni *include Durand nal dril ress of dri epened -cased cased -cased -77 87 110 128	Index number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II number — 32-U #II D C B A #II T O H #II L I T #II P Q R #II L I T #II P Q R #III Number — 32-U #III P Q R #III Number — 32-U #III Numbe

McBride Well name			6E-35E-20-B
			(Code: Tp., R., Sec., 2 Sec.)
LOCATION:			DCBA
Umatilla Count	7		E F G H
Unmapped Quadrangl			N L X J
68 358 20 EV2 of EV2 Tp. Range Section Fractional			N P Q R
Ty. MARGO Decelon Practicular			
STATISTICS:	•		
Well type-Dig Elevation (1 prilled x face)	and sur- ft.	Use st	atus- Well status-
Driven 200ve		iniu	strial shandoned
Final depth 376			gation X dry hole cipal producer X s stock wells
McBride Brothers Owners hame	A. A. Origin	Durand .	& Son lers name
Address Freewater, Oregon			Valla Valla, Vashington
			lling Feb. 1944 to Mar. 1944
This record compiled by N.S.W. data secured from the Following sou	from Dec	opened -cased	<u> </u>
riller	010	eaned	
	_		
Date compiled January 1948	Da		1
Material	Thickness (feet)	(feet)	Rosarks
Pit		26	Casing 12" to 105"
Cement gravel	17	43	Casing 12" to 105' 12" hole to 285' 10" hole 285' to bottom
Gravel and clay mixed	16	59	
Loose gravel	11	70	
Clay and gravel	68	138	
Brown clay	5	143	
Gravel	2	145	
Clay and gravel	150	295	
Brown clay	40	335	
Clean gravel	5	340	
		345	
Clay	5		
Gravel	31_	376	est had now
			SWL 45'. Pumps around
	 	-	350 g.p.m.
	1		
	<u> </u>	<u> </u>	
	1	<u> </u>	
		<u> </u>	
	<u> </u>		
	1	<u> </u>	
	-		
	1	<u> </u>	
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	<u> </u>		
		<u> </u>	
<u> </u>			

McClintock Well name	_		Index number 122-N 3S-23E-33-R File number	McEntire Well name	_		Index number 173-M 48-24E-13-H File number
LOCATION:		-	(Gode: Tp., R., Sec., 2 Sec.)	LOCATION:			(Code: Tp., R., Sec., 2 Sec.)
Morrow Count			E F G H	Korrow Cou			E F G H
Unmapped Quadrangle			M L K J	Blalock Island Quadran	-		M L K J
3S 23E 33 SE of SE	section		N P Q R	Tp. Range Section Fractions	l section		N P Q R
STATISTICS:		Use sta	well status-	STATISTICS:	Dand our	Use st	atus- Well status-
Well type-Dug Drilled x Driven Driven above	ft.	domes in aus	stic* x strial abandoned	Well type-Dug Elevation Drilled x face) Driven above	ft.	dome	stic* x strial sbandoned
Final depth 630' below	 	munic	gation dry hole ipal producer x s stock wells	Final depth 127		muni	gation dry hole cipal producer x stock wells
William McClintock Owners name Address Ione, Oregon	Origin	Cotter nal drill	lers name Ione, Oregon	John McEntire Owners name Address Boardman, Oregon	R. Har Origi	nal dril	lers name Goldendale, Washington
	Date	of dril	lling June 1922 to Aug. 1923		Dat	e of dri	lling 1928
data secured from the following sou	from Dec ross: re- cle	epenedeased	- by	This record compiled by N.S.W. data secured from the following s	from De	epened -cased eaned	
Driller				Owner	_		
Date compiled November 1947	Da: Thickness	Depth	Remarks	Date compiled March 1948 Material	Thickness	Depth	Remarks
	(feet)	(feet)			(feet)	(feet)	Aventi A0
Soil .	12	90	6" hole	Dirt and soil	4	4	
Cracked rock with different se- Blue and gray basalt with plenty of seams	117	207		Basalt, medium Hard blue basalt	100	104	lst water at 50'.
Soft red rock with some honeyo		265		Blue sticky clay	15	127	1st artesian flow at 751.
Hard blue basalt	63	328				<u> </u>	The above water cased out with 6" casing to 80'. 2nd water at 112. SWL 4'.
Soft cracked rock, yellow seam		385		•	-	 	Soft water - as compared to that of most other wells in
Hard blue and gray rock Cracked rock, yellow seams	30 40	415 455				<u> </u>	reported at 45°F.
Hard gray basalt	65	520					
Red rock, some sompstone	22	542	Had to cement from -520' to -542'				
Hard blue basalt	68	610					
Brown rock with seams	20	630	Bottom of hole				
			of water. No pump test.	NcFarlane ∲1 Well name	_		Index number 174-M 4W-25E-19 File number (Code: Tp., R., Sec., 2 Sec.)
·				LOCATION:			D C B A
					inty		E F G H
	1			## 25E 19 No of ME	1		M L K J N P Q R
	 			Tp. Range Section Fractions	al section		
				STATISTICS:	(1eed		
	1			Well type-Dug Elevation Drilled x face) Driven above	(land sur- ft.	inti	estic* x estrial abandoned
				Final depth 94!		irri muni	gation dry hole cipal producer x stock wells
				Jack Mulligan			1
				- Vuole markagan	A. M.	Edwards	
				Owners name Address Boardman, Oregon	Origi	nal dril	Lexington, Oregon
				Owners name Address Boardman, Oregon	Origi Add	nal dril ress se of dri	Lexington, Oregon
				Owners name	Original Add	nal dril	Lexington, Oregon
				Owners neme Address Boardman, Oregon This record compiled by N.S.Y.	Original Add	nal dril ress e of dri epened -cased	Lexington, Oregon
				Owners neme Address Boardman, Oregon This record compiled by N.S.Y.	from De sources: re	nal dril ress e of dri eepened cased	Lexington, Oregon
				Owners name Address Boardman, Oragon This record compiled by M.S.V. data secured from the following a	from Description	nal dril ress	Lexington, Oregon
				Owners name Address Boardman, Oragon This record compiled by H.S.Y. data secured from the following a Driller and owner Date compiled Sovember 1944	Original Add Date of Park Property of Pa	nal dril ress	Lexington, Oregon lling 1979 by Remarks Flowing well, Flow re-
				Owners name Address Boardman, Oragon This record compiled by M.S.Y. data secured from the Following a Driller and owner Date compiled Sevember 1944 Material	Original Add Date of Park Property of Pa	te of dri eepened -cased eaned ts Depth	Lexington, Oregon lling 1377 by Benarks Flowing well, Flow re- ported by the driller as seasured at 50 Kp.s. Flow reported by the present
				Owners name Address Boardman, Oragon This record compiled by M.S.Y. data secured from the Following a Driller and owner Date compiled Sevember 1944 Material	Original Add Date of Park Property of Pa	te of dri eepened -cased eaned ts Depth	Lexington, Oregon liing 1979 by Remarks Flowing well, Flow reported by the driller as seasured at 5% g.p.s. Flow reported by the driller as seasured at 5% g.p.s.
				Owners name Address Boardman, Oragon This record compiled by M.S.Y. data secured from the Following a Driller and owner Date compiled Sevember 1944 Material	Original Add Date of Park Property of Pa	te of dri eepened -cased eaned ts Depth	Lexington, Oregon liing 1979 by Remarks Flowing well, Flow reported by the driller as seasured at 5% g.p.s. Flow reported by the driller as seasured at 5% g.p.s.
				Owners name Address Boardman, Oragon This record compiled by M.S.Y. data secured from the Following a Driller and owner Date compiled Sevember 1944 Material	Original Add Date of Park Property of Pa	te of dri eepened -cased eaned ts Depth	Lexington, Oregon liing 1979 by Remarks Flowing well, Flow reported by the driller as seasured at 5% g.p.s. Flow reported by the driller as seasured at 5% g.p.s.
				Owners name Address Boardman, Oragon This record compiled by M.S.Y. data secured from the Following a Driller and owner Date compiled Sevember 1944 Material	Original Add Date of Park Property of Pa	te of dri eepened -cased eaned ts Depth	Lexington, Oregon liing 1979 by Remarks Flowing well, Flow reported by the driller as seasured at 5% g.p.s. Flow reported by the driller as seasured at 5% g.p.s.
				Owners name Address Boardman, Oragon This record compiled by M.S.Y. data secured from the Following a Driller and owner Date compiled Sevember 1944 Material	Original Add Date of Park Property of Pa	te of dri eepened -cased eaned ts Depth	Lexington, Oregon 1110g 1377 by Remarks Flowing well, Flow re- ported by the driller as measured at 50 Kp.m. Flow reported by the present
				Owners name Address Boardman, Oragon This record compiled by M.S.Y. data secured from the Following a Driller and owner Date compiled Sevember 1944 Material	Original Add Date of Park Property of Pa	te of dri eepened -cased eaned ts Depth	Lexington, Oregon litime 1370 by Remarks Flowing well. Flow reported by the driller as seasured at 56 g.p.s. Flow reported by the present of the control

McFarlane #2 Fell name			Index number 175-M 4H-25E-19 File number	McHary Dam site	-		Index number 80-U 59-289-10 File number
			(Code: Tp., R., Sec., 2 Sec.)				(Code: Tp., R., Sec., 2 Se
LOCATION:			D C B A	LOCATION:			D C B
	inty		E F G H	Umatilla Count			E F G
Blalock Island Quadran			M L K J	Umatilla Quadrangl			M L K
4g 25g 19 Center of Section Fractions	f NV		R P Q R	7p. Range Section Fractional			н Р Q 1
FTATISTICS:				STATISTICS:			
fell type-Dug Elevation Drilled_x face)	(land sur-	Use st	atus- Well status-	Well type-Dug Elevation (1 Drilled x face) 370	and sur-	Use st	utus- Well status-
Drivenabove	ft.	indu	strial abandoned gation dry hole	Driven above		iniu	strial abandoned
Final depth 1151 below		muni	cipal producer X s stock wells	Final depth 167'		muni	gation dry hole pipal producer
Jack Mulligan	A_ N.	Edwards		U. S. Engineers	A. A.	Durand &	Son
Owners name Address Boardman, Oregon	Ad	inal dril dress	Lexington, Oregon	Owners name Address	Origi Add	nal dril	lers name illa Walla, Washington
	Da	te of dri	lling 1941		Dat	e of dri	lling August 12, 1947
This record compiled by N.S.W. data secured from the Following s	from D	eepened_	_	This record compiled by N.S.W.	from De	epened_	
Driller and owner	sources: r	leaned	by	data secured from the following sou	el	-cased	. ра
	-			Lloyd Ruff, U. S. Wagineers, Portl	_		
Date compiled Movember 1947 Naterial	Thicknes	ate	Remarks	Date compiled August 1947	Thickness		
	(feet)	(feet)	 	Material	(feet)	(feet)	Remarks
No log available	-	115	Flow estimated at 5 or 6 g.p.m. when well was drilled	Sand	6	6	12" casing to -127.5"
		+	Pressure low. According to present owner this well was	Gravel and small boulders	18	30	
	+	+	plugged when he acquired the property in 1944. With	Boulders	+		
	+	1	removed, a small flow was	Gravel	30	35 68	
	+	+	re-gained. Water reported as sulphurous.	Sand and gravel	33 12	80	
	1	1		Silt and gravel Gravel and sand	8	88	
		†		Gravel and sand	13	101	Elevation of water rable 275.8' or -95'.
		1		Gravel and occasional boulders		110	
		†		Gravel	5	115	
<u> </u>							
					1		
				Gravel and sand	 	116	
			Index number 60-U	Gravel and sand	 		
einers Fell name	_		4H-32H-19 File number	Gravel and sand	1	116	
Well name	_		4N-32B-19	Gravel and sand Sand Gravel and coarse sand	1 1 6	116 117 123	
Well name	_		4H-32H-19 File number	Gravel and sand Sand Gravel and coarse sand Roulders and fine sand	1 6 2	116 117 123 125	
Counting Cou	unty		4H-32H-19 File number (Code: Tp., R., Sec., 2 Sec.)	Oravel and sand Sand Gravel and coarse sand Boulders and fine sand Soulders	1 1 6 2 3	116 117 123 125 128	
Moll name LOCATION: Pastilla Cou Pendleton Quadran	-		#H-32H-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A	Oravel and sand Sand Oravel and coarse sand Boulders and fine sand Loulders	1 6 2 3 2	116 117 123 125 128 130	
Counting Cou	ngle		#E-32E-19 File number (Code: Tp., R., Sec., 2 Sec.)	Gravel and sand Sand Gravel and coarse sand Boulders and fine sand Boulders Fine sand Boulders	1 1 6 2 3 2 8	116 117 123 125 128 130 138	
Moli name LOCATION: Location: Location Quadran NS 122 19 ESA Ty. Hange Section Fractions	ngle		NB-321-19 File masber (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H M L K J	Gravel and coarse sand Gravel and coarse sand Boulders and fine sand Boulders Fine sand Boulders Soulders Soulders Soulders Soulders and sand Closely fractured basalt Sound basalt	1 1 6 2 3 2 8 8 8	116 117 123 125 128 130 138 146 154	Bottom of hale.
Mell name LOCATION: Destilla Cou Condition Quadrat NS 22 19 E2 D. Range Section Fractions	ngle	Uga st	#M-321-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C H M L K J N P Q R	Oravel and sand Sand Gravel and coarse sand Boulders and fine sand Soulders Fine sand Boulders Boulders Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Mattire water supply from grave	1 1 6 2 3 2 8 8 8	116 117 123 125 128 130 138 146 154	
Mell name LOCATION: Destilla Cou Tendiaton Quadrar NI 22 19 EM TD. Range Section Fractions	ngle	1n-iu	#M-321-19 File number [Code: Tp., R., Sec., 2 Sec.] D C B A E F G H W L K J N P Q R ### ### ##########################	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
Mell name LOCATION: Description Quadrar No. 222 19 E22 Description Fractions FRATISTICS: [call type-Dag Elevation Driven below below below below below below below below control or c	al section	dome in iu irri guni	##-32-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H H L K J N F Q R atus- stics x ##11 stabus- stics x abandoned blag y reducer x reducer x	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
	al section (land sur_ft.	dome in iu irri muni *include	AN-323-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H H L K J N P Q R Autor Strial Status— strial status— strial status— strial biday producer 2 stock wells	Gravel and sand Sand Gravel and coarse sand Soulders and fine sand Soulders Fine sand Boulders Soulders and sand Closely fractured basalt Sound besalt Knitre water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
Moli name LOCATION: Condition Quadran Si 22 19 EE TO, Range Section Fractions THATISTICS (ell type-Dug Elevation Drilledx face) Driven below Final depth 2004 See, R. Meiners THE STATES AND SECTION THE SECTION FRACTIONS SECTION FRACTIONS Control of the Section of t	(land sur-ft.	dome in in irri muni *include . Durand inal dril	AN-323-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H H L K J N P Q R Attached to the status- strick attache	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
Mell name LOCATION: Destilla Cou Condition Quadrar N 22 19 M2 Th. Range Section Fractions TATISTICS: fell type-Dig Driven face) Driven above below final depth 2001	lland sur-ft.	dome indu irri muni *include Durand inal dril dress	AN - 322 - 19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H H L K J H P Q R At L K J H P Q R Attantation abandoned getton cipal stabus abandoned getton cipal producer X stock walls A Son leve name Sonle Manager (Code)	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
Contint Contint	(land surft.	dome in lu irri muni *include Durand inal dril dress te of dri	#W-321-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H M L K J N P Q R ### Will stabus- #### ################################	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
Moli name LOCATION: Condition Quadran Si 22 19 EE TO, Range Section Fractions THATISTICS (ell type-Dug Elevation Drilledx face) Driven below Final depth 2004 See, R. Meiners THE STATES AND SECTION THE SECTION FRACTIONS SECTION FRACTIONS Control of the Section of t	(land surft. A. A. A. Original Da	dome in tu irri muni *include Durand inal dril dress te of dri espened e-cased	AN-321-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H H L K J H P Q R At L K J H P Q R Attraction x attraction at the control of pall at the co	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
Contint Contint	(land surft. A. A. A. Original Da	dome in lu irri muni *include Durand inal dril dress te of dri	#W-321-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H M L K J N P Q R ### Will stabus- #### ################################	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
Contint Contint	(land surft. A. A. A. A. Article of the surft. Da from D courses: r	dome in au irri muni *include . Durand dinal dril dress te of dri eepened e-cased leaned	AN-321-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H H L K J H P Q R At L K J H P Q R Attraction x attraction at the control of pall at the co	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
COATION: COATION: Condition Quadran Condition Quadran Condition Quadran N 228 19 E24 Fractions Fraction	(land surft. A. A. Orig. An orig.	dome in in in in in in in in in in in in in i	#W-321-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H M L K J N F Q R ### Will stabus- stic* X extra bills cartin bolder cipal producer X s Stock wells #### A Son lers name fig.14 walla, Vashington 11ing Jan. and Feb. 1948	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
Continue Continue	A. A. A. A. A. A. A. A. A. A. A. A. A. A	dome in in in in in in in in in in in in in i	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H H I K J R F Q R R F Q R R R F Q R R R R F Q R R R R	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
COATION: COATION: Coation:	(land surft. (land surft. A. A. A. Orig. Advantage of the control of the contr	dome in in in in in in in in in in in in in i	#W-321-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H M L K J N F Q R ### Will stabus- stic* X extra bills cartin bolder cipal producer X s Stock wells #### A Son lers name fig.14 walla, Vashington 11ing Jan. and Feb. 1948	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
COATION: Condition Quadran Condition Quadran Condition Quadran Condition Quadran Condition Quadran Condition Quadran Condition Quadran Condition Elevation Condition Case Fractions Final depth 200° condition Condition Condition Quadran Condition Condition Condition Quadran Condition Condition Condition Quadran Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condition Condi	Cand surft. Cand surft.	dome initial wini finclude Durand inal dril dress te of dri e-cased leaned ate Depth (rest) 6	## - 322-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O R H L K J H P Q R ## L K J H P Q R ## P Q R ## L K J H P Q R ##	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
Moli name LOCATION: Condition Quadran Vendinton Quadran N 22 19 EF4 The Range Section Fractions Fraction	land surft. A. A. A. A. A. A. A. A. A. A. A. A. A. A	dome initial wini finclude Durand inal dril dress te of dri e-cased leaned ate f(eet) 6 16	## - 322-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O R H L K J H P Q R ## L K J H P Q R ## P Q R ## L K J H P Q R ##	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
Continue Continue	land surft. A. A. A. A. Original Street, Stre	done invitation in include Durand dril final dril dress te of dri sepened secased leaned Depth freet) 6 16 17 49	## - 322-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O R H L K J H P Q R ## L K J H P Q R ## P Q R ## L K J H P Q R ##	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
COATOM: Condition	land surft. (land surft. A.A. A. A. A. A. A. A. A. A. A. A. A. A.	done invitation in a done	## - 322-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O R H L K J H P Q R ## L K J H P Q R ## P Q R ## P Q R ## L K J H	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
Continue Continue	A A A A A A A A A A A A A A A A A A A	dome invited the control of the cont	## - 322-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O R H L K J H P Q R ## L K J H P Q R ## P Q R ## P Q R ## L K J H	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
COATION: COCATION: COCATION: Condition Quadrar Condition Quadrar STATISTICS: Foll type-Dig Prival Acceptable Fill type-Dig Prival Acceptable Fill type-Dig Prival Acceptable Fill type-Dig Prival Acceptable Fill type-Dig Prival Acceptable Fill type-Dig Prival Acceptable Fill type-Dig Prival Acceptable Fill type-Dig Prival Acceptable Fill type-Dig Prival Acceptable Fill record compiled by H.S.V. Lata secured from the Tollowing acceptable Fill record compiled March 1948 Material Fit - soil Clay Fit - soil Clay Froken basalt Broken hard blue basalt Broken hard blue basalt Broken hard blue basalt	(land surft.	dome invitation in in in in in in in in in in in in in i	## - 322-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O R H L K J H P Q R ## L K J H P Q R ## P Q R ## P Q R ## L K J H	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source
Continue Continue	A A A A A A A A A A A A A A A A A A A	dome invited the control of the cont	## - 322-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O R H L K J H P Q R ## L K J H P Q R ## P Q R ## P Q R ## L K J H	Oravel and coarse sand Boulders and fine sand Boulders and fine sand Boulders Fine sand Boulders Boulders Boulders Boulders Boulders and sand Closely fractured basalt Sound basalt Ratire water supply from grave undetermined.	1 1 6 2 3 2 8 8 8 13 3 and boul	116 117 123 125 128 130 138 146 154 167 cers abo	e the basalt. Source

Nessenger Well name			Index number 176-N 4N-25N-17-L File number (Code: Tp., R., Sec., 2 Sec.)	Nilton City #1 Well name			Index number 21-U 5M-35E-12-K File number (Code: Tp., R., Sec., 2 Sec.
Norrey Count	•		D C B A E 7 G H M °L K J N P Q R				D C B A E F G H M L K J N P Q R
Tp. Range Section Fractional	section			Tp. Range Section Fractional se	otion		1-1-1-1-
STATISTICS: Well type-Dug	and sur- ft.	irri	stic* x strial abandoned ary hole	STATISTICS: Well type-Dug Elevation (land face) Driven below	d sur- ft.	inau	stic* strial abandoned sation dry hole
Final depth 110		*include	producer x stock mells	Final depth 651		*include	cipal X producer X s stock wells
E. T. Messenger Owners name Address Boardman, Oregon	Origi Add	ress	ers name Pendleton, Oregon	City of Milton Owners name Address	Origi	Durand nal dril	y Son lers name Walla Walla, Washington
This record compiled by M.S.W. data secured from the following sou Owner	from De	e of dri epened -cased eaned	lling about 1933	This record complied by M.S.V. f. data secured from the following source Driller	rom Dec	of dri	llingby
Date compiled March 1948	De	te		Date compiled January 1948	Dat	te	
Naterial	Thickness (feet)	Depth (feet)	Remarks	Material T	hickness (feet)	Depth (feet)	Remarks
No log made		110	Well flows. Low g.p.m. and	Gravel with some boulders	30	30	Small amount water at 25
Owner reports:			low pressure.	Cement gravel	16	30 46	Water at 35
Soil and unconsolidated materi	1 28	28		Gravel and clay	14	60	
301id rock	28	100		Black basalt	38	98	
Clay	100	110	Hole 6* to 801	Black basalt and clay	17	115	
			5" from 80" to bottom.	Hard black basalt	13	128	
	ĺ			Medium hard black basalt	17	145	
	ĺ			Soft red and brown basalt	35	180	Water between 175' and 180'
				Medium hard black basalt	6	186	
				Eard black basalt	16	202	
			*			 	
				Medium hard gray basalt	10	212	
			Index number 9-U	Soft basalt	37 16	249	
Hiller #2 Well name			6H-35-E-28	Brown basalt Soft brown basalt	32	265	Water at 262'
			(Code: Tp., R., Sec., 2 Sec.)	Gray basalt	12	309	
LOCATION:			D C B A	Medium hard gray baselt	107	416	Water between 409 and 416
Umatilla Count	•		E F G H	Very hard black basalt	13	429	Water at 428
Unmapped Quadrangle	•		M L K J	Sard black basalt	11	440	11-101 dV 120
Tp. Range Section Fractional	ration		N P Q R	Hard gray basalt	10	450	
Ty. Italia Double Having				Black basalt	15	465	Water at 4551
STATISTICS:				Gray basalt	140	605	waver av 4))
Well type-Dug Elevation (la Drilled Y face)	nd sur- ft.	Use sta	tus- Well status-	Gray basalt, crevices and caver	46	651	Bottom of hole
Driven above below below		iniu irri muni	abandoned dry hole producer x			-2-	SWL -851
			stock wells				
Evert S. Miller Owners name	Origi	Durand on al dril	ATA DAMA				
Address Milton, Oregon			Valla Walla, Washington				<u> </u>
			ling Jan. and Feb. 1948				<u> </u>
This record compiled by H.S.W. data secured from the Following sour Driller	from De	epened -cased eaned	by				
Date compiled March 1948	Da	te					
Vaterial Vaterial	Thickness	Depth	Remarks				
	(feet)	(teet)					
Soil	2	2	,				
Brown clay	9	11					
Gravel	46	57					
Cement gravel	195	252					
	18	270	· · · · · · · · · · · · · · · · · · ·				
Coarse gravel	60	330					1
Coment gravel							:
	15	345		1 '			
Coment gravel Gravel			Bottom of hole				
Coment gravel							

Milton City #2			Index number 20-U 5E-35E-12-G File Enter
MAIT Dame			(Code: 7 , P., Sec., 2 Sec.)
LOCATION:			DCBA
Umatilla County	,		R & C H
Unmapped Quadrangle			M T K 1
5E 35E 12 SW1 of HE TP. Range Section Fractional s	ection		B P Q 3
TATISTICS:			
Well type-Dig Elevation (la Drilled x face)	nd sur- ft.	Use sta dome	atus- Well status- stio*
Drivenabove			strial abandoned cation dry hole
Final depth 902			cipal x producer x s stock wells
City of Milton	A. A	. Durand	& Son
Owners name Address	Origi	nal dril ress Va	& Son lers name lla Walla, Washington
			lling May to Oct. 1944
This record compiledby H.S.W. lata secured from the Following sour		ерепеф	_
iata secured from the following sour	rces: re-	-cased eaned	
Driller			
Date compiled	Da	te	
Material	Thickness (feet)	Depth (feet)	Remarks
Surface gravel, loose	28	28	Casing 20" OD to 40"-10" # 16" OD to 99'
Cement gravel	35	63	Hole 16" to bottom
Brown honeycomb	19	82	Static water level 102}
Black basalt	28	110	
Brown basalt	4	114	
Black basalt	35	149	
Brown basalt	27	176	
Brown and red rock	9	185	1095 g.p.m. yield with
Black basalt	10	195	stabilized pumping level
Gray basalt	9	204	at 237'.
Brown honeycomb	5	209	
Black basalt	7	216	
Brown rock	14	230	
Black and brown basalt	25	255	
Black basalt	63	318	
Brown honeycomb	7	325	
Brown and black basalt	12	337	
Black basalt	12	349	
Brown basalt	4	353	
Black basalt	49	402	
Blue clay	1	403	
Black basalt	56	459	
Brown honeycomb	7	466 479	
Brown rock Black honeycomb	13	485	
Black honeycomb	41	526	
Black and brown rock	2	528	
Black basalt	33	561	
Gray basalt	22	583	
Black honeycomb	12	595	
Black basalt	26	621	
Gray basalt	33	654	
Black honeycomb	24	678	
Black basalt	19	697	
Black, brown and some honeycomb	6	703	
Black basalt	5	708	
Black and gray basalt	13	721	
Brown and black basalt	27	748	
	13	761	
Gray basalt		——	
Gray basalt Red and gray basalt	32	793	
Gray basalt Red and gray basalt Gray basalt	32 6	793	
Red and gray basalt		ı	

Black and brown basalt	5	810	
Black basalt	3	813	
Gray basalt	3	816	
Black basalt	17	833	
Black and brown basalt	14	847	
Black	55	902	Bettem of hele.
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		+	
	-	+	
	i	+	1
		+	
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Noore			Index number	r 177-X N-25E-18-F
Well name			File number	R., Sec., 2 Sec.)
LOCATION:				DCBA
Aorta Count	y			E F G H
Blalock Island Quadrangl	.e			M L K J
Tp. Range Section Fractional	section			N P Q R
STATISTICS: Well type-Dug Elevation (1		Transition of		Well status-
Drilled x face)		dome	atus- stic* x strial	abandoned
Drivenabove below		irri	gation	dry hole
Final depun			s stock wells	
Mr. Moore		Edwards		
Owners name Address Boardman, Oregon	_ Add	ress	lers name Lexington,	Oregon
	Dat	e of dri	11ing 193	9
This record compiled by E.S.W. data secured from the following sou Driller	rces: re	epened -cased eaned	by	
Date compiled March 1948	 Da	te		
Date compiled March 1948	Da Thickness (feet)	Depth	Re	marks
	Thickness	Depth	Re	marks
Material Soil and clay Broken rock	Thickness (feet)	Depth (rest)	Re	marks
Soil and clay Broken rock Basalt, black, medium hard	Thickness (feet)	Depth (feet)	Re	marke
Naterial Soil and clay Broken rock	Thickness (feet) 12	Depth (reet) 12 20	Re	EARKS
Natorial Soil and clay Sroken rock Basalt, black, medium hard Smaalt, clue, soild and medium hard Basalt, gray, very hard	Thickness (feet) 12 8 6	Depth (reet) 12 20 26	Re	EARKS
Natorial Soil and clay Broken rock Description Baselt, black, medium hard Baselt, Dite, Soild and medium hard	Thickness (feet) 12 8 6	Depth (reet) 12 20 26 38	Re	marks
Natorial Soil and clay Proken rock Basalt, black, medium hard Basalt, blue, molic and medium hard Basalt, gray, very hard Clay, rown, tight, with	Thickness (feet) 12 8 6 12 22	Depth (feet) 12 20 26 38 60	Pottom of h	nle.
Natorial Soil and clay Proken rock Basalt, black, medium hard Basalt, blue, molic and medium hard Basalt, gray, very hard Clay, rown, tight, with	Thickness (feet) 12 8 6 12 22	Depth (feet) 12 20 26 38 60	Bottom of h Casing: 07 64* from 42	ole. to 42'. Hole:
Natorial Soil and clay Proken rock Basalt, black, medium hard Basalt, blue, molic and medium hard Basalt, gray, very hard Clay, rown, tight, with	Thickness (feet) 12 8 6 12 22	Depth (feet) 12 20 26 38 60	Bottom of h Casing: 87 64° from 42 Well flows	ole.
Natorial Soil and clay Proken rock Basalt, black, medium hard Basalt, blue, molic and medium hard Basalt, gray, very hard Clay, rown, tight, with	Thickness (feet) 12 8 6 12 22	Depth (feet) 12 20 26 38 60	Bottom of h Casing: 87 64° from 42 Well flows	ole, to 42'. Hole: 'to bottom. Nut barely so.
Natorial Soil and clay Proken rock Basalt, black, medium hard Basalt, blue, molic and medium hard Basalt, gray, very hard Clay, rown, tight, with	Thickness (feet) 12 8 6 12 22	Depth (feet) 12 20 26 38 60	Bottom of h Casing: 87 64° from 42 Well flows	ole, to 42'. Hole: 'to bottom. Nut barely so.
Natorial Soil and clay Proken rock Basalt, black, medium hard Basalt, blue, molic and medium hard Basalt, gray, very hard Clay, rown, tight, with	Thickness (feet) 12 8 6 12 22	Depth (feet) 12 20 26 38 60	Bottom of h Casing: 87 64° from 42 Well flows	ole, to 42'. Hole: 'to bottom. Nut barely so.
Natorial Soil and clay Proken rock Basalt, black, medium hard Basalt, blue, molic and medium hard Basalt, gray, very hard Clay, rown, tight, with	Thickness (feet) 12 8 6 12 22	Depth (feet) 12 20 26 38 60	Bottom of h Casing: 87 64° from 42 Well flows	ole, to 42'. Hole: 'to bottom. Nut barely so.

Milton City #3			Index number 18-U 5H-35H-2-J File number	Milton Hursery			Index number 15-W 6W-36M-31 File number
-			(Code: Tp., R., Sec., 2 Sec.)				(Code: Tp., R., Sec., 2
OCATION:			D C B A	LOCATION:			D C B
County	,		E F G H	Umatilla County			Z 7 G
nuanned Quadrangle)		M L K J	Unmapped Quadrangle			M L K
Range Section Fractional s	ection		N P Q R	Tp. Range Section Fractional s	m center ection		H P Q
ATISTICS:				STATISTICS:			
oll type-Dug Elevation (le Drilled x face) Driven above	nd sur- ft.	1 main	strial shandoned	Well type-Dug Elevation (la Drilled I face) Driven above	nd sur- ft.	Use st dome inqu	stic* strial <u>x</u> abandor
inal depth 550'	_		gation dry hole cipal x producer x stock wells	Final depth 20001 below		muni	gation dry hol cipal produce s stock wells
City of Milton	Georg	ge Scott		Milton Mursery	A. A.	Durand	& Son
mers name Address	Origi Add	nal dril	lers name 40 S. Main, Milton, Oregon	Owners name Address Milton, Oregon	Origi:	nal dril ress	lers name Walla Walla, Washingto
			lling Dec. 1945 to July 1946			e of dri	
his record compiled by 2.3.W. ata secured from the collowing sour	from De	epened	_	This record compiled by E.S.W. data secured from the Following sour			
	cest re	eaned_	by		ces: re	-cased_ ean ed_	by
City Officials				Company Officials	_		
ate compiled January 1948	De	te		Jan. 1948 - Product Date compiled November 1944 for 1	ion og Da	te	
Naterial	Thicknes (feet)	Depth feet1	Remarks	Material	Thickness (feet)	Depth (feet)	Remarks
Clay and coarse gravel	43	43		Soil	20	20	
Black basalt	36	79		Gravel	180	200	
Reddish rock	9	88		Basalt	217	417	
Black basalt	19	107		Shale	17	434	Gas here
Eard gray basalt	10	117		Gray basalt with black basalt rock bearing no water	278	712	
Black baselt	7	124		Black basalt	3	715	Water bearing
Brown rock	7	131		Gray basalt	185	900	
Black basalt	108	239	Crevices from 209 to 218 rock harder	Black basalt with streaks of re		917	Water bearing
Brown rock	10	249		Gray basalt	203	1120	
Black basalt	14	263		Black basalt	2	1122	Water bearing
Brown rock	24	287		Gray basalt	268	1390	
Black rock	6	293		Black basalt rock with very wh water washed gravel	ite 3	1393	Water bearing
Hard black baselt	22	31.5		Gray basalt	457	1850	
Black basalt	41	356		Black basalt	6	1856	Vater bearing
Hard basalt	12	368		Gray basalt	84	1940	
Black basalt	99	467		Black basalt	4	1944	Water bearing
Black basalt, broken	21	488		Stopped drilling in basalt at		2000	
Loose gray stone	3	491					Record of casing:
Hard black basalt	47	538					391 of 128
Black porous rock	12	550	Bottom of hole				207° of 10°
			SWL 501				3481 of 8■
		_	Drawdown 54' at 1400 g.p.m.			ļ	120' of 62" casing
			* 65 at 1550 g.p.m.			<u> </u>	liners from 417' to 53
			# 84' at 1950 g.p.m.			1	SWL - 1151
		1	85 at 2000 g.p.s.				Drawdown to 135' at 11
			Hole 20" to 43"				g.p.m. which is normal
			" 16" to 100°			1.	pumping rate. This dr
		-					down is stabilized at
•		1				ļ	above rate for weeks
						1	-
		-				1	
		-				ļ. I	
							1
		1	1 .			-	1
						i	1
						<u> </u>	1

Norton Well name	-		Index number 41-U 3W-35E-17 File number (Code: Tp., R., Sec., 2 Sec.)	Worgan and Joy Well name		_		Index number 157-M 2S-26E-21-Q File number (Code: Tp., R., Sec., 2 Sec
LOGATION:			D C B A	LOCATION:				D C B A
Ventilla Coun) y		в в С н	Morrow	Coun	ty		Z F G H
Umanued Quadrang	Le		M L K J	Unmapped	Quadrang			M T K 1
Tp. Range Section Fractional	section		N P Q R	ZS ZGS Range	21 SW1 of SE1 Section Fractional	section		N P Q R
STATISTICS:				STATISTICS:				
Well type-Dug Elevation (land sur- ft.	Use st	stic*	Well type-Dug Drill	ed I face)	land sur- ft.	Use st dome	stic* x
Driven above below Final depth 146		irri muni	strial abandoned gation dry hole producer x	Drive Final depth_55	below		irri	strial abandoned gation dry hole producer z
Norton Estate		*include	s stock wells					s stock wells
Owners name Address	Origin		a Son lers name alla Walla, Washington	Morgan and Joy Owners name Address p	orthand and Chicago	Origi		lers name Lexington, Oregon
		e of dri					e of dri	
This record compiled by H.S.W. data secured from the Following so	_from De	epened_	_	This record com	piled by M.S.W.	_from De	epened_	_
data secured from the Following so Messrs. Williams, Foster and Barne	ole	-cased	by	data secured fr	om the following so	urces: re	-cased Leaned	by
Date compiled March 1948	Dat	te		Date compiled_	March 1948	De	1te	
Material	Thickness (feet)	(feet)	Remarks	1	Material	Thicknes (feet)	s Depth (feet)	Remarks
Not available		146	Flow - low g.p.m. when originally drilled.	l i	lay and gravel	18	18	1
	+	<u> </u>		Solid bass		30	48	Veter home
	+	 	Pumps only now, but yield under pumping for domestic	Black cani		3	52	Water here
	+	I	and stock use strong and consistent.	Solid bass	iit.	+ -	727	SWL 201. Bail test 15 g.p
								1
	 	<u> </u>	· .			<u> </u>	<u> </u>	1
		ļ						
1	1	1	1	1 1		1		
tum		J	Index number 59-U 3x-32x-14-xp	Kyera				Index number 4-U 6M-35E-19
Well name	-			Nyera Well name				Index number — 4-U SH-35E-19 File number (Gode: Tp., R., Sec., 2 Sec.
Well name	-		N-3ZE-14-EF File number (Code: Tp., R., Sec., ≥ Sec.)	LOCATION:	Cour	-	-1	SN-35E-19 File number (Code: Tp., R., Sec., 2 Sec.
Well name LOCATION: Umetilla Coun	•	J	33-325-14-EF File number (Code: Tp., R., Sec., ≥ Sec.) D C B A E F G H	LOCATION: Umatilla	Coun			SN-35E-19 File number (Code: Tp., R., Sec., & Sec. D C B A E F G H
Well name LOCATION: Umetilla Coun	le		N-3ZE-14-EF File number (Code: Tp., R., Sec., ≥ Sec.)	LOCATION: Umatilla Unsapped 6H 35E	Quadrang	de t from east	‡ corner	SH-35E-19 File number (Gode: Tp., R. Sec. ; Sec.) Sec. Sec.
Well name LOCATION: Unctilla Coun Pendleton Quadrans	le		33-32-10-3F File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C G H H L K J	Unatilla Unasped 6H 25E Tp. Ronge	Quadrang	de t from east	† corner	SH-35E-19 File number (Gode: Tp., R., Sec., 2 Sec. 2 Sec. 2 F 0 H H L K J
Well rease LOCATION: Countills Country Pendleton Quadrang JE 222 14 Sign Fractional STATISTICS: Well tree-Dug Elevation [section	Use st	33-32-10-3F File number (Code: Tp., R., Sec., ≥ Sec.) D C B A E F G H H L K J N P Q R	LOCATION: Umatilla Umatilla Umapped GN 35B Tp. Romes STATISTICS: Well type-Dag	Quadrang 19 1360' west Section Fractional	t from east section	Use st	Si -332-19 File number (Oode: Tp., R., Sec., Sec.) D C B A E F G G B M L K J N P Q R
Well name LOCATION: Quantilla Coun Pondiation Quadrang 25 22 14 5 of Wel The Bange Section Fractional STATISTICS: Well type-Dig Reveal Drilled x face) Driven above	section	Use st	33-32-14-3F Flie number (Code: Tp., R., Sec.)	LOCATION: Umatilla Unmapped AN 258 Tp. Statistics:	Quadrang 19 1960 west	t from east section	Use st dome	Si - 32 - 19 File number (Code: Tp., R., Sec., Sec.) D C B A E 7 G B M L K 7 N P Q R atus- stic* #ball status- stic* abandoned
No. No. No. No.	section land surft.	Use st dome indu irri muni	33-32-19-3F File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H H L K J N P Q R ### ### ##########################	Unantilla Unanpped 6W 35E Tp. Hence STATISTICS: Well type-Dig	Quadrang 19 1360 west Section Fractional Elevetion (ad x face) above below	t from east section	Use st dome indu irri muni	Si-3g-19 File number (Code: Tp., R., Sec., 2 Sec D C B A E F G B M L K 7 N P Q B
Well name LOCATION: Questilla Coun Poncleton Questrang 35 222 10 St of Not The Range Section Fractional STATISTICS: Well type-Dag Elevation (Driven Care balow balow Final depth SAA1	land sur- ft.	Use st dome iniu irri zuni *include	33-32-10-3F Tile number	Unantilla Unanapped ON 35E Tp. Eunes STATISTICS: Well type-Dag Drive Final depth 17 J. E. Kyers Owners name	Quadrang 19 1360' west	t from east section land sur- ft.	Use st dome indu irri muni *include	Si - 352 - 19
	land sur- ft.	Use st dome inriu irri *include nal dril ress_	Tile number (Code: Tp., R., Sec., & Sec.) D C B A E F G H H L K J N P Q R Total abandoned dry hole cipal actor wils abandoned dry hole producer x	Unsatilia Unsapped GH 35E Ty. Bangs STATISTICS: Well type-Dag Drill Drive Final depth 13	Quadrang 19 1360' west Section Fractional Elevation (face) n above below Route 2	t from east section land surft. Original	Use st dome indu irri muni *include	Si -32-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G B M L K 7 N P Q B Abundand atua- atua- atia-
Todation	land sur- ft. Origin Add: Date	Use st dome indu irri muni *include nal dril ress e of dri	Tile number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H H L K J N P Q B Title abandomed dry hole stock wells stock wells	Unastilla Unasped GN 358 Renge STATISTICS: Well type-Dug Drill Drive Final depth 13 J. E. Kyers Owners name Address	Quadrang 19 1360' west Section Fractional ad _ face) n	t from east section land surft. Original	Use st dome iniu irri muni *include inal dril iress	Si - 372 - 19
Moll name LOCATION: Unstills Coun Pondleton Quadrang 38 222 10 St of Nyl Typ. Bange Section Fractional STATISTICS: Well type-Dag Elevation (Driven Bore Final depth State below John Nume Address This record compiled by H.S.V. data secured from the Following so	section land surft. Original Add: Datt from Dateuross: re-	Use st dome inriu irri *include nal dril ress_	Tile number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H H L K J H P Q B Auto- atus- atu	Unantilla Unanapped GM 25E Tp. Eunes STATISTICS: Well type-Dig Drive Final depth 13 J. E. Kyers Gwnere name Address	Quadrang 19 1360' west Section Fractional ad _ face) n	t from east section land surft. Original Add The from Description of the Description of	Use st dome indu irri muni *include	Si -32-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G B M L K 7 N P Q B Abundand atua- atua- atia-
Moli name LOCATION: Umatilla Coun Pandlaton Quadrang JE 2Z 14 Si of Nyi The Range Section Fractional STATISTICS: Well type-Dag Drilled x Face) Drilled x Face) Drilled x Face) Driven Address John Humm Consers name Address Address This record compiled by H.S.V. data secured from the following so Verbal report by the driller	land surft. Original Adding Adding From Determined Services: Fee-color	Use st does in an in a second result of the control	33-32-14-3F File number (Code: Tp., R., Sec., 2 Sec.)	LOCATION: Unantilla Unmapped 68 358 Tp. Enngs STATISTICS: Well type-Dag Drill Drive Final depth 17 J. E. Kyers Owners name Address This record condata secured fr State Engineer	Quadrang 19 1360 west Section Frectional a	land sur- ft. Original Add a Data from De Sur- graph of the Sur-	Use st dome inau irri muni *include inal dril ress te of dri sepened -cased Leaned	Si -332-19 File number (Oode: Tp., R., Sec., 2 Sec) D C B A E F G B M L K F
LOGATION: Umetills Country 238 322 10 \$\frac{1}{2}\$ \$\frac{1}{2}\$ \$\frac{1}{2}\$	land surft. Original Add Land Surft. Dett from Deturces: re-	Use st domes in a result of the state of the	Tile number File number Folde: Tp., R., Sec., Sec.] D C B A E F G H H L K J N P Q R Tile number Stock wells Bell status- stock wells Fendleton, Oregon	Unatilla Unmapped GN 358 Tp. Bange STATISTICS: Well type-Dag Drill Drive Final depth 13 J. E. Kyers Gwaere name Addreas This record condata secured fr Stata Engineer Date compiled	Quadrang 19 1360 west Section Frectional ded x face) a face) Route 2 Freewater, Gregou piled by K.S.V. on the following so	land sur- ft. Original Add a Det from De De	Use st dome inau irri muni *include inal dril ress te of dri sepened -cased Leaned	Si -352-19 File number (Code: Tp., R., Sec., Sec.) D C B A E 7 G H M L E 7 G
Mell name LOCATION: Unatilla Coun Panaleton Quadrang 25 22 14 St of Well The Range Section Fractional STATISTICS: Well type-Dag Drilled x Driven above below Final depth 3444 John Numm Comero name Address This record compiled by M.S.W. data secured from the following so Verbal report by the driller Date compiled July 1947 Material	land surfit. Original Addition Determines: recorder of the Control of the Contro	Use st domes in a result of the state of the	Tile number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H H L K J H P Q B Auto- atus- atu	Unsatilia Unsapped GH 35E Ty. Bange STATISTICS: Well type-Dag Drill Drive Final depth 17 J. E. Kyers Owners name Address This record condata secured for State Engineer Date compiled	Quadrang 19 1360 west Section Frectional a	land sur- ft. Original Add Add Add Trom De Thickness Thickness (feet)	Use st dome iniu irri *include inal dril ress te of dri sepened -cased teamed ite g Depth (reet)	Si -352-19 File number (Code: Tp., R., Sec., Sec.) D C B A E 7 G H M L E 7 G
Moli name LOCATION: Umatilla Coun Panaliston Quadrang 25 22 14 5 of We's Press Section Fractional STATISTICS: Well type-Dig Driven above below Final depth 8441 John Numm Comere name Address This record compiled by E.S. W. data secured from the Following so Verbal report by the driller Material Well was about 200' deep when Levis started drilling. From ti	land sur- ft. Original Add: Add: Add: Dat from Deturces: re- clurces: re- from (foot)	Use st domes in a result of the state of the	Tile number File number Folde: Tp., R., Sec., Sec.] D C B A E F G H H L K J N P Q R Tile number Stock wells Bell status- stock wells Fendleton, Oregon	Unantilla Unanapped ON 35E Ty. Eunes STATISTICS: Well type-Dag Dollil Drive Final depth 13 J. E. Kyers Owners name Address This record condata secured from the secured conduction of the secured from the secu	Quadrang 19 1360 vest Section Frectional a	land surft. Original Additional Parameters of the Control of the	Use st dome inia irri muni *include inal dril ress te of dri sepened leaned ite Depth (rest)	Si -352-19 File number (Code: Tp., R., Sec., Sec.) D C B A E 7 G H M L E 7 G
Mell name LOCATION: Unatilla Coun Panaleton Quadrang 25 22 14 St of Well The Range Section Fractional STATISTICS: Well type-Dag Drilled x Driven above below Final depth 3444 John Numm Comero name Address This record compiled by M.S.W. data secured from the following so Verbal report by the driller Date compiled July 1947 Material	land sur- ft. Original Add: Add: Add: Dat from Deturces: re- clurces: re- from (foot)	Use st domes in a result of the state of the	Tile number File number Folde: Tp., R., Sec., Sec.] D C B A E F G H H L K J N P Q R Tile number Stock wells Bell status- stock wells Fendleton, Oregon	Unantilla Unanapped ON 358 Tp. Henre STATISTICS: Well typ-Dag Drive Final depth 17 J. E. Kyers Owners name Address This record condata secured for State Engineer Date compiled Diret Loose gravel	Quadrang 19 1360 week Scotton Frectional sed x face) a above whice Frection face) Route 2 Freewater, Gregor upiled by K.S.V. on the following so February 1948	tron between the control of the cont	Use st dome dome in au irri muni *include include conditional dril ress to of dri sepened -cased teamed ite specification ite specificatio	Si -352-19 File number (Code: Tp., R., Sec., Sec.) D C B A E 7 G H M L E 7 G
Moli name LOCATION: Countills	lee section land surft. Original Add: Add: Add: From Det Clother From Det Thickness (feet)	Use at domes in a irri irri irri irri irri irri irri	Tile number File number Folde: Tp., R., Sec., Sec.] D C B A E F G H H L K J N P Q R Tile number Stock wells Bell status- stock wells Fendleton, Oregon	Unanapped ON 258 Tp. Hange STATISTICS: Well type-Dig Drive Final depth 17 J. E. Kyers Owners name Address This record con data secured fr State Engineer Date compiled Dirt Loose gravel Cenent grave	Quadrang 19 1360 wee Scotton Frectional sd r face) 19 100 100 100 100 100 100 100 100 100 1	trom better tromagnet to the section	Use st dome dome in rai irri muni *include inel dril ress to of dri espened -cased -cased (rest) 14 35	Si - 352-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E 7 G B M L E
Well mass LOCATION: Countills Countills Countills Countills Countills Countills Countills Space Section Fractional STATISTICS: Well type-Dug Drillod x face) Drivan below Final depth Shat Countill type-Dug Drivan Drivan Drivan Drivan Drivan Countill type-Dug Final depth Shat Countill type-Dug Final depth Shat Countill type-Dug Material Well was about 200° deep when Levis started drilling, From it	lee section land surft. Original Add: Add: Add: From Det Clother From Det Thickness (feet)	Use at domes in a irri irri irri irri irri irri irri	Tile number File number Folde: Tp., R., Sec., Sec.] D C B A E F G H H L K J N P Q R Tile number Stock wells Bell status- stock wells Fendleton, Oregon	Unanapped ON 258 Tp. Hange STATISTICS: Well type-Dig Drive Final depth 17 J. E. Kyers Owners name Address This record con data secured fr State Engineer Date compiled Dirt Loose gravel Cenent grave	Quadrang 19 1360 week Scotton Frectional sed x face) a above whice Frection face) Route 2 Freewater, Gregor upiled by K.S.V. on the following so February 1948	trom better tromagnet to the section	Use st dome dome in au irri muni *include include conditional dril ress to of dri sepened -cased teamed ite specification ite specificatio	SH 192-192 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G B W L E 7
Well mass Countron: Countro: Countro	lee section land surft. Original Add: Add: Add: From Det Clother From Det Thickness (feet)	Use at domes in a irri irri irri irri irri irri irri	Tile number File number Folde: Tp., R., Sec., Sec.] D C B A E F G H H L K J N P Q R Tile number Stock wells Bell status- stock wells Fendleton, Oregon	Unanapped ON 258 Tp. Hange STATISTICS: Well type-Dig Drive Final depth 17 J. E. Kyers Owners name Address This record con data secured fr State Engineer Date compiled Dirt Loose gravel Cenent grave	Quadrang 19 1360 wee Scotton Frectional sd r face) 19 100 100 100 100 100 100 100 100 100 1	trom better tromagnet to the section	Use st dome dome in rai irri muni *include inel dril ress to of dri espened -cased -cased (rest) 14 35	Signature (1946) File number (1958) File number (1958) File number (1958) D C B A E F G B M L K F
Mell name LOCATION: Countilla Coun Pondiston Quadrang Mell 22 10 54 of N4 The Range Section Fractional STATISTICS: Well type-Dag Elevation (Drilled X face) Driven below Final depth 344 Vohn Hums Comere name Address This record compiled by H.S.V. data secured from the following so Verbal report by the driller Date compiled July 1947 Material Vell was about 200' deep when Lewis started drilling, From it point on it was sunk to a depth of about Material penetrated was rock for the most part with 2 or 3 clay	lee section land surft. Original Add: Add: Add: From Det Clother From Det Thickness (feet)	Use at domes in a irri irri irri irri irri irri irri	Tile number File number Folde: Tp., R., Sec., Sec.] D C B A E F G H H L K J N P Q R Stock wells Bell status- atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- atu	Unanapped ON 258 Tp. Hange STATISTICS: Well type-Dig Drive Final depth 17 J. E. Kyers Owners name Address This record con data secured fr State Engineer Date compiled Dirt Loose gravel Cenent grave	Quadrang 19 1360 wee Scotton Frectional sd r face) 19 100 100 100 100 100 100 100 100 100 1	trom better tromagnet to the section	Use st dome dome in rai irri muni *include inel dril ress to of dri espened -cased -cased (rest) 14 35	SH-122-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H L E T G
Moll name LOCATION: Umstills Coun Pondleton Quadrang 38 22 10 5½ of Nyl Tp. Range Section Fractional STATISTICS: Well type-Dug Range Driven below Final depth Shi John Hums Address This record compiled by H.S.V. data secured from the following so Verbal report by the driller Date compiled July 1987 Material Well was about 200' deep when Leviz started drilling. From it point on it was sunk to a depth of about Naterial penetrated was rock for the nost part with 2 or 3 clay	lee section land surft. Original Add: Add: Add: From Det Clother From Det Thickness (feet)	Use at domes in a irri irri irri irri irri irri irri	Tile number File number Folde: Tp., R., Sec., Sec.] D C B A E F G H H L K J N P Q R Stock wells Bell status- atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- atus- atu	Unanapped ON 258 Tp. Hange STATISTICS: Well type-Dig Drive Final depth 17 J. E. Kyers Owners name Address This record con data secured fr State Engineer Date compiled Dirt Loose gravel Cenent grave	Quadrang 19 1360 wee Scotton Frectional sd r face) 19 100 100 100 100 100 100 100 100 100 1	trom better tromagnet to the section	Use st dome dome in rai irri muni *include inel dril ress to of dri espened -cased -cased (rest) 14 35	SH-122-19 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H L E T G

Well name	_		#N-25E-18-L File number (Code: Tp., R., Sec., 2 Sec.
LOCATION:			(4046. 1p., A., 56 c., 2 5ec.
Norrow Cour	ıt v		D C B A
Blalock Island Quadrans	-		E F G H
4W 25R 18 HE of SW			M L K J
Tp. Range Section Fractional	section		N P Q R
STATISTICS:			
Well type-Dug Elevation (land sur- ft.	Use st	atus- Well status-
Driven above		iniu	strial abandoned
Final depth 86		muni	gation dry hole cipal producer X s stock wells
W. N. Nickerson			
Owners name Address Boardman, Oregon	Origi	nal dril	lers name
Maries Donatalan, Crogon	Dat		lling about 1938
This record compiled by M.S.W.	_		
This record compiled by M.S.W. data secured from the Following so	urces: re	-cased	
Owner		-	-
Date compiled March 1948	De	ite	
Material	Thickness	Depth	Remarks
	(feet)		
No log available	1	86	Well flows. Water very col
	1		1
			7-4 11/1 W
Nolan Estats	_		Index number 114-M 2S-23E-1-A
Well Dame			File number (Code: Tp., R., Sec., 2 Sec.
LOCATION:			
Morro♥ Cour	ity		D C B A
Blalock Island Quadrane	1.0		
	μ0		W 7 V 7
			M L K J
			M L K J
25 238 1 HE of NE TP. Range Section Fractional STATISTICS:	section	Use st	N P Q R
25 278 1 ENt of NF2 Tp. Range Section Fractional STATISTICS: Well typs-Dug Elevation (face) Drilled x face) Driven above	section	dome	N P Q R
25 2W 1 MEN OF NE TO SECTION 1 STATISTICS: Well type-Dug Elevation (face)	section	dome iniu irri muni	ntus- stic* x strial gation dry hole cipal producer x
25 27E 1 ENt of NE Tp. Range Section Fractional STATISTICS: Well type-Dug Drilled x Driven Zievation (face) Driven above below Final depth 533'	land sur-	dome in u irri muni *include	atus- stic* x strial abandoned dry hole
25 278 1 IN TRACTIONAL The Range Section Fractional STATISTICS: Well type-Dug Drilled X face) Driven below Final depth 533' Garland Swamson Outpers name	land sur- ft.	dome invu irri muni *include Cotter nel dril	ntus- stic* X atrial gration dry hole gratic wells errs name
25 27E 1 ENt of NE Tp. Range Section Fractional STATISTICS: Well type-Dug Drilled x Driven Zievation (face) Driven above below Final depth 533'	land sur- ft. M. E. Origi	dome innu irri zuni *include Cotter nal dril ress	ntus- stic* X strial status- strial dry hole cipal stock wells lone, Oregon
25 27E 1 ER2 of NP2 Tp. Range Section Fractional STATISTICS: Well type-Dig Driven Sove Driven below Final depth 533! Garland Swanson Owners name Address Roardman, Oregon	land sur- ft. M. E. Origi Add	dome indu irri zuni *include Cotter nal dril ress e of dri	ntus- stic* X atrial gration dry hole gratic wells errs name
25 278 1 IN TRACTIONAL The Range Section Fractional STATISTICS: Well type-Dug Drilled X face) Driven below Final depth 533' Garland Swamson Outpers name	section land surft. M. E. Original Add Date from Deturces: re	dome invu irri muni include Cotter nal dril ress e of dri epened -cased	ntus- stic* x strial status- strial dry hole cipal producer x stock wells lers name lone, Oregon lling Dec. 1915 to June 1916
25 27E 1 IB2 of NP2 TP. Range Section Fractional STATISTICS: Well type-Dug	section land surft. M. E. Original Add Date from Deturces: re	dome indu irri zuni include Cotter nal dril ress e of dri epened	ntus- stic* x strial status- strial dry hole cipal producer x stock wells lers name lone, Oregon lling Dec. 1915 to June 1916
25 276 1 276 NZ	land sur- ft. M. E. Origi Add Add Lorent from Det Gross re	dome invu irri zuni include Cotter nel dril ress e of dri epened -cased	ntus- stic* x strial status- strial dry hole cipal producer x stock wells lers name lone, Oregon lling Dec. 1915 to June 1916
2S 27E 1 ER2 of NF2 TD. Range Section Fractional STATISTICS: Well type-Dug	land Surft.	dome invu irri zuni include Cotter nel dril ress e of dri epened -cased eaned	N P Q R N P
25 27 1 ER2 of NP2 Th. Range Section Fractional STATISTICS: Well type-Dig	land sur- ft. M. E. Origi Add Add Lorent from Det Gross re	dome invu irri zuni include Cotter nel dril ress e of dri epened -cased eaned	ntus- stic* x strial status- strial dry hole cipal producer x stock wells lers name lone, Oregon lling Dec. 1915 to June 1916
2S 27E 1 ER2 of NF2 TD. Range Section Fractional STATISTICS: Well type-Dug	M. E. Origi	dome innu irri zuni *include Cotter nal dril ress e of dri epened -cased eaned Depth (feet)	N P Q R N P
25 27	land sur- ft. M. E. Origi Add Dat from De Thickness (feet) 85	dome invu irri auni include Cotter mal dril ress e of dri epened -cased eaned Depth freet) 85	N P Q R N P
25 27	M. E. Origi	dome inva irri minclude Cotter nel dril rese e of dri epened cased eaned Depth (reet) 85 130 192	N P Q R N P
25 27	notion N. E. Orlege Add from De urces: relations (feet) Da Thickness (feet) 45 45 62	dome invu irri auni include Cotter mal dril ress e of dri epened -cased eaned Depth freet) 85	N P Q R N P
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2S 27E 1 ER2 of NP2 Tp. Range Section Fractional STATISTICS: Well typs-Dag 107190	Ind surft. N. E. I. I. I. I. I. I. I. I. I. I. I. I. I.	dome innu irri irri irri irri irri irri irri	N P Q R N P
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25 27	N. E Original	dome insu irri mini mini mini mini mini mini mini	ntus- ntus- stick x gation dry hole clipal producer x stock wells lers name lone, Oregon ling Dec. 1915 to June 1916 by Remarks
25 27	N. E Original	dome insu irri mini mini mini mini mini mini mini	Remarks Rell status— total a status— stock wells Remarks Remarks
28 27	N. E Original	dome insu irri mini mini mini mini mini mini mini	Remarks Rell tatus— Well status— attrial day hole clyal producer I s stock wells lers name Ione, Oregon ling Dec. 1915 to June 1916
28 27	N. E Original	dome insu irri mini mini mini mini mini mini mini	N P Q R N P Q R Well status— strial abandoned dry hole— cipal producer x stock wells lers name

			Index number 74-U
Well name			Index number 74-U 2N-30E-6-H File number
TOTAL PROPERTY.			(Code: Tp., R., Sec., 2 Sec.)
LOCATION: Umatilla Count:			D C B A
Umatilla Quadrangl			E F G He
Tp. Range Section Fractional	f NE		N P Q R
STATISTICS:			
Well type-Dug Elevation (1)	and sur-	Use st	atus- Well status-
Driven above	ft.	dome in iu	stic* x strial abandoned gation dry hole
Final depth 2331 below			gation dry hole producer x s stock wells
Cunningham Sheep Company			
Cunningham Sheep Company Owners name Address Pendleton, Oregon	Origi	nal dril	& Son lers name Walla Walla, Washington
			lling finished Jan. 1947
This record compiled by N.S.W. data secured from the following sour	from De	epened	_
Mr. Levy, Cunningham Sheep Company	alı	-cased	by
	_		
Date compiled July 1947	Da		
Naterial	Thickness (feet)	(feet)	Remarks
Dug pit	. 8	8	Artesian flow estimated at 100 g.p.m.
Coarse gravel and boulders	7	15	
Gravel and boulders - some cla		24	Temp. 55°F. Hole cased 8" for 26.7'
Gravel - coarse Basalt	6	27 33	Hole cased 8" for 25,7"
Hard basalt - (water)	40	73	
Hard gray basalt	11	84	1
Black basalt	8	92	
Hard blue basalt	4	96	,
Gray basalt (pump test)	46	142	
Gray basalt, hard (water)	- 11	153	
Basalt	3	156	
Basalt, hard	7	161	
Black basalt	15	183	
Firm basalt	8	191	
Hard basalt	8	199	
Firm basalt	7	209	
Basalt	8	214	
Hard basalt Porous brown basalt (well flow)	11	225	
,	-6, 0	200	
,			
1			

			Index number 113-M 28-24E-36 File number	Ordnance Housing Project			4H-27H-27 F e number (Code: Tp., R., Sec., 2 Se
TOCKMITOM.			(Code: Tp., R., Sec., 2 Sec.)	LOCATION:			
LOCATION:	_		D C B A	Usatilla County	,		D C B
Morrow Count			E F G H	Umatilla Quadrangle	•		E F G
Unmapped Quadrangle 2S 24E 36	.6		M L K J	4# 27B 27 SB2	•		M L K
Tp. Range Section Fractional	section		N P Q R	Tp. Range Section Fractional	section.		[*] []
STATISTICS:				STATISTICS:			
Well type-Dug Elevation (1: Drilled x face)		Use st	atus- Well status- stic* x	Well type-Dig Elevation (la Drilled x face)	and sur- ft.	Use sta domes	stic*
Drivenabove	ft.	intu	strial abandoned artion dry hole	Driven above below		irri	strial abandoned gation dry hole
Final depth 3971 below		muni	cipal producer x	Final depth 5431		munio	ripal x producer stock wells
Grant Olden		. Cotter	5 5555 WILL	Ordnance Housing Project			
Owners name Address Ione, Oregon	Origi		lers name Ione, Oregon	Owners name Address D. W. Bliss, Mgr.		nal drill ress	ers name
		e of dri			Date	e of dri	lling
This record compiled by N.S.W.		epened		This record compiled by M.S.W. data secured from the following sour	from Dec		_
This record compiled by K.S.W. date secured from the following sour	roes: re	bears-e			rces: re-	-cased eaned	ра
Driller				D. W. Bliss, Ordnance, Mgr. and Boi L. Morin, Architect, Portland			
Date compiled November 1947	Da	te		Date compiled February 1948	Da	te	****
Waterial	Thickness	Depth	Remarks	Material	Thickness (feet)	Depth (feet)	Remarks
	(feet)	(feet)		Sand	4	4	Casing: 16" to 146.5"
Soil	16	16	6" hole	Loose gravel	127	131	10" to 530"
Cracked rock	94	110		Gravel and clay	4	135	
Blue basalt	25	135		Small gravel	5	140	First water - SWL 100' sealed off.
Blue and gray basalt	67 68	202		Loose gravel	. 6	146	
Rock full of seams Gray and blue basalt	7B	348		Boulders	24	170	
Brown rock with seams	49	397	Bottom of hole,	Brown clay	32	202	
Promi lock Athi seems	"	1 271		Soapstone	6	208	
		t	Stood 34 in hole.	Black basalt	97	305	
		<u> </u>	flow.	Sticky clay	7	312	
	L	ı	L	Black honeycomb with clay	18	330	Second water sealed off.
					î	i	
				Black basalt	27	357	
			Index number 10-F	Black basalt Gray basalt	27	357 361	
lsen Well name			Index number 10-U 6W-35E-21-E File number	i e e e e e e e e e e e e e e e e e e e	i i	i	
lsen Tell name			Index number - 10-U 6H-35R-21-R File number (Gode: Tp., R., Sec., 2 Sec.)	Gray basalt	4	361	
leen fell name LOCATION:			File number	Gray basalt Black basalt	14	361 375	
LOCATION: matilla Count	у		file number (Code: Tp., R., Sec., Sec.)	Gray basalt Elack basalt Soft black basalt	14	361 375 385	Third water swaled off SWL 981
LOCATION: matilla Count nnapped Quadrangle	e		File number (Gode: Tp., R., Sec., 2 Sec.)	Gray basalt Rinck basalt Soft black basalt Clay	14 10 6	361 375 385 391	
LOCATION: matilla Count	of NW≟	CHIP (The s	Si - 3 Si - 3	Gray basalt Black basalt Soft black basalt Clay Honeycomb with blue clay	14 14 10 6 21	361 375 385 391 412	
COCATION: Smattlla County Innapped Quadrangle SM 358 21 Mag of SMg Tp. Range Section Fractional	of NW≟		File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C C B A E F C C C C C C C C C C C C C C C C C C	Gray basalt Black basalt Soft black basalt Clay Boneycomb with blue clay Elack basalt	14 10 6 21 20	361 375 385 391 412 432	
COCATION: matilla County mapped Quadrangle M 358 21 M4 of S44 Tp. Bangs Section Fractional of	of NW2		File number (Gode: Tp., R., Sec., 2 Sec.) D C B A E F C H M L K J N P Q R	Gray basalt Black basalt Soft black basalt Clay Honeycomb with blue clay Black basalt Brown rock	14 10 6 21 20 2	361 375 385 391 412 432 434	
COUNTION: Smatilla County Smattlla Quadrangle W 35E 21 M2 of S% Th. Range Section Fractional SMATUSTICS: Fell type-Dug Elevation [1stack]	of NW2	Use st	File number (Code: Tp., R., Sec., Sec.) D C B A E F C H N L K J N P Q B atus- atus- well status- stic*	Gray basalt Eleck basalt Soft black basalt Clay Honeycomb with blue clay Eleck basalt Erown rock Gray basalt	14 10 6 21 20 2 57	361 375 385 391 412 432 434 491	
COUNTION: Imatilla Country Imatilla Country Quadrangle IN 258 21 NV of S	of NW2 section	dome iniu irri	### ##################################	Gray basalt Block basalt Soft black basalt Clay Boneycomb with blue clay Black basalt Brown rook Gray basalt Shale and red rock	14 10 6 21 20 2 57 23	361 375 385 391 412 432 434 491 514	
COUNTION: Imatilla Country Imatilla Country Quadrangle IN 258 21 NV of S	of NW1 section	dome iniu irri muni	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F F O H M L K J N P Q R atus-	Gray basalt Black basalt Soft black basalt Clay Boneycomb with blue clay Black basalt Rrown rock Gray basalt Shale and red rock Gray rock	14 10 6 21 20 2 57 23	361 375 385 391 412 432 434 491 514 516	- SMT 381
COUNTION: Imatilla Countrion: Imatilla Quadrangle Image 2 Http: of SV4 Tp. Bange Section Fractional: STATISTICS: Mell type-Dug Elevation (left face) Drillad Face) Driven above below Final depth 102!	of NW2 section and surft.	dome intu irri muni *include	File number (Code: Tp., R., Sec., Sec.) D C B A E F C H M L K J N P Q R atus- atus- atus- tio* atus- tio* atus- tio* atus- producer X producer X stock walls	Gray basalt Elack basalt Soft black basalt Clay Enceycomb with blue clay Black basalt Rrown rock Gray basalt Shale and red rock Gray rock Gray rock Brown rock	4 14 10 6 21 20 2 2 57 23 2 12	361 375 385 391 412 432 434 491 514 516 528	
COCATION: Innapped Quadrangle Si 35E 21 NV of SV2 Th. Range Section Fractional STATISTICS: Tell type-Dug Drillad Tace) Driva above	of NW2 section and surft.	dome intu irri muni *include	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H H L K J H P Q R atus- atus- atica well status- atica atica atica strical cipil producer K s stock wells	Gray basalt Black basalt Soft black basalt Clay Boneycomb with blue clay Black basalt Brown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock	4 14 10 6 21 20 2 57 23 2 12 10	361 375 385 391 412 432 434 491 514 516 528 538	- SWL 98' FOURTH WATER: SWL IZI'-
COUNTION: Smatilla Countries Smatilla Countries Quadrangle Smatter Smatter Smatter Smatter Countries Quadrangle Fig. 358 21 Mt of St of the countries Fractional Fractional Fractional Fractional Fraction (leface) Derivan Derivan Countries Smatter Smatter Countries Fraction (leface) Above below Delivan Deni	of NWigsection and surft. Hardi Originad	dome intu irri muni *include ing Broth	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H N L K J N P Q B atus- stic* ashadoned gation X aty hole cipal producer X secons 211 Williard, V-lla Walls, Wash.	Gray basalt Black basalt Soft black basalt Clay Boneycomb with blue clay Black basalt Brown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock From rock From rock	14 10 6 21 20 2 57 23 2 12 10 5	361 375 385 391 412 432 434 491 514 516 528 538 543	- SWL 98' Fourth water. SWL 121'. 180f pressure Bottom of hole propried lowered the
COUNTION: Countrion: Countri	e of NW2 section and surft. Hardi Original	dome indu irri muni *include ing Broth nal dril lress e of dri	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H N L K J N P Q B atus- stic* ashadoned gation X aty hole cipal producer X secons 211 Williard, V-lla Walls, Wash.	Gray basalt Block basalt Soft black basalt Clay Boneycomb with blue clay Black basalt Brown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock Promy rock Brown rock Srown rock Srown rock Brown rock Srown rock Srown rock Bed porous rock	14 10 6 21 20 2 57 23 2 12 10 5 .p.m. for	361 375 385 391 412 432 434 491 514 516 528 538 543	- SWI 98' Fourth water. SWI IZI'. 1800 pressure Bottom of hole ar period lowered the derable pumping temp. rise
COUNTION: Imatilla County Imatilla County Guadrangle Si 25 21 My of SW o	e of NW2 section and surft. Hardi Origi Add Det from De ross: re	dome indu irri muni *include ing Broth nal dril lress e of dri	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H N L K J N P Q B atus- stic* ashadoned gation X aty hole cipal producer X secons 211 Williard, V-lla Walls, Wash.	Gray basalt Black basalt Soft black basalt Clay Boneycomb with blue clay Black basalt Brown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock Red porous rock Pamp test at the rate of 1200 SWI 10'. Water temp, standing to 55.	14 10 6 21 20 2 57 23 2 12 10 5 5 4. P. S. for	361 375 385 391 412 432 434 491 514 516 528 538 543 an 8 horer cons	- SWI 98' FOURTH WEIGHT. SWI 121'. 180f pressure Bottom of hole r period lowered the derable pumping temp, rise
COCATION: Commanded Quadrangle Commanded Quadrangle Section Fractional Commanded Process Commanded Proc	e of NW2 section and surft. Hardi Origi Add Det from De ross: re	dome infu irri muni *include ing Broth nal dril iress e of dri epened	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C H H M L K J N P Q R Strial about the status- etto* et	Gray basalt Black basalt Soft black basalt Clay Boneycomb with blue clay Black basalt Brown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock Brown rock Brown rock Jesus of the state of 1200 SWI 10'. Water temp, standing to 58. The pump installed has a rated At the tank inlat (plus 120') Driver the three day months of	14 10 6 21 20 2 57 23 2 12 10 5 5 4. P. S. for capacity rusp capac	361 375 385 391 412 432 434 491 516 528 538 543 an 8 horer cons of 1000 by 1s a and 500	- SWI 98' Fourth water. SWI 121'. 1804 pressure Bottom of hole r period lowered the derable pumping temp. rise p.m. at the well head, proximately 70 c.p.m. 000 callone of water ber
COCATION: Commanded Countries Commanded Quadrangle Commanded Quadrangle Commanded Countries Commanded Countries Commanded Countries Commanded Countries Commanded Countries Commanded Countries Commanded Countries Commanded Countries Commanded Countries Coun	e of NW2 section and surft. Hardi Origi Add Det from De ross: re	dome iniu irri *include ing Broth nal dril ress e of dri epened -cased	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C H H M L K J N P Q R Strial about the status- etto* et	Gray basalt Black basalt Soft black basalt Clay Boneycomb with blue clay Black basalt Rrown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock Brown rock And porous rock Fump test at the rate of 1200 SWI 101. Water temp. standing to 56. The pump installed has a rated At the tank fallet (plue 1207) During the three day months of day (20 hours) is used. This well to may great attent.	# 14 10 6 21 20 2 57 23 2 12 10 5 5 4 Capacity pump capac summer ar grain or summer ar grain or s	361 375 385 391 412 492 494 491 514 516 528 538 543 an 8 hos er cons er 1000 typly do	- SWI 98' Fourth water. SWI IZI'- 1800 pressure Bottom of hole or period lowered the derable pumping temp. Fisi p.m. at the well head, proximately 70 g.p.m. SOU gallons of water per as not lower water in the
COCATION: Commanded Countries Commanded Quadrangle Commanded Quadrangle Commanded Countries Commanded Countries Commanded Countries Commanded Countries Commanded Countries Commanded Countries Commanded Countries Commanded Countries Commanded Countries Coun	e of NM2 section and surft. Hardi Original Add Det from De rees: re	dome iniu irri muni *include ng Broth nal dril ress e of dri epened -cased eaned	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C H H M L K J N P Q R Strial about the status- etto* et	Gray basalt Black basalt Soft black basalt Clay Boneycomb with blue clay Black basalt Brown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock Brown rock Thus the fact of 1200 SWI 101. Water temp. standing to 58. The pump installed has a rated 44 the task falls (plus label the fact of 36, 27 the three day months of 36, 27 the tries if the task falls (plus 101) Daring the three day months of 36, 27 the tries is seen and 17 the task falls (plus 101).	14 10 6 21 20 2 57 23 2 12 10 5	361 375 385 391 412 432 431 514 516 528 an 8 hower coan er 1000 ty 1s a er 1000 ty 1s a	- SWI 98' Fourth water. SWI 121'. 1804 pressure Bottom of hole r period lowered the derable pumping temp. rise p.m. at the well head, proximately 70 g.p.m. 000 gallons of water per m not love water in the s of September 19, 1944,
COUNTION: Commanded Country Commanded Quadrangle Sy 358 21 We of Swelt The Range Section Fractional of Swelt Country Control Fractional of Swelt Country Coun	e of NW2 section and surft. Hardi Origi Add Dat from De cos: recoil rec	dome iniu irri muni *include ng Broth nal dril ress e of dri epened -cased eaned	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H N L K J N P Q R atus- a	Gray basalt Black basalt Clay Boneycomb with blue clay Black basalt Rrown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock The pump test at the rate of 1200 SWI 10'. Water temp, standing to 55. The pump installed has a rated at the tank inlet (plue 120') buring the three dry months of day (20' hours) is used. This well to any great extent. The following is a report of the Solids in Solution:	14 10 6 21 20 2 57 23 2 12 10 5	361 375 385 391 412 432 431 514 516 528 an 8 hower coan er 1000 ty 1s a er 1000 ty 1s a	- SWI 98' Fourth water. SWI 121'. 1804 pressure Bottom of hole r period lowered the derable pumping temp. rise p.m. at the well head, proximately 70 g.p.m. 000 gallons of water per m not love water in the s of September 19, 1944,
COUNTION: Imaniped Quadrangle Tonapped Quadrangle Type Section Fractional STATISTICS: Rell type-Dug Elevation (left face) Drillad Face) Driven below Final depth 102! Albert Oisen Numers name Address Et. #2 Freewater, Oregon This record compiled by K.S.V. Lata secured from the Following soul State Engineer Date compiled February 1948 Material Top soil	e of NWi section and surft. Hardi Origi Add Det from De roes: recol	dome intu irri muni *include ing Broth nal dril ress e of dri epened -cased eaned Depth freet)	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H N L K J N P Q R atus- a	Gray basalt Black basalt Clay Boneycomb with blue clay Black basalt Rrown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock The pump lest at the rate of 1200 SW. 10'. Water temp, standing to 59. The pump installed has a rated at the tank inlet (plus 120') During the three dry months of day (2w hours) is used. This well to any great ottent. The following is a report of the Solida in Solition: Silica Union of Iron and aluminums	14 10 6 21 20 2 57 23 2 12 10 5	361 375 385 391 412 432 491 514 516 528 538 543 an 8 hower cons of 1000 ty 1s m and so ward so	Johrth water. SWL 121'. 1804 pressure Bottom of hole r period lowered the derable pumping temp. rise p.p.s. at the well head, presimately 70 g.p.s. 1000 gallons of water per en not lower water in the de of September 19, 1944. Universed Supply On 188s. Per 1000 gals. 534 194
matilla Countrion: matilla Countrion: matilla Countrion: matilla Countrion: matilla Countrion: matilla Countrion: matilla Countrion: matilla Section Fractional (1) pp. Range Section Fractional (1) p	e of INA section and surft. Hardi Origi Add Det from De rees: re cl Da Thickness (feet)	dome invition in the control of the	File number (Gode: Tp., R., Sec., 2 Sec.) D C B A E F O H N L K J N P Q B Actus— Stics— St	Gray basalt Black basalt Clay Boseycomb with blue clay Black basalt Rrows rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock The pump test at the rate of 1200 SWI 10'. Water temp, standing to 59. The pump installed has a rated at the task inlet (plue 120') Drug blown rock The pump installed mas a rated at the task inlet (plue 120') Drug blown rock The pump installed mas a rated at the task inlet (plue 120') Drug blown rock Gray for the pump of th	# 14 10 6 21 20 2 2 57 23 2 12 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 2 10 5 5 4 2 2 2 2 10 5 5 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	361 375 385 391 412 432 439 491 514 516 528 538 543 543 541 510 510 510 510 510 510 510 510 510 51	Journal water. SWL 121*. 1804 pressure Sottom of hole ar period lowered the derable pumping temp. rise c.p.m. at the well head, proximately 25 g.p.m. and lower water in the sof September 19, 1944, Universed Supply On 1888 per 1807 rais. 650 .332
COUNTION: Counting Counting	e of NWi section and surft. Hardi Origi Add Det from De rees: of Da Thickness (feet) 4	dome indu irri muni *include ing Broth nal dril irese e of dri ee of dri ee of dri te Depth (feet) 12 32	File number (Gode: Tp., R., Sec., 2 Sec.) D C B A E F O H N L K J N P Q B Actus— Stics— St	Gray basalt Black basalt Soft black basalt Clay Boneycomb with blue clay Black basalt Brown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock The pump installed has a rated for the following the three dry months of day (2% hours) is used. The vell to any great extent. The following is a report of t Solids in Solution: Silica United of Ifon and Aluminum Calcies Carbonate Magness Tarantee Magness Tarantee Magness Tarantee Magness Tarantee Magness Tarantee Incompany Solids	# 14 10 6 21 20 2 2 57 23 2 12 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 2 10 5 5 4 2 2 2 2 10 5 5 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	361 375 385 391 412 491 491 514 516 528 538 543 381 5100 5107 5107 5107 5107 5107 5107 510	- SWI 98' Fourth water. SWI 121'. 180' pressure Bottom of hole present set the well head, p.m. at the well head, p.m. at the well head, p.m. at the will head, p.m. at the well head, p.m. at the well head, p.m. to low ruler in the s of September 19, 1944, University of the set of September 19, 1944, 00 MBs. per 1900 cals 1977 - 1974 - 197
COUNTION: Counting	e of NWA section and surft. Hardi Origi Add Dat from Decres: recipion Column	dome inviu irri muni include ing Broth nal dril iress e of dri epened cased eaned Depth ifeet) 4	File number (Gode: Tp., R., Sec., 2 Sec.) D C B A E F O H N L K J N P Q B Actus— Stics— St	Gray basalt Black basalt Soft black basalt Clay Boneycomb with blue clay Black basalt Brown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock Brown rock Arewn rock Brown rock Rown rock Brown rock Bad porous rock Fung test at the rate of 1200 SWI 101. Water temp. standing to 58. The pump installed has a rated for the standing to 59. The pump installed has a rated for the standing to 59. The pump installed has a rated for 59. The following is a report of the standing of the standing is a report of the standing is a report of the standing is a report of the standing of the standing is a report of the standing of the standing is a report of the standing of the standing is a report of the standing of the standing is a report of the standing	# 14 10 6 21 20 2 2 57 23 2 12 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 2 10 5 5 4 2 2 2 2 10 5 5 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	361 375 385 391 412 492 491 514 516 528 538 543 391 412 11/11 516 528 538 543 543 544 550 67 67 67 67 1.31	Fourth water. SWL IZI. Fourth water. SWL IZI. 1809 pressure Bottom of hole profine lowered the derable pumping temp. rise p.m. at the well head, proximately 70 g.p.m. not lower water in the so of September 19, 1984, Universited Supply 101 1819 1821 1000 sals. 1033 1050 1154 1159 1296 1297
COUNTION: Counting	e of NWA section and surft. Hardi Origi Add Add Dat from De rees: references: references: (feet) 4 8 8 20 13	dome indu irri muni *include ing Broth nal dril irres e of dri espened e cased e aned tte 4 12 32 45	File number (Gode: Tp., R., Sec., 2 Sec.) D C B A E F O H N L K J N P Q B Actus— Stics— St	Gray basalt Black basalt Soft black basalt Clay Boneycomb with blue clay Black basalt Rrown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock Brown rock Brown rock All prome rock Fump test at the rate of 1200 SWI 101. Water temp. standing to 58. The pump installed has a rated At the tank inlet (plus 1201) Daring the three day months of day (24 hours) is used. This well to any great extent. The following is a report of the standing of the standing to the standing to the standing to the standing to the standing to the standing to the standing to 58. The pump installed has a rated At the tank inlet (plus 1201) Daring the three day months of day (24 hours) is used. This well to any great extent. The following is a report of the standing to	# 14 10 6 21 20 2 2 57 23 2 12 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 2 10 5 5 4 2 2 2 2 10 5 5 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	361 375 385 391 412 492 491 514 516 528 538 543 391 412 11/11 516 528 538 543 543 544 550 67 67 67 67 1.31	FOURTH water. SWL 121*. 1804 pressure Bottom of hole or period lowered the derable pumping temp. rise proximately 70 g.p.m. 200 gallons of water pressure in the so of September 19, 1944, University SWL 121*. 180 132 181 134 182 134 183 134 186 134 187 134 188 134 189 134 180 188 188 189 189 189 189 189 189 189 189 189 189 189 189 189 189 189 189 189 189 189
COUNTION: Countrion: Countri	Bardion Hardion From De Thickness (feet) 4 8 20 13	dome indu irri muni *include ing Broth nal dril ress e of dri epened -cased cased te - Depth freet 12 32 45 95	File number (Gode: Tp., R., Sec., 2 Sec.) D C B A E F O H N L K J N P Q B Actus— Stics— St	Gray basalt Black basalt Soft black basalt Clay Boseycomb with blue clay Black basalt Rrown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock Red porous rock Pamp test at the rate of 1200 SWL 101. Water temp. standing to 58. The pump installed has a rated At the teak inlet (plue 1201) During the three day months of day (20 hours) is used. This well to any great extent. The following is a report of the standard of the standar	# 14 10 6 21 20 2 2 57 23 2 12 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 2 10 5 5 4 2 2 2 2 10 5 5 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	361 375 385 391 412 432 431 491 516 528 538 543 an 8 hor cons of 1000 tiy is m will so the so	Fourth water. SWL 121*. 1804 pressure Bottom of hole terprited bywaping temp. Fist provid lowered the derable pumping temp. Fist provid lowered the derable pumping temp. Fist provid lowered the derable pumping temp. Fist provided by temp. provided by temp. provided by temp. Interested Supply On Man. per 1000 cals. 1534 1654 187 187 189 189 189 189 189 189
COUNTION: Contion: Countrion	Bardion Hardion From De Thickness (feet) 4 8 20 13	dome indu irri muni *include ing Broth nal dril ress e of dri epened -cased cased te - Depth freet 12 32 45 95	File number (Gode: Tp., R., Sec., 2 Sec.) D C B A E F O H N L K J N P Q B Actus— Stics— St	Gray basalt Black basalt Soft black basalt Clay Boneycomb with blue clay Black basalt Rrown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock Brown rock Brown rock All prome rock Fump test at the rate of 1200 SWI 101. Water temp. standing to 58. The pump installed has a rated At the tank inlet (plus 1201) Daring the three day months of day (24 hours) is used. This well to any great extent. The following is a report of the standing of the standing to the standing to the standing to the standing to the standing to the standing to the standing to 58. The pump installed has a rated At the tank inlet (plus 1201) Daring the three day months of day (24 hours) is used. This well to any great extent. The following is a report of the standing to	# 14 10 6 21 20 2 2 57 23 2 12 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 2 10 5 5 4 2 2 2 2 10 5 5 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	361 375 385 391 412 492 491 514 516 528 538 543 391 412 11/11 516 528 538 543 543 544 550 67 67 67 67 1.31	FOURTH water. SWL 121*. 1804 pressure Bottom of hole or period lowered the derable pumping temp. rise proximately 70 g.p.m. 200 gallons of water pressure in the so of September 19, 1944, University SWL 121*. 180 132 181 134 182 134 183 134 186 134 187 134 188 134 189 134 180 188 188 189 189 189 189 189 189 189 189 189 189 189 189 189 189 189 189 189 189 189
COUNTION: Countrion: Countri	of NWA section and sur- fr. Hardi Origi Add Det from De ress: re cl Thickness (feet) 4 8 20 7 13	dome indu irri muni *include ing Broth nal dril ress e of dri epened -cased cased te - Depth freet 12 32 45 95	File number (Gode: Tp., R., Sec., 2 Sec.) D C B A E F O H N L K J N P Q B Actus— Stics— St	Gray basalt Black basalt Soft black basalt Clay Boseycomb with blue clay Black basalt Rrown rock Gray basalt Shale and red rock Gray rock Brown rock Brown rock Brown rock Brown rock Brown rock Brown rock Red porous rock Pamp test at the rate of 1200 SWL 101. Water temp. standing to 58. The pump installed has a rated At the teak inlet (plue 1201) During the three day months of day (20 hours) is used. This well to any great extent. The following is a report of the standard of the standar	# 14 10 6 21 20 2 2 57 23 2 12 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 10 5 5 4 2 2 2 10 5 5 4 2 2 2 2 10 5 5 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	361 375 385 391 412 432 431 491 516 528 538 543 an 8 hor cons of 1000 tiy is m of 1000 tiy	Fourth water. SWL 121*. 1804 pressure Bottom of hole terprited bywaping temp. Fist provid lowered the derable pumping temp. Fist provid lowered the derable pumping temp. Fist provid lowered the derable pumping temp. Fist provided by temp. provided by temp. provided by temp. Interested Supply On Man. per 1000 cals. 1534 1654 187 187 189 189 189 189 189 189

rûnance Depet #1			Index number 194-5 45-275-22 File number (Code: Th. P. Sec. a Sec.)	Index number 196- 0rdnance Depat #3 4H-27H-8 Well name 17ths number 17ths number 18ths 18th
CATION:			(Code: Tp., R., Sec., 2 Sec.)	(Code: Tp., R., Sec.
matilla Count	-		E 7 G H	Rorrow County E F
matilla Quadrangl	•		M T K 1	Umatilla Quadrangle M L
Range Section Fractional	section		H P Q R	H 278 8 SR2 N Page Range Section Fractional section
ATISTICS:				STATISTICS:
ll type-Dug Elevation (1 Drilled z face)	and sur-	Use st	atus- Well status- stic*	Well type-Dug Elevation (land sur- Use status- Well s Drilled x face) ft. domestic*
Driven above			strial x abandoned gation dry hole	Driven above iniustrial aba
mal depth 3271		muni	cipal producer X s stock wells	Final depth 4531 municipal pro
		Durand		U. S. Army A. A. Durand & Son
. S. Army ners name	Origi	nel dril	lers name	Owners name Original drillers name
Address			Valla Valla, Vashington	Address Valla Valla, Vashing
		e of dri	11ing 4/22/1941	Date of drilling 9-11-41
is record compiled by I.S.V. ta secured from the Following sou clonel Class and Captain Kelly	from De	epened -cased eaned	by	This record compiled by M.S.V. from Deepened data secured from the following sources: re-cased oleaned by Ocionel Class and Ceptain Lelly
te compiled March 1948	Da			Date compiled March 1948 Date
Material	Thickness (feet)	Depth (feet)	Remarks	Material Thickness Depth (feet) Ramarks
No log available		327	Casing: 12". SWL 1051	He leg available 453 Casing 12". SWL -7
			Capacity 575 g.p.m. Draw-	Drawdown -?
			down 101	
Notes in the depot file contain	the foll	wine st		
only available information con				
cased to rock at 150', below i				
and clay, ending in rock.	~ 01 1			
	<u> </u>	1		
VATER ANALYSIS	PPN	 		
Description of sample	 	Raw	- as Delivered	
Total hardness as CaCO3		140		
Alkalinity (M.O.)		148.4	Bicarbonate	
ph value		7.7		<u> </u>
Total iren		0.15		Index number — 195-0 Ordnance Depot #2 4N-27E-22
Magneeium		10.6		Well name File number
Calcium		38.1		(Code: Tp., R., Sec.
Sulphates as SO _b		11.4		LOCATION:
Chlorides as CL		10.8		Umtilla County E F
Average color		2		Umatilla Quadrangle M L
Average turbidity		1		Tp. Range Section Fractional section
Date analysis		4/26/41		
Where sample taken		well #		STATISTICS:
By whom made		Charlto	ı Lab.	Well type-Dug
				Driven above industrial x abase below irrigation dry
		ĺ		Final depth 360 municipal pro
				U. S. Aray A. A. Durand & Son
		İ		Owners name Original drillers name
		İ		Date of drilling 7/12/1941
		İ		This record compiled by H.S.W. from Deepened data secured from the following sources: re-cased
		 		Colonel Glass and Captain Kelly
		İ		Pote countries Wareh 10h9
		 		Date compiled Narch 1948 Date
				Material Thickness Depth (feet) Remarks
		-		No log available 360 Casing: 12". SWL 95
				Notes in the depot file contain Capacity 750 g.p.m. down 100'.
	 			the following statement which exists as the only available
				information concerning formations
				encountered. "Well No. 2 is
				encountered. "Well No. 2 is cased to 218' on rock, then
				encountered. Well No. 2 is cased to 218 on rock, then through basalt ledges and honeybomb basalt.
				encountered. "Well No. 2 is cased to 218" on rock, then through basalt ledges and honeypomb
				encountered. "Well No. 2 is cased to 218" on rock, then through basalt ledges and honeypomb
•				encountered, "Well Mo. 2 is cased to 218" on rock, then through basalt ledges and honeypomb

Palmer Well name	Index number — 123-N 48-24R-4-F File number (Code: Tp., R., Sec., 2 Sec.)	Fartlow (John) Well name	Index number 179-M 4N-24E-24-F File number (Code: Tp., R., Sec., 2 Sec.
LOCATION: Morrow County	D C B A	LOCATION: Norrow County	D C B A
Unmapped Quadrangle	E F G H	Blalock Island Quadrangle	E F G H
4S 24E 4 SET of NWT	M L K J		M L K J
Tp. Range Section Fractional section	[N P Q E	4# 24E 24 EME -7 of SW1 Tp. Range Section Fractional section	[*]*,
STATISTICS:		STATISTICS:	
Well type-Dug Elevation (land eur- prilled x face) ft. Driven above below	Use status- domestic* x in ustrial abandoned irrigation dry hole x	Well type-Dug Elevation (land sur- Drilled x face) ft. Driven above below	Use status— domestio* x iniustrial abandoned_ irrigation dry hole
Final depth 5001	municipal producer includes stook wells		municipal producer x includes stock wells and Ille Drilling Company
Owners name Address Willow Creek west of Add	nal drillers name ress Lexington, Oregon	Owners name Origin Address Boardman, Oregon Add	ress Portland, Oregon
	of drilling 1945		of drilling Spring 1947
data secured from the following sources: re	spened -casedby	data secured from the following sources: re-	pened
Date compiled October 1947 Da	4	Date compiled March 1948 Date	•
This has a second	Touth	- Implehence	Danah
Haterial (feet) Basalt with crevices common		Following log made from owner's notation	(reet) Of progress and formations as told course of drilling.
to abundant all the way.	NO DEA BOTA	Sand 3	First water at 27'. SWL 1 3 Second water at 54'. SWL
		Alkali rock 2	with the above cased off water at 72'.
		Dark solid basalt, medium 27	32 SML with all above water cased off was 20'. SML unaffected by bail test.
		Very hard basalt 3	35 unaffected by bail test.
		Dark solid basalt, medium 19	54
Fandlatan Alwant	Index number 58-U	Brown clay, sticky 7	61
Fendleton Airport	File number	Basalt, broken 11	72
T DOART OF A	(Code: Tp., R., Sec., & Sec.)	Blue clay 66	138 Bottom of hole.
LOCATION: Umatilla County	D C B A		1 20002 01 2010.
Pendleton Quadrangle	E F G H		
Tp. Range Section Fractional section	N P Q R	Partlow (Paul)	Index number 180-M 48-248-24-C File number
STATISTICS:			(Code: Tp., R., Sec., 2 Sec.
Well type-Dug Elevation (land sur- Drilled x face) ft.	Use status- domestic* industrial x abandoned x	LOCATION: Korrow County	D C B A
Final depth 825'	irrigation dry hole municipal producer	Blalock Island Quadrangle 4E 24E 24 EW of SE	м г к д
	. Ruther	Tp. Range Section Fractional section	N P Q R
Owners name Origi Address Add	nal drillers name ress Ecosevelt St., Walla Walla, Wash.	STATISTICS:	
This record compiled by N.S.W. from De	e of drilling Fall 1933 to Spring 1934	Well type-Dug Elevation (land sur- Drilled x face) ft.	Use status- domestic* x injustrial abandoned
United Airlines and also a Verbal log report by driller	saned by W. W. Euther		irrigation dry hole municipal producer x
Date compiled March 1948 Da		Paul Partlow C. E Owners name Advance Boardman, Oregon	nal drillers name
Material Thickness (feet)	Depth Remarks (feet)		of drilling 1940
Top soil, clay, gravel and boulders 80	80		spened
Gray basalt - medium hard 185	265	data secured from the following sources: re-	-casedby
Honeycomb basalt 20	285 Some water here.	Owner	
Gray basalt - medium hard 226 Red honeycomb - with crevices 62	511 At 511' lost all water.	Date compiled March 1948 Da	to
Red homeycomb - with crevices 62	573 Well "blew and sucked" air here. At 573 picked up water	Material Thickness (feet)	Depth Remarks
	which stood 521 in hole.	No log made	971 SWL 5. Couldn't lower by
Well bailed 12 g.p.m. with no deavdown.	Bottom of original well.	Formation similar to the John	bailing. Reportedly lost water at 7
g.p.m. in practice. Casing 42" to bottom	Sarthquake of about 1935 dried	Partlow section with the blue clay below a hard rock layer	Main water originates lower cased only 35'.
well up. Deepened by Ruther as follows.	alt:60 feet - thickness, depth - 825	according to Mr. Paul Particw	
well up. Deepened by Ruther as follows: ness, depth - 763 feet; Honeycoab blue ba- feet.			
well up. Deepened by Ruther as follows: ness, depth - 763 feet; Honeycook blue ba feet.	lowering SWL. Well subsequently		
well up. Deepened by Ruther as follows: ness, depth - 763 feet; Honeycoab blue ba	lowering SWL. Well subsequently ted water.		
well up. Deepened by Ruther as follows: ness, depth - 763 feet; Honeycook blue ba feet.	lowering SVL. Well subsequently ted water.		
well up. Deepened by Ruther as follows: ness, depth - 763 feet; Honeycook blue ba feet.	lowering SVL. Well subsequently tod water.		
well up. Deepened by Ruther as follows: ness, depth - 763 feet; Honeycook blue ba feet.	lowering SWL. Well subsequently tod water.		

Pendleton City	_		ZN-3ZN-2 File number (Code: Tp., R., Sec., 2 Sec.)	Pilot Rock City 18-328-17-6K Well name File number (Gode: Tp., R., Sec., 2 Sec.) 2 Sec.
OCATION:				LOCATION:
Umatilla Cour	ity		D C B A	D C B A Umatilla County E 7 G H
Pendleton Quadrane	ple		M T K 1	Unnapped Quadrangle M L K J
2N 3ZE 2 (lot 13, to p. Range Section Fractional	lock 152, B	yers Add		15 32E 17 Center Tp. Range Section Fractional section
TATISTICS: ell type-Dug Elevation (land sur-	Use st	atus- Well status-	STATISTICS: Well type-Dug _ Elevation (land sur- Use status- Well status-
ell type-Dug Elevation (Drilled x face) 105 Driven above	3.14 ft.	dome	stic*strialsbandoned	Well type-Dug Elevation (land sur- Drilled race) ft. domestic Driven bove investrial abandoned
inal depth 934	level	irri	gation dry hole cipal x producer x	Final depth 309 below irrigation dry hole municipal x producer x
		*include	s stock wells	*includes stock wells
City of Pendleton	A.A. Origi	Durand nal dril	i Son	City of Pilot Rock A. M. Edwards Owners name Original drillers name
Address	Add:	ress	Walla Walla, Washington	Address Lexington, Oregon
		e of dri	11ing 1944 to 1946	Date of drilling completed February 19
his record compiled by N.S.V. ata secured from the following so	from De	epened -cased	- [This record compiled by N.S.W. from Deepened data secured from the Following sources: re-cased
Driller and Umatilla County and F	ol	eaned	ру	Charles Bracher, City Clerk
City Engineers.			<u> </u>	
ate compiled July 1947	Da			Date compiled July 1947 Date Thickness Doubt
Naterial	Thickness (feet)	(reet)	Remarks	Memarks (feet) (feet) Memarks
Gravel	14	14		Artesian flow measured at between 1,100 and 1,420 g.p.m. • 65%.
Soft black basalt	11	25		Analysis by Northwest Filter Company, Seattle
Hard black basalt	48	73		ph 7.7 Very clear no odor
Soft basalt and scapstone	12	85	 	alk mo 135 ppm soap hardness 115 ppm
Hard black basalt	24	108	End 20" hole at 113"	Fe (iron) 0.2 Si02 (Sinca) 60.0
Soft and medium basalt	32	141	End 16" casing at 1241	Cr (Chrome) 14.0
Rard basalt	18	158		Analysis by Perolin Company of New York, Mfg. Chamists
Soft black basalt	32	191		temporary hardness 8.1 premenent hardness 0.3
Soft red rock	7	217		total hardness 8.4 ph Hydrogen ion 7.7
Kedium black rock	10	227		1 1
Red and black soft rock	38	265		
Hard gray basalt	62	327		Y-3
Nedium black basalt	12	334	Static water level went to 70'. Then to 135' and re-	Pinkerton Fell name Tile number
Soft brown and red rock	30	370	mained there.	Well name File number (Code: Tp., R., Sec., 2 Sec
Hard gray basalt	51	426	Evidence of water	LOCATION:
Soft black basalt	24	451		Unatilla County E F G H
Hard black basalt	3	453		Quadrangle M L K J
Soft black basalt	11	462		Tp. Range Section Fractional section
Hard gray basalt	8	472		
Medium black basalt	54	527		STATISTICS:
Hard black basalt	154	680	Some evidence of more water.	Well type-Dug Elevation (land sur- Use status- Well status- Drilled x face) ft. domestic* x
Medium black basalt	43	722		Driven above injustrial abandoned
Hard gray basalt	4	727		Final depth 133' municipal producer x *includes stock wells
Black baselt	24	750		Lawrence Pinkerton
Gray basalt - hard	22	772	Some evidence of water	Owners name Original drillers name Address Athena, Oregon Address
Brown-red-gray - soft	11	783		Date of drilling
Hard gray basalt	17	800		This record compiled by H.S.W. from Deepened x
Brown basalt	5	805		data secured from the following sources: re-cased cleaned by A. A. Durand & Son
Black basalt	15	820		Durand Walla Walla, Washing
Hard gray basalt	20	840		Date compiled January 1948 Date
Black basalt	39	874		Thickness Depth
Gray basalt	4	884		
	12	895	Probably water bearing.	Elack baselt, very hard 28 130
Black basalt	16	912	,	Gray basalt 3 133
Porous black rock		934	Bottom of hole.	SWL 51'. Bailed about
	23		Note: This well caved and	15 g.p.m. and lowered water 5 feet.
Porous black rock	23			
Porous black rock Black basalt	,		was cleaned out to a depth of 7741.) jest,
Porous black rock	,	igares i	was cleaned out to a depth of 7741.	1 2 1005.
Porous black rock Black basalt	,	igures i	was cleaned out to a depth of 7741.	1 2 1005,
Porous black rock Black basalt	,	igures i	was cleaned out to a depth of 7741.	1 2 1005,

		Index number — none-G	Pool Well name			Index number 181-M 4H-25-18-P
		(Code: Tp., R., Sec., 2 Sec.)				(Code: Tp., R., Sec., 2 Se
LOCATION:		D C B A	LOCATION:			D C B
	unty	E F G H	Morrow County			E F G
Quadra	ngle	M L K J	Blalock Island Quadrangle)		M L K
Tp. Range Section Fractions	al section	N P Q R	Tp. Range Section Fractional s	ection		N P Q
STATISTICS:			STATISTICS:			
Well type-DugElevation	(land sur- Use	status- Well status-	Well type-Dug Elevation (la		Use sta	
Drilled x face)	ir	mestic* x clustrial abandoned	Drilled x face) Driven above	ft.	inau	strial abandoned
Final depth 194	and and	rigation dry hole inicipal producer x ides stock wells	Final depth 961 below_	*	munic	gation dry hole producer stock wells
D. M. and R. E. Potter Owners neme	Original d	illers name	Mr. Pool Owners name	Origina	al dril	lers name
Address Mikkalo, Oregon	Address		Address Boardman, Oregon	Addr		
	Date of	rilling			of dri	lling
This record complied by N.S.W. data secured from the Pollowing	from Deepence sources: re-cased		This record compiled by M.S.W. data secured from the following sour	from Deep roes: re-	pened cased	-
Durand	cleaned	by A. A. Durand & Son	Messrs. Wasmer and Mulligan, Boards	cle	aned	by
		Walla Walla, Washington				
Date compiled January 1948	Date	March 1947	Date compiled March 1948	Dat		
, Naterial	Thickness Dept (feet) (feet	Remarks	Material	Thickness (feet)	Depth (feet)	Remarks
Old well	16	5	No log available about		96	Well flows
Broken basalt	15 18					Natural pressure sufficie
Firm black basalt	14 19	•		T		to service domestic water system. This well was
		SWL 801. Couldn't lower by				affected by the Wasmer we Refer to log Wasmer well.
		Dalling.				
<u> </u>						
Well name		File number (Code: Tp., R., Sec., 2 Sec.)	Well name		-	File number (Code: Tp., R., Sec., Sec.
LOCATION:		D C B A	LOCATION:			D C B
•	unty	E F G H	Morrow County			E F G
Blalock Island Quadra		M+ L K J	Blalock Island Quadrangle	,		M L K
	al section	N P Q R	Tp. Range Section Fractional s	ection		N P Q
Tp. Range Section Fractions						
Tp. Range Section Fraction			STATISTICS:			
Tp. Range Section Fractions STATISTICS:					_	
Tp. Range Section Fractions STATISTICS: Well type-Dug Elevation face)	(land sur- Use	status- Well status-	Well type-Dug Elevation (la Drilledx face)	nd sur- ft.	Use sta	stic* x
Tp. Range Section Fractions STATISTICS: Well type-Dug	(land sur- Use ft. do in	mestic* x minstrial abandoned rigation dry hole	Well type-Dug Elevation (le prilledx face)		dome: in:iu irri	stic* x strial ab ndoned gation dry hole
Tp. Range Section Fraction STATISTICS: Well type-Dug Drilled x Driven above above	(land sur- Use ft. dc in	mestic* x mustrial abandoned	Well type-Dug Elevation (la Drilledx face) Driven above	ft.	dome: in:lu irri; muni:	stic* x strial ab ndoned gation dry hole
77. Range Section Fraction: STATUSTICS: Well type-Dag Elevation Driven above below Final depth 751 Nrs. Nora Ransfer	(land sur- Use ft. dc ii ii ii fine	mestic x chustrial abandoned rigation dry hole nicipal producer x des stock wells	Well type-Dag Elevation (le Drilledx face) Driven above below Final depth 93' C. L. Potts	ft.	dome: in:iu irri; muni: include:	stic* x strial ab ndoned gation dry hole cipal producer s stock wells
77). Range Section Fraction: STATISTICS: Well type-Dug	(land sur- Use ft. d. in in finch and Abe Hansen Original di	mestic x abandoned trigation dry hole name x description x des stock wells	Well type-Dug Elevation (le Drilledg face) Driven eboe Final depth 921	Wm. Il	domes in lu irri muni- includes le	stic* x strial ab ndoned gation dry hole
77). Range Section Fraction: STATISTICS: Well type-Dug Drilled Tace) Driven above below Final depth 751 Mrs. Nora Ransier Orners name	(land sur- Use ft. d. in in finch and Abe Hansen Original di	westic* X untstrial, abandoned rigation dry hole inicipal producer X des stock wells willers name Goldendale, Washington	Well type-Dug Elevation (Le Drilledx Face) Driven below Final depth 92' C. L. Fotts Owners name	Wm. Il Origina	domes in lu irri muni- includes le	stic* x ab ndoned gation dry hole sipal producer s stock wells
77. Range Section Fraction: STATUSTICS: Well type-Dag Floward Face) Driven below below Final depth 751 Hre, Hore Ransier Weners name Boardman, Oregon	(land sur- Use ft. do in in in in Abe Hansen Original di Address Date of d	westic* X untstrial abandoned rigation dry hole inicipal producer X des stock wells willers name Goldendale, Washington rilling about 1928	Well type-Dag Elevation (le Drilledx face) Driven above below Final depth 93' C. L. Potts Owners name Address Boardman, Oregon	Wm. Il Origina Addr	domerin in iu irri muni includes le al drilless of drillesned	stic* x ab ndoned gation dry hole sipal producer s stock wells
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77. Range Section Fraction: STATUSTICS: Well type-Dag Floward Face) Driven below below Final depth 751 Hre, Hore Ransier Weners name Boardman, Oregon	(land sur- Use ft. dc ft. dc ii ii ii ii ii ii ii ii ii ii ii ii ii	westic* X untstrial abandoned rigation dry hole nincipal producer X des stock wells willers name Goldendale, Washington rilling about 1928	Well type-Dag Elevation (le Drilledx face) Driven above below Final depth 93' C. L. Potts Owners name Address Boardman, Oregon	Wm. Il Origina Addr Date from Deep cess: re-	domes in the irri municincludes le al drilless of drilless of drilless cased	stic* x ab ndoned gation dry hole gation dry hole gation producer stock wells Lers name Fortland, Oregon lling June 1947
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The record compiled by S.S.V. data secured from the John Corner Date on pile of the John Corner of the John	(land sur- Use ft. d. i. f. d. i. in i. *incl *incl *Actrees Date of d. from Deepend cleend Date Thickness Dept [feet] Bet	mestic* X abandoned right on Mry hole minicipal producer X des stock wells tillers name	Well type-Dug Drilledx Face) Drilledx Face) Priven above below Final depth 93! C. L. Fotts Owners name Address Boardman, Oregon This record compiled by N.S.W. data secured from the Pollowing sour Owner Date compiled March 1948 Material Bo log made Owner reports: Sand and unconsolidated materi	Vm. 11 Origin Addr Date from Deecest re- cle Cle Thickness (feet)	domein in in in in in in in in in in in in i	stic* x ab ndoned getion dry hole epinal producer stock wells producer stock wells producer stock wells for name Fortland, Oregon ling June 1947 by Remarks Vell flows. First water encountered s 27'. Second water encountered at 60' with a light flow over casing. Main flow from at 911. Ho pump or pressure still be service desectic west.
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Rasmussen Mell name	-		File number (Code: Tp., R., Sec., 2 Sec.)		Well name	_		IN-26E-29-F File number (Code: Tp., R., Sec., 2
LOCATION:			$\overline{}$	1	LOCATION:			
Umatilla Coun	ty		D C B A	1	Morrow Cou	inty		D C B
Unmapped Quadrang	le		M L K J	İ	Blalock Island Quadran	igle		N I X
611 35E 35 Way of STB2			N P Q R	l	1H 26E 29 SE2 of HV	14		N P Q
Tp. Range Section Fractional	section		TW P Q R		Tp. Range Section Fractions	l section		N F Q
STATISTICS:					STATISTICS:			
Well type-Dug Elevation (: Drilled = face)	land sur- ft.	Use st	stic*x_	- 1	Well type-Dug Elevation face)	(land sur- ft.	Use str dome:	stic* x
Driven above below			strial abandoned gration dry hole	- 1	Driven above below			strial abandon gation dry hol-
Final depth 225		muni include*	cipel producer x s stock wells		Final depth_350			sipal produce s stock wells
C. W. Rasmussen	A. A	Durand	& Son		Mr. Howton	V. 3.	Newlon	
Owners name Address Box 68	Origi	nal dril	lers name Walla Walla, Washington		Owners name Address R.F.D. Lexington, (Origi		ers meno
Freewater, Oregon	-		lling Winter 1946	ł	Autos			lling 1915
	_			İ	This record committed by N.S.W.			
This record compiled by N.S.W. data secured from the Following so	urces: re	-cased		1	This record complied by N.S.V. data secured from the rollowing s		-cased	- by
Driller			-		Verbal log account by former own R. B. Rice for whom original we	101		-
Date compiled January 1948	De	te			Date compiled October 1947	De.	te	
Naterial Naterial	Thickness	Depth	Remarks		Naterial	Thickness	Depth	Remarks
	(feet)					(feet)	(feet)	
Old well		37	Casing: 8" to 87'		Soft rock	150	150	6" hole
Cement gravel	14	51	Casing: 6" to bottom		Harder rock	150	300	Casing had to be driven
Broken basalt	5	56	SWL 37'. Water level held on 57' with bailing. The		Very sticky gumbo	20	320	5" hole from -320' on.
Sandy gravel and clay	11	67	dug well went dry in Hov.		Hard rock	20	340	
Cement gravel	69	136			Softer rock and water	10	350	Bottom of hole,
Sand and small gravel	2	138			Flow encountered - but there countered at the water hori	zon Rice st	teted the	k the driller claimed a
Cement gravel	35	173			measured flow of 600 g.p.m. figure to be high. Well dr that the flow appeared to b the well shortly after its	but that he	Rice, h	ad always considered the
Tellow clay and rock, sticky	2	175			that the flow appeared to b the well shortly after its	e all of 600 completion.	g.p.m., This well	If not more, when he visi
Cement gravel	25	200			new owners of the property generally lost it to the ex and a new well was sunk. T	tried to enla	rge the	well and in doing so, tually filled with concre
Cement gravel and clay	25	225			and a new well was sunk T	he hew well	as locat	ed within 5 feet of the
Search and cray				1	original wall It is Biggle	understandi	that t	
Search other cray	'			' ·	original well. It is Rice's	understandi:	ng that t	
Rasmusson (R. E.)			Index number 184-H 4W-24E-13-R File number) .	original well. It is Rice's	understandi: the origina not as stro: n, the well	ng that t	
Eassussen (R. E.)	_		4N-24Z-13-R File number (Code: Tp., R., Sec., 2 Sec.)		original well. It is Rice's carried to the asse dayth as but in Rice's opinion it was to Mr. Guidroth Charingto 60 g.p.s. The water is quit Ricetana (David)	understandi: the origina not as stro: n, the well	ng that t	k flow was again encounts original flow. According flowing at hetween 40 and Index number 106-W 1N-24E-29-A
Eassussen (R. E.)	ty		4N-24Z-13-R File number (Code: Tp., R., Sec., 2 Sec.)		original well. It is Rice's corried to the amme dauth as but in Rice's opinion it was to Mr. Ontsforth of Lewingto 60 g.p.s. The water is quit	understandi: the origina not as stro: n, the well	ng that t	k flow was again encounts original flow. Accordin flowing at between 40 and Index number 106-M
Ensemuseon (R. E.) Well name LOCATION:	-		#R-24E-13-R File number (Code: Tp., R., Sec., 2 Sec.) D C B A		original well. It is Rice's carried to the asse dayth as but in Rice's opinion it was to Mr. Guidroth Charingto 60 g.p.s. The water is quit Ricetana (David)	understandi: the origina not as stro: n, the well	ng that t	Index musber - 106-W Index musber - 106-W IN-24E-29-A File number Gode: Tp., R., Sec., 2
Ensmussen (R. E.) Well name LOCATION: Morrov Coun Salock Island Quadrang 4H 24S 13 SE2 of SE2	rle L		#N-24E-13-R File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H		original well. It is Rice's carried to the asses depth as but in Rice's opinion it was to Mr. Guiden of Co. The water is quit Rice's opinion it was to Mr. Guiden of Co. S.p.o. The water is quit Richard (David) Well unne	uniterstandi; the origina not as stron not as stron not as stron not as stron not as stron not as stron not as stron	ng that t	Index number 106-K IN-20E-29-A File number (Code: Tp., R., Sec., 2
Ensmussen (R. E.) Well name LOCATION: Morrov Coun Salock Island Quadrang 4H 24S 13 SE2 of SE2	rle L		File number [Code: Tp., R., Sec., 2 Sec.) D C B A E 7 G H M L K J		original well. It is Rice's carried to the asses depth as but in Rice's opinion it was to Mr. Guiden of Co. The water is quit Rice's opinion it was to Mr. Guiden of Co. S.p.o. The water is quit Richard (David) Well unne	uniterstandi; the original not as stron not as stron not as stron not as stron not as stron not as stron not as stron not as stron not as stron not as stron not as stron not as stron not as stron not as stron not as stron	ng that t	Index number 106-K IN-24E-29-A File number (Code: Tp., R., Sec.,)
Resnussen (R. E.) Well name LOCATION: Morrov Coun Elalock island Quadrang hM 248 13 Sk of Sk of Tp. Range Section Fractional	rle L		File number [Code: Tp., R., Sec., 2 Sec.) D C B A E 7 G H M L K J		original well. It is Rice's carried to the asset daysh as but in Rice's opinion it was to Mr. Guntarchis of Lawington 60 g.p.s. The water is quit Ricetann (David) Woll mame LOCATON: Rotrow Co. Elalock Island Quadra 18 202 29 EPt of M	unierstandi: the origina not as stron n, the vall e warm.	ng that t	Index number 106-W IN-20E-29-A File number (Code: Tp., R., Sec.,) D C B E F G M L K
Rasmussen (R. E.) Well name LOCATION: Korrov Coun Blalock Island Quadrang MH 248 13 SEt of SEt Th. Range Section Fractional STATISTICS: Well type-Dig Elevation (Doubled x face)	section		#M_202-13-R File number (Odde: Tp., R., Sec., 2 Sec.) D C B A E F C H M L K J M P Q R atus- atus- ###################################		original well. It is Rice's carried to the same dayth an but in Rice's opinion it was to Av. Chatforth of Leximpto 60 g.p.s. The water is quit Rietman (David) Well mass LOCATION: Rorrow Co. Blalock Island Quadran	unierstandi: the origina not as stron n, the vall e warm.	ng that t	Index number 106-W IN-28E-29-A File number [Code: Tp., R., Sec., 2 D C B E F G M L K
Resnussen (R. E.) Well name LOCATION: Korrov Coun Blalock Island Quadrang by 245 13 S22 of S2 Tp. Range Section Fractional STATISTICS: Well type-Dag Elevation (Driven above above	section	dome iniu irri	### ##################################		original well. It is Rice's carried to the asset daysh as but in Rice's opinion it was to Mr. Guntarchis of Lawington 60 g.p.s. The water is quit Ricetann (David) Woll mame LOCATON: Rotrow Co. Elalock Island Quadra 18 202 29 EPt of M	unierstandi: the origina not as stron n, the vall e warm.	ng that t	Index number 106-W IN-20E-29-A File number (Code: Tp., R., Sec.,) D C B E F G M L K
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Bassussen (R. E.) Well name LOCATION: Morrov Coun Blalock Island Quadram SHA 248 13 SEt of SEt Typ. Range Section STATISTICS: Well type-Dug Drilled x Driven below below Baymond R. Rassussen	section	dome iniu irri muni *include	#N202-13-R File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C H M L K J N P Q R atria. ###################################		original well. It is Rice's carried to the asset depth as but in Rice's opinion it was to Av. Chairforth of Levington 60 g.p.s. The water is quit Rice's opinion it was to Av. Chairforth of Levington 60 g.p.s. The water is quit Rice's Chairforth of Reliance (David) Reliance (Dav	understandit. the original not as stron, not as stron, not as stron, the well te where.	Use st dome	Index number 106-W Index number 106-W
Reserves on (R. E.) Well name LOCATION: Morrov Coun Blalock Island Quadrang 4M 20E 13 Sth of SE TP. Range Section Fratisfics: Well type-Dug Received Section Driven Sorve Section Final depth 80' Raymond E. Rasmussen	section land surft.	dome iniu irri muni *include	#M_202-13-R File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H M L K J N P Q R atua- a		original well. It is Rice's carried to the asses dayth as but in Rice's opinion it was to km. (mistorth of Lexingtio 60 g.p.s. The water is quit Rice's opinion it was to km. (mistorth of Lexingtio 60 g.p.s. The water is quit Rice's Company of the water is quit Rice's	understandi the origina no as stron no as	Use st domain in multiple states of the stat	Index mumber 106-N Index mumber 106-N Index mumber 106-N File number D C B Z F C M L X N P Q Stus- Stus- Well status- Stus- Well status- Stus- Stus- Well status- Stus- Stus- Well status- Stus
Resource (R. E.) Well name LOCATION: Korrov Coun Blalock Island Quedrang MH 24K 13 Sty of Sky Tp. Renge Section Fractional STATISTICS: Driven Sove Section Final depth 80'	land sur- ft.	dome iniu irri muni *include	#N202-13-R File number (Odde: Tp., R., Sec., 2 Sec.) D C B A E F G H H L X J H P Q R atua- atua		original well. It is Rice's carried to the same dayth an but in Rice's opinion it was to Av. Chaironto 15 or	understandit the original not as strong not as strong not as strong not as strong not as strong not as strong not as strong not not not not not not not not not not	Use at dome in uni *include	Index number 106-K Index number 106-K IN-20E-29-A File number [Code: Tp., R., Sec., 2] D C B E F G M L K N P Q tutue- stic* Well statu strial_ strial_ spiton dry hold griden dry hol
Ensures (R. E.) Well name LOCATION: Korrev Coun Elalock Island Quadrang AN 285 13 SM of SE Typ. Renge Section Fractional STATISTICS Well type-Dag Renge Section Final depth Sol Baymond E. Renguesen Omere name Address Boardman, Oregon This record compiled by N.S.V.	section land surft. Original Add Date from De	dome infu irri muni *include nal dril ress e of dri epened	#N202-13-R File number (Odde: Tp., R., Sec., 2 Sec.) D C B A E F G H H L X J H P Q R atua- atua		original well. It is Rice's carried to the asset daysh as but in Rice's opinion it was to Mr. Guntarchin for Lawington GO 6.7.0. The water is quit Rice's opinion it was to Mr. Guntarchin for the water is quit Richard Country of the w	understandit the original not as strong not	Use at dome in au in include in au include i	Index mumber 106-N Index mumber 106-N Index mumber 106-N File number D C B Z F C M L X N P Q Stus- Stus- Well status- Stus- Well status- Stus- Stus- Well status- Stus- Stus- Well status- Stus
Bassussen (R. E.) Well name LOCATION: Morrov Country Blalock Island Custom Typ. Response Section Fractional STATISTICS: Well type-Dug Drilled x Driven Driven Baymond E. Rassussen Comere name Address Boardman, Oregon This record compiled by M.S.V. data secured from the following so	section land surft. Original Add Add From Deturces: results of the surces and the surces are th	dome infu irri muni *include nal dril ress e of dri	#N202-13-R File number (Odde: Tp., R., Sec., 2 Sec.) D C B A E F G H H L X J H P Q R atua- atua		original well. It is Rice's carried to the asset daysh as but in Rice's opinion it was in Ar. Guisforth of Levington 60 g.p.s. The water is quit Ricetana (David) Well mass LOCATION: Roffer Occupant Section Fraction: 18 202 29 REctor Fraction: STATISTICS: Well type-Dag Elevation Fraction: Final dayth 4271 below Final dayth 4271 David Rietaman	understandit the original and as strong the well's strong the well's strong the well's section the well's section the well's section the well's section the well's section the well and surfit.	Use still Use stidone in a minima in a min	Index masher 106-N Index masher 106-N IN-2018-20-A File number D C B Z F G M L X N P Q Actual Actual State Actual B Z F G M L X N P Q Actual State S
Resource (R. E.) Well name LOCATION: Horrov Coun Blaick Island Quadrang by 248 13 St of SE TP. Range Section Fractional STATISTICS: Oriven Selow Selow Final depth So' Raymond E. Rangussen Address Boardman, Oregon This record compiled by N.S.V.	section land surft. Original Add Add From Deturces: results of the surces and the surces are th	dome intu irri muni *include nal dril ress e of dri epened -cased	### ### #### #########################		original well. It is Rice's carried to the asset daysh as but in Rice's opinion it was to Ar. Gustarbut of Levingen 60 g.p.s. The water is quit Riceton (David) Well tames LOGATION: Rorrow Con Blaick Island Quadra 18 20% 29 RP4 of N Typ. Range Section Fractions STATISTICS: Well type-Dug Riceton Fractions Prinal depth 4271 David Rictman Compare name Address lone, Oragon	understandit the original and as strong the well's control of the well-section of	Use st dome or and or a	Index masher 106-N Index masher 106-N IN-2018-20-A File number D C B Z F G M L X N P Q Actual Actual State Actual B Z F G M L X N P Q Actual State S
Bassussen (R. E.) Well name LOCATION: Norrow Coun Blalock Island Ly 248 13 52 of 52	land surft. Original Add Det from De purces: re	dome intu irri muni *include nal dril ress e of dri epened -cased	### ### #### #########################		original well. It is Rice's carried to the asset daysh as but in Rice's opinion it was to Mr. Guntarchin for Lawington GO 6.7.0. The water is quit Rice's opinion it was to Mr. Guntarchin for the water is quit Richard Country of the w	understandit the original policy of the original policy of the original policy of the original policy of the original policy of the original policy of the original policy of the original policy of the original policy of the original policy of the original policy origina	Use statil Use statil Use statil use as the statil use statil	Index number 106-K Index number 106-K IN-20E-29-A File number [Code: Tp., R., Sec., 2] D C B E F G M L K N P Q white title strick stri
Bassussen (B. E.) Well name LOCATION: Korrov Coun Blalock Island Quedrang SH 24E 13 SE of SE of SE TP. Range Section Fractional STATISTICS: Drilled X face) Driven above below Final depth 801 Baymond E. Rangussen Address Boardman, Oregon This record complied by N.S.V. data secured from the following so Krs. Rangussen and Kr. McEntire Date compiled March 1948	land sur- ft. Original Add Add from Deturces: resurces: resurces: resurces: resurces.	dome insu irri muni *include nal dril ress e of dri epened -cased eaned	### ##################################		original well. It is Rice's carried to the asset daysh as but in Rice's opinion it was to Ar. Gustarbut of Levingen 60 g.p.s. The water is quit Riceton (David) Well tames LOGATION: Rorrow Con Blaick Island Quadra 18 20% 29 RP4 of N Typ. Range Section Fractions STATISTICS: Well type-Dug Riceton Fractions Prinal depth 4271 David Rictman Compare name Address lone, Oragon	understandit the original policy of the original policy of the original policy of the original policy of the original policy of the original policy of the original policy of the original policy of the original policy of the original policy of the original policy origina	wall. wall wall wall wall wall wall wall	Index number — 105-M Index number — 105-M Index number — 105-M IN-242-29-A File number [Code: Tp., R., Sec., 1 IN P Q I
Bassussen (B. E.) Well name LOCATION: Korrov Coun Blalock Island Quedrang SH 24E 13 SE of SE TP. Range Section Fractional STATISTICS: Drille X Fractional Boyen Book Final depth 801 Baysond E. Rangussen Address Boardman, Oregon This record compiled by N.S.V. data secured from the Following so Mrs. Rangussen and Mr. McEntire Date compiled March 1948 Material	land surft. Original Add Pet from De grand Pet Color	dome intu irri muni *include nal dril ress e of dri epened -cased eaned Depth frest)	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H N L K J N P Q R atus- a		original well. It is Rice's carried to the asset daysh as but in Rice's opinion it was to Av. Contarched Levines 160 g.p.s. The water is quit Reliance (David)	understandit the original not as strong the original not as strong the property of the original not as strong the original not as strong the original not a construct of the original not a construct of the original not a construct or original not a construct or original not a construct or original not a construct or original not a construct or original not a construct or original notation original notation	What we are the second of the	Index manager — 106-K Index manager — 106-K
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Bassussen (R. E.) Well name LOCATION: Norrow Coun Blalock Island Quedrang 4M 24E 13 SE of SE TD. Range Section Fractional STATISTICS: Drilled X Drilled X Driven above below Final depth 801 Baywond E. Rassussen Address Boardman, Oregon This record compiled by M.S.W. data secured from the following so Mrs. Rassussen and Mr. McEntire Date compiled March 1948 Material	land surft. Original Add Pet from De grand Pet Color	dome intu irri muni *include nal dril ress e of dri epened -cased eaned Depth frest)	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C H N L K J N P Q R strict Section at the section at the		corriginal well. It is Rice's carried to the asset depth as but in Rice's opinion it was to Av. Contaronth of Levington 60 g.p.s. The water is quit Reliance (David) Reliance (D	understandit the original not as strong the original not as strong the property of the control o	What we will be a stil	Index manager — 106-K Index manager — 106-K
Bassussen (R. E.) Well name LOCATION: Norrow Coun Blalock Island Quedrang 4M 24E 13 SE of SE TD. Range Section Fractional STATISTICS: Drilled X Drilled X Driven above below Final depth 801 Baywond E. Rassussen Address Boardman, Oregon This record compiled by M.S.W. data secured from the following so Mrs. Rassussen and Mr. McEntire Date compiled March 1948 Material	land surft. Original Add Pet from De grand Pet Color	dome intu irri muni *include nal dril ress e of dri epened -cased eaned Depth frest)	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C H N L K J N P Q R strict Section at the second dry hole cipal estock wells Remarks Remarks SKL 4: 9*. Reportedly did flow but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry ba		coriginal well. It is Rice's carried to the asset daysh as but in Rice's opinion it was to Ar. Contarons of Levinger Contarons of Le	understandit the original not as strong the original not as strong the property of the control o	What we will be a stil	Index mmaber — 106-N Index mmaber — 106-N
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Bassussen (B. E.) Well name LOCATION: Korrov Coun Blalock Island Quedrang SH 24E 13 SE of SE TP. Range Section Fractional STATISTICS: Drille X Fractional Boyen Book Final depth 801 Baysond E. Rangussen Address Boardman, Oregon This record compiled by N.S.V. data secured from the Following so Mrs. Rangussen and Mr. McEntire Date compiled March 1948 Material	land surft. Original Add Pet from De grand Pet Color	dome intu irri muni *include nal dril ress e of dri epened -cased eaned Depth frest)	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C H N L K J N P Q R strict Section at the second dry hole cipal estock wells Remarks Remarks SKL 4: 9*. Reportedly did flow but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry ba		corriginal well. It is Rice's carried to the asset depth as but in Rice's opinion it was to Av. Contaronth of Levington 60 g.p.s. The water is quit Reliance (David) Reliance (D	understandit the original not as strong the original not as strong the property of the control o	What we will be a stil	Index mmaber — 106-N Index mmaber — 106-N
Bassussen (R. E.) Well name LOCATION: Norrow Coun Blalock Island Quedrang 4M 24E 13 SE of SE TD. Range Section Fractional STATISTICS: Drilled X Drilled X Driven above below Final depth 801 Baywond E. Rassussen Address Boardman, Oregon This record compiled by M.S.W. data secured from the following so Mrs. Rassussen and Mr. McEntire Date compiled March 1948 Material	land surft. Original Add Pet from De grand Pet Color	dome intu irri muni *include nal dril ress e of dri epened -cased eaned Depth frest)	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C H N L K J N P Q R strict Section at the second dry hole cipal estock wells Remarks Remarks SKL 4: 9*. Reportedly did flow but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry ba		original well. It is litche's carried to the asset daysh as to Mr. Grand to the asset daysh as to Mr. Grand to the second to the control of t	understandit the original not as strong the original not as strong the property of the control o	white a the second seco	Index mmaber — 106-N Index mmaber — 106-N
Bassussen (R. E.) Well name LOCATION: Norrow Coun Blalock Island Quedrang 4M 24E 13 SE of SE TD. Range Section Fractional STATISTICS: Drilled X Drilled X Driven above below Final depth 801 Baywond E. Rassussen Address Boardman, Oregon This record compiled by M.S.W. data secured from the following so Mrs. Rassussen and Mr. McEntire Date compiled March 1948 Material	land surft. Original Add Pet from De grand Pet Color	dome intu irri muni *include nal dril ress e of dri epened -cased eaned Depth frest)	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C H N L K J N P Q R strict Section at the second dry hole cipal estock wells Remarks Remarks SKL 4: 9*. Reportedly did flow but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry ba		original well. It is Rice's carried to the asset daysh as but in Rice's opinion it was to ke. Guistorbut of Levington 60 g.p.s. The water is quit Relating to the control of the control o	understandit the original not a strong the well of the content of	Was at the well a stil	Index mmaber — 106-N Index mmaber — 106-N
Rasmussen (R. E.) Well name LOCATION: Korrov Coun Blalock Island Quedrang MH 24% 13 St of St Th. Range Section Fractional STATISTICS: Well type-Dag County Security Final depth 80' Baymond E. Rasmussen Mdress Boardaan, Oregon This record compiled by N.S.V. data secured from the Following so Kre. Rasmussen and Kr. McEntire Date compiled March 1948 Material	land surft. Original Add Pet from De grand Pources: relational P	dome intu irri muni *include nal dril ress e of dri epened -cased eaned Depth frest)	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C H N L K J N P Q R strict Section at the second dry hole cipal estock wells Remarks Remarks SKL 4: 9*. Reportedly did flow but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry ba		original well. It is Rice's carried to the asset daysh as but in Rice's opinion it was to Ar. Gustarbut of Levingen 60 g.p.s. The water is quit Rice's opinion it was to Ar. Gustarbut of Levingen 60 g.p.s. The water is quit Rice's Committee of Committee	understandit the original not a strong the well of the original not as strong the well of	Was at the well a stil	Index mmaber — 106-N Index mmaber — 106-N
Bassussen (B. E.) Well name LOCATION: Korrov Coun Blalock Island Quedrang SH 24E 13 SE of SE TP. Range Section Fractional STATISTICS: Drille X Fractional Boyen Book Final depth 801 Baysond E. Rangussen Address Boardman, Oregon This record compiled by N.S.V. data secured from the Following so Mrs. Rangussen and Mr. McEntire Date compiled March 1948 Material	land surft. Original Add Pet from De grand Pources: relational P	dome intu irri muni *include nal dril ress e of dri epened -cased eaned Depth frest)	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C H N L K J N P Q R strict Section at the second dry hole cipal estock wells Remarks Remarks SKL 4: 9*. Reportedly did flow but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry but flow cased out on account of bateria in the second dry ba		original well. It is Rice's carried to the asset daysh as but in Rice's opinion it was to ke. Guistorbut of Levington 60 g.p.s. The water is quit Relating to the control of the control o	understandit the original not a strong the well of the content of	Was at the well a stil	Index mmaber — 106-N Index mmaber — 106-N

Rietman (Tictor)		Index number 105-M 1E-24E-16-R File number (Code: Tp., R., Sec., 2 Sec.)	Roberts Well name			Index number 112-M 28-24E-5 File number (Code: Tp., R., Sec., 2 S
LOCATION:		[LOCATION:			
Rorrow Count	7	D C B A E F G H	Morrow Count	7		D C B
Blalock Island Quadrangl	9		Unmapped Quadrangl	9		
1H 24B 16 SEt of SEt		N P Q R	2H 24E 5 SW2			M L K
Tp. Range Section Fractional	section	41, 14	Tp. Range Section Fractional	section		[,1,1,1
STATISTICS:			STATISTICS:			
Well type-Dug Elevation (1: Drilled x face)	ft. dom	stic* _ I	Well type-Dug Elevation (1: D illed_x face)	and sur- ft.	Use st dome	stic* I
Driven above below	ina	strial abandoned ary hole	Driven above below		in au	strial abandoned gation dry hole
Final depth 550	mun *include	cipal producer x s stock wells	Final depth 5291		muni include*	cipal producer s stock wells
Victor Rietman	not known		Mrs. J. D. Roberts	7red	Nich oson	1
Owners name Address Ione, Oregon	Original dri	lers name	Owners name Address Portland, Oregon	Origi		lers name Ione, Oregon
	Date of dr	Illing				Started Oct. 1946 lling Finished June 1947
This record compiled by N.S.W.			This record complied by N.S.W.		epened	
data secured from the following sou	rces: re-cased_ cleaned	by Fred Nichoson	data secured from the following sou	rces: re	-cased	
Driller		Ione, Oregon	Driller			
Date compiled October 1947	Date	April 1943	Date compiled October 1947	De	te	
Naterial Naterial	Thickness Depth	Remarks	Material	Thickness	Depth	Remarks
This well was 455' deep to bee	(feet) (feet)	epened by Nichoson as follows:		(feet)	(feet)	
	1 1		Top soil	9	9	6" hole - casing set at -
Hard blue basalt with occasion		5 5/8" hole	Shelly black basalt	9	18	
soft streaks	65 520		Solid black basalt	27	45	
Gray basalt	9 529		Solid blue basalt	10	55	
Black porous basalt	3 532		Very hard gray basalt	64	119	
Gray baselt	8 540		Blue scapstone	4	123	
Crevice with green sompstone	1 541	Water here	Very hard gray basalt	33	156	
Gray basalt	9 550	- Bottom of hole -	Moderate brown basalt	9	165	
-	<u> </u>	Pump steady 3 g.p.u.	Blue basalt	23	188	
	LL	L	Unusually hard gray basalt	76	264	
4			Solid brown basalt	16	280	
			Black basalt	10	290	
Rogers		Index number 185-W 4W-24E-13-W	Gray basalt	27	317	
Well name	·	File number (Code: Tp., R., Sec., 2 Sec.)	Black porous basalt	8	325	
LOCATION:			Brown porous basalt	6	331	
Morrow Count	v	D C B A	Blue basalt	25	356	
Blalock Island Quadrangl		E F G H	Gray bouldery basalt	7	363	
		M L K J	Blue bouldery basalt	36	399	
Tp. Range Section Fractional	section	N P Q R	Gray bouldery basalt	13	412	
STATISTICS:			Blue basalt with seams, crevic	 	ļ	
Well type-Dug Elevation (1	and sur- Use s	atus- Well status-	boulders and clay-like mud	79	491	
Drilled x face) Driven above	ft. dom	stic* x strial abandoned	Dark colored lava rock shot wi	1		
Final depth 87'	irr	gation dry hole	yellow soapstone and a trace of	1	-	
	*includ	s stock wells	brown clay-like mud	19	510	
Emmet Rogers Owners name	Beck Original dri	lers nome	Dark porous basalt	19	529	Bottom of hole
Address Boardman, Oregon	Address	1000	Soapstone at -119' -123' is ce at -102'. The next water, abo	mented out	The f	rst seep of water was ween -264 and -280 . Al.
		illing about 1936	formations from -331'-491' wer comes in at -510' to -515', ov hours bailing time to lower wa	hard to	drill an	d keep straight. Hext water allons were removed in 3
This record compiled by N.S.W. data secured from the Following sou	from Deepened_ rces: re-cased_	-	lower no more. This water wil	l raise as	stin to -	-116' deep in well. The pur
Messrs. Wilson, Crowder and Wangbo	cleaned	by	is set about 4 inches off bott	m with th	intake	about 20 ft. from bottom.
(Waagbo was a former owner)		<u> </u>		1	1	
Date compiled March 1948	Date				1	1
Material	Thickness Depth (feet) (feet)	Remarks		1	1	1
Wo log available - about	87	Well flows periodically.		1	1	1
		Former owner, Wasgbo reports well will just flow during				
		winter for about a month- but SWL would drop to 5!		-	1	-
		during Summer and well could be pumped dry with a hand		-	-	
		pump with plunger at 571. Recovery slow.		-	-	
					1	-
	İ					
	i					
	l I					

			Index mumber 29-U				T-1
Rogers Canning Company, Athena #1			File number (Code: Tp., R., Sec., 2 Sec.)	Rogers Canning Company, Athena #2			Index number 30-U 4E-35E-19-E File number (Code: Tp., R., Sec., 2 Sec.
OCATION:				LOCATION:			
Umatilla County			D C B A		_		D C B A
Unmapped Quadrangle			E F G H		•		Z 7 G H
48 358 19 SW of NW	•		M L K J	Unmapped Quadrangl	•		N L X J
p. Range Section Fractional	section		N P Q R	Tp. Range Section Fractional	section		H P Q R
TATISTICS:				STATISTICS:			
Tell type-Dug	nd sur- ft.	Use sta dome	stic*	Well type-Dug Elevation (1: Drilled E face)	and sur- ft.	Use st dome	stic*
Driven above below		irri	strial x abandoned gation dry hole	below below		inau irri	strial x abandoned gation dry hole
'inal depth 1069'		muni include*	cipal producer X s stock wells	Final depth 1156'		muni include*	cipal producer producer
Rogers Canning Company		Durand	I. San	Parama Caratter Caratter		Durand	8 P
mers name Address Kilton, Oregon	Ortot	nal dril	lers name	Rogers Canning Company Owners name Address Milton, Oregon	Origi	nal dril	Valla Valla, Vashington
	Dat	e of dri	Valla Valla, Washington started Nov. 1940 llins completed April 1944	Autron, oregon			lling finished June 1944
his record compiled by M.S.V.		epened_	Completes April 174	muta annual annu		epened_	TILLS THISHED VALO 1944
ata secured from the following sour	ces: re	-cased_	- by	This record compiled by N.S.V. data secured from the Following sour	rces: re	-cased	
Driller and company officials				Driller and company officials	61	eaned	рЪ
ate compiled January 1948	_			10/9	_		
	Thickness			Date compiled January 1948	De Thicknes		
Naterial	(feet)	(teet)	Remarks	Material	(feet)		Remarks
Dirt	10	10	SWL was 54 at the time this well was finished.	Top soil	4	4	20" hole to 115"
Cement gravel	41	51	Company officials report	Gravel	15	19	16" hole from 115' to 507' 12" hole from 507' to 1156
Black basalt	40	91	This well is used as a stand-by well. When used	Hard cemented gravel	3	22	
Clay and black rock	39	130	it is pumped at the rate of	Gravel and clay	4	26	SWL from 0' to 86' was 35'
Black honeycomb basalt	31	161	the drawdown is to 4001 which	Cemented gravel	21	47	at 86' SWL changed to 25' at 245' SWL changed to 18'
Black basalt	70	231	is the bottom of the pump line. Recovery at that	Red gravel and clay	12	59	at 475 SWL changed to 16
Blue soapstone	4	235	level, however, is rapid.	Brown gravel and shale	10	69	Final SWL - 16'
Black basalt	18	253		Large boulders	3	72	
Porous black basalt	10	263		Brown gravely clay	8	80	
Black basalt and scapstone	7	270		Cemented gravel	4	84	Well abandoned
Black basalt	12	282		Clay and gravel	,	86	
Gray basalt - hard	80	362	1	Hard black basalt	8	34	
Black basalt- porous layers	28	390		Broken basalt	5	99	
Gray basalt	66	456		Hard baselt	19	118	
Black basalt, porous layers	74	530		Hard black basalt	14	132	
Hard gray basalt	46	576		Black basalt	28	160	Bad crevice from 132 to 1
Brown honeycomb basalt	45	621		Black porous rock and brown ch		178	Dau Crevice from 1)2 to 1
Black basalt	24	645		Hard black basalt	67	245	
Brown honeycomb basalt	13	658		i -	60	305	
Black heavy basalt	82	740		Black basalt		312	
	33	773		Green sticky clay	7	-	
Black shale-tools stick Black basalt - drills coarae	66	839		Hard black basalt	91	323	
	25	864		Hard gray basalt		414	
Gray basalt Red rock	5	869		Hard black basalt	61	475	
	16	885		Hard gray basalt	47	522	
Blue clay Black basalt	12	897		Black basalt	148	670	
	95	992		Hard basalt	37	707	
Gray basalt Black basalt	95	1004		Medium hard basalt	56	763	
Black basalt Brown basalt - drills up fine	57	1004		Soft basalt	102	865	
		1061		Hard gray basalt	67	932	1
Gray basalt	4	1009		Medium hard basalt	16	948	
				Brown basalt	47	995	
				Red and black basalt	82	1077	
				Red basalt	79	1156	
							Bottom of hole
			<u> </u>				

Rogers Canning Company, Athena #3	_		Index mmber 31-U 4H-34H-24-J File number
			(Code: Tp., R., Sec., 2 Sec
LOCATION:			D C B A
Umatilla Cour	-		E F G H
Pendleton Quadrana			MIKI
Tp. Benge Section Fractional	section		N P Q R
STATISTICS:			
Well type-Dug Elevation (land sur-	Use st	tatus- Well status-
Driven above			istrial abandoned
Final depth 1148'		aun:	ightion dry hole icipal producer x
Rogers Canning Company	A. A.	Durand &	
Owners name Address Milton, Oregon	Orig	inal dril	llers name Walla Walla, Washington
with and			Illing Jan. to May 1946
This record compiled by N.S.V.		espened_	
This record compiled by N.S.V. inta secured from the following so	urces: r	e-cased_ leaned_	
Driller and company officials			
ate compiled January 1948	_ De	1te	
Material	Thicknes (feet)	Depth (feet)	Recarks
Tellow silt	0	7	24" casing at 22"
Gravel	15	22	16" " to 102' 6" to 230' 4"
Gray basalt.	9	31	Hole reduced to 122 at 550
Broken basalt	7	38	
Brown shale	3	41	Pumps 1515 g.p.m. with
Gray basalt	19	60	stabilized production level at 175'
Erown and gray shale	15	75	
Hard gray basalt	50	125	
Broken basalt and shale	60	185	According to Company office the pumping water level at
Black basalt, soft	88	193	550 g.p.m. stabilized at al 190' in June 1947 for a per
Gray basalt	19	212	190' in June 1947 for a per of about 3 weeks and then dropped to 245' in July 194 This level remained constan
Dark broken basalt	18	230	throughout the pumping seas
Gray and dark basalt layers	106	336	flowed 15 days after being
Broken basalt	6	342	snuc uown.
Gray and dark basalt layers	28	370	
Blue shale	10	380	
Black basalt	10	390	
Dark broken basalt	34	424	
Brown basalt	17	441	
Gray basalt	47	488	[
Brown shale	12	500	
Dark basalt	- 29	570	Reduced hole to 1218 at 550
Gray basalt Broken dark basalt	38	608	Reduced hole to 12 at 550
Solid dark basalt	64	672	
Sticky blue shale	6	678	
Gray and dark basalt	103	781	
Broken dark basalt	15	796	
Dark basalt	14	810	
Broken basalt	15	825	
Gray basalt	100	935	
Gray sticky mud	5	940	
Gray basalt	6	946	
Brown basalt	14	960	
Broken reddish brown basalt	15	975	
Red rock	10	985	
Brown basalt	22	1007	
Broken dark basalt	10	1017	
Dark basalt	14	1031	
Gray basalt	3	1034	
Black basalt	8	1042	

11 1053 5 1058

(continued)

Gray and dark basalt

Black basalt

Gray and dark basalt	74	1132	
Broken brown basalt	7	1139	
Black basalt	5	1144	
Gray basalt	4	1148	
			Bottom of hole
Water courses:			
Water between 1851 and 1931.	ore water	from 70	and 713 well flowed for
3 hours between 7301 and 7361	SWL 1'.	Flowing	constant at 7591. Nore water

Rogers Canning Company, Milton #1			5N-35E-12-6
			(Code: Tp., R., Sec., & Sec.)
LOCATION:			DCBA
Umatilla Count	7		E F G H
Unmapped Quadrangl			MLKJ
75N 35E 12 SW1 of NET Section Fractional	section		N P Q R
STATISTICS:			
Well type-Dug Elevation (1 prilled x face) above	and sur- ft.	Use st	atus- Well status- stric* abandoned
Final depth 702		irri	gation dry hole cipal producer x
inai depui / vag		*include	s stock wells
Rogers Canning Company	A. A.	Durand &	Son
Address Milton, Oregon	Add	ress	lers name Walla Walla, Washington
	Det	e of dri	lling Feb. to May 1944
This record compiled by N.S.V.	from De	epened_	_
. ,	cl.	-cased	by
Driller and company officials	_		
Date compiled January 1948 and Mov.			
Material	Thickness (feet)	(feet)	Remarks
Gravel	21	21	officials in Jan, 1948 the SWL is 117'. This
Cemented gravel	26	47	the SWL is 117'. This well is pumped at the rate
Rock	3	50	the SVL is 117'. This well is pumped at the rate of 1200 g.p.m. 24 hours a day during the height of the season. Drawdown
Black basalt	7	57	under such conditions is
Gray basalt	8	65	23'.
Black basalt	67	132	According to the driller the SVL was 16 in this
Brown basalt	35	167	At 102 the SWL rose to
Black basalt	15	182	At 102' the SWL rose to 13'. At 102' the SWL dropped to 120' where it
Brown and black honeycomb bass	at 3	185	of the hole.
Black basalt	18	203	Water temp. is 58°F.
Brown and black basalt	52	255	
Black basalt	140	395	
Gray basalt	6	401	
Black basalt	107	508	
Gray basalt	13	521	
Black basalt	15	536	
Gray basalt	33	569	
Black honeycombed	15	584	
Black basalt	38	622	
Gray basalt	17	639	
Black basalt	63 ≩	702 <u>1</u>	Bottom
		L	

Well name	- <u>F</u>	Index number 37-U 3N-34Z-18-E	Index number 69-M
Count Coun	by Le	Code: Tp., R., Sec., & Sec.) D C B A E F G H M L K 7 N P Q B	Code: Tp., R., Sec., 2 Sec.) LOCATION:
SPATIFICIOS:	ft. domest in lust irriga munici *includes A. A. Durand & S Original drille	tic* x real ebandoned titon dry hole pal producer x Stock wells	STATISTICS:
This record compiled by N.S.W. data secured from the Pollowing sou		ling November 1945	This record compiled by E.S.V. from data secured from the Tollowing sources: re-cased cleaned by C. E. Levis Both drillers Pendleton, Oregon
Date compiled December 1947	Date		Date compiled July 1947 Date 1941
Naterial	Thickness Depth (feet) (feet)	Remarks .	Material Thickness Depth Remarks (feet)
Soil	6 6	SWL 231 - 2 Nov. 1945	Hole drilled thrn hard rock all the 5" hole - Artesian flow
Gravel and clay	6 12	o casing to ju' Bailed 10 g.p.m. with 27' drawdown	way with cuttings black like call at the water horizon 161 reported at 465 g.p.m.
Gravel Basalt SWL 23	4 16 159 175	ATTH ZY, GLANGOAN	This well was visited by the compiler who contributes the following conservations run tharm rock reported by the fittler is without doubt wholly bealt. The well is still active y flowing and apparently as strongly as ever.
Ringg #2		Index number 135-M 18-29E-14	Index number 142-U Sacreson 15-518-2
LOCATION:	(1	Tile number Code: Tp., R., Sec., Sec.) D C B A	Well name
LOCATION: Count	() Le	file number Code: Tp., R., Sec., 2 Sec.)	Code: Tp., R., Sec., 2 Sec.) LOCATION:
Mell name LOCATION: Morrow Count Unmapped Quadrangl 18 278 14	section section und surft. domestarirriga irriga munici	Pile number (Code: Tp., R., Sec., Sec.) D C B A E F G H M L K J N P Q R Tus- Tiel sebadoned dry hole	Code: Tp., R., Sec., Esc.)
Moli name	section section ft. domest fruits frings munical frinkdes Original drille Address Date of drill	Tile namer Code: Tp., R., Sec., Sec.) D C B A E F G H M L K J N P Q R Well status- rica abendoned dry hole producer Tronger	Code: Tp., R., Sec., Sec.)
No. No.	section section to domest fr. domest irriga munici friga deleta	The number (Code: Tp., R., Sec.) Sec.) D C B A Z 7 G H H L K 7 N P Q R TO SEC. Well status- rick abendonse dry hole producer X stock wells	Code: Tp., R., Sec., S
Moli name LOCATION: MOTION Unmarped Quadrangl 18 278 14 Ty. Range Section Fractional STATISTICS: Well type-Dug Hevation (1 Drilled X face) Driven above below Final depth George Rugg Owners name Address Echo, Oregon This record compiled by X.S.V. data secured from the Following sou	section section section ft. domest inust irriga municol includes Original drille Address Date of drill from Despended irones re-cased cleaned sociation Date	The number (Code: Tp., R., Sec.) Sec.) D C B A Z 7 G H H L K 7 N P Q R TO SEC. Well status- rick abendonse dry hole producer X stock wells	Code: Tp., R., Sec., Sec.)
Moll name LOCATION: Count	section section ft. domest ft. friend minical minical includes Original drille Address Date of drill from Deepened re-sased ociation	The number (Code: Tp., R., Sec.) Sec.) D C B A Z 7 G H H L K 7 N P Q R TO SEC. Well status- rick abendonse dry hole producer X stock wells	Code: Tp., R., Sec., Sec.)
Moll name LOCATION:	section section ft. domest fruits frigg munical frille Address Dete of drill from Despened cleaned sociation Thickness Depth	The number (Code: Tp., R., Sec.) Sec.) D C B A E F G H M L K J N P Q R THE SEC. SEC. SEC. SEC. SEC. SEC. SEC. SEC	Code: Tp., R., Sec., Sec.)
Mell name LOCATION: Count	section section ft. domest fruits frigg munical frille Address Dete of drill from Despened cleaned sociation Thickness Depth	The number (Code: Tp., R., Sec.) Sec.) D C B A E F G H M L K J N P Q R THE SEC. SEC. SEC. SEC. SEC. SEC. SEC. SEC	Code: Tp., R., Sec., Sec.)
Mell name LOCATION:	section section ft. domest fruits frigg munical frille Address Dete of drill from Despened cleaned sociation Thickness Depth	The number (Code: Tp., R., Sec.) Sec.) D C B A E F G H M L K J N P Q R THE SEC. SEC. SEC. SEC. SEC. SEC. SEC. SEC	Code: Tp., R., Sec., Sec.)
Mell name LOCATION: Count	section section ft. domest fruits frigg munical frille Address Dete of drill from Despened cleaned sociation Thickness Depth	The number (Code: Tp., R., Sec.) Sec.) D C B A E F G H M L K J N P Q R THE SEC. SEC. SEC. SEC. SEC. SEC. SEC. SEC	Code: Tp., R., Sec., 2 Sec.)
Mell name LOCATION: Count	section section ft. domest fruits frigg munical frille Address Dete of drill from Despened cleaned sociation Thickness Depth	The number (Code: Tp., R., Sec.) Sec.) D C B A E F G H M L K J N P Q R THE SEC. SEC. SEC. SEC. SEC. SEC. SEC. SEC	Code: Tp., R., Sec., 2 Sec.)
Mell name LOCATION: Count	section section ft. domest fruits frigg munical frille Address Dete of drill from Despened cleaned sociation Thickness Depth	The number (Code: Tp., R., Sec.) Sec.) D C B A E F G H M L K J N P Q R THE SEC. SEC. SEC. SEC. SEC. SEC. SEC. SEC	Code: Tp., R., Sec., Sec.)
Mell name LOCATION:	section section ft. domest fruits frigg munical frille Address Dete of drill from Despened cleaned sociation Thickness Depth	The number (Code: Tp., R., Sec.) Sec.) D C B A E F G H M L K J N P Q R THE SEC. SEC. SEC. SEC. SEC. SEC. SEC. SEC	Code: Tp., R., Sec., Sec.)
Mell name LOCATION: Count	section section ft. domest fruits frigg munical frille Address Dete of drill from Despened cleaned sociation Thickness Depth	The number (Code: Tp., R., Sec.) Sec.) D C B A E F G H M L K J N P Q R THE SEC. SEC. SEC. SEC. SEC. SEC. SEC. SEC	Code: Tp., R., Sec., Sec.)

Schomp			Index number 0. 5S-20E-23-J	Scott	_		Index number none-U
ell name		-	File number (Code: Tp., R., Sec., 2 Sec.)	Well name			File number (Code: Tp., R., Sec., Sec.
OCATION:			D C B A	LOCATION:			D C B A
Gilliam Count	у		E F G H	Umatilla Coun	ty		E F G H
Condon Quadrangl	9		MLKJ	Quadrang	le		M L K J
p. Range Section Fractional	section		N P Q R	Tp. Range Section Fractional	section		N P Q R
TATISTICS:				STATISTICS:			
ell type-Dug Elevation (1 Drilled x face) Driven above	and sur- ft.	in au	stic*x strial abandoned	Well type-Dug Elevation (Drilled x face) Driven above	land sur- ft.	inau	stic* x abandoned
inal depth 398		muni	gation dry hole cipal producer x s stock wells	Final depth 2051		mun1	gation dry hole cipal producer x s stock wells
R. R. Schomp	A. A.	Durand	& Son	Estella A. Scott		Durand	
Address Mayville, Oregon	Add	ressi	lers name Valla Walla, Washington	Owners name Address Athena, Oregon	_ Add	iress W	lers name alla Walla, Washington
. Box 53	Dat	e of dri	lling May to August 1947	-	_ Dat	te of dri	llingFall 1946
his record complied by M.S.W. ata secured from the Tollowing sou	from De	opened_	_	This record complied by N.S.W. data secured from the following so	_from De	epened_	_
	rces: re	-cased eaned	by		urces: re	e-cased eaned	ъу
Driller	_			Driller	_		
ate compiled January 1948	Da	te		Date compiled January 1948	De	ate	
Material	Thickness (feet)	Depth (feet)	Remarks	Material	Thicknes (feet)	Depth (feet)	Remarks
Top soil	2	2	Casing: 6" to 23' SML 277'	Tops soil	15	15	
Rock and yellow clay	6	8		Cemented gravel	10	25	
Yellow green sandy shale	7	15		Hard basalt	25	50	
Rock and clay	15	30		Hard blue basalt	13	63	
Hard gray rock	19	49	Lost water here	Black basalt	82	145	
Broken black reck	1	50		Gray basalt	14	149	
Gray rock	10	6C	.,	Dark basalt	11	160	
Broken brown rock	1	61	Lost water here	Brown basalt	7	167	
'ard gray rock	10	71		Black basalt	3	170	
Grny rock	8	80		Brown basalt	10	180	
Broken brown rock	1	81	Lost water here	Black basalt	25	205	
Gray rock	7	88					SWL 301
Broken brown rock	1	89	Lost water here				Bailed hole down 125 in
Gray rock	22	111					30 minutes. Mield 7 g.p.m.
Brown rock	2	113					
Gray rock	12	125					Index number 88-U
Hard white rock	3	1.28		Sheard Well name	-,		4N-34E-25 File number
Hard blue rock	20	148					(Code: Tp., R., Sec., 2 Sec.
Broken brown rock	2	150	Lost water here	LOCATION:			D C B A
Brown rock (solid)	4	154		Umatilla Count	ty		E F G H
Broken brown rock	2 .	156	Lost water here	Pendleton Quadrang	le		M L K J
Brown rock (solid)	7	163	-	4N 34E 25 Tp. Range Section Fractional	section		N P Q R
Broken brown rock	4	167	Lost water here				
Brown rock	5	172		STATISTICS:		_	
Broken brown rock	2	174	Lost water here	Well type-Dug Elevation () Drilledx face)	land sur- ft.	Use sta	stic* x
Brown sticky shale (caving)	36	210		Drivenabove		iniu irri	strial abandoned ary hole
Hard gray rock	4	214		Final depth 65'		muni include	cipal producer x s stock wells
Gray and brown rock	26	240		M. F. Sheard		Durand &	
Black basalt	2	242		Owners name Address Athena, Oregon	Origi	nal dril	lers name alla Valla, Washington
Gray basalt	7	249		**************************************	-		lling 1945
Black basalt	7	256		This record compiled by N.S.V.	from De	enened	
Gray basalt	4	260		data secured from the following so	urces: re	e-cased	by
Black basalt	20	280	Some water, enough to	U. S. G. S. Ground-Water Division	_		
Black broken basalt	1	281	drill with	Date compiled December 1947	De	ate	
Alternate black and gray basal	1	356		Material	Thicknes (feet)	Bepth free+1	Remarks
Black basalt	31	387		Soil	13	13	Casing, 8-inch, set to
Hard gray basalt	1 3	390 300	Tale assumed out 2001	Gravel with boulders	5	18	35 feet, open end. Bailed 40 g.p.m. with 20
Black basalt	8	398	Hole measured out 390'	Boulders	7	25	ft. drawdown after 1 hr. Static level 15 feet,
				Gravel and clay	5	30	Uct. 24, 1945
		l .		Graver and Clay			
		İ		Rasalt	30	60	
				Basalt Basalt, soft and sand	30 5	65	

Well name	-		Index number none-U	Skoubo Well name	_		Index number — 186-M 49-259-18-A File number
OCATION:			(Code: Tp., R., Sec., 2 Sec.)	LOCATION:			(Code: Tp., R., Sec., 2 Sec.
			D C B A				D C B A
Umatilla Count	-		E F G H	Rorrew Com			E 7 G H
Quadrangl			R L K J	Blalock Island Quadrang			H L E J
p. Range Section Fractional	section		N P Q R	Tp. Range Section Fractional	section		H P Q R
TATISTICS:			A	STATISTICS:			
Well type-Dug Elevation (1	land sur-	Use sta			land sur-	Use st	atus- Well status-
Drilled x face)	ft.		strial abandoned	Well type-Dug Elevation (Drilled x face) Driven above	ft.		stic* x strial abandoned_
final depth 3444		munio	gation dry hole	Final depth 102' below		muni	gation dry hole cipal producer x
		*include	s stock wells			*include	s stock wells
Gus Siebold Woers name	- A. A. Origin	Durand a	ers name	I. Skeubo	Beck Origi	nal dril	lere name
Address Freewater, Oregon	-		Walla Walla, Washington	Address Boardman, Oregon		ress	
	-		ling Spring 1945				llling_about 1922
This record complied by M.S.W. lata secured from the following sou	from Dec	-cased_		This record compiled by H.S.W. data secured from the Following so	from De ources: re	epened -cased	- .
Driller —	ole	eaned	by A. A. Durand & Son Walla Walla, Wash,	Owner	el	benned	by
	_		pring 1946	N> 1016	-		
ate compiled January 1948	Thickness	Depth		Date compiled March 1948	Thickness	Depth	P
Naterial	(feet)	(feet)	Remarks	Katerial	(feet)	(feet)	Remarks
Old well	 	28		No log available	+-	102	
Coarse gravel	67	95		Owner reports:		-	
Black basalt	10	105		Started in solid basalt	100	100	
Porons brown basalt	42	147		Blue clay	2	102	
Brown rock Black basalt	68	150 218	Crevice at 218		+	 	72'. SWL was 4'. This was cased off. Second water
Place Geogra	+		Bottom original hole		+	t	encountered at 102'. Final
	†	 	SWL 17		+	t	0 0 14'.
Log of deepened well:	†	İ.			†	<u> </u>	1
Hard black baselt	35	253			†	i –	1
Porous basalt	39	292		L			1
Solid basalt	12	304	At 304 water level dropped to 221				
Black basalt	4	308					Index number 146-0
Red basalt	23	331	At 309 struck water, SWL dropped to 40'. At 315' again dropped	Smyth Well name	_		38-218-26 File number
Hard black basalt	13	344	to 541				(Code: Tp., R., Sec., 2 Sec.
			Final SWL 531	LOCATION:			D C B A
				Gilliam Cour	-		E F G H
	I	1		Arlington Quadrang	gle		M L K J
Smith (Frank)	_		Index number 149-0 25-225-36-a	Tp. Range Section Fractional	section		N P Q R
ell name	-		File number (Code: Tp., R., Sec., & Sec.)				
OCATION.				STATISTICS: Well type-Dug Elevation	//	Use st	atus- Well status-
	••		D C B A	Drilled x face) Driven above	ft.	dome	stic* x
	·J			Final depth 8951		irri	igntion dry hole
Gilliam Count			MLKJ			anun:	
Gilliam Count Arlington Quadrangl 2H 2ZE 36 HE4 of HE4	le		M L K J N P Q R			muni *include	es stock wells
Gilliam Count Arlington Quadrangl ZH 2ZE 36 HB2 of HB2	le			John Krebs	H. H.	*include Vilburn	lers page
Count Arlington Quadrangl 2H 2ZE 36 HEt of HEt D. Range Section Fractional	le			John Krebs	H. H. Origi	*include Wilburn nal dril ress_8	lers name 312 E. 7th, The Dalles, Oregon
Oillias Count Arlington Quadrangl 25 22 36 Ebd of Fbd Th. Range Section Fractional TRATISTICS: [cill troe-Dur Elevation (1)	section	Use str	N P Q R	John Krebe Owners name Address Umatilla, Oregon	H. H. Origi	*include Wilburn nal dril lress 8	lers name 312 E. 7th, The Dalles, Oregon
	section	dome:	N P Q R	John Krebs Owners name	H. H. Origi Add	*include Wilbarn nal dril tress 8 se of dri sepened_	lers name 112 E. 7th, The Dalles, Oregon 111ing
	section	dome: iniu irri	N P Q R	John Krebe Owners name Address Umatilla, Oregon	H. H. Origi Add Dat	*include Vilburn nal dril ress 8 se of dri	lers name 312 E. 7th, The Dalles, Oregon
	section	dome: in:u irri muni: *include:	N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R	John Krebs Dwners name Address Umatilla, Oregon This record compiled by Dole data secured from the Jollowing st Letter from the driller, Jan. 19,	E. H. Origi Add Date from De purces: re ol	*include Wilborn nal dril ress 8 se of dri sepened -cased seaned	lers name 112 E. 7th, The Dalles, Oregon 111ing
Olilias Count Arlington Quadrangi 28 222 36 Eb of Eb p. Banco Section Fractional FRATISTICS: (cal type-Dug Drives Drives above balow	section	dome: in:u irri muni: *include:	N P Q R	John Krebs Dwarz name Address Umatilla, Oregon This record compiled by Dole data secured from the Jollowing st Letter from the driller, Jan. 19, Date compiled January 1948	E. H. Origi Add Dat from De Durces: re 1948	*include Wilburn nal dril iress 8 se of dri sepened -cased eaned	lors mase lors mase lors the Dalles, Oregon llling by
Arlington Quadrangi 2H 222 36 Eb of Eb The Bange Section Fractional TATISTICS: Fall type-Dug Driven Driven Final depth 6671 Frank Sattle Frank Sattle	section land surft. Origin	dome: in:u irri muni: *include:	N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R	John Krebs Dwarz name Address Umatilla, Oregon This record compiled by Dole data secured from the Jollowing st Letter from the driller, Jan. 19, Date compiled Material	E. H. Original Add Date of the property of the	*include Wilburn nal dril tress 8 te of dri tepened t-cased eaned tte Depth (feet)	lers name 112 E. 7th, The Dalles, Oregon 111ing
Odilias Count Arlington Quadrangi 2H 2ZI 36 EL of FR The Fractional TATISTICS: Briven Driven Driven Final depth 6671 Frank Smith Momers name Address Cacil, Oragon	section land surft. Origin Add:	domeriniu irri, muni include include and drill ress e of dril	N P Q R N P	John Krebs Dwarz name Address Umatilla, Oregon This record compiled by Dole data secured from the Jollowing so Letter from the driller, Jan. 19, Date compiled January 1948 Material Congloserate	Date of the property of the pr	*include Wilburn nal dril ress 8 se of dri sepened -cased caned tts Depth (reet)	lors mase lors mase lors to the Dalles, Oregon llling by Ramarks
Odification Odific	section land surft. Original Addition Date prom Decuroes:	dome in iu irri muni *include: nal dril: ress	N P Q R N P	John Krebs Dwarz name Address Umatilla, Oregon This record compiled by Dole data secured from the Jollowing st Letter from the driller, Jan. 19, Date compiled Material	E. H. Original Add Date of the property of the	*include Wilburn nal dril tress 8 te of dri tepened t-cased eaned tte Depth (feet)	lors name lors name lors name lors name lors name lors name by Ramarks Bottom of hole
Odification Odific	section land surft. Original Addition Date prom Decuroes:	dome iniu irri, muni *include nal dril: ress e of dri: epened x -cased	N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R N P Q R	John Krebs Dwarz name Address Umatilla, Oregon This record compiled by Dole data secured from the Jollowing so Letter from the driller, Jan. 19, Date compiled January 1948 Material Congloserate	Date of the property of the pr	*include Wilburn nal dril ress 8 se of dri sepened -cased caned tts Depth (reet)	lors name 12 E. 7th, The Dalles, Gregon 11 ing by Ramarks Bottom of hole Small flow of water between
Olilias Count Arlington Quadrangl 22 222 36 EL of INA Dr. Range Section Fractional FARTISTICS: (all type-Dug Energy Section Fractional Driven Driven below Frank Smith Wanter name Address Cacil, Oregon This record compiled by N.S.V. Lata secured from the following sound	section land surft. Original Addition Date prom Decuroes:	dome intu intu intu intu intu intu intu intu	N P Q R N P Q R N P Q R Note: Note: Note: N P Q R Note: N	John Krebs Dwarz name Address Umatilla, Oregon This record compiled by Dole data secured from the Jollowing so Letter from the driller, Jan. 19, Date compiled January 1948 Material Congloserate	Date of the property of the pr	*include Wilburn nal dril ress 8 se of dri sepened -cased caned tts Depth (reet)	lors name lors name lors. The Dalles, Oregon liling by Ramarks Bottom of hole Small flow of water between 450 and 500'. Home belev. ximeralized and notic for
Odification Quadrangl Quad	land sur- ft. Original Add Add Datt from Decuroes: re- oli	dome in in in in in in in in in in in in in	N F Q R N F	John Krebs Dwarz name Address Umatilla, Oregon This record compiled by Dole data secured from the Jollowing so Letter from the driller, Jan. 19, Date compiled January 1948 Material Congloserate	Date of the property of the pr	*include Wilburn nal dril ress 8 se of dri sepened -cased caned tts Depth (reet)	Ders mase 10 z K. 7th, The Dalles, Oregon 111ing by Beat South of hole Small flow of water between 450 and 500'. Home below, wineralized and muffit are busen use, (This well is 100cally reported to be 1115
Olilias Count Arlington Quadrangl 22 225 36 EF of EF o	land surft. Original Add Date from Decuroes: re-	dome iniu irri muni include mal dril ress e of dri epened x -cased eaned Depth (feet)	N P Q R N P	John Krebs Dwarz name Address Umatilla, Oregon This record compiled by Dole data secured from the Jollowing so Letter from the driller, Jan. 19, Date compiled January 1948 Material Congloserate	Date of the property of the pr	*include Wilburn nal dril ress 8 se of dri sepened -cased caned tts Depth (reet)	lors name lors name lors. The Dalles, Oregon liling by Ramarks Bottom of hole Small flow of water between 450 and 500'. Home belev. ximeralized and notic for
Odification Quadrangl Quad	section section ft. Original Addition Addition Pattern Patt	domeninimum de la companya de la com	N P Q R N P	John Krebs Dwarz name Address Umatilla, Oregon This record compiled by Dole data secured from the Jollowing so Letter from the driller, Jan. 19, Date compiled January 1948 Material Congloserate	Date of the property of the pr	*include Wilburn nal dril ress 8 se of dri sepened -cased caned tts Depth (reet)	Ders mase 10 z K. 7th, The Dalles, Oregon 111ing by Beat South of hole Small flow of water between 450 and 500'. Home below, wineralized and muffit are busen use, (This well is 100cally reported to be 1115
Odunt Arlington Quadrangi 2H 22E 36 EF of	land sur- ft. Original Add Add Datt from Decuroes: re- oli	dome iniu irri muni include mal dril ress e of dri epened x -cased eaned Depth (feet)	N P Q R N P	John Krebs Dwarz name Address Umatilla, Oregon This record compiled by Dole data secured from the Jollowing so Letter from the driller, Jan. 19, Date compiled January 1948 Material Congloserate	Date of the property of the pr	*include Wilburn nal dril ress 8 se of dri sepened -cased caned tts Depth (reet)	Ders mase 10 z K. 7th, The Dalles, Oregon 111ing by Beat South of hole Small flow of water between 450 and 500'. Home below, wineralized and muffit are busen use, (This well is 100cally reported to be 1115

Smith Canning Company	•		Index number 56-U 2H-32H-10-F File number	Intex number 78-U
OCATION:			(Code: Tp., R., Sec., 2 Sec.)	(Code: Tp., R., Sec., à Se
	_		D C B A	D C B /
	•		E F G H	E 7 G 1
Fendleton Quadrangl	.0		M L K J	N L L L
p. Range 10 SV1 of NV1 Section Fractional	section		H P Q R	48 29E 32 SW1 Tp. Range Section Fractional section
TATISTICS:				STATISTICS:
Self type-Dug Rievation (1 Drilled x face)	and sur- ft.	Use st dome	atus- Well status-	Well type-Dig Elevation (land sur- Use status- Well status- Drilled x face) ft. domestic*
Driven above below		inau	strial x sbandoned gration dry hole	Driven above in ustrial abandoned below irrigation dry hole
'inal depth 665'		muni	cipal producer x s stock wells	Final depth 187' municipal x producer *includes stock wells
Smith Canning Company	A. A. Origi	Durand nal dril	k Son lers name Walla Walla, Washington	City of Stanfield James Beebe Owners name Original drillers name
Address Fendleton, Oregon			Walla Walla, Washington	Address Address Hermiston
W 0 11			111ng Jan. 1942 to July 1942	
his record complied by N.S.W. ata secured from the following sou	from De irces: re	-cased_	_	This record compiled by H.S.W. from Deepened data secured from the following sources: re-cased
Driller	61	eaned	by	Mr. N. D. Bard, Mayor, Stanfield by
	-			10/19
ate compiled January 1948	Thickness	Depth	Remarks	Date compiled Movember 1947 Date Material Thickness Depth Remarks
	(feet)	(feet)		(feet) feet)
Loose gravel	23	23	12g" casing to 35'	No log available 187 Test pump - 125 g.p.m.
Broken rock	2	25	10" liner in hole set	Casing - 10" to begin, the 6". Water stands at -33".
Basalt rock	7	32	at 635 - 40 foot length.	When pumping & -23' when n
Sand, gravel and clay	28	60		
Broken brown basalt	38	98		
Red rock	17	115	Static water level, 1381	<u> </u>
Rotten brown basalt	10	125	G.P.M. Water level	
Forous gray basalt	5	130	584 2041 596 2171	
Gray basalt	4	134	723 230° 813 240°	
Red rock	6	140		
Gray conglomerate	9	149	Water temp. 512°F.	
Gray baselt, soft	9	158		
Gray basalt, solid	67	225		Index number 197-W State Highway, Castle Rock 4M-24E-8-Q
Red volcanic ash, muddy	33	258	ļI	Well name File number (Code: Tp., R., Sec., 2 Se
Red rock	17	275		LOCATION:
Brown basalt	30	305		Former County
Red rock	15	320		Blalack Taland
Brown basalt	42	362		AN 24E 8 SWL of SEL
Gray basalt	23	385		Tp. Range Section Fractional section
Brown basalt	17	402		STATISTICS:
Gray basalt	27	429		Well type-Dig Elevation (land sur- Use status- Well status-
Black basalt	25	454		Drilled x face) ft. domestic* Driven above inquestrial abandoned
Gray basal't	143	597		Final depth irrigation dry hole municipal producer
Brown basalt	38	635		*includes stock wells
Gray basalt	30	665		State Highway Department J. J. Vetter Owners name Original drillers name
	1	<u> </u>	Bottom of hole	Address Address Zellah, Washington
	1	<u> </u>		Date of drilling 1936
	1	<u> </u>		This record complied by N.S.V. from Deepened data secured from the Following sources: re-cased
	1	<u> </u>		State Highway officials cleaned by
	1	<u> </u>		
	1	<u> </u>		Date compiled February 1948 Date
	1	<u> </u>		Material Thickness Depth (feet) Remarks
	1	<u> </u>		No data available
	<u> </u>			
		1		
		-		
				1 1 1

			File number (Code: Tp., R., Sec., 2 Sec.					File number (Code: Tp., R., Sec., 2 Sec
LOCATION:			D C B A	LOCATION:				D C B A
Umatilla Co	unty		E F G H	Umatilla	Count	y		E F G E
Unmapped Quadra			M L K J	Unmapped	Quadrangl			M L K J
Tp. Range Section Fraction	El al section		N P Q R	5 <u>H</u> 3 <u>5E</u> Tp. Range 1	26 HE2 of SW2 Section Fractional	section		N P Q F
STATISTICS:				STATISTICS:				
	(land sur-	Use st	atus- Well status-	Well type-Dug Drille	Elevation (1		Use st	tatus- Well status-
Drilled x face) Driven above	ft.	inau	stic*strialabandoned_ gationdry_hole	Driver	ed x face) above below	ft.	ina	strial abandoned gation dry hole
Final depth		muni	cipal producer producer	Final depth 1	1031		auni	cipal producer
State Highway Department			Drilling Company	Harold Steen			Durand	
Owners name Address	Origi	nal dril	lers name E. 82nd Street, Portland, On	Owners name	lton, Oregon	Origi	nal dril	lers name Walla Walla, Washington
			lling about 1934			-		111ing December 1945
This record compiled by N.S.W. data secured from the Pollowing	from De	epened_	_	This record com	piled by M.S.W.	from De	epened_	_
data secured from the Following Eighway officials	sources: re	-cased	by	data secured from	om the Following sou	rces: re	-cased_ .eaned_	by
nighway officials	_			_ briller		_		
Date compiled February 1948	De			Date compiled	January 1948	_ De		
Naterial	Thickness (feet)		Remarks	и	daterial	Thicknes	(feet)	Remarks
No data available				Top soil		5	5	Cased 10" to 16'10"
		<u> </u>		Sand and gr	ravel	5	10	1
		<u> </u>		Gravel and	boulders	10	20	
		 			basalt boulders	10	30	1
	1	<u> </u>	<u> </u>		eycomb rock, green	10	40	1
	_	-		Green honey		20	60	
	1	1	<u> </u>	Gray basalt	1	43	103	L
		┼				1	1	BWL 51
				-		 	<u> </u>	
						1		
State Highway, Meacham			Index number 46-U	Stevens				Index number 8-U 6N-35E-23-D
State Highway, Meacham			Index number 46-U 15-752-1-E File number (Gode: Tp., R., Sec., § Sec.	Well name				
Well name			File number	LOCATION:				6N-35E-23-D File number
Noll name LOGATION: Umatilla Co	ounty		1S-35E-3-B File number (Code: Tp., R., Sec., 2 Sec.	LOCATION: Umatilla	Count			6N-35E-23-D File number (Code: Tp., R., Sec., Sec.
Well name LOCATION: Umatilla Co Unmapped Quadra	ngle		File number (Code: Tp., R., Sec., 2 Sec. D C B A E F G H M L K J	LOCATION: Umatilla Unmapped	Quadrang			Si-35B-23-D File number (Gode: Tp., R., Sec., 2 Sec. 2 Se
Well name LOGATION: Umaiilla Co Unmapped Quadre 15 35E 3 NW of :	ngle		13-35E-3-E File number (Code: Tp., R., Sec., 2 Sec. D C B A E F G H	LOCATION: Umatilla Unnapped 60 358		le .		53-35E-23-D File number (Gode: Tp., R., Sec., 2 Sec
Well name LOGATION: Umntilla Co Unnupped Quadre 18 35E 3 M/4 of 7 To, Range Section Fraction	ngle		File number (Code: Tp., R., Sec., 2 Sec. D C B A E F G H M L K J	LOCATION: Umatilla Unnapped 64 358	Quadrang) 23 NW of NW	le .		Si-35B-23-D File number (Gode: Tp., R., Sec., 2 Sec. 2 Se
Well name LOGATION: Unntilla Co Unnumbred 2 nadre 75 2 NV of i 77 Range Section Fraction STATISTICS: Well type-Disc	mgle	Use st	13-792-1-2 13-792-1-2	Well name LOCATION: Unatilla Unnapped GH 35E Ty. Range STATISTICS: Wall type-bas	Quadrangi 23 Wid of NWd Section Fractional	section	Use st	Si-3yz-23-D File number (Gode: Tp., R., Sec., 2 Sec. D C B B B E F G B M L K 3 N P Q I
No. No.	angle	dome in au	13-792-1-2 13-792-1-2	Well name LOCATION: Unatilla Unnapped GH 35E Ty. Range STATISTICS: Wall type-bas	Quadrang) 23 M4½ of N4½ Section Fractional Elevation (1 face) n above	section	in a	Si=3yE-23-D File number (Gode: Tp., R., Sec., 2 Sec. D C B
Well name LOUATION: Unntilla Co Unnupped Quadre 15 35E 3 My of 1 Tp. Range Section Fraction STATISTICS: Well type-Dag Elevation Driven bolow	mgle	dome insu irri muni	13-192-1-2 200-1	Well name LOCATION: Unatilla Unnapped 6W 35E 7D. Range i STATISTICS: Well type-Dag Drilli Drives	Quadrangl 23 MM½ of NM½ Section Fractional Elevation (1 ed x face) above below	section and surft.	dome in n irri muni	Si-3yE-23-D File number Goods: Typ. R., Sec. Sec.
Well name LODATION: Unnumbed Quadre 15 35 3 FV of i TP. Range Section Fraction STATISTICS: Well type-Dug Elevation Drilled I face Driven above below Final depth 3881	angle A laid section A (land surft.	dome insu irri muni *include	13-192-1-2 13-1	Mell name LOGATION: Unatilla Unanapped GH 35E TD. Range STATISTICS: Well type-Dig Delthi Driver Final depth 1	Quadrangl 23 MM½ of NM½ Section Fractional Elevation (1 ed x face) above below	section and surft.	dome in n irri muni	Si-3yE-23-D File number (Gode: Tp., R., Sec., 2 Sec D., C. B. J. E F G 1 M L K 3 N P Q 3 satisfication- satisficatio- satisfication- satisfication- satisfication- satisfication- sa
Well name LOOATION: Unnupped Quadre 15 35 3 MV of i TD. Range Section Fraction STATISTICS: Well type-Dug Elevation Drilled x face Driven below Final depth 3881 State Highway Department Owners name	angle REAL Section a (land surft. Original Section of the secti	dome in u irri muni *include Durand & nal dril	13-192-1-2 200	Well name LOGATION: Unatilla Unnapped GN 35E TD. Range STATISTICS: Well type-Dag Drill Drive: Final depth Elmer Stevens Owners name	Quadrangs 23 Wei of Wei Fractional	section and surft. Origi	dome in n irri muni *include	Si-3yE-23-D File number Goods: Typ. R., Sec. Sec.
Well name LOCATION: Unnamped Quadre Unnamped Quadre Statistics: Well type-Dug Elevation Final depth 3881 State Highway Department	angle A. A. A. Original	dome intu irri muni *include Durand & nal dril	13-792-1-2	Mell name LOCATION: Unatilla Unmapped	Quadrange 23 Wig of Neg Section Fractional ad x face) 1 face) 2 above below Box 196	and surft.	dome in n irri muni *include nal dril	Si-3yE-23-D File number (Gode: Tp., R., Sec., 2 Sec D., C. B. E F G 1 M L K 1 N P Q 1 Status- satisf
Well name LOGATION: Unnapped Quadre 18 35E 3 FW of 1 To. Range Section Fraction STATISTICS: Well type-Dug Elevation Driven face) Pinal depth 338! State Highway Department Owners name Address	angle A. A. Original	dome invu irri muni *include Durand & nal dril lressW	13-792-1-2	Well name LOGATION: Unatilla Unnapped GM 35E Tp. Range STATISTICS: Well type-Dag Drill Drivet Final depth 1 Elmer Stevens Owners name Address	Quadrangy 23 Wit of Net Section Fractional Elevation (1 face) above below Box 196 Freewater, Oregon	and surft. Original	dome in n irri muni *include nal dril	Si-3yE-23-D
Well name LOGATION: Unnumbed Quadre 15 35E 2 5½ of i The Rames Section Fraction STATISTICS: Well type-Dag Elevation Drilled x face) Driven below Final depth 388! State Highway Department Owners name Address This record complied by M.S.W.	A. A. Original from Des	dome invu irri muni *include Durand & nal dril lressW	File number (10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec.	Well name LOGATION: Unatilla Unnapped GN 35E TD. Range STATISTICS: Well type-Dig Dritti Drive: Final depth 1: Elmer Stevens Owners name Address This record com data secured fre	Quadrangy 23 Wit of Net Section Fractional Elevation (1 face) above below Box 196 Freewater, Oregon	and surft. Original Add Date from Decirces:	dome in no irri muni *include nal dril iress te of dri	Si-3yE-23-D File number (Gode: Tp., R., Sec., 2 Sec D., C. B. E F G 1 M L K 1 N P Q 1 Status- satisf
Well name LOOATION: Unnumbed Quadre Sale 3 Mth of it Th. Range Section Fraction STATISTICS: Well type-Dug Elevation Drilled I face Driven below Final depth 3381	A. A. Original from Des	dome intu irri muni *include Durand & nal dril iress W se of dri epened	13-792-1-2	Well name LOGATION: Unatilla Unnapped GM 35E Tp. Range STATISTICS: Well type-Dag Drill Drivet Final depth 1 Elmer Stevens Owners name Address	Quadrangy 23 Wit of Net Section Fractional Elevation (1 face) above below Box 196 Freewater, Oregon	and surft. Original Add Date from Decirces:	dome in a irri muni *include nel dril iress te of dri sepened	Si-3yE-23-D File number (Gode: Tp., R., Sec., 2 Sec D., C. B. J. E F G 1 M L K 3 N P Q 3 Total status- sation satio
Well name LOCATION: Unnumped Quadra 15 35 3 NV of i The Rames Section Fraction STATISTICS: Well type-Dug Elevation Drilled x Driven face) Drilled x Driven below Final depth 338! State Highway Department Conners name Address This record compil d by M.S.W. data secured from the Tillowing Driller	A. A. Original Address of the Sources: Program of the	dome intu irri muni *include Durand & nal dril iress W se of dri epened	File number (10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec.	Well name LOGATION: Unatilla Unnapped GN 35E TD. Range STATISTICS: Well type-Dig Dritti Drive: Final depth 1: Elmer Stevens Owners name Address This record com data secured fre	Quadrangy 23 We of Net	and surft. Original Add Add Add Add Add Add Add Add Add Ad	dome in a irri muni *include nel dril iress te of dri sepened	Si-3yE-23-D File number (Gode: Tp., R., Sec., 2 Sec D., C. B. J. E F G 1 M L K 3 N P Q 3 Total status- sation satio
Well name LOCATION: Unanoped Quadre 15 35 2 NV of 17 The Rames Section Frection STATISTICS: Well type-Dag Elevation Drilled x face) Drivan above below Final depth 3301 State Highway Department Owners name Address This record complied by M.S.W. data secured from the Jollowing	A. A. A. Orist Add or or or or or or or or or or or or or	dome intu irri muni *include Durand & nel dril iress W te of dri epened -cased eaned tte	File number (10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec., 2 Sec. 10de: Tp., R., Sec.	Well name LOCATION: Unatilla Unnapped GH 35E Ty. Rames STATISTICS: Well type-Dag Drilli Drivet Final depth 1 Elmer Stevens Owners mass Address This record con data secured fr State Engineer Date compiled	Quadrangy 23 We of Net	section and surft. Original Add from Detroes: reconstruction	dome in a irri muni *include .nel dril ress .e of dri eppend .cased	Si-3yE-23-D File number (Gode: Tp., R., Sec., 2 Sec D. C. B J E F G 1 M L K 1 N P Q 1 August August Ligha Larch 1930 - August by Ramarks
Well name LOCATION: Unamped Quadre 15 35 3 We of i Type Rames Section Fraction STATISTICS: Well type-Dug Drilled x Drival Drival Drival Onners name Address This record compiled by X.S.V. data secured from the Tollowing Driller Date compiled January 1948 Naterial	angle A. A. Original Original from Dat groupes: recolumness: recol	dome intu irri muni *include Durand & nel dril iress W te of dri epened -cased eaned tte	File number (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., I Sec. (2004s: Th., R., Sec., I Sec.,	Well name LOCATION: Unatilla Unnapped GH 35E Ty. Rames STATISTICS: Well type-Dag Drilli Drivet Final depth 1 Elmer Stevens Owners mass Address This record con data secured fr State Engineer Date compiled	Quadrangy 23 We't of Ne't Section Fractional Elevation (1 face) 00071 Box 196 Freewater, Oregon 1ptied by H.S.W. on the Following soc	and surft. Original Add Add Add Add Add Add Add Add Add Ad	dome in a irri muni *include .nel dril ress .e of dri eppend .cased	Si-3yE-23-D
Well name LOCATION: Unanapsed Quadre 15 15 2 NV of 17 Range Section Frection STATISTICS: Well type-Dag Elevation Drilled X Driven below Final depth 3381 State Highway Department Owners name Address Address Driller Date compiled January 1948 Natorial Soil	A. A. A. Original of the sources: resources:	dome intu irri muni *include Durand & nal dril ress W es of dri epened -cased eaned Depth (feet)	File number (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., I Sec. (2004s: Th., R., Sec., I Sec.,	Well name LOCATION: Unatilla Unanapped	Quadrangy 23 May of Ney Section Fractional Elevation (1 face) above 00071 Box 196 Freewater, Oregon philed by M.S.W. on the Following sou	original and surft. Original Add Add Add Dat from De column 1 Thickness (feet)	dome in a irri muni *include .nal dril .ress .e of dri .eaned .cased .eaned .te .pepth freet)	Si-35E-23-D File number (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., Sec., S
Well name LOCATION: Unamped Quadre 15 35 3 We of i Type Rames Section Fraction STATISTICS: Well type-Dug Drilled x Drival Drival Drival Onners name Address This record compiled by X.S.V. data secured from the Tollowing Driller Date compiled January 1948 Naterial	A. A. Original Additio	dome innu irri muni finclude nel dril iress W e of dri epened -cased eaned Depth (reet)	File number (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., I Sec. (2004s: Th., R., Sec., I Sec.,	Well name LOCATION: Unatilla Unnapped GH 35E Th. Range STATISTICS: Well type-Dag Drill: Drive: Final depth 1: Elmer Stevens Owners name Address This record con data secured fr State Engineer Date compiled M Dirt	Quadrangy 23 May of Ney Section Fractional Elevation (1 face) above 00071 Box 196 Freewater, Oregon philed by M.S.W. on the Following sou	original Add par from De Thicknes (feet) 42	dome in a irri muni finclude nel dril ress fe of dri feepened feeaned tte Depth feet) 42	Si-35E-23-D File number (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., Sec., S
Well name LOCATION: Unanapsed Quadre 15 358 2 FV of i The Range Section Fraction STATISTICS: Well type-Dag Driven face) Driven Device below Final depth 3381 State Highway Department Owners name Address This record complied by M.S.W. data secured from the Following Driller Date compiled January 1948 Naterial Soil Very hard rock	angle A. A. Original from Det from Det Thickness (feet) 12 188	dome innum irri muni *include Durand & nal dril tress W de of dri depend -cased -cased -cased -cate Depth (feet) 12	File number (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., I Sec. (2004s: Th., R., Sec., I Sec.,	Well name LOCATION: Unatilla Unnapped GH 35E Th. Range STATISTICS: Well type-Dag Drill: Drive: Final depth 1: Elmer Stevens Ownere name Address This record con data secured fr State Engineer Date compiled M Dirt Clay and b	Quadrangy 23 Wit of Net Bestion Frestional Elevation (1 face) a bove 00071 Box 196 Freswater, Oregon uplied by M.S.W. on the Following sou February 1948 Seterial	original from De Thickness (feet)	dome invariant irri muni finclude nal dril ress e of dri epened cased cased te ppth free 225	Si-35E-23-D File number (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., Sec., S
Well name LOOATION: Unnumbed Quadre 18 358 2 FV of i TO Rames Section Fraction STATISTICS: Well type-Dug Elevation Drilled x face) Driven Above below Final depth 388! State Highway Department Owners name Address This record compiled by H.S.V. data secured from the Following Driller Date compiled January 1948 Naterial Soil Very hard rock Enseycoab rock	A. A. Original Add Add Add Add Add Add Add Add Add Ad	dome in.u. irri muni *include Durand & nel dril iress W e of dri e-cased eaned Depth (reet) 12 200 225	File number (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., i Sec. (2004s: Th., R., Sec., I Sec. (2004s: Th., R., Sec., I Sec.,	Well name LOCATION: Unatilla Unmapped	Quadrangy 23 Wit of Net Bestion Frestional Elevation (1 face) a bove 00071 Box 196 Freswater, Oregon uplied by M.S.W. on the Following sou February 1948 Seterial	original and surfit. Original Add Dat from De Irces: rece	dome invariant invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant in invariant invariant in invariant in invariant in invariant invariant in invariant in invariant in invariant invariant in invariant in invaria	Si-35E-23-D File number (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., Sec., S
Well name LOCATION: Unnamped Quadra Unnamped Quadra Th. Ser 3 Myl of Frestion STATISTICS: Well type-Dug Elevation Drilled Driven Above Driven Above Driven Dellow Driven Dellow State Highway Department Owners name Addresse This record complied by M.S.V. Addresse Driller Date compiled January 1948 Soil Very hard rock	A. A. Original Section A. A. A. Original Section A. A. A. Original Section Add Add Add Add Add Add Add Add Add Ad	dome in.u. irri muni *include Durand & nel dril iress W e of dri e-cased eaned tte Depth (foet) 12 200 225 380	File number (2004s: Tp., R., Sec. 2006s: Tp., R., Sec. 2006s: Sec.	Well name LOCATION: Unatilla Unmapped	Quadrangy 23 Wig of Neighborotron Bootion Fractional ad X face) 1 face) 2 above 2 below Box 196 Freewater, Oregon 1 piled by H.S.W. Ton the Following social section of the	section and surft. Original Add Add Det from De press: re ple Thicknes (feet) 42 183 268 57	dome inva	Si-35E-23-D File number (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., R., Sec.,) Sec (Gode: Ty., Sec., S
Well name LOCATION: Unanilla Co Unanoped Quadre 13 15 7 NY4 of i Fraction STATISTICS: Well type-Dug Drilled x Driven Drilled x Driven Address State Highway Department Owners name Address This record compiled by M.S.V. data secured from the Jollowing Driller Date compiled Material Soil Very hard rock Fones rock	A. A. A. A. A. A. A. A. A. A. A. A. A. A	dome innum irri muni *include Durand & nal dril tress where the control of the co	File number (100de: Tp., R., Sec., 2 Sec.) D C B A Z F G H M L X Z N P Q R R R R R R R R R R R R R R R R R R	Well name LOCATION: Unatilla Unmapped SI 35E Tp. Range Tp. Range Drilli Drivet Final depth 1 Limer Stevens Conere name Address This record con data secured fr State Engineer Date compiled Limer Stevens Conere name Address	Quadrangy 23 Wig of Neighborotron Bootion Fractional ad X face) 1 face) 2 above 2 below Box 196 Freewater, Oregon 1 piled by H.S.W. Ton the Following social section of the	original and surfit. Original Add Dat from De Froes: recet) 42 183 268 57 137	dome invariant irriginal i	Si-3yE-23-D File number Floor answer D_g C B
Well name LOCATION: Unantilla Co Unanoped Quadra 15 3 3 NY of 1 The Range Section Fraction STATISTICS: Well type-Dug Drilled x Driven Above below Final depth 338! State Highway Department Commers name Address This record compiled by M.S.V. data secured from the Jollowing Driller Date compiled Naterial Soil Very hard rock Forous rock	A. A. A. A. A. A. A. A. A. A. A. A. A. A	dome innum irri muni *include Durand & nal dril tress where the control of the co	File number (2004s: Tp., R., Sec. 2006s: Tp., R., Sec. 2006s: Sec.	Well name LOCATION: Unatilla Unmapped SI 35E Tp. Range Tp. Range Drilli Drivet Final depth 1 Limer Stevens Conere name Address This record con data secured fr State Engineer Date compiled Limer Stevens Conere name Address	Quadrangy 23 Wig of Neighborotron Bootion Fractional ad X face) 1 face) 2 above 2 below Box 196 Freewater, Oregon 1 piled by H.S.W. Ton the Following social section of the	original and surfit. Original Add Dat from Deiroes: received (feet) 42 183 268 57 137 270	dometinate in a control of the contr	Si-3yE-23-D File number Floor answer D_g C B
Well name LOCATION: Unantilla Co Unanoped Quadra 15 3 3 NY of 1 The Range Section Fraction STATISTICS: Well type-Dug Drilled x Driven Above below Final depth 338! State Highway Department Commers name Address This record compiled by M.S.V. data secured from the Jollowing Driller Date compiled Naterial Soil Very hard rock Forous rock	A. A. A. A. A. A. A. A. A. A. A. A. A. A	dome innum irri muni *include Durand & nal dril tress where the control of the co	File number (Code: Tp., R., Sec. : Se	Well name LOCATION: Unatilla Unmapped	Quadrangi 23 Wi of Nei Section Frectional Elevation (1 face) above below Box 196 Freewater, Oregon aplied by M.S.W. on the Following soc February 1948 isterial coulders gravel and basalt ik	original and surfit. Original Add Add Add Add Add Add Add Add Add Ad	domenia dril in a dril in	Si-3yz-2>D File number Floor at 735 Floor at 735

			Index number 104-M 3N-23E-14-R File number	Till Well name			Index number none-U
LOCATION			(Code: Tp., R., Sec., 2 Sec.)				(Code: Tp., R., Sec., & Sec.
LOCATION:	_		D C B A	LOCATION:			D C B A
Morrow County	•		E F G H	Umatilla County			E 7 G H
Blalock Island Quadrangle			M I K J	Quadrangle			K T K 1
Tp. Range Section Fractional s	section		N P Q R	Tp. Range Section Fractional se	ection		N P Q R
STATISTICS:				STATISTICS:			
Well type-Dug Elevation (le	and sur-	Use st	atus- Well status-		ni sur-	Use st	atus- Well status-
Drilled x face) Driven above	ft.	inu	strice x shandoned	Drilled x face) Driven above	ft.	dome	stic* sbandoned_
Final depth 321		muni.	gation dry hole sipal producer x stock wells	Final depth 385		muni	gation dry hole cipal producer s stock wells
Bines Brothers Owners name		Nichoson nal dril	lers name	William Till	A. A.	Durand	& Son lers name
Address Cecil, Oregon	Add	ress	Ione, Oregon	Owners name Address Spofford, Oregon			Valla Walla, Washington
		e of dri	lling 1942		Date	e of dri	lling
This record compiled by M.S.W. data secured from the following sour	from De	epened	<u>-</u>	This record compiled by E.S.W. that secured from the following source	from De	epened_x	<u>L</u>
Log signed by Virgil Starr and furr by R. S. Bennett. U. S. Bureau of I	nished cl	eaned	by		cle	eaned	by A. A. Durand & Son
Management, Baker, Oregon	_			Driller			Walla Walla, Washin
Date compiled November 1947	Da			Date compiled January 1945	Da		June and July 1945
Material	Thickness (feet)	Depth (feet)	Remarks	Material	Thickness (feet)	Depth (feet)	Remarks
Loose gray sand	45	45	8" casing to -60'	Old dug well		64	
Soft yellow hardpan	15	60	6" casing to -185"	Gravel	95	159	Bottom of old well,
Moderately hard brown basalt	14	74		Blue clay	86	245	Old well bailed 20 g.p.m.
Hard blue basalt	13	87		Gravel and sandy clay	45	290	with a drawdown from a static water level of 65
Very hard gray basalt	26	113		Sandy blue clay	55	345	depth) pumped 45 minutes a
Very hard light gray basalt	9	122		Basalt	15	360	167 g.p.m. SWL, 80 . Water warm and sulphurous. Prog
Moderately hard, brown, porous	5	127		Broken honeycomb rock - cavey	15	375	pump tests: With hole at 290', bailed 20 g.p.m. for
Soft, blue clay Moderately hard black	44	171		Black rock - cavey	10	385	70 to 108'. With hole at
Moderately hard black porous basalt	10	181	l g.p.m. water	minutes with drawdown from 80	o 901 . W	th hole	360', bailed 20 g.p.m. for at 367', bailed 20 g.p.m. w
Very hard gray basalt Moderately hard, blue	111	292		a drawdown of 101. With hole at	t final d	pth of	85', pumped 45 minutes at
porous basalt	10	302	14 g.p.m., plus				
Soft, green, similar to shale	19	321					
				Tim			Index number 50-U 1N-32E-6
<u> </u>		-		Well name			File number (Code: Tp., R., Sec., 2 Sec.
		<u> </u>		LOCATION:			
			Index number — 134-U 28-32E-17-P	Umatilla County			D C B A
"hompson			File number	Pendleton Quadrangle			E F G H
Thompson Well name			(Code: Tp., R., Sec., 2 Sec.)				H T X J
				18 32E 6 Ng of SW			-اداءات
LOCATION:	,		D C B A	Tp. Range 6 Ng of SW1 Tp. Range Section Fractional Sec	ection		N P Q R
LOCATION: Umatilla County			D C B A		ection		N P Q R
Unntilla County Unnapped Quadrangle 28 322 17 524 of 514			M T K 1 E 1 0 H D C B Y	Tp. Range Section Fractional section STATISTICS: Well type-Dug x Elevation (lan	nd sur-	Use sta	atus- Well status-
Unstilla County Unsayped Quadrangle 28 322 17 534 of 544			D C B A	Tp. Eangs Section Fractional section STATISTICS: Well type-Dug telephone face) Driven above		dome:	atus- Well status-
			M T K 1 E 1 0 H D C B Y	Tp. Range Section Fractional section STATISTICS: Well type-Dug x Elevation (lan face)	nd sur- ft.	dome: in:lu: irri; munic	atus- stic* X stic* X strial abendoned gation dry hole oipal producer X
LOCATION: Umatilla County Uneapped Quadrangle 28 328 17 584 of 584 75. Hange Section Fractional se	ection	Use sta	D C B A E F G H H L K J N P Q R	Tp. Range Section Fractional set STATISTICS: Well type-Dug the Section (land face) Driven above below	nd sur- ft.	dome: in:lu: irri; munic	atus- stic* X strial abandoned gation dry hole
Quadrangle Quadrangle	ection	inius	D C B A E F G H M L X F N P Q R tua- tio* x bandoned	Tp. Bengs Section Fractional set STATISTICS: Well type-Dug the Section of the S	of sur-	domer in iun irrig munic includes	atus- stic* X stic* X strial abendoned gation dry hole oipal producer X
COMMING COMMING	ection nd sur- ft.	inius irrig munic	D C B A E F O H N P Q R Total ation dry hole trial ation producer X	Ty. Range Section Fractional section Statistics: Well type-De: State Section (land face) Drives Section (land face) Final depth 651	Origin	domer includes munic fincludes and drill	atus- stice X abandoned gation dry hole lipsi producer X atook wells
County C	ection nd sur- ft.	inius irrig munic	D C B A E F O H H L K F N P Q R Trial shandoned ation dry hole	Ty. Range Section Fractional se STATISTICS: Well type-Dug Elevation (land face) Driven above Final depth 651 Tim Owners name Address	Origin	domerinium irrigumunic fincludes drill drill ress	atus- stice X abandoned gation dry hole lipsi producer X atook wells
LOCATION: Umatilla County Unmanyed Quadrangle 28 322 17 524 of 514 Th. Range Section Fractional st STATISTIOS: Well type-Dug Driven Above below Final depth Section Se	oction nd sur- ft. Origin	domes indus irrig munic includes	D C B A E F O H N P Q R Total ation dry hole trial ation producer X	Ty. Range Section Fractional set STATISTICS: Well type-Dig Tace) Driven above below Final depth 651 Tim Owners name Address	Origin Addr	domerinium irriganic de inium ir	atus- stice X abandoned getion dry hole ijpal producer X es stock wells
COMMING: Comming Com	origin	domes invius irrig munic includes and drill	tus- tius- t	Ty. Range Section Fractional se STATISTICS: Well type-Dug Elevation (land face) Driven above Final depth 651 Tim Owners name Address	Origin Addr	domerinium irrigumunic fincludes fin	atus- stice X abandoned gation dry hole lipsi producer X atook wells
LOCATION: Unmanyped Quedrangle 28 32E 17 5Mg of SMg Tp. Range Section Fractional at STATISTICS: Well type-Dag Livetion (lar Driven above below Final depth E. A. Thompson Owners name	origin	domes invited irrig munici includes includes and drill ress	tus- tius- t	Ty. Bangs Section Fractional set STATISTICS: Well type-Dug	Origin Addr	domerin in in in in in in in in in in in in i	atus- stice X abandoned getion dry hole ijpal producer X es stock wells
LOCATION: Umatilla County Unmanyed Quadrangle 28 322 17 524 of 514 Th. Range Section Fractional st STATISTIOS: Well type-Dug Driven Above below Final depth Section Se	origin	domes indus irrig munic includes al drill cess of dril epened cased	D C B A E F O H H L K J N P Q R Trial shandoned arion dry hole producer X ers name 1938	Ty. Eangs Section Fractional set STATISTICS: Well type-Dug x Derived above below Final depth 65t Tim Ceners name Address After secured from the following source Mr. J. R. Hanna, Fendleton, Oregon Dete compiled January 1948	Original Addr. Date ones: re-	domerin in in in in in in in in in in in in i	atus- stics x shadoned grion dry hole producer x stock wells producer x stock wells by
LOCATION: Unmanyped Quedrangle 28 32E 17 5Mg of SMg Tp. Range Section Fractional at STATISTICS: Well type-Dag Livetion (lar Driven above below Final depth E. A. Thompson Owners name	original pate from Detection of the cost o	domes intus irrig munic fincludes and drill ress of drill ress and anned	D C B A E F O H M L X J N P Q R tus- tic* x tic* x abandoned ation dry hole typal producer_X ers name	Ty. Range Section Fractional se STATISTICS: Well type-Dug	Origin Addr	domerinium inright municipal drilliness of drilliness cased	atus- stice x shadoned grion dry hole producer x stock wells producer x shadoned the producer x stock wells shadoned the producer x shadoned the produ
County	origin Addr	domes industrial industrial industrial drill ressert of drill ressert of drill ressert of drill ressert of drill ressert of drill ressert of drill resert of d	D C B A E F O H H L K J N P Q R Trial shandoned arion dry hole producer X ers name 1938	Ty. Eangs Section Fractional set STATISTICS: Well type-Dug x Derived above below Final depth 65t Tim Ceners name Address After secured from the following source Mr. J. R. Hanna, Fendleton, Oregon Dete compiled January 1948	Original Addr. Date ones: re-	domeinium irrifermunicirriferm	atus- stics X strial abandoned gation dry hole lipsi producer X as stock wells Bars mass Ramarks SVL 62'. Pumps 1 6.p.m.
County	origin Addr	domes industrial industrial industrial drill ress.	D C B A E F O H N L X 7 N P Q R Tue- tice x shandoned dry hole producer X ers name 1938	Ty. Range Section Fractional se STATISTICS: Well type-Dug	Original Addr. Date ones: re-	domeinium irrifermunicirriferm	atus- stice x shadoned grion dry hole producer x stock wells producer x shadoned the producer x stock wells shadoned the producer x shadoned the produ
County	origin Addr	domes industrial industrial industrial drill ress.	D C B A E F O H H L K J N P Q R Trial shandoned arion dry hole producer X ers name 1938	Ty. Range Section Fractional se STATISTICS: Well type-Dug	Original Addr. Date ole Date	domeinium irrifermunicirriferm	atus- stics X strial abandoned gation dry hole lipsi producer X as stock wells Bars mass Ramarks SVL 62'. Pumps 1 6.p.m.
County	origin Addr	domes industrial industrial industrial drill ress.	D C B A E F O H N L X 7 N P Q R Tue- tice x shandoned dry hole producer X ers name 1938	Ty. Range Section Fractional se STATISTICS: Well type-Dug	Original Addr. Date ole Date	domeinium irrifermunicirriferm	atus- stics X strial abandoned gation dry hole lipsi producer X as stock wells Bars mass Ramarks SVL 62'. Pumps 1 6.p.m.
IOCATION: Unmapped Quadrangle Section State of S	origin Addr	domes industrial industrial industrial drill ress.	D C B A E F O H N L X 7 N P Q R Tue- tice x shandoned dry hole producer X ers name 1938	Ty. Range Section Fractional se STATISTICS: Well type-Dug	Original Addr. Date ole Date	domeinium irrifermunicirriferm	atus- stics X abandoned spiton dry hole lipsi producer X as stock wells Bars mass Ramarks SVL 62'. Pumps 1 6.P.m.
IOCATION: Unmapped Quadrangle Section State of S	origin Addr	domes industrial industrial industrial drill ress.	D C B A E F O H N L X 7 N P Q R tus- tic* x shandoned dry hole producer X stock wells ers name 1938	Ty. Range Section Fractional se STATISTICS: Well type-Dug	Original Addr. Date ole Date	domeinium irrifermunicirriferm	atus- stics X abandoned spiton dry hole lipsi producer X as stock wells Bars mass Ramarks SVL 62'. Pumps 1 6.P.m.
COGATION: Unmayped Quadrangle Sp. 32R 17 Sat of Skt The Banes Section Fractional st PARISTICS: Rell type-Dag Elevation (lar face) Priven above below Final depth R. A. Thompson Commerc name Address This record compiled by M.S.V. Lata secured from the Following sour U. S. Production and Marketing Admin Date compiled March 1948 Material	origin Addr	domes industrial industrial industrial drill ress.	D C B A E F O H N L X 7 N P Q R tus- tic* x shandoned dry hole producer X stock wells ers name 1938	Ty. Range Section Fractional se STATISTICS: Well type-Dug	Original Addr. Date ole Date	domeinium irrifermunicirriferm	atus- stics X abandoned spiton dry hole lipsi producer X as stock wells Bars mass Ramarks SVL 62'. Pumps 1 6.P.m.
IOCATION: Unmapped Quadrangle Section State of S	origin Addr	domes industrial industrial industrial drill ress.	D C B A E F O H N L X 7 N P Q R tus- tic* x shandoned dry hole producer X stock wells ers name 1938	Ty. Range Section Fractional se STATISTICS: Well type-Dug	Original Addr. Date ole Date	domeinium irrifermunicirriferm	atus- stics X abandoned spiton dry hole lipsi producer X as stock wells Bars mass Ramarks SVL 62'. Pumps 1 6.P.m.
IOCATION: Unmapped Quadrangle Section State of S	origin Addr	domes industrial industrial industrial drill ress.	D C B A E F O H N L X 7 N P Q R tus- tic* x shandoned dry hole producer X stock wells ers name 1938	Ty. Range Section Fractional se STATISTICS: Well type-Dug	Original Addr. Date ole Date	domeinium irris irris munici munici mal drill mess of dril pened cased cased bened Depth (feet)	atus- stics X abandoned spiton dry hole lipsi producer X as stock wells Bars mass Ramarks SVL 62'. Pumps 1 6.P.m.

Well name	-		Index number 93-H 2H-27E-20-H File number	Tubbs Well name	_		Index number none-U
			(Code: Tp., R., Sec., 2 Sec.)	****			(Code: Tp., R., Sec., 2 Sec
LOCATION:			D C B A	LOCATION:			D C B A
Morrow Count	-		E F G H	Umatilla Cour			E F G H
Umatilla Quadrangl	le		M L K J	Quadrang	gle		M L K J
ZH 27E 20 SE ¹ / ₄ of HE ¹ / ₄ Tp. Range Section Fractional	section		N P Q R	Tp. Range Section Fractional	lsection		N P Q R
STATISTICS:				STATISTICS:			
	land Sur-	Use st	atus- Well status-		Dand Sur-	Use at	atus- Well status-
Well type-Dug Elevation (1 Drilled x face) Driven above	ft.	dome		Well type-Dug Elevation (Drilled T face) Driven above	ft.	dome	stic* x strial abandoned
Final depth 3651		irri muni	gation x dry hole	Final depth 1931		irri muni	gation dry hole cipal producer x
		*include	s stock wells			*include	s stock wells
Ed Tucker Owners name		and Ande	rson	Clarence Tubbs Owners name	- A. A. Origi	Durand	& Son lers name
Address Division Street	_ Add	ressW	hitman St., Valla Walla, Wash,	Address Adams, Oregon	_		Walla Walla, Washington
Walla Walla, Washington			lling finished Jan. 1948			e of dri	lling January 1944
This record compiled by M.S.W. data secured from the following sou	from De irces: re	epened	=	This record compiled by N.S.W. data secured from the following so	from De	epened	
Driller	el	eaned	pa	U. S. G. S. Ground-Water Division	cl	leaned	by
Date compiled January 1948	_				_		
Naterial	_ Da		Remarks	Date compiled January 1948 Eaterial	Da		Remarks
	(feet)	(feet)			Thickness (feet)		ROMETES
Dirt	10	10	Casing: 10" to 53'	Old well	89	89	
Grayel	12	22		Basalt, hard	26	115	
SCRO FOCK	13	35		Basalt, porous	30 48	145	
Flack rock	35	<u>55</u> 		Basalt, hard SWL 35	1 48	193	SWL 35' - 18 Jan. 1944.
Brown rock - clay seams Black rock	35	104			+	†	5" Casing to 90' - open bottom - perforated
Brown rock, clay in seams	23	127			1	i -	54' - 57' 68' - 74'
Brown rock	7	134			 	i –	
Black rock	99	233				†	Bailed 24 g.p.m. for 40 min, with 128 drawdown recovered in 1 hour.
Brown rock	4	237	SWL 2501	,	 	i –	TOURSE IN I HOUR,
Black rock	12	249	Pumped 200 g.p.m. for 4	<u> </u>			dia and and and and and and and and and an
Red rock (seep of water)	4	253	hours - pump at 300'.				
Gray basalt	45	298	Drawdown to 300				Index number 63-U
Brown rock (water bearing)	52	350	Yield held at 200 g.p.m.	Union Pacific, Barnhart #1 Well name	-		ZN-31E-15-L File number
	2	352					(Code: Tp., R., Sec., 2 Sec
Cloy		365		LOCATION:			D C B A
Cloy Gray basalt	13	2.2		-			
	13	2.2		Umatilla Cour	-		E F G H
	13			Pendleton Quadrang	gle		H L K J
Gray basalt	13		Index number — 83-U		gle		
Gray basalt	13		Index number — 83-U 51-28E-17-L Flin number (Code: Tp. R., Sec.)	Pendleton Quadrang	gle		H L K J
Gray basalt matilla City #1 fell name	13		5N-28E-17-L File number (Code: Tp., R., Sec., 2 Sec.)	Pendleton Quadrang 2H 31E 15 HE2 of SW Tp. Range Section Fractional STATISTICS:	il section	Use st	M L K J N P Q R
Gray basalt matilla City #1 fell name	-		5M-26E-17-L File number (Code: Tp., R., Sec., 2 Sec.) D C B A	Pendleton Quadrange	gle	dome iniu	M L K J N P Q R atus- atus- atus- atio* abandoned
Gray basalt matilla City #1 fell name	-		51-25E-17-L File number (Code: Tp., R., Sec., Sec.) D C B A E F G H	Pendleton Quadrang	the section land surfet.	dome iniu irri muni	atus- nstic* Well status- nstic* which with a shandened gation dry hole producer x
Gray basalt satilla City #1 [ell name .OCATION: matilla Count matilla Quadrangi # 288 17 ND of SE	- Le		5M-26E-17-L File number (Code: Tp., R., Sec., 2 Sec.) D C B A	Pendleton Quadrang	gle il section (land sur- ft.	dome indu irri muni *include	atus- stus-
Gray basalt	- Le		5H-28E-17-L File number (Code: Tp., R., Sec.) D C B A E F G H H L K J	Pendleton Quadrang	gle (1 section (land surft. Origi	dome indu irri muni *include Durand	tus- ntic* Well status- ntic* Well status- ntic* which is a bandomed, agation dry hole cipal producer x \$ 500 L X J R P Q R
Gray basalt satilla City #1 [ell name .OCATION: matilla Count matilla Quadrangi # 288 17 ND of SE	- Le		5H-28E-17-L File number (Code: Tp., R., Sec.) D C B A E F G H H L K J	Pendleton Quadrang	(land surft.	dome into irri muni *include Durand inal dril	atus- atus- atus- atirial X abandoned dry hole cital producer X a stock wells & Son L X J Avantage Avantage Avantage Valla Valla, Vashington
Gray basalt	section	Use st.	5H-28E-17-L File number (Code: Tp., R., Sec.) D C B A E F C H H L K J N P Q R	Pendleton Quadrang	(land surft. A. A. Original	dome into irri muni *include Durand dril lress te of dri	atus- atus- atus- atirial X abandoned dry hole cital producer X a stock wells & Son L X J Avantage Avantage Avantage Valla Valla, Vashington
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Gray basalt Sastilla City #1	section	Use stidose iniu irri.	File number (Code: Tp., R., Sec.) D C B A E F C H M L K J N P Q R Students of the status-	Pendleton Quadrang	diand surft. A. A. Original parts of the purpose in the purpose i	dome into irri muni *include Durand inel dril iress te of dri depend -cased	atus- atus- atus- atirial X abandoned dry hole cital producer X a stock wells & Son L X J Avantage Avantage Avantage Valla Valla, Vashington
Oray basalt satilla City #1 sall name COATION: matilla Count matilla Quadrangl M 288 17 MR2 or SR2 tyb. Ranse Section Fractional TATISTICS: (sell typo-Dug Driven Section S	section	Use stidose iniu irri.	File number (Code: Tp., R., Sec.,) Sec.) D C B A E F G H H L K J N P Q R Tuesday B C C C C C C C C C C C C C C C C C C	Pendleton Quadran 2N 71E 15 REL of SW Tp. Range Section Frectional STATISTICS: Well type-Dug Drilled X Canon Driven Accordance Final depth 1611 Union Pacific Bailroad Owners name Address Canha, Relrankx This record compiled by M.S.W. data secured from the following of Driller and U. P. Water Service Fo	diand surft. A. A. Original parts of the purpose in the purpose i	dome intuition irri muni *include Durand inal dril irress te of dri epened -cased leaned ker	atus- atus- atus- stic* well status- stic* atrial x abandoned gation dry hole cipal producer x \$ 500 Lura name Valla Vashington lling January 1940
Oray basalt matilla City #1 ell name OCATION: matilla Quadrangl # 288 17 MB or Sk to Sk	section and surft.	Use st dome inviu irri: *include:	File number (Code: Tp., R., Sec.,) Sec.) D C B A E F G H H L K J N P Q R Tuesday B C C C C C C C C C C C C C C C C C C	Pendleton Quadrang 2N 31E 15 EF\$ of SW Ty. Hange Section Frectional STATISTICS: Well type-Dag Drilled E face) Drilled E face Driven Union Pacific Beliroed Owners name Address Omaha, Nebraska This record compiled by N.S.V. data secured from the Following st Driller and U. P. Water Service For Data compiled January 1948	A. A. Original Add Add Patron Personness: re-	dome into irrivation and irrivation	atus- atus-
OCATION: matilla City #1 coll name OCATION: matilla Quadrangl H 28B 17 M2 of Sk2 p. Range Section Fractional TATISTICS: coll type-Dug Zievetion (1) Driven above below inel depth 133!	section and surft. Original	Use st. dome. iniu. irri. *uni. *include: mal dril.	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H H L K J N P Q R This is abendoned dry hole producer x stock wells	Pendleton Quadrang 2N 31E 15 EF\$ of SW Ty. Hange Section Frectional STATISTICS: Well type-Dag Drilled E Gree Drilled E Gree Final depth 161* Union Pacific Bailroad Owners name Address Omaha, Nebrasica This record compiled by N.S.V. data secured from the following sc Driller and U. P. Water Service For Date compiled January 1948 Material	A. A. A. Original And A. A. A. Trom De Durces room De Troman, Mets Thickness (feet)	dome into irribation and irribation and irribation and irribation and irress are of dribation and irress are of dribation and irress are of dribation and irress are of dribation and irress are of dribation and irrest are irrestable and irrestable and irrestable and irrestable are irrestable and irrestable and irrestable and irrestable are irrestable and irrestable	atus- atus- atus- stic* well status- stic* atrial x abandoned gation dry hole cipal producer x \$ 500 Lura name Valla Vashington lling January 1940
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Oray basalt satilla City #1 cll amae CCATION: satilla Quadrangl # 28H 17 MR of SR2 p. Range Section Fractional TATISTICS: cll type-Dug Elevation (1 face) Driven Section Section Section Section (1 face) 1331 ity of Unitila Section Section Section (1 face) show section Section Section (1 face) above below section (1 face) above below section (1 face) above below section (1 face) above below section (1 face) above below section (1 face) above below section (1 face) above below section (1 face) above below section (1 face) above below section face (1 face) above below section	section and surft. Original Add Add From Detrices: re-	Use standard of the standard o	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H H L K J N P Q R This is abendoned dry hole producer x stock wells	Pendleton Quadrang 2H 71E 15 EE of SW Tp. Range Section Frectional STATISTICS: Well type-Dug Drilled X Cases Driven 161' Union Pacific Bailroad Owners name Address Cmaha, Febraska This record compiled by M.S.W. data secured from the following of Driller and U. P. Water Service For Date compiled January 1948 Material Dirt and gravel Eroken basalt rock Eard gray basalt	A. A. Original Add Add Dat from De Durcest De Durcest De Trickness (Det De Durcest) De Durcest De D	dome invitation of the control of th	atus- atus-
Oray basalt matilla City #1 coll name COUNTY: matilla Quadrangl M 288 17 MP2 of S82 Porton Fractional TATISTICS: Drivan Drivan Drivan below inal depth 133! Mars aname Address Address his record compiled by H.S.V. ata secured from the following sou	section and surft. Original Addition of the part of	Use stidose dose dose dose dose dose dose dose	File number (Code: Tp., R., Sec.) Sec.) D C B A E F G H M L K 7 N P Q R Attus- Strial abandoned dry hole gation dry hole gator works estock wells	Pendleton Quadrang 2N 112 15 WE of SW Tp. Range Section Fractional STATISTICS: Well type-Dug Drillind X Cace Driven Shore Final depth 1611 Union Pacific Bellroad Owners name Address Omnha, Nebraska This record compiled by M.S.W. data secured from the Tollowing ac Driller and U. P. Water Service For Date compiled January 1948 Material Dirt and gravel Broken basalt rock Hard gray basalt Gray basalt	A. A. Original Additio	dome invaluable for the property of the proper	atus- atus-
Oray basalt matilla City #1 Oll mass CCATION: matilla Quadrangl M 288 17 MP2 of S82 Portion Fractional TATISTICS: Drivan Drivan above below inal depth 133! Mars above below in the following sou ity officiale ats compiled December 1947	section section ft. Original from Detross: re- particular Thickness	Use store dome invariant in the store of the	File number (Code: Tp., R., Sec.) D C B A E F G H M L K 7 N P Q R This interpolation abendoned dry hole stock wells ero name	Pendleton Quadrang 2N 712 15 WE½ of SW Tp. Range Section Fractional STATISTICS: Well type-Dug Drillind X face) Driven 161 face Union Pecific Bailroed Owners Ame Address Canha, Febraska This record compiled by M.S.W. data secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the Secured from the Secured from the	A. A. A. Original And A. Original And A. Original A	dome invaluation of the control of t	atus- atus-
Oray basalt matilla City #1 ell name OCATION: matilla Quadrangl M 28 17 MP4 of S84 Section Fractional TATISTICS: ell type-Dag Elevation (hard) Drivan Drivan Drivan Sove below inal depth 1331 ity of Umatilla mars name Address Address his record compiled by H.S.V. ata secured from the Following sou ity officiale ate compiled December 1947 Material	original participation of the control of the contro	Use st dome dome in unit in it is in it in it is in it in it in it is in it in	File number (Code: Tp., R., Sec.) D C B A E F G H M L K 7 N P Q R Well status- price abandoned dry hole producer x estock wells Remarks	Pendleton Quadrang 2N 71E 15 EE of SN Tp. Eangs Section Fractional STATISTICS: Well type-Dug Drillad X face) Driven Shore Final depth 161' Union Pacific Beliroed Owners name Omnha, Yelwaska Address Onnha, Yelwaska This record compiled by M.S.W. data secured from the Collowing sc Driller and U. P. Water Service For Data compiled January 1948 Katerial Dirt and gravel Eroken hassalt rock Eard gray basalt Gray hasalt Forous rock and shale Eard gray basalt rock	A. A. A. Grant Person De Courses result (feet) Thickness (feet) 18 5 45 21 56	dome inva in in in in in in in in in in in in in	atus- atus-
Oray basalt matilla City #1 Oll mass CCATION: matilla Quadrangl M 288 17 MP2 of S82; Pop. Range Section Fractional TATISTICS: Drivan Drivan above below inal depth 133! Ity of Unetilla ware name Addra 28 Addra 28 Addra 28 Addra 28 Attached to the following sou ity officials attached pecember 1947	section section ft. Original from Detross: re- particular Thickness	Use standard of the control of the c	File number (Code: Tp., R., Sec.) Sec.) D C B A E F G H M L K 7 N P Q R Remarks Funning well — reportedly Funning well — reportedly Functed & Co., p.s. in 1935.	Pendleton Quadrang 2N 712 15 WE½ of SW Tp. Range Section Fractional STATISTICS: Well type-Dug Drillind X face) Driven 161 face Union Pecific Bailroed Owners Ame Address Canha, Febraska This record compiled by M.S.W. data secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the secured from the Collowing at the Secured from the Secured from the	A. A. A. Original And A. Original And A. Original A	dome invaluation of the control of t	atus- atus-
Gray basalt Gray basalt	section section ft. Original from Detross: re- particular Thickness	Use standard of the control of the c	File number (Code: Tp., R., Sec.) D C B A E F G H M L K 7 N P Q R Well status- price abandoned dry hole producer x estock wells Remarks	Pendleton Quadrang 2N 71E 15 EE of SN Tp. Eangs Section Fractional STATISTICS: Well type-Dug Drillad X face) Driven Shore Final depth 161' Union Pacific Beliroed Owners name Omnha, Yelwaska Address Onnha, Yelwaska This record compiled by M.S.W. data secured from the Collowing sc Driller and U. P. Water Service For Data compiled January 1948 Katerial Dirt and gravel Eroken hassalt rock Eard gray basalt Gray hasalt Forous rock and shale Eard gray basalt rock	A. A. A. Grant Person De Courses result (feet) Thickness (feet) 18 5 45 21 56	dome inva in in in in in in in in in in in in in	atus- atus-

Umstilla City #2							
	_		Index mm her 84-0 58-28E-17-J	Umatilla City #3			Index number 85-U 5N-28E-19-A
Well name			File matter (Code: Tp., R., Sec., 2 Sec.)	Well name			File number (Code: Tp., R., Sec., Sec.
LOCATION:	_			LOCATION:			
Umotilla Cou	nty		D C B A		County		D C B A
Umatilla Quadran			H L K J		rangle		B F G H
5E 28E 17 NET of SE Tp. Range Section Fractional			H L K J	5M 28m 19 NE of	NE à		N P Q R
	. section			Tp. Range Section Fracti	onal section		
STATISTICS:		Use st	atus- Well status-	STATISTICS:			
Mell type-Dug Elevation Drilled x face)	ft.	done	atus- stic* strial abandoned	Drilled x face)	on (land sur- ft.		est10*
Drivenabove below	· .	irri	gation dry hole	Driven above below		irr	astrial abandoned igation dry hole
Final depth 580'		*include:	cipal X producer X s stock wells	Final depth 785		mun *include	icipal x producer x es stock wells
City of Umatilla	C. E.	Lewis		City of Umatilla	A. M.	Jannser	llers name
Owners name Address	Origi:	nal dril.	lers name ndleton, Oregon	Owners name Address	Origi Add	nal dri	llers name 319 Pittock Block, Portland, (
	Dat	e of dri	lling 1940				illing November 19, 1947
This record complied by N.S.W. data secured from the Following so	_ from De-	epened_	-	This record complied by N.S. data secured from the Followin		epened	
	cle	-cased	- by		cl	-cased_ Leaned_	
Verbal log report by the driller data from city officials and Stat	and also e Departm <u>en</u>	.t		Mayor J. A. Stevens, Umatilla	_		
of Health Date compiled July, Dec. 1947	Def	te		Date compiled December 1	947 Da	ıte	
Material	Thickness (feet)	Depth (cost)	Remarks	Naterial	Thickness	s Depth	Remarks
Soil and gravel	(Feet)	18	8" hole. Flow of 125		(feet)	(feet)	
		16	g.p.m. encountered.	Clay and top soil	17	17	Casing used:
Solid rock about	580	 		Gravel and boulders	10	27	170' of 16"
	1. 2	۱	By Lewis	Sand	11	38	
According to Walter Bullard,	- 1		1	Gravel	132	176	174' of 8"
A pump test by W. W. Mewton, January 25, 1946, shows a sta	Rankin Equip	be -32	many of Yakima, Washington and the well good for	Rock	175	345	
about 300 g.p.m. with a drawd	lown to -92".	1		Blue clay	28	373	200
Records in the files of the S well is 530 deep and that tw	itate Dept. (f Health	carry a notation that this e penetrated. The largest is	Broken rock	42	415	SWL 115', Drawiown 90'
estimated at 50 g.p.m.	-	1		Rock	90	505	Yield approximately 1000
	Nr. Cotte	r. 1940,	states flow of about 80 g.g.s	Clay	30	535	g.p.m. Temp. 71°F.
A letter in the same files by and gives the following log -	- 10" hole					+	I .
and gives the following log - 10" hole bedrock into bedrock	10" hole t	hrough : 8" ho	0' losm and clay to bedrock; s drilled from -40' bedrock	Rock	215	750	
and gives the following log -	10" hole t	hrough : 8" ho	0' losm and clay to bedrock; s drilled from -40' bedrock	Rock Sandy formation		750 755	
and gives the following log - 10" hole bedrock into bedrock	10" hole t	hrough: 8" ho to -66	0' loam and clay to bedrock; a drilled from -40' bedrock			T	
and five the following log- 10" hole bearook into bearook to -535" bearook. 8" casing	10" hole t	hrough: 8 ho to -66	00 loom and clay to befrock; a sitlled from -001 bedrock . Index number 60-70 23-35-3-R	Sandy formation	215	755	
and rive the following in 10th hole series the bearest true bearest to -535 bearest. Et casing to -535 bearest. Et casing laten Facific, Cayuse #1 fell name	10" hole t	hrough: 8 ho to -66	00 loom and clay to befrock; e drilled from -b00 bedrock Index number bb-J 21-9-2-b-R Filo number (Code: Ty., R., Sec.)	Sandy formation Rock	215	755	Index number — 89-11
and rive the following in 10th hole served the beared the beared the total to -535 beared. The first casing to -535 beared. Et casing binds Facific, Cayuse #1 fell name	- 10" hole to 20' to 40 from surface	hrough: 8 ho to -66	00 loss and clay to befrock; e drilled from -001 bedrock Index number bu-0 20-03-2 File number (Code: Tp., R., Sec.)	Sandy formation	215	755	File number
and cive the following in 10th hole served the beared the beared the total to -535 beared. The first casing to -535 beared. Et casing binds Facific, Cayuse #1 fell name LOCATION: Destilla Count	- 10" hole to 70' to 40 from surface	hrough: 8 ho to -66	00 lone and clay to befrock; e sirilled from -00' bedrock Index number 40-0 21-03-0-2 File number (Code: Tp., R., Sec., Sec.)	Sandy formation Rock Haton Factic, Field Station Well name	215	755	File number (Code: Tp., R., Sec., 2 Sec.
nnd ciwe the following in 10th hole beared the beared true beared to -535 befreck. E* cesting to -535 befreck. E* cesting inton Pacific, Cayuse \$1 least like Coartion: COCATION: COCATION: Cocation: Cocatio	10" hole c 70' to 40 from surface	hrough: 8 ho to -66	00 lone and clay to befrock; a siriled from -00' bedrock Index number 40-0 23-03-3-R File number (Code: Tp., R., Sec., Sec.)	Sandy formation Rock Union Factic, Field Station Well name LOCATION:	215 5 30	755	#N-2RE-23 File number (Code: Tp., R., Sec., 2 Sec.
nnd ciwe the following in 10th hole beared the beared true beared to -535 befreck. E* cesting to -535 befreck. E* cesting inton Pacific, Cayuse \$1 least like Coartion: COCATION: COCATION: Cocation: Cocatio	10" hole con to 40 from surface	hrough: 8 ho to -66	00 lone and clay to befrock; e sirilled from -00' bedrock Index number 40-0 21-03-0-2 File number (Code: Tp., R., Sec., Sec.)	Sandy formation Rock Inion Pacific, Field Station	215 5 30	755	File number (Code: Tp., R., Sec., 2 Sec. D C B A E F G H
nnd civre the following in . 10 hole beineck into beineck to .535 bedrock. Et casing to .535 bedrock. Et casing latent . Inion Facific, Cayuse \$1 Solid Rame LOCATION: Partilla Country Regulaton Quadrang 28 WE 4 SE of SE o	10" hole con to 40 from surface	hrough: 8 ho to -66	00 lone and clay to befrock; a siriled from -00' bedrock Index number 40-0 23-03-3-R File number (Code: Tp., R., Sec., Sec.)	Sandy formation Rock Haton Factic, Field Station Well name LOCATION: Unctilla Unatilla Quad	215 5 30	755	#N.28E_23 File number (Code: Tp., R., Sec., 2 Sec. D C B A E F G H H L K J
nnd civre the following in 10th hole being king in 10th hole being king to -535 bedrock. Et cesing to -535 bedrock. Et cesing lead to -535 bedrock. Et cesing	10° hole (10° to 40° fon surface)	hrough : 8" ha to -66'	O'l loom and clay to bedrock; e drilled from -hO'l bedrock Index number id-J 2H-3+2-i-R 711s number D C B A Z 7 O H M L K J N P Q R	Sandy formation Rock Inion Pacific, Field Station	215 5 30	755	File number (Code: Tp., R., Sec., 2 Sec. D C B A E F G H
nnd cive the following in control to -535 bedrock. Et cesing to -535 bedrock. Et cesing to -535 bedrock. Et cesing to -535 bedrock. Et cesing to -535 bedrock. Et cesing to -535 bedrock. Et cesing the control to -535 bedrock. Et cesing the control to -535 bedrock. Et cesing the cesing t	10° hole (10° to 40° fon surface)	Tse sta	O' loom and clay to befrock; e drilled from _hO' bedrock; Index number id_J 2H_J\S_J-J-R Tilo number D C B A E F O H M L K J N P Q R Tus- Tus- Tell status-	Sandy formation Rock Union Factio, Field Station Well name LOCATION: Unstilla Unstilla And And And And And And And And And An	215 5 30	755	#N.28E_23 File number (Code: Tp., R., Sec., 2 Sec. D C B A E F G H H L K J
nnd rive the following in the relation of the head of the relation in the relation in the relation in the relation in the relation countries in the	- 10° hole r 20° to -40° from surface	Use sta domes irvis	O' leve and clay to befrock	Sandy formation Rock Union Factic, Field Station Well name LOCATION: Unctilla Usatilla Usatilla Out Tp. Range Section Fracti GTATISTICS: Wall type-Dag Elevation	215 5 30 County rangle	755	#N - 282 - 27 File number (Gode: Tp., R., Sec., 2 Sec. D
and rive the following in a control of hole being in the following in the control of the following in the fo	- 10° hole c 70° to 40° foos surface foos surface foos surface foos surface foos surface foos section foos foos foos foos foos foos foos fo	Use sta domes invision	O' leve and clay to befrock	Sandy formation Rock Union Facific, Field Station Well name LOCATION: Uncatilla Uncatilla AN 26E 23 Ned Tp. Range Section Fracti STATISTICS: Well type-Dug Elevati Devilled x face)	215 5 30	755 785	#N282_72 File number (Code: Tp., R., Sec., 1 Sec. D C B A E F G H M L K J N P Q R
nnd rive the following inc. 10° hale beincok into beincok to -535° bedrock. E* cesing to -535° bedrock. E* cesing nion Facific, Cayuse \$1 continue Countries C	- 10° hole c 70 to 40° for surface for sur	Use sta domes invui	O' loos and clay to befrock; a drilled from -HO' bedrock; a drilled from -HO' bedrock Index number - HH-II 2I-345-1-R File number (Code: Tp., R., Sec., Sec.) D C B A E F O H M L K J N P Q R ATUS. THE STORY Well stetus- trica - HH-II Atus. The Story of the Status- trica - HH-II Atus. The Story of the Status- trica - HH-II Atus. The Story of the Status- trica - HH-II Atus. The Story of the Status- trica - HH-II Atus. The Status- Th	Sandy formation Rock Inion Pacific, Field Station	215 5 30 County rangle conal section	755 785 785	#N28E_72 File number (Code: Tp., R., Sec., 1 Sec. D C B A E F C H M L K J N P Q R atus- stric* strict grid a sendoned dry hole
nnd rive the following inc. 10° hale beincok into beincok to -535° bedrock. E* cesing to -535° bedrock. E* cesing nion Facific, Cayuse \$1 continue Countries C	- 10° hole c 70 to 40° for surface for sur	Use sta domes invui	O' loos and clay to befrock; a drilled from -HO' bedrock; a drilled from -HO' bedrock Index number - HH-II 2I-345-1-R File number (Code: Tp., R., Sec., Sec.) D C B A E F O H M L K J N P Q R ATUS. THE STORY Well stetus- trica - HH-II Atus. The Story of the Status- trica - HH-II Atus. The Story of the Status- trica - HH-II Atus. The Story of the Status- trica - HH-II Atus. The Story of the Status- trica - HH-II Atus. The Status- Th	Sandy formation Rock Hatter Hatter	215 5 30 County rangle onal section on (land surft.	755 785 Vae st dome inca irri	File number (Code: Tp., R., Sec., ; Sec.) D C B A E F C H M L K J N P Q R status- stic* should be should
nand riwe the following inc. 10th hole bescock into belong to -535 bedrook. E* casing inton Facific, Cayuse #1 OCATION: manilla Coan Coan	- 10° hole of the surface of the sur	Use sta domes inva "findument purant designations of the purant of the p	O' loos and clay to befrock; a dilled from -HO' beirock a dilled from -HO' beirock Index number - HD	Sandy formation Rock Inion Pacific, Field Station	215 5 30 County rangle onal section on (land sur-ft.	Use st dome interior munitimum.	File number File number File number File number File number D C B A E F G H M L K J N P Q R File number Well status- matical status-
nand riwe the following inc. 10th hole bescock into belong to -535 bedrook. E* casing inton Facific, Cayuse #1 OCATION: manilla Coan Coan	- 10° hole of the surface of the sur	Use sta domes inva "findument purant designations of the purant of the p	O' loos and clay to befrock; a dilled from -HO' beirock a dilled from -HO' beirock Index number - HD	Sandy formation Rock Union Pactific, Field Station Well name LOCATION: Unatilla Usatilla Usatilla Usatilla Oued Fr. SEE 23 N4 Fr. SEE 23 N4 Fr. SEE 23 N4 Fr. SEE 23 N4 Fracti STATISTICS: Well type-Dug 21-07-14 Drillad X 50-04 Driven 60-00 Final depth 2751	215 5 30 County rangle onal section on (land sur- ft.	Use st dome interior munitimum.	### - 28
and stwe the following inc. 10 hole bescek the bescek to -535 bedrock. Et casing to -535 bedrock. Et casing Inion Facific, Cayuse #1 Ocarios: Destilla Countries: Destilla Countries: Destilla Countries: Destilla Section Fractional TARTISTICS: Sell type-Dag Elevation (Destilled X foce) Bellow Sellow	- lor hole c for surface A. A. Original A. A. Original A. A. Original A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. Original A. A. A. Original A. O	Use sta domes inva "findument purant designations of the purant of the p	O' loos and clay to befrock; a dilled from -HO' beirock a dilled from -HO' beirock Index number - HD	Sandy formation Rock Union Pactific, Field Station Well name LOCATION: Unatilla Usatilla Usatilla Usatilla STATISTICS: Well type-Dug Elevati Driven above Final depth 2751 Union Factific Reilroad Oupers name	215 5 30 County rangle onal section on (land sur- ft.	Use standard domental manual drill	File number File number File number File number File number D C B A E F G H M L K J N P Q R File number Well status- matical status-
nnd cive the following in 10th hole being to 10th hole being to 1535 bedrock. Et casing to -535 bedrock. Et casing to -535 bedrock. Et casing the control of	- lor hole c for surface A. A. Original A. A. Original A. A. Original A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. A. A. Original A. Original A. A. A. Original A. O	Use street of th	O' loom and clay to bedrock; a dilled from _h0' bedrock; a dilled from _h0' bedrock; 2H_9\2-i-R ZH_9\2-i-R D C B A Z F O H M L K J N P Q R The statustic abandoned dry hole producer X stock wells \$ 500 Walla Walla, Washington 111ng June 1941	Sandy formation Rock Inion Pacific, Field Station	County rangle onal section Original Add Date	Use of drivers of driv	File number File number File number File number File number D C B A E F G H M L K J N P Q R File number Well status- matical status-
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nnd stwe the following in 10th hole sherock into hearned to -535 bedrook. Et casing to -535 bedrook. Et casing to -535 bedrook. Et casing the sherock in the	tty the section A. A. Origin Addit Addit Tom Dee Tom Dee Thickness: re- Thickness: re- Thickness: re- Thickness: re- Thickness: re- Thickness: re-	Use std doment of the state of	O' loos and clay to bedrock; a dilled from -hO' bedrock; a dilled from -hO' bedrock Index number - win-U 2U-305-h-R File number (Gode: Tp., R., Sec., Sec.) D C B A E F F O H M L K J N P Q R N P Q R Atus. **Tile number Gode: Tp., R., Sec., Sec.) **Tile number Gode: Tp., R., Sec., Sec.) **Tile number ### L K J N P Q R **Tile number ### A L K J N P Q R **Tile nu	Sandy formation Rock Union Factio, Field Station Well name LOCATION: Unatilla Unatilla Jan 23E 23 Nd Ty. Earney Section Fracti Fratiffics: Well type-Dug Elevati Driven above Final depth 2751 Union Factific Railroad Ompers name Address Omnha, Nebroska This record comptied by K.S. data secured from the Jollowin	County rangle onal section Original Add Dat From Desg sources: re-	Use standard domain and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and drill ress of driver and	File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C H M L K J N P Q R Antus- stric* strict Sec. Well status- stric* strict sector wills restock wells
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and rive the following for 10th hole bestock into before to -535 bedrock. Et cestage t	and surface from s	Use string to the control of the con	O' loos and clay to bedrock; a dilled from -hO' bedrock; a dilled from -hO' bedrock Index number - win-U 2U-305-h-R File number (Gode: Tp., R., Sec., Sec.) D C B A E F F O H M L K J N P Q R N P Q R Atus. **Tile number Gode: Tp., R., Sec., Sec.) **Tile number Gode: Tp., R., Sec., Sec.) **Tile number ### L K J N P Q R **Tile number ### A L K J N P Q R **Tile nu	Sandy formation Rock Continuation Rock Rock	County rangle onal section Original Add Dat From Deg Sources: re- on (feet)	Use st domesting in the state of the state o	File number (Gode: Tp., R., Sec., Sec. Sec. Sec. Sec. Sec. Sec. Sec. Sec.
nnd stwe the following inc. 10 hole beirock its beirock to -535 bedrock. E* casing 10 hole beirock to -535 bedrock. E* casing 10 hole beirock to -535 bedrock. E* casing 10 hole partial fell name 10 hole 10 hole 10 hole 10 hole 10 hole 10 hole 10 hole 11 type-big 10 hole 11 type-big 12 hole 13 hole 14 hole 15 hole 16 hol	a. A. A. Origin Add Larces: re- from Determined From Determine	Use still the st	O' loos and clay to bedrock; a dilled from -hO' bedrock; a dilled from -hO' bedrock Index number - win-U 2U-305-h-R File number (Gode: Tp., R., Sec., Sec.) D C B A E F F O H M L K J N P Q R N P Q R Atus. **Tile number Gode: Tp., R., Sec., Sec.) **Tile number Gode: Tp., R., Sec., Sec.) **Tile number ### L K J N P Q R **Tile number ### A L K J N P Q R **Tile nu	Sandy formation Rock Continue Continue Continue Continue	County rangle onal section Original Add M. from Deggeources: recipitation on the county of the cou	Use starting to the starting t	File number (Gode: Ty., R., Sec., Sec. Sec. Sec. Sec. Sec. Sec. Sec. Sec.
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and cive the following loc- 10" hole bearook into hearonk to -535" bedrock. E" eneing to -535" bedrock. E" eneing location: Dation Facific, Cayuse #1	and surface from s	Use std domeson in the state of	O' loos and clay to befrock; a dilled from -40' befrock; a dilled from -40' befrock; a dilled from -40' befrock; Bo C B A E F O H M L K J M P Q R Attus- Tilo number (Code: Tp., R., Sec., Sec.) Filo number (Code: Tp., R., Sec., Sec.) Filo number (Code: Tp., R., Sec., Sec.) Filo number (Code: Tp., R., Sec., Sec.) Filo number (Code: Tp., R., Sec., Sec.) Filo number (Code: Tp., R., Sec., Sec.) Filo number (Code: Tp., R., Sec., Sec.) Filo number (Code: Tp., R., Sec., Sec.) Filo number Wall a kalus Attus- Story of the filo number Remarks B' coming seated at 40' Static water level A', Dymanic water level A',	Sandy formation Rock Inion Pacific, Field Station	County rangle onal section Original Add M. from Derg sources: click pa United States of Control o	Use st domest for interest for the state of	File number (Gode: Ty., R., Sec., Sec. Sec. Sec. Sec. Sec. Sec. Sec. Sec.
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nnd stwe the following inc. 10 hole beirock its beirock to -535 bedrock. Et casing 10 hole beirock its bedrock to -535 bedrock. Et casing Inion Facific, Cayuse #1 Foll name LOCATION: LOCATIO	and surface from s	Use std domestic state of drill stat	O' loos and clay to befrock; a dilled from -40' befrock; a dilled from -40' befrock; a dilled from -40' befrock; Bo C B A E F O H M L K J M P Q R Attus- Tilo number (Code: Tp., R., Sec., Sec.) Filo number (Code: Tp., R., Sec., Sec.) Filo number (Code: Tp., R., Sec., Sec.) Filo number (Code: Tp., R., Sec., Sec.) Filo number (Code: Tp., R., Sec., Sec.) Filo number (Code: Tp., R., Sec., Sec.) Filo number (Code: Tp., R., Sec., Sec.) Filo number (Code: Tp., R., Sec., Sec.) Filo number Wall a kalus Attus- Story of the filo number Remarks B' coming seated at 40' Static water level A', Dymanic water level A',	Sandy formation Rock Inion Pacific, Field Station	County rangle onal section Original Add M. from Derg sources: click pa United States of Control o	Use st domest for interest for the state of	File number (Code: Tp., R., Sec., Sec. Sec. Sec. Sec. Sec. Sec. Sec. Sec.

Union Pacific, Kamela			Index number 155-Un 1N-35E-36-N	- 1	
Well name	· 		File number (Code: Tp., R., Sec., 2 Sec.)		
LOCATION:					Brown rock 9 913
	_		D C B A	- 1	Gray basalt 15 928
Unmapped Quadrangi			Z F G H		Gray basalt, some clay 68 996
1x 258 36 SW2 of SW2			M L K J		Bottom of hole
Tp. Range Section Fractional	section		N P Q R	- 1	Final SVL 264.51. Well
					abandoned
STATISTICS:				-	
Well type-Dug Elevation (1 Drilled x face) Driven above	ft.	Use st	stic*		Index number 97-W
below		irri	gation dry hole_ z		Union Pacific, Messner 4M-25M-3-P Well name File number
Final depth 996		nuni include	cipal producers stock wells		(Code: Tp., R., Sec., 2 Sec.)
Union Pacific Railroad	A. A.	Durand	& Son		LOCATION:
Owners name Omaha, Hebraska	Origi:	nal dril ress	lers name Alla Walla, Washington		Rorrow County E 7 G H
	Date	of dri	lling July 1944 to Jan. 1946		Blalock Island Quadrangle M L K J
This record compiled by M.S.W. data secured from the Following sou	from De	epened_	_	-	th 25E 3 Sk of SW N P Q R
data secured from the Following sou	rces: re-	-cased	- by	. 1	.,, 1,4,5,0
Driller					STATISTICS:
Date compiled January 1948	Da	te			Well type-Dug Elevation (land sur- Use status- Drilled x face) ft. domestic*
Naterial	Thickness	Depth	Remarks	1	Driven above industrial x abandoned
+	(feet)				Final depth 1621 below irrigation dry hole municipal producer X
Brown hardpan clay	49	49	Casing 20" seated at 50'8"		*includes stock wells
Black basalt	22	71	Casing 16" seated at 141"4"		Union Facific Railroad George Scott Owners name Original drillers name
Very hard basalt	2	73	Well abandoned At 853 foot depth SWL was		Address Umana City, Medrasza Address Milton, Oregon
Black basalt	8	81	23' 6". Pump test pumped		Date of drilling 1916
Soft black basalt Black basalt with streaks	10	91	well dry in 12 minutes and there was no recovery after a 2 hour rest.		This record compiled by N.S.W. from Deepened data secured from the following sources: re-cased
of black shale	10	101	Final SWL in deepened well was 264.5' and well bails		Union Pacific Emilroad Officials by
Black basalt	12	113	dry	1 1	·
Porous brown rock and clay	32	145		! !	Date compiled February, 1948 Date
Black basalt	12	157		{	Material Thickness Depth (feet) Remarks
Red rock	38	195	1		No log available 162 Casing: 12" to 49"
Black basalt	10	205			Hole 12" to bottom uncased.
Clay and basalt	60	265		{	
Hard red rock	50	415			Index number 43-U
Hard black rock	9	424			Union Pacific, Gibbon #1 3N-36E-31-C Well name File number
Hard brown rock	15	439			(Code: Tp., R., Sec., ¿ Sec.)
Hard black rock	15	454			LOCATION: D C B A
Broken brown rock	6	460			Umatilla County E F G H
Hard brown rock	7	467		! [Unmapped Quadrangle M L K J
Brown rock with clay seams	16	483		! !	Tp. Range Section Fractional section N P Q R
Red rock with clay seams	10	493		↓	
Brown rock with clay seams	15	508		ļ	STATISTICS:
Porous brown rock with some cl	y 23	531			Well type-Dug Elevation (land sur- Use status- Well status- Drilled x face) ft. domestic*
Porous gray basalt	5	536			Driven above innustrial x abandoned below irrigation dry hole
Red rock with some clay	15	551		ļ ·	Final depth 80' zunicipal producer x *includes stock wells
Porous clay basalt	65	616			
Hard black rock	3	619			Owners name Original drillers name
Hard gray rock	8	627			Address Cmaha, Sebraska Address Walla Walla, Washington Date of drilling
Broken black rock	5	632			This record compiled by H.S.W. from Deepened
Hard gray basalt	26	658			data secured from the following sources: re-cased
Gray basalt with some clays	9	667			Driller oleaned by
Hard blue rock with some clay	9	676			Date compiled January 1948 Date
Hard blue rock	17	693			Total Second Popular
Red rock	69	762			(feet) (feet)
Hard gray rock	6	768			Gravel and boulders 12 12 8" casing to 32"
Hard gray rock with some clay	2	770			Cement gravel with bad crevices 12 24 6" " to 56"
Broken basait with sticky red clay mixed in	- 3	773			Blue basalt boulders 2 26 6s hole to bottom
Gray basalt mixed with clay	20	793		j l	Caving scale basalt 3 29
Gray basalt mixed with	14	807			Gray basalt 2 31 SWL 8
Gray basalt	26	833			Black basalt, boulders 22 53
Gray basalt - some clay	6	839		j	Black basalt, solid, hard 4 57
Porous gray basalt, some red rock and small amount of clay	49	888			Black basalt with bad crevices 9 66
Porous gray basalt, some red re		893			Hard gray basalt 5 71
Red rock	11	904		1	Honeycomb black basalt 9 80 Yater bearing. Bottom of hole.
1	(contim		<u> </u>	1	
				- 1	

Union Pacific, La Grande #1 Well name			Index number 153-Un 38-38E-5-M File number (Code: Tp., R., Sec., 2 Sec.)	Union Pacific, LaGrande \$2			Index number 154-Ui 3S-38E-5-M File number (Code: Tp., R., Sec.,
Date Date	ngle		D C B A E F G H W L K J N P Q R	LOCATION: Union County			D C 1 E F C M L 1 N P C
Tp. Range Section Fractions	1 section		41.11.	Tp. Range Section Fractional se	etion		[*1+1.
STATISTICS: Well type-Dug Elevation Driven face) Pinal depth 15571 Union Facific Bail road	(land surft.	in u irri muni *include	atus- stic* sticitis	Well type-Dig Trilled X face) Driven above below Union Facific Entireed	ft.	irri munic include:	stic* abando strial x abando gation dry ho
Owners name Address Omaha, Nebraska	Origi	nal dril	lers name	Owners name Address Omana, Nebraska	Origin	nal drill	lers name Los Angeles, California
Autros Omnia, neurasaa			lling Jan. 25, 1928	Autions Chang, noorable			lling Aug. 1941 to Feb
This record compiled by M.S.M. data secured from the collowing s	from Dec	epened_ -cased_ eaned		This record complied by M.S.V. data secured from the following source for the following source f	from Doc	opened_x -cased_ eaned_	
Date compiled November 1944	Da	ite	1945	Date compiled Harch 1948	Dat		ished January 1945
Natorial	Thickness	Depth	Remarks		Thickness	Depth	Remarks
		(feet)		22.001.12	(feet)	(feet)	
Gravel and boulders	200	200	Flows at rate of 75 g.p.m.	Soil	6	-6-	
Yellow clay	123	323		Gravel and boulders	16	22	
Fine wash gravel	14	337		Gravel, boulders and clay	158	180	
Yellow clay	273	610		Yellow clay	390	570	
Blue clay	235	996	Water here	Flue clay	370	940	
Clay	110	1100	water nere	Essalt boulders in clay	22	962	
Rock	224	1324		Blue clay	28	990	
		1339		Pasalt and clay	6	996	
Blue clay	40	+		Pinck hasalt	174	1170	
Basalt rock	+	1379	Water here	Bacalt and red clay	28	1198	
Blue clay	20	1399		Red clay	112	1310	
Red rock	155	1554	Water here	Red bacalt	25	1335	
Gravel	3	1557		Black basalt, very hard	74	1/409	
		1	Bottom of hole	Brown basalt	41	1450	2
				Black basalt		1496	Fottom of original we We'l deepened by Duras
				1945 as follows:			
Union Pacific, Munley #1			Index number 98-M 4N-27E-20-M	Plack basalt, hard	9	1499	
Well name	_		File number (Code: Tp., R., Sec., 2 Sec.)	Black basalt	10	1509	
LOCATION:	******		(00.00. 19., 12., 200., 200.)	Brown baselt	15	1524	
	inter.		D C B A	Brown basalt (hard)	12	1536	
Towns Con	,		E F G H				Bottom of hole
Rorrow Cou	ele.						i
Umetilla Quadran 4N 27E 20 NW2 of SW	€2		и г к л	Casing record: 18" from 0' to 1			
	€2		M F G B		3361		
Umetilla Quadran 4N 27E 20 NW2 of SW	€2			16" from 0' to 12" liner to 154 Water temp, 78°F Pressure as	336' 5' well has	remaine	constant at 53 lbs.
Umatilla Quadran	al section	Use at	N P Q R	10" from 0" to 12" liner to 154 Water temp, 780F Pressure at flow was 4 g.p.m. encountered s.g.p.m. Flow continued increas;	yell has	At 1395	flow had increased to
Umatilla Quadran	al section	dome in:u	N P Q R atus- atica well status- strial x abendoned x	16" from 0' to 12" liner to 15" Water temp. 78°F Presented A	yell has	At 1395	flow had increased to
Unatillo Quadran	(land sur-	dome in:u irri muni	N P Q R Note: Well status— ntici x abandoned x activial x abandoned y reculsure.	10" from 0" to 12" liner to 15" inter to 15" inter to 15" inter to 15" inter to 15" inter to 15" inter to 15" inter to 15" inter to 15" inter to 15" inter to 15" inter to 15" inter to 15" inter to 15" interest 10"	well has t 1330 . ng to 900	At 1395 g.p.m. 20, 1942	flow had increased to during drilling to the
Unstilla Quadran 19	(land surft.	dome intu irri muni *include	N P Q R N P Q R N P Q R N P Q R Attisi x abandoned x agation dry hole	10" From 0" to 12" liner 10" liner 1	well has t 1330'. ng to 900 .m. Feb. .m. Apr. .m. Nov.	At 1395 g.p.m. 20, 1942 12, 1943 1944	flow had increased to during drilling to the
Unntilla Quadran 4	(land surft.	dome in do irri muni *include ge Scott	N P Q R Toll status— stic strial x abandoned x dry hole stock wells levs name	10" From 0" to 12" liner 10" liner 1	well has t 1330'. ng to 900 .m. Feb. .m. Apr. .m. Nov.	At 1395 g.p.m. 20, 1942 12, 1943 1944	flow had increased to during drilling to the
Unstille Quadran	(land surft. Georg	dome into irri muni *include ge Scott inal dril	ntus- ntito* well status- ntito* utrial x gation dry hole clipal producer stock wells Hiton, Oregon	10" from 0" to 12" liner 10" liner 1	well has t 1330°, ng to 900 .m. Feb. .m. Apr. .m. Nov. .m. Jan. .m. Jan.	20, 1942 12, 1943 1944 12, 1945 18, 1945 18, 1945 19, 1945	flow had increased to during drilling to the
Unstillo Quadran AS 27E 20 F4 of SW Tp. Sange Section Fractions STATISTICS: Well type-Dug Elevan Cocol Driven Solve below Union Pacific Railrond Owners name Address Omahn, Sebraska	(land surft. Georg	dome intu irri muni *include ge Scott lnal dril lress	N P Q R Toll status— stic strial x abandoned x dry hole stock wells levs name	10" from 0" to 12" liner 10" liner 1	well has t 1330°, ng to 900 .m. Feb. .m. Apr. .m. Nov. .m. Jan. .m. Jan.	20, 1942 12, 1943 1944 12, 1945 18, 1945 18, 1945 19, 1945	flow had increased to during drilling to the
Unstillo Quadran AS 27E 20 F4 of SW Tp. Sange Section Fractions STATISTICS: Well type-Dug Elevan Cocol Driven Solve below Union Pacific Railrond Owners name Address Omahn, Sebraska	(land surft. Georgical Add Dat	dome into irri muni *include ge Scott nal dril iress te of dri eepened	ntus- ntits- miles Well status- ntits abandoned x dry hole oipal producer stook wells Hiton, Gregon 114mg 1915	10" from 0" to 12" liner 10" liner 1	well has t 1330'. ng to 900 .m. Feb. .m. Apr. .m. Nov. .m. Jan. .m. Jan.	20, 1942 12, 1943 1944 12, 1945 18, 1945 18, 1945 19, 1945	flow had increased to during drilling to the
Unntilla Quadran 4	(land surft. Georg Crigi Add Dat from De	dome into irri muni *include ge Scott inal dril iress	ntus- ntits- miles Well status- ntits abandoned x dry hole oipal producer stook wells Hiton, Gregon 114mg 1915	10" from 0" to 12" liner 10" liner 1	well has t 1330°, ng to 900 .m. Feb. .m. Apr. .m. Nov. .m. Jan. .m. Jan.	20, 1942 12, 1943 1944 12, 1945 18, 1945 18, 1945 19, 1945	flow had increased to during drilling to the
Union Facific Enilrond Officials Union Facific Enilrond Officials Union Facific Enilrond Officials Union Facific Enilrond Officials Union Facific Enilrond Officials	Cland surft. Clan	dome invu irri muni *include ge Scott inal dril iress te of dri pepened cased	ntus- ntits- miles Well status- ntits abandoned x dry hole oipal producer stook wells Hiton, Gregon 114mg 1915	10" from 0" to 12" liner 10" liner 1	well has t 1330°, ng to 900 .m. Feb. .m. Apr. .m. Nov. .m. Jan. .m. Jan.	20, 1942 12, 1943 1944 12, 1945 18, 1945 18, 1945 19, 1945	flow had increased to during drilling to the
Unstilla Quadran AN 27E 20 Htt of SM Tp. Range Section Fractions STATISTICS: Well type-Dug Elevation Drillod X Driven Good above below Union Facific Railrond Owners name Address Dmahn, Sebraska This record comptind by J.S.V. data secured from the JOHOwing s	Cland surft. Clan	dome inva irri muni *include ge Scott Inal dril Ireas te of dri pepened cased	ntus- ntits- miles Well status- ntits abandoned x dry hole oipal producer stook wells Hiton, Gregon 114mg 1915	10" from 0" to 12" liner 10" liner 1	well has t 1330°, ng to 900 .m. Feb. .m. Apr. .m. Nov. .m. Jan. .m. Jan.	20, 1942 12, 1943 1944 12, 1945 18, 1945 18, 1945 19, 1945	flow had increased to during drilling to the
Union Pacific Enilrond Officials Union Pacific Enilrond Officials Union Pacific Enilrond Officials Union Pacific Enilrond Officials Union Pacific Enilrond Officials	Cland surft. Clan	dome into irri muni *include ge Scott inal dril lress ge of dri pepened cased caned	ntus- ntits- miles Well status- ntits abandoned x dry hole oipal producer stook wells Hiton, Gregon 114mg 1915	10" from 0" to 12" liner 10" liner 1	well has t 1330°, ng to 900 .m. Feb. .m. Apr. .m. Nov. .m. Jan. .m. Jan.	20, 1942 12, 1943 1944 12, 1945 18, 1945 18, 1945 19, 1945	flow had increased to during drilling to the
Union Pacific Railroad Omnora name Address Omnha, Rebranka This record compiled by J.S.V. data secured from the Jollowing s Union Pacific Railroad Omnora name Address Omnha, Rebranka This record compiled by J.S.V. data secured from the Jollowing s Union Pacific Railroad Officials Date compiled February 1948	Coorg Open Determined Coorg Open Determined Determi	dome into irri muni *include ge Scott inal dril lress ge of dri pepened cased caned	ntus- ntics Well status- ntics Abandoned x dry hole glad produces stock wells lers name Nilton, Gregon lling 1915 Banarks Well used till 1945 and	10" from 0" to 12" liner 10" liner 1	well has t 1330°, ng to 900 .m. Feb. .m. Apr. .m. Nov. .m. Jan. .m. Jan.	20, 1942 12, 1943 1944 12, 1945 18, 1945 18, 1945 19, 1945	flow had increased to during drilling to the
Union Facific Railroad Omnora name Address Omnha, Sebranka This record compiled by J.S.V. data secured from the John pacific Railroad Officials Date compiled February 1948 Natorial	Coorg Open Determined Coorg Open Determined Determi	dome into irri muni *include ge Scott inal dril ress e of dri sepened -cased eaned Depth freet)	ntus- ntics Well status- ntics abandoned x ntrial x abandoned x ntrial x dry hole clpal producer stock wells lers ness Milton, Gregon lling 1915 by Remarks Well used till 1945 and abandoned because f2 well releded wifficient gallonese	10" from 0" to 12" liner 10" liner 1	well has t 1330°, ng to 900 .m. Feb. .m. Apr. .m. Nov. .m. Jan. .m. Jan.	20, 1942 12, 1943 1944 12, 1945 18, 1945 18, 1945 19, 1945	flow had increased to during drilling to the
Union Facific Railroad Omnora name Address Omnha, Sebranka This record compiled by J.S.V. data secured from the John pacific Railroad Officials Date compiled February 1948 Natorial	Coorg Open Determined Coorg Open Determined Determi	dome into irri muni *include ge Scott inal dril ress e of dri sepened -cased eaned Depth freet)	N P Q R ntus- well status- ntus- state while status- ntus- state while status- state while status- day hole day hole day hole dipal producer stock wells lers name Nilton, Grogon ling 1915 by Remarks Well need till 1945 and handondb weams #2 well	10" from 0" to 12" liner 10" liner 1	well has t 1330°, ng to 900 .m. Feb. .m. Apr. .m. Nov. .m. Jan. .m. Jan.	20, 1942 12, 1943 1944 12, 1945 18, 1945 18, 1945 19, 1945	flow had increased to during drilling to the
Union Facific Railroad Omnora name Address Omnha, Sebranka This record compiled by J.S.V. data secured from the John pacific Railroad Officials Date compiled February 1948 Natorial	Coorg Open Determined Coorg Open Determined Determi	dome into irri muni *include ge Scott inal dril ress e of dri sepened -cased eaned Depth freet)	ntus- ntics Well status- ntics abandoned x ntrial x abandoned x ntrial x dry hole clpal producer stock wells lers ness Milton, Gregon lling 1915 by Remarks Well used till 1945 and abandoned because f2 well releded wifficient gallonese	10" from 0" to 12" liner 10" liner 1	well has t 1330°, ng to 900 .m. Feb. .m. Apr. .m. Nov. .m. Jan. .m. Jan.	20, 1942 12, 1943 1944 12, 1945 18, 1945 18, 1945 19, 1945	flow had increased to during drilling to the
Umetille Quadran AN 27E 20 19th of 34 The Same Saction Fractions Fractions Well type-Dug Elevation Drillod X face) Driven below Final depth 165' Union Facific Enlirond Omore name Address Omahn, Sebraska This record compiled by 3.3.4. data secured from the Nollowing a Union Pacific Enlirond Omore name Address Omahn, Sebraska This record compiled by 3.3.4. data secured from the Nollowing a Union Pacific Enlirond Officials Date compiled February 1948 Naterial	Coorg Open Determined Coorg Open Determined Determi	dome into irri muni *include ge Scott inal dril ress e of dri sepened -cased eaned Depth freet)	ntus- ntics Well status- ntics abandoned x ntrial x abandoned x ntrial x dry hole clpal producer stock wells lers ness Milton, Gregon lling 1915 by Remarks Well used till 1945 and abandoned because f2 well releded wifficient gallonese	10" from 0" to 12" liner 10" liner 1	well has t 1330°, ng to 900 .m. Feb. .m. Apr. .m. Nov. .m. Jan. .m. Jan.	20, 1942 12, 1943 1944 12, 1945 18, 1945 18, 1945 19, 1945	flow had increased to during drilling to the

Union Pacific, Meacham			Index number 48-U 15-35E-3-P File number (Code: Tp., R., Sec., & Sec.)		Union Facific, Munley #2 Union Facific, Munley #2 Well mane File number for for Tu. R. Sec Sec.)
LOATION: Unatilla Count Unappoid Quadrange	• ,		D C B A E F G H M L K J N P Q R		County D C B A
Well type-Dag Drillad _ above Drinal depth 279 Cuion Pacific Sailrond Owners name	A. A. Origi	innu irri muni *include Durand nal dril	stic* strial x abandoned gation dry hole cipal producer x s stock wells & Son		STATISTICS: Well type-Dug
Address Quaha, Hebracka This record complied by U.S.V. data secured from the following sou Mr. Cole, U. P. Geologist	from De		Valla Valla, Vashington lling Vinter 1943_44 by		Address Omahn, Nobreaka Address Valla Valla, Vashington Date of drilling Oct. 1944 to June 1945 This record complied by W.S.V. from Despensed data see red from the Tollowing sources: re-nased cleaned by
Date compiled October 1944	De	te			Date compiled February 1948 Date
p	Thickness			1	
Material	(feet)		Remarks Artesian flow 25 g.p.m.		Material Thickness Depth (feet) Remarks
Top soil	. 3	3	Pumps 314 g.p.m.		Black sand 145 145 Hole diameter 12"
Top soil and boulders	10	13	Bottom 20" casing at -11.5		Coarse sand and gravel 25 170
Elack basalt	5	18			Gray basalt 139 309
Black basalt with clay seams	10	28	Small stata H2O at -28		Basalt and clay 61 370
Black basalt	16	44			Gray baselt 13 383
Blue clay	2	46		i	
	-	†			
Lava sand	14	60	Water raised to top of pipe	60'	Gray basalt 69 457 Bottom of hole. Water first encountered at 50'. SWL
Disintegrated lava and clay	. 3	63	Flow 22.5 g.p.m. at -63'		shop definition completed and
Lava sand	12	75	Flow 35 g.p.m. at -681 later decreased to 25 g.p.m.		431. Drawdown 9 at 300 g.p. s. in 3 hr. and 37 min. No.
		80			seasonal variation noted,
Black basalt, solid		85			
Black basalt, seams	5				
Black basalt, solid	10	95	<u> </u> 		
Black basalt, seams	3	98]	Index number - 55-U Union Pacific, Rieth #1 2N-32E-7-H
Black basalt, solid	10	108		j	Well name File number
Gray basalt, solid	8	116		1	(Code: Tp., R., Sec., Sec.)
Gray basalt mixed with lawa	ĺ	İ		İ	LOCATION:
cinders and blue clay	6	122		1	Instills County
	-	1		1	Pendleton Australia
Black basalt mixed with lava	1				2W 32W 2 Well of Civil
cinders and blue clay	5	127	Bottom 16" casing at -125.1		Tp. Range Section Fractional section N P Q R
Black basalt, some lava cinder					
mixed thru rock	19	146			STATISTICS:
Black basalt, wery hard	31	177			Well type-Dug Elevation (land sur- Use status- Hell status- Drilled x face) ft. domestic*
Black rock mixed with blue cla	12	189		i l	Driven above injustrial x abandoned
Basalt - hit small crevice				i	Final depth 188 below irrigation dry hole municipal producer x
fitted with blue clay at -219	90				*includes stock wells
	88	277	1		Union Pacific Railroad G. S. Scott Owners name Original drillers name
Shattered basalt and blue clay	2	279			Address Omaha, Nebraska Address Main St., Milton, Oregon
			Hole started caving at		Date of drilling 1914
			-279'. Final depth hole when cleaned out after		
			pumping test, -278'. Pumps 314 g.p.m. in		This record compiled by H.S.W. from data secured from the following sources: re-cased cleaned by
			of -24.41.	Î l	State Engineer and U. P. Officials
					Date compiled February 1948 Date
			l	1	Material Thickness Depth (feet) Remarks
			l		Ho formation log available 188 Hole diameter 12". SWL 651.
				!	75' drawdown when tested at 500 g.p.m. Pumped in prac-
<u> </u>					tice about 12 hours per day at the rate of 500 g.p.m.
		\mathbb{L}^{-7}			asy at the rate of 500 g.p.m.
			· ·	[
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nion Pacific, Rieth #2			Index number 54-U 2N-32E-7-H File number	Union Facific, Umatilla Index mmaber 82-U Well name File number 82-U The number 82-U The number 82-U
			(Code: Tp., R., Sec., 2 Sec.)	[Code: Tp., R., Sec., 2 Sec.
CATION:			D C B A	LOCATION: D C B A
matilla County			E F G H	Unatilla County E F G H
endleton Quadrangle			M T K 1	Unatilla Quadrangle M L X J
N 328 7 SW of SW . Range Section Fractional	section		H P Q R	Tp. Range Section Fractional section N P Q R
ATISTICS:				STATISTICS:
ll type-Dug Elevation (1: Drilled x face)	nd sur-	Use st dome	stic*	Mell type-Dug Elevation (land sur- Use status- Well status- Drilled
Driven above below		irri	strial x sbandoned gation dry hole	Driven above injustrial x abandoned below irrigation dry hole
nal depth 2871		muni include	cipal producer x s stock wells	Final depth 192 minicipal producer X *includes stock wells
nion Pacific Railroad	A. A.	Durand	å Son lers name	Union Pacific Railroad George Scott Owners name Original drillers name
Address Omaha, Nebraska	Md	ress_ ¥	alla Walla, Washington	Address Omaha, Nebraska Address Main St., Milton, Oregon
		e of dri	lling Oct, 1941 to July 1942	Date of drilling June to August 1915
is record compiled by H.S.W. ta secured from the Following sour	from Per	epened	-	This record compiled by H.S.W. from Despense data secured from the following sources: re-cased
riller	c)	eaned	by	Union Pacific Railroad Officials oleaned by
	_			
te compiled January 1946	Da Thickness			Date compiled February 1948 Date [Thickness Depth]
Naterial	(feet)	(rest)	Remarks	Material (feet) (feet) Remarks
Cinders	7_	7		40 Surface water at 401
Gravel	7	14		55 Light flow in bedrock at 5
Pasalt rock containing old iro	. 4	18		77 Very hard 35' water in well - very
Black baselt	3	21		80 weak flow
Black basalt	8	29		114 mard rock
Hard gray basalt	14	43	Small quantity of water	120 Solid rock
Broken basalt	3	46	easily bailed out.	137 Solid rock
Hard gray basalt	14	60		150 Solid rock
Black basalt with alternate set of clay	15	75		152 Soft porous rock
Hard gray basalt	10	85		170 Loose basalt
Caving red rock	16	101		Disintegrated water bearing
Hard brown basalt	2	103		rock 22 192 Bottom of hole
Black and gray basalt, broken	24	127	Caving	1 1002 1 272 1 20002 01 1020
Broken basalt	11	138	Nore water	
Hard basalt rock	43	181		U. S. Forest Service, Ukiah Index number 129-U U. S. Forest Service, Ukiah 58-31E-14-E
Alternate hard and broken basa		188		Well name File number (Code: Tp., R., Sec., Sec.
Broken basalt	15	203		LOCATION:
Very hard gray basalt	7	210		Umatilla Caustu
Hard fractured gray basalt	7	217	Water bearing	Unmanned Customalo
Fractured brown basalt	11	228		SB 31R 14 SW of NW
Hard brown basalt	7	235		Tp. Range Section Fractional section
Fractured basalt	26	261		STATIBTICS:
Fractured gray basalt	19	280		Well type-Dis Flavetion (land sun. Hea status. Wall status
Fractured basalt	7	287	Water bearing	Drilled x face) ft. domestic* x
-	<u> </u>	-	Bottom of hole	below irrigation dry hole
			SWL 651. Tested 638 g.p.m.	Final depth 4001 municipal producer 2
			with 17' drawdown. Casing 12" seated at 20' 10" and	U. S. Forest Service A. A. Durand & Son
			10" seated at 54' 10".	Owners name Original drillers name Address Address Walla Washington
		-		Dete of drilling
				This record compiled by M.S.W. from Despened
				data secured from the following sources: re-cased cleaned by
				This record compiled by N.S.V. from Despened data secured from the following sources: re-cased U. S. Forest Service Officials U. S. Forest Service Officials
				cleaned by
				U. S. Forest Service Officials Date compiled March 1946 Date
				U. S. Forest Service Officials Date compiled March 1948 Date Material Thickness Dopth (feet) Resarks
				U. S. Forest Service Officials Date compiled March 1948 Material Thickness Depth (feet) No log available feet
				U. S. Forest Service Officials Date compiled March 1948 Dete Material Thickness Depth Resarks We do garniable Forest Service notes on file Bestich depth 88
				U. S. Forest Service Officials Date compiled March 1948 Dete Material Thickness Depth Resarks We do g available Forest Service notes on file Mential Gepth Res
				U. S. Forest Service Officials Date compiled March 1948 Dete Naterial Thickness Depth (feet) Remarks
				U. S. Forest Service Officials Date compiled March 1948 Dete
				U. S. Forest Service Officials Date compiled March 1948 Date Katerial Thiokness Depth (feet) Remarks No log available Forest Service notes on file BENIOR REPUR B. A00 Cased to 350°. Notes indicate that formations apparently
				U. S. Forest Service Officials Date compiled March 1948 Date Material Thickness Depth (Feet) Remarks No log available Forest Service notes on file Bentian depth RS

Code Typ. 2. & 50 5 5 5 5 5 5 5 5 5	Utah Canning Company	-		Index number 14-U 5E-35E-1-E File number	Vais #1 Wall name File number
Description	•				(Code: Tp., R., Sec., 2 Sec.
				D C B A	D C B A
29 29 1 10 10 10 10 10 10 10		•			Te-4/11a
25 25 15 Style of PM 1				MLKJ	
	5H 35E 1 Swing of New 1	section			28 28s In Service Canyon
Training Section Sec					
Train Company	Drivenabove		inque	estic*ustrial_xabandoned	DLIAGE SPOAG TH.108fLIST SOURCES
Property of the part Property Company	final depth_5281		sunic *includes	icipal producer x es stock wells	Final depth 400! aunicipal pr du er x *includes stock wells
Date of drilling Sev. 1990 Sev. 19	Where here	Origin	inal drill	llers name	Owners name Original drillers name
This record complicity Fig. From Company Fig. From Company Fig.	AUG. 400	_			
Material Ticking Special Control Con		from Dec Irces: re-	eepened	=	This record compiled by S.S.V. from Despended data secured from the following sources: re-cased cleaned by
Reterial Thickness Spetch Remarks Rema	ate compiled January 1948	De	ate		Date compiled July 1947 Date
Derivation of Decision 20 20 Rain 106 to Notion	Material	Thickness (feet)	Depth (feet)	Remarks	Thickness Depth
Delivery 10 30 16 00 casting set to 25 55 109 38 109 39 109	Gravel and boulders		T -	Hole 16" to bottom	
Clay and gravel 25 55 109 37	ı	10	1 1	1	but rock shows 400 Good volume of water
Solic Nack hash 15 107 Pump test 20 hrs. continuous	Clay and gravel	25	1	1091 3"	
Solid black basalt	Pure gravel	9 '	64		
Black basalt and blue shale	Yellow clay and gravel	28	92		
Black Massit	Solid black basalt	15	107	Pump test 24 hrs. continuous	
Oray healt and blue shale	Black basalt and blue shale	7	114	SWL 491 Main pumping roint	
Oray healt and blue shale 20 155 701 1029	Black basalt	4	118	as follows:	
Care	Gray & brown basalt & blue sha	7	125	Dynamic W.L. G.P.M.	
Description 1	Gray basalt and blue shale		145	•	
Shack basalt with little 28 186 51 1350	(blue) 11	156	731 1040	
Name Part	Gray & brown basalt with blue	clay 2	158	791 1265	
Sheck besalt and blue chale 7 205	Black & red basalt with little	8		81 1350	Vais ∲2 Well name File number
Date Date	Black basalt	5	198	Γ	LOCATION:
Yeard black baselt 8 213 221 28 28 10 Service Canyon about 1½ miles above 10 Proceedings 10 Proceedings 10 Proceded 10 P		7	205		D C B A
Bard black basalt 8 221 Black basalt with little clay 7 228 Bard black basalt 5 233 Gray basalt 5 285 Bard black basalt 7 292 Bard black basalt 7 292 Bard black basalt 7 292 Bard black basalt 109 401 Bard gray basalt 109 401 Bard black basalt 36 437 Bard black basalt 36 437 Bard black basalt 36 437 Bard black basalt 31 468 Soft and hard black basalt 60 528 Bard gray basalt 60 528 Bard gra		8	213		E 7 C H
Stard black baselt 10 228 Th. Range Section Fractional section Tail #1. N Q X mard black baselt 5 233 The start 5 233 The start 5 235 The sta			221		2W 28F In Service Canyon about 14 miles above
Gray basalt 52 285 Eard blue basalt 7 292 Eard blue basalt 109 401 Eard blue basalt 36 437 Hard gray basalt 31 466 Soft and nard black basalt 60 528 Soft and nard black basalt 60 528 This record compiled by N.S.W. from Despense date secured from the following software re-cased cleaned by Tarbal report by the driller This record compiled by N.S.W. from Despense date secured from the following software re-cased cleaned by Tarbal report by the driller Date compiled July 1947 Date Material Thickness Depth Remarks We light the status—Rell status— Schaddrass Abaddrass Final type—Dug Elevation (land sur Use status—Rell status— Destatus—I domestic X Schaddrass Abaddrass Final depth 200! Final de			228		Tp. Range Section Fractional section Vais \$1. N P Q R
Gray basalt 52 285 Well type-Dug Rievation (land surface) ft. domestic x dom	Hard black basalt	5	233		
Hard blue basalt 7 292 Mel type-Dug Risvation (land surprised of the property	Gray basalt	52	1 1		
Mard gray basalt 109 401 Eard black basalt 36 437 Eard black basalt 31 468 Soft and nard black basalt 60 528 Soft and	i i	1	i		Well type-Dug Elevation (land sur- Drilledz face) ft. domestic* x
Eard black basalt 36 437 Hard gray basalt 31 468 Soft and hard black basalt 60 528 Soft and hard black basalt 60 528 Determined black basalt 60 528 This record complied by 3.5.V. from Despended data secured from the Following Softces: re-nased by Verbal report by the driller This record complied by 3.5.V. from Despended the secured from the Following Softces: re-nased by Secur	i	1 1			Drivenabove inputstrialabandonedbelowirrigationdry hole
Bard gray basalt 31 468 Soft and nard black basalt 60 528 Madress Pine City, Oregon Date of drilling This record compiled by 3.5.V. from Despended date secured from the following sources: re-cased oldered by the driller Verbal report by the driller Date compiled July 1947 Date Material Thickness Depth Benarks If old g made — about Verbal report by the larger town of the secured from the following sources: re-cased oldered by the driller Date compiled July 1947 Date Material Thickness Depth Benarks (feet) (Feet) Unit legal town of the secured from the secured from the following sources from th		1 -	1 1		Final depth 200 municipal producer I
Soft and nard black basalt 60 528 Commerce name Address Pine City, Oregon Original drillage name Address Pine City, Oregon	Hard gray basalt	i - i	-		Joe Vais C. E. Lewis
Date of drilling This record compiled by 3.5.V. from Deepened data secured from the Following sources: re-cased by Carbal report by the driller Verbal report by the driller Date compiled July 1947 Date Material Thickness Depth Remarks (feet) Feet) Benarks We will sight new 1.000 Each this compiled to the compiled of the compiled of the compiled of the compiled of the compiled by Carbal Remarks We will sight new 1.000 Each this compiled to the compiled of the compiled	i	1 -	+ -	1	Owners name Address Original drillers name Address Address Pendleton, Oregon
This record compiled by 3.5.V. from Despaned data secured from the Following sources: re-cased object of the driller Verbal report by the driller Date compiled July 1947 Date Material Thickness Depth (feet) Feet) Jo log made about 200 Lewis reports that this					
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Material Thickness Depth (foot) Remarks Ho log made about 200 Lewis reports that this veri might have 110000 has	i		<u> </u>		
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Motorial (foot) Feet) Hearing Holog made — about 200 Levis reports that this			<u></u>		Meanual Thickness Depth
Vell night have liowed han	· · · · · ·				(feet) (Feet) Hemarks
it been cased properly.	1				Well Hight have flowed had
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		(Code: Tp., R., Sec., & Sec.)	(Code: To., R., Sec., 2)
LOCATION:			LOCATION:
	unty	D C B A	Unitable County E 7 0
Blalock Island Quadra	ngle	MIKI	Unatilia Quadrangle M L K
ty 25E 7 SEL ci S	Ni al section	H P Q R	Tp. Range Section Fractional section
STATUSTICS:			STATISTICS:
	(land sur- Use st	atus- Well status-	Well type-Dug Elevation (land sur- Use status- Well status face) ft. domestic*
Drilled Y face) Driven above below below	init irri	stic* x strial abandoned gation dry hole cipal producsr x	Driven above innustrial abandons below irrigation dry hole producer
	*include	s stook wells	*includes stock wells
W. Wasgbo Owners name	William Ille Original dril Address	lers name	C. E. Ward Owners name Original drillers name Address Address
Address Boardman, Oregon	Date of dr	Portland, Oregon	Dete of drilling 1905 to 1910
This record counties by K.S.V			This record countied by N.S.W. from Dechand
This record compiled by E.S.W. data secured from the following	sources: re-cased cleaned		This record complied by S.S.V. from Deepened data secured from the following sources: re-cased by
Owner			Mr. Malcolm, Echo, Oregon, and several other local citizens
Date compiled March 1948	Dats		Date compiled July 1947 Date
Material	Thickness Depth (feet) (feet)	Remarks	Hateriel Thickness Depth Remarks (feet)
Soil and clay	13 13	Casing: 6" to 18"	This well was drilled in about 1900 to 1910 under the direction of Mr. C. E. & Funds for the drilling were donated by various ranchers in the district at lar
Solid rock with hard and soft streaks	57 70		the whole undertaking being a pioneering venture. The well was lost and has presumably been long since cultivated over. It is generally reported, however
Soft green rock	13 83		that an abundant flow of artesian tater was incountered before the well was lo
		Bottom of hole	of Unstitle County, including a Kr. Malcon who worked on the well crew at the time the artesian water was encountered. According to Kr. Malcon the artesian water was encountered at a depth of SOC, Catinuad Pirling resulted in a use loss of all water. It is presumed that a crevice was encountered as the water
		Well began flowing at about 75 - increasing to 80.	water was encountered at a depth of 800'. Centinued drilling resulted in a st loss of all water. It is presumed that a crystoe was encountered as the water
		No rate of flow or pressure	could be heard roaring below. All told, the well was carried to a depth of 10 Many wagon loads of rock were dumped in the sole in an unsuccessful effort to
		pressure insufficient to	the crevice. The well was eventually plugged near the surface and abandoned. Several layers of gravel and clay, including bods of "white alkali" were en- countered (presumably interbedded tith basalis) to the 800 foot level, below were a hard "blue rock formation" to the botten of the hole.
	+ +	system without mechanical	was a hard "blue rock formation" to the bottem of the hole.
Wagner Well name		Index number 188-M 4H-25E-18-K File number	Index number 143-U Varren Well name File number
Wagner Well name		4N-25E-18-K	Varren 1H-31E-8 Well name (Code: Tp., E., Sec., 24 LOCATION:
LOCATION: Morrow Co		#H-25E-18-K File number (Code: Tp., R., Sec., 2 Sec.)	Warren
LOCATION: Morrow Co Blalock Island Quadra	ngle	#E-25E-18-K File number (Code: Tp., R., Sec., & Sec.) D C B A	Warren
LOCATION: Morrow Co	ngle Ež	43:-25E-18-E File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H	Warren
LOCATION: Morrow Go Blalock Island Quadra	ngle Eg al section	#3-253-18-K File number [Code: Tp., R., Sec., 2 Sec.] D C B A E F C B A H L K* J N P Q E	Warren
100ATION: CO	ngle st al section (land cur- Use st ft. dom	#3-253-18-X File number [Code: Tp., R., Sec., 2 Sec.] D C B A E 7 0 H H L E 7 N P Q R The control of t	Warren 11-312-8
100ATION: CO	al section i (land cur- Use s' ft. dome invi	#1-25-18-X File number [Code: Tp. R. Sec. 2 Sec.] D C B A E F O H M L K 7 M P Q R F C B A	Warren
LOCATION: Co	ngle st al section (land sur- ft. dom inter irr mun.	#N-252-18-K Filo number (Code: Tp., R., Sec., Sec.) D C B A E 7 O H M L K 7 N P Q R Tatus- stic X ebandoned ebandoned	Warren
DOATION: Co	ngle al section (land cur- ft. dom irr mun. *Include	#N-252-18-K File number (Code: Tp., R., Sec., Sec.) D C B A E F O H M L K 7 N P Q R Tatus- stic 4 abandoned dry hole clipial se stock wells	Warren
LOCATION: LOCATION:	ngle al section (land our Use s' ft. dom in:	#3-25-18-X File number [Oode: Tp. R., Sec. 2 Sec.] D C B A E F O H H L E 7 N P Q R Sec. 2 Sec. 3 Sec. 4 Sec. 4 Sec. 5 Sec. 6 Sec. 6 Sec. 6 Sec. 6 Sec. 7 S	Warren
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LOCATION: Norrow Co Black Island Quadra 4N 258 18 Wy or Si Ty. Bangs Bection Frestion STATISTICS: Well type-Dag Elevation Final depth 751 D. E. Wagner Conser name Address 30ordman, Oregon Mr. Wasser, Soardman, Oregon	ngle al section i (land sur- ft. dom int irr sinclud Original dri. Address Date of dr sources: re-cased	#N-25-18-K File number [Code: Tp., R., Sec., Sec.] D C B A E F O H M L K J N P Q R N P Q R Status- Strial Status- Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Str	Warren 11-312-8
LOCATION: Norrow Co Black Island Quadra AN 258 18 Wy or Si Ty. Eargy Section Frestion STATISTICS: Well type-Day Elevation Drilled x Drives below Final depth 75' D. E. Wagner Conser name Address Sourdman, Oregon This record compiled by X.S.V. data secured from the Sillowing Mr. Wasser, Sourdman, Oregon Date compiled March 1948	ngle al section (land eur— Use s' ft. dom in: ann "include Original dri. Address Date of dr from Despend counces: re-cased cleaned Date	#N-25-18-K File number [Code: Tp., R., Sec., Sec.] D C B A E F O H M L K J N P Q R N P Q R Status- Strial Status- Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Strial Str	Well name Well name Well name File number Gode: Tp., R., Sec., 2 LOCATION: Describle Pendleton Quadrangle 1F 31E 8 Signal Tp. Range Section Fractional section STATISTICS: Well type-Dug x Elevation (land surdemented from the following sources) Final depth 12' Walker C. Warren Owners name Address Walker C. Warren Owners name Address Date of drilling This record complied by M.S.V. from Deepsned data secured from the following sources: u. S. Froduction and Marketing Administration Date compiled Narch 1948 Date Thickness Depth Thickness Depth Thickness Depth Thickness Depth Thickness Depth Thickness Depth
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Blalock Island Quadr	County		(Code: Tp., R., Sec., 2 Sec.) D C B A E F G B M L K J	LOGATION: Oilliam Arlington Que	County		D G B E 7 G M L K
Tp. Range Section Fraction	onal section		N P Q R	Tp. Range Section Fract	ional section		и P Q
STATISTICS:				STATISTICS:			
Well type-Dug Elevation Drilled x face) Driven above	on (land sur-	Use st dome init	atus- Well status- stic* strialabandoned	Well type-Dug Elevat Drilled x face) Driven above	ion (land sur- ft.	Use st dome indu	atus- Well status- stic* X strial abandoned
Final depth 74		irri	gation dry hole cipel producer x s stock wells	Final depth 666' below		irri muni	gation dry hole cipal producer s stock wells
R. Wasmer Owners name Address Boardman, Oreg	Abe Ha Origi	nsen inal dril iress	lers name Goldendale, Washington	Veatherford Estate Owners name Address	Origi	Wilburn nal dril	lers name 2 E. 7th, the Dalles, Orego
		te of dr				of dri	
This record compiled by E.S.V data secured from the Pollowing	g sources: re	epened_ e-cased_ leaned_		This record complied by Dol- data secured from the Followi Letter from the driller, Jan	e]	epened_ -cased_ .eaned	
	_				_		
Date compiled March 1948	Thickness			Date compiled January 1	748 De		
Material	(feet)	(feet)	Remarks	Material	(feet)	(feet)	Remarks
No log available		74	6" hole from 0 - 16'. 5" hole from 16 to 74'. Well flows.	Conglowerate Basalt	350 316	350 666	Bottom of hole. Water
		L	When first drilled, this well		7.0		encountered in soit noney comb basalt. Good stand
			was allowed to flow uncapped for 3 days. Under this				hole, but only a good domestic well.
			circumstance, the Brigge & Pool wells stopped flowing. After this well was capped			<u> </u>	
	-	 	and yield restricted, flow was resumed in the other	<u> </u>	<u> </u>	<u> </u>	1
	<u> </u>	<u> </u>	satisfactority ever since.		-	 	
	1	1				<u> </u>	
	i	İ	i i		i	i	i
Wattenburgher Well hame			Index number — 156-U 2H-278-94-W File number (Code: Tp., R., Sec., 2 Sec.)	Weber Well name		1	Index number — 67-U 1H-30H-4 File number (Code: Tp., R., Sec., Sec.)
Well name LOGATION: Ummatilla	County rangle SW2		ZH - C7R - 34 - 37 The number (Code: Tp., R., Sec., Sec.) D C B A Z F C H H L K J	Well name LOCATION: Umatilla	County		1H-30R-h File number (Code: Tp., R., Sec., 2 Se D C B E F G M L K
Well name LOGATION: Unmatilla Unmatilla Quedr	rangle S¥		28-278-34-8 File number (Gode: Tp., R., Sec., Sec.) D C B A E F G H	Well name LOCATION: Umatilla Umatilla Qua	irangle		1H-30R-h File number (Code: Tp., R., Sec., 2 Se D C B E F G M L K
Mell name LOCATION: Unmtilla Quadr Th. Range Section Fraction STATISTICS:	rangle SWd onal section		ZH272-3-N F File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H M L X J N P Q R	Well name LOCATION: Unmatilla Dmatilla Dmatilla Typ. Range Section Frect STATISTICS:	irangle		116-308-0-1 File number (Code: Tp., R., Sec., 2 Sec., 2 Sec., 2 Sec., 2 Sec., 3 Sec.,
Mell name LOCATION: Unmilla Quadr 2M 27K 34 SW of 7p. Range Section Fractio	rangle SVi onal section on (land surft.	into irri muni	ZH272-3-N F File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H M L X J F P Q E	Well name LOCATION: Unatilla Destilla Quantilla Quantilla Tp. Son 4 Tp. Eange Section Frect	ional section ion (land surft.	iniu irri muni	118-308-0- File number (Oode: Tp., R., Sec., 2 Sec., 2 Sec., 2 Sec., 2 Sec., 2 Sec., 2 Sec., 2 Sec., 2 Sec., 2 Sec., 2 Sec., 3 Sec., 2
Mell name LOCATION: Unstills Condition The condition Condition The condition Condition The condition Condition TAXISTICS: Well type-Dag face) Driven below	on (land surft. C. E. Original	dome intu irri muni *include Levis inal dril	ZH772-N-W File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H M L K J H P Q R atus- atus- atis- at	Well name LOCATION: Unatilla Dmatilla Ty. Range Section Frect STATISTICS: Well type-Dag Drillad x Driven above below	ional section ion (land surft. Crigi	dome indu irri muni *include nal dril ress	Tile number (Code: Tp., R., Sec., 2 Se
No. Color	on (land surft. C. E. Original Add Det g sources: Peg so	dome inti irri muni *include Lewis Inal dril	ZH772-N-W File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H M L K J H P Q R atus- atus- atis- at	Well name LOCATION: Dmatilla Dmatilla Dmatilla JGE 4 Typ. Range Section Frect STATISTIOS: Well type-Dug Elevet Driven above Final depth not known Cunningham Sheep Company Green name	rangle ional section ion (land surft. pegon Add V. from Det	dome iniu irri muni *include nal dril ress e of dri epened -cased eaned x	Tis-jon-in- File number (Code: Tp. R., Sec., 2 Sec., 2 Sec., 2 Sec., 2 Sec., 2 Sec., 3
Wall name LOCATION: Unstills Quedr	on (land sur- rt. C. E. Original Add Date from Deg Sources: Pe	dome into into into into into into into into	ZH72-34-34 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H M L K J R P Q R atrial status- stic strial producer strial producer strial producer strial producer strial strial stock wells	Well name LOCATION: Dmatilla Dmatilla Dmatilla Umatilla Umatilla Umatilla Umatilla Umatilla Guan Frect STATISTIOS: Well type-Dug Driven Driven Above Final depth not known Cunningham Sheep Company Comman name Address Fendleton, Or	rangle ional section ion (land surft. pegon Add V. from Det	dome in:u irri muni *include nal dril ress e of dri epened -cased eaned I	Tis-OR-1- File number (Oode: Tp. R., Sec., 2 Sec., 2 Sec., 2 Sec., 2 Sec., 2 Sec., 3 S
Well name Constilla Const	on (land surft. Original Add part of the	dome into into into into into into into into	ZH72-34-34 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H M L K J R P Q R atrial status- stic strial producer strial producer strial producer strial producer strial strial stock wells	Well name LOCATION: Unatilla Dastilla Typ. Searce Soution Freet STATISTICS: Well type-Dig Driven Driven Driven Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Company officials	onal section ion (land surft. Original section Determine the section of the se	dome iniu irri muni *include nal dril ress e of dri epened -cased eaned x Walla W	Tis-OR-1- File number (Oode: Tp. R., Sec., 2 Sec., 2 Sec., 2 Sec., 2 Sec., 2 Sec., 3 S
Well name LOCATION: Unstille	on (land sur- ft. Original Add Dat from Degrees: re Thickness: (feet)	dome intuition irrimund *include Levis imal dril irress te of dri expensed coased coased foot)	ZH772-N-F File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F C H M L X J W P Q R atus- atus- atis- atis- a	Well iname Description Description	rangle ional section ion (land surft. ft. pegon Add N. from De De De Sourcest re	dome in au irri muni *include nal dril ress e of dri epened cased eaned x Valla W	Tile number (Code: Tp., R., Sec., 2 Sec. 2 S
Wall name LOGATION: Unstille Quedr ZF 75 34 584 of To. Earge Section Fraction STATISTICS: Drilledy face) Drilledy face) Drilledy face) Driven above below Final depth 72! Lon Wattenburgher Owners name Address Echo, Oregon This record compiled by E.S. W. data secured from the Following Verbal report by the driller Date compiled July 1947	on (land sur- ft. Original Add Dat from Degrees: re Thickness: (feet)	dome into into into into into into into into	ZH772-N-F File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H M L X J W P Q R atus- atics a	Well name LOCATION: Unatilla Datilla Typ. Sange Section Frect STATISTICS: Well type-Dig Drillad X Facel Driven Driven Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Company Section of the Collowic Company of Company This record compiled by M.S. data secured from the Collowic Company of Compan	rangle ional section ion (land surft. ft. pegon Add N. from De De De Sourcest re	dome iniu irri muni *include nal dril ress e of dri epened -cased eaned x Walla W te Depth (feet)	Tis-OR.1- File number (Code: Tp., R., Sec., ;
Well name LOCATION: Unstille	on (land sur- ft. Original Add Dat from Degrees: re Thickness: (feet)	dome intuition irrimund *include Levis imal dril irress te of dri expensed coased coased foot)	ZH772-N-F File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F O H H L X J H P Q R atus- ation ation Tell status- ation ation dry hole clipal produces _ by Remarks Fendleton Remarks Fendleton Remarks Of hole. Artesian flow estimated at 15 g.p.s. Well still flowing. Water level reportedly raises to a height	Well name LOCATION: Unatilla Datilla Typ. Sange Section Frect STATISTICS: Well type-Dig Drillad X Facel Driven Driven Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Company Section of the Collowic Company of Company This record compiled by M.S. data secured from the Collowic Company of Compan	rangle ional section ion (land surft. ft. pegon Add N. from De De De Sourcest re	dome iniu irri muni *include nal dril ress e of dri epened -cased eaned x Walla W te Depth (feet)	Tis-OR.1- File number (Code: Tp., R., Sec., ;
Well name LOCATION: Unstille	on (land sur- ft. Original Add Dat from Degrees: re Thickness: (feet)	dome intuition irrimund *include Levis imal dril irress te of dri expensed coased coased foot)	ZH72-30-32 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H M L K J N P Q R Strial status- strial status- strial strong producer x strok wells e stock wells Fondleton 1916 Benerks Fendleton 1916 Benerks Fendleton 1916 Benerks Fendleton 1916 Benerks Fendleton	Well name LOCATION: Unatilla Datilla Typ. Sange Section Frect STATISTICS: Well type-Dig Drillad X Facel Driven Driven Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Company Section of the Collowic Company of Company This record compiled by M.S. data secured from the Collowic Company of Compan	rangle ional section ion (land surft. ft. pegon Add N. from De De De Sourcest re	dome iniu irri muni *include nal dril ress e of dri epened -cased eaned x Walla W te Depth (feet)	Tis-OR.1- File number (Code: Tp., R., Sec., ;
Well name LOCATION: Unstille	on (land sur- ft. Original Add Dat from Degrees: re Thickness: (feet)	dome intuition irrimund *include Levis imal dril irress te of dri expensed coased coased foot)	ZH772-30-37 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H M L K J R P Q R String and a second and a second a sec	Well name LOCATION: Unatilla Datilla Typ. Sange Section Frect STATISTICS: Well type-Dig Drillad X Facel Driven Driven Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Company Section of the Collowic Company of Company This record compiled by M.S. data secured from the Collowic Company of Compan	rangle ional section ion (land surft. ft. pegon Add N. from De De De Sourcest re	dome iniu irri muni *include nal dril ress e of dri epened -cased eaned x Walla W te Depth (feet)	Tis-OR.1- File number (Code: Tp., R., Sec., ;
Well name LOCATION: Unstille	on (land sur- ft. Original Add Dat from Degrees: re Thickness: (feet)	dome intuition irrimund *include Levis imal dril irress te of dri expensed coased coased foot)	ZH772-30-37 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H M L K J R P Q R String and a second and a second a sec	Well name LOCATION: Unatilla Datilla Typ. Sange Section Frect STATISTICS: Well type-Dig Drillad X Facel Driven Driven Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Company Section of the Collowic Company of Company This record compiled by M.S. data secured from the Collowic Company of Compan	rangle ional section ion (land surft. ft. pegon Add N. from De De De Sourcest re	dome iniu irri muni *include nal dril ress e of dri epened -cased eaned x Walla W te Depth (feet)	Tis-OR.1- File number (Code: Tp., R., Sec., ;
Well name LOCATION: Unstille	on (land sur- ft. Original Add Dat from Degrees: re Thickness: (feet)	dome intuition irrimund *include Levis inal dril iress te of dri sepened cased cased teamed	ZH772-30-37 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H M L K J R P Q R String and a second and a second a sec	Well name LOCATION: Unatilla Datilla Typ. Sange Section Frect STATISTICS: Well type-Dig Drillad X Facel Driven Driven Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Countingham Sheep Company Company Section of the Collowic Company of Company This record compiled by M.S. data secured from the Collowic Company of Compan	rangle ional section ion (land surft. ft. pegon Add N. from De De De Sourcest re	dome iniu irri muni *include nal dril ress e of dri epened -cased eaned x Walla W te Depth (feet)	Tis-OR.1- File number (Code: Tp., R., Sec., ;
Well name LOCATION: Unstille	on (land sur- ft. Original Add Dat from Degrees: re Thickness: (feet)	dome intuition irrimund *include Levis inal dril iress te of dri sepened cased cased teamed	ZH772-30-37 File number (Code: Tp., R., Sec., 2 Sec.) D C B A E F G H M L K J R P Q R String and a second and a second a sec	Well name LOCATION: Unatilla Datilla Typ. Sange Section Frect STATISTICS: Well type-Dig Drillad X face). Driven Final depth not known Cunningham Sheep Company Owners name Address Fendleton, Or This record compiled by M.S. data secured from the Tollow! Company officials Date compiled July 1947	rangle ional section ion (land surft. ft. pegon Add N. from De De De Sourcest re	dome iniu irri muni *include nal dril ress e of dri epened -cased eaned x Walla W te Depth (feet)	Tis-OR.1- File number (Code: Tp., R., Sec., ;

Wells Springs			Index number 102-M 2N-25N-28-D	Index number 2-U West 6M-35E-16
Well name	-		File number (Code: Tp., R., Sec., & Sec.)	Yest 6H-35H-16 Well name File number (Code: Tp., R., Sec., 2 Sec.)
LOCATION:				TOCKSTON
Morrow Count	.y		D C B A	Unatilla County D C B A
Blalock Island Quadrang			E F G H	Unsapped Quadrangle M L K J
28 25% 28 EW of EW			N P Q R	6H 35H 16 HV2
Tp. Range Section Fractional	section			Tp. Range Section Fractional section
STATISTICS:			i	STATISTICS:
Mell type-Dug Elevation (: Drilled x face) Driven above	and sur-	Use st		Well type-Dug Elevation (land sur- Use status- Drilled x face) ft. domestic*
Driven above	ft.	inau	strial abandoned	Drilled x face ft. downstic*
Final depth 423'		muni	gation dry hole cipal producer x s stock wells	Final depth 171' zunicipal producer x *includes stock wells
1	Fred N	lichoson	· · ·	P. E. and Sanny Oliver
Owners name Address drilled originally for	Origi	nal dril ress	lers name Ione, Oregon	Owners name Address Freewater, Oregon Address
Wells Springs Oil and Gag	-		lling 1931	Date of drilling Oct Dec. 1945
This record compiled by H.S.W. data secured from the Following so		epened_		This record compiled by W.S.W. from Deepened
data secured from the following so	rces: re	-cased	by	data secured from the following sources: re-cased cleaned by
Driller	_			State Engineer
Date compiled October 1947	De	te		Date compiled February 1948 Date
. Material	Thickness (feet)		Remarks	Haterial Thickness Depth Remarks (feet)
Coarse, clean sand	40	40	7 5/6" casing to about 40' 6" hole from 40' on to	Dirt 20 20 Hole diameter: 8"
Baselt	139	179	bottom.	Quick sand 10 30
Hard blue basalt	33	212		Coarse gravel 10 40
Clay and seamy basalt	6	218		Loose gravel 15 55
Harder green rock	19	237		Cement gravel 21 76
Gray basalt	11	248		Loose gravel 4 80
Soft and green rock	9	257		Clay 80 160
Hard gray basalt	9	266		Gravel 11 171 Bottom of hole
Soft black rock	24	290		Water first encountered at a depth of 76'. SWL at dompletion of drilling was 20'. SWL at beginning of 1947 sesson reported at 44', A sessonal variation
Brown honeycomb	1	291		in the water level reported with level lower during winter months. Maximum rate of yield in 1947 was 180 g.p.m.
Soft black rock	10	301		
Hard black rock, shelly	19	320	Hore water and gas	
Crevices and boulders	31	351		Index mmmber 190-M Wilson
Medium hard black rock	9	360	Nore water at -399'	Well name File number (Code: Tp., R., Sec., 2 Sec.)
Hard gray	43	403		LOCATION:
Boulder formation, caving	14	417		D C B A
Hard blue basalt Boulder formation	3	420	Bottom of hole	Blalock Island Quadrangle
This was a flowing spring to	i	† •		4E 24E 13 We of NW of SW TP. Range Section Fractional Section N P Q R
thereof. Flow over casing mes Warn water - 80°F.	sured at 2	g.p.m.	after completion of hole.	
	İ			STATISTICS:
	ľ			Well type-Dug
				Driven above industrial abandoned below irrigation dry hole
				Final depth 81 municipal producer X *includes stock wells
				R. S. Wilson Troy Griffin Owners name Original drillers name
				Owners name Original drillers name Address Boardman, Oregon Address Hermiston, Oregon
	1			Date of drilling Bay 1944
	1			This record compiled by N.S.V. from Despened data secured from the following sources: re-cased
	1			Owner Cleaned by_
	-	 		-
	1	1		Date compiled March 1948 Date
		1	<u> </u>	Naterial Thickness Depth (feet) Remarks
	1	Ì	1 1 1	No log made 81 6" casing to 50
				SWI - shout 101
				SWL - about 10'
				SWL - about 10*
				SWL - about 10*
				SWL - about 10*
				SWL - about 10*
				SWL - about 10'
				SWL - about 10 ¹
				SWL - about 10'

Weston City #1 Well name	.		Index number — 25-U 4M-35E-22-Q File number (Code: Tp., R., Sec., Sec.)	Wharton Well name			Index number 11-U 6H-35H-33-L File number (Code: Tp., R., Sec., 2 Sec.
Unatilla Countrol Unmapped Quadrange N	•		D C B A E F G H M L K J N P Q R	Inestilla County Unestilla County Unestilla Quadrangle GH 33E 33 Hh of 584 Ty. Eange Scotton Fractional a			D C B A E F G H M L K J N P Q R
### STATISTICS: Well type-Dig	and sur- ft.	irri muni	Atus- ntic* abundoned spation dry hole ipal x producer x	STATISTICS: Well type-Dug face) Drilled x face) Driven above below	nd sur- ft.	in iu irri muni	atus- stic* well status- stical abandoned gation X dry hole cipal producer X s stock wells
City of Weston Owners name Address This record complied by M.S.V. data secured from the Ablowing sou	A. A. Originald	Durand	& Son ers name alla Walla, Washington	Owners name Address Ronte #1 Freewalter, Oregon This record complied by M.S.V. data secured from the 'ollowing sou	Origi Add Dat		lers name
U. S. G. S. Ground-Water Division		eaned	ру	State Engineer	cl cl	eaned	by
Date compiled February 1948	Da			Date compiled February 1948	Da		
Naterial	Thickness (feet)	Depth (feet)	Remarks	Material	Thickness (feet)	Depth (feet)	Remarks
Soil	6	6		Loose gravel	24	24	
Boulders	14	20		Cement gravel	13	37	
Basalt honeycomb	10	30		Open gravel with light flow	2	39	
Basalt honeycomb with clay sa	me 4	34		Cement gravel	27	66	
Black basalt	18	52			5	71	
	6	58		Open gravel - water	54	125	
Gray basalt Gray basalt with clay seams	11	69		Cement gravel	<u> </u>		
	38	107		Open gravel and water	3	128	
Gray basalt		115		Cement gravel Hole diameter: 10" SWL 35".	22 arismm ra	150	eld during 1947 season repor
Gray basalt with blue clay ses	 	-		at 300 e.p.m.		0. 7.	
Gray basalt	10	125				L	<u> </u>
Basalt honeycomb with clay	35	160					
Oray basalt	6	166					
Gray basalt changing to black	9	175		Villiams			Index number 40-U 3N-35E-18-E
Black basalt	10	185.		Well name			File number (Code: Tp., R., Sec., 2 Sec.
Blue clay	5	190		LOCATION:			(Doce. 19., A., Sec., 2 Sec
Gray basalt, hard	30	220					D C B A
Black basalt - with water	10	230		Umatilla County			E F G. E
Black basalt changing to gray	45	275		Unmapped Quadrangle	•		MLKJ
Gray basalt	5	280		Tp. Range Section Fractional s	section		N P Q F
Gray basa_t with black streaks	20	300					
Black basalt, medium hard	30	330		STATISTICS:			
Black basalt with some clay	10	340		Well type-Dug Elevation (le	nd sur- ft.	Use st	atus- Well status-
Black basalt, medium hard	100	440		Driven above below		inn	strial abandoned gration dry hole
Black basalt with clay pockets	20	460		Final depth 176	_	muni	cipal producer :
Gray basalt, very hard	26	486		1			
Gray basalt - some water	20	508		Frank Williams Owners name	Origi		lers name
	26	508	Bottom of hole	Address Adams, Oregon		resa	Walla Walla, Washington
Gray basalt with strong water (washed cuttings away)	20	354	SWL about 100' Pumps 247 g.p.m. with 802' drawdown	data secured from the following sour	from De	of dri	lling July and August 1947
	1	<u> </u>		Driller			
	-	1	Casing 10" to 40".	Date compiled January 1948	· -		
The city watermaster reports t for about 15 hour periods during t	hat this v	ell is p	mped at the rate of 500 g.p.m. he summer. Otherwise the		Thickness		
The city watermaster reports to for about 15 hour periods during to city water supply is derived from to the southeast of the town. No other than the observation that the winter, but taper off to very litt	aprings si	tuated a	sout 4 miles up Pine Creek to the flow of these springs	Naterial	Thickness (feet)	(feet)	Remarks
other than the observation that the winter, but taper off to very litt	y fill a	he summ	ine to capacity during the	Top soil	10	10	
	 	1	 	Cemented gravel	4	14	
According to the County Sanita Eastern Oregon Canning Co. Well #2	was pump	ty well	quit producing when the	Basalt, hard	1	15	
or of one outside oo. dett by	, and pump	[a	>pra 01 00000 /60 1	Black basalt	83	98	
	<u> </u>			Gray basalt	2	100	
	!			Black basalt	34	134	Water flowing over casing at 134' very slow
		ļ		Black basalt, hard	42	176	
				James J. James J.			Well did not hold up on bailer test on 80' level, Held fairly steady at the rate of 10 gallons every
							2 minutes at 100 level.

Wild Horse Grange Sell name			Index master 34-U hg-4g-34-Q File number (Code: Tp., R., Sec., 2 Sec.)	Wilkinson Well name			Index number 158-M 4E-23E-33-H File number (Code: Tp., R., Sec., 2 Sec.
CATION:				LOCATION:			
Umatilla County	,		D C B A	Rorrow County	,		D C B A
Pendleton Quadrangle			N L K J	Blalook Island Quadrangle			E F G H
48 342 34 SW4 of SE4 p. Range Section Fractional	section		и в d и	Tp. Bange Section Fractional s	ection		H P Q R
TATISTICS:				STATISTICS;			
ell type-Dug Elevation (lo face) Driven above below	n.	irri zuni	atus—stic* abandoned gation dry hole producer x s stock wells	Well type-Dug Elevation (le Drilled E face) Driven above below Final depth still drilling	ft.	irri	atus- stic* x stric* x stric* x stric* abendoned gation dry hole sipal producer s stock wells
Wild Horse Grange where name Address Adams, Gregon	A. A. Origi	Durand &		Frank Wilkinson Omers name Address Heppner, Oregon	A. M. Origi	Edwards nal dril	lers name xington, Oregon
			lling Winter 1946-47			e of dri	
his record compiled by H.S.W. ata secured from the Following sour	from De	perece		This record compiled by N.S.W. data secured from the following sour		epened	
ata secured from the Following sour	ces: re	-cased_	by		ces: re	-cased eaned	by
Driller				Driller	_		
ate compiled January 1948	De			Date compiled March 1948	De	te	
Material	Thickness (feet)	Depth (feet)	Remarks	Naterial	Thickness (feet)	Depth (feet)	Remarks
Clay and boulders	0	17	Casing: 22' 9" of 6"	Soil	11	11	
Black basalt	17	20	Static water level 181	Herdpen	7	81	
Gray basalt	20	30		Broken brown basalt	29	371	
herk hard basalt	30	52		Granite boulder	6	#4	Very hard and cutting whit
Gray basalt	52	66		Hard dark green rock	10	54	
Black becalt (hard and fine)	66	79		Softer dark green rock		59	
Dark basalt	79	92		Very hard green rock	9	68	Very hard and cuttings whi
Soft, gray basalt	92	100		Granite boulder	- 5	72	(new bit every 6 inches)
Black basalt Brown shale	100	112		Hard basalt - gray	6	78	
		i i		Blue basalt	9	87	
Dark basalt, hard	117	143	***************************************	Soft red rock, gritty (occasional thin Yellow clay (blue streaks)	57	91	
Gray basalt Black basalt (hard streaks)	143 160	209	P.44 of b.14	Red and blue clay, firm to har		158	
Black bassit (mard strengs)	160	209	Some water at 165 to 168	Blue clay - runny	8	166	
			1000 10101 07 107 10	Seamy, broken rock		183	(Still drilling - hole dry- need drill water)
	·	İ					Dogu Silii Water)
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Woodward			Index number	 -341	33- -28	Ū	
Well name			File number (Code: Tp., I				Sec.
LOCATION:					_	r -	_
Umntilla County				D	C	В	A
Pendleton Quadrangle				E	7	G	н
48 348 28 SW2				M	L	K	1
Tp. Range Section Fractional s	ection			N	P	Q	R
STATISTICS:							
Fell two-Dug Flevetion (le	nd sur-	Use sta	itus-	We.	11 8	tatu	8-
Drilled x face)above	ft.	dome	t10", X			ndon	
Final depth 979		irri	pation		dry	hol	Ţ
		include	stock wells		,,,,,		
Mrs. C. L. Goodward	A. A.	Durand	Son				
Owners name Address Adams, Oregon	Add	ress	ers name Walla Walla	, Va	shin	gton	
	Date	of dri	ling Sep	t. t	De	c. 1	941
This record compiled by N.S.W.	from Dec	pened x	-				
data secured from the Following sour	ces: re-	ened	by <u>A. A.</u>	Dur	and .	& So	<u> </u>
Driller			Walla Walla	, Va	shin	gton	
Date compiled January 1948	Dat	te	oct. and Nov.	194	6		
Material	Thickness (feet)	Depth (feet)	Re	mark	8		
Soil	7	7	8" hole				
Tellow dirt	49	56	Test records				
Black rock	21	77	30 g.p.m. in with no draw	dow:	ler fr	tes om 6	£ +1
Hard blue basalt	46	123					
Hard Fack basalt	12	135					
Soft red rock and clay	18	153	Test records	for	de	epen	ed we
Black rock	2	155	SWL 121			-	
Soft brown r and mud	10	165	18 g.n.m. w	th c	iraw	down	to est.
Hard black rock	30	195	132 on one Well recover of one inch	red :	at t	he r	ate
Hard gray basalt	15	210		por			_
	2	212					
Brown muddy rock Black basalt	31	243					
Very hard blue basalt	27	270					
Black rock	20	290					
Hard gray rock - crevices	9	299					
Hard gray basalt	21	320					
Blue clay	1	221					
Hard black basalt	11	332					
Hard gray basalt	20	352					
Black basalt - hard	18	370					
Very hard gray basalt	16	386					
Black rock with clay seams	19	405		-			_
Hard black rock	5	410					
Hard gray basalt	10	420	-				
Streaks of hard and soft rock	7	427					
Very hard blue rock	29	456					
Black rock and clay	3	459					
Hard black basalt	6	465					
Hard gray & black rock, crevic	s 4	469					
Very hard gray basalt	24	493					
Black rock with some clay stream	iks 62	555					
Medium brown rock	5	560					
Fairly hard black rock	19	579					
		598					
Hard grav baselt	19					_	
Hard gray basalt	19 on) 34	632					
Black rock (clay in upper port	on) 34	632					
Black rock (clay in upper port	on) 34 8	640	Water hau-				
Black rock (clay in upper port Eard blue rock Black rock	on) 34 8 3	640 643	Water here				
Black rock (clay in upper port	on) 34 8	640	Water here	rigi	nal	vel1	
Black rook (clay in upper port Eard blue rock Black rock Hari gray rock	on) 34 8 3	640 643 645		rigi	nal	well	
Black rock (clay in upper port Eard blue rock Black rock Eard cray rock Mard blue basalt	on) 34 8 3 2	640 643 645 780		rigi	nal	well	
Black rook (clay in upper port Eard blue rock Black rock Hari gray rock	on) 34 8 3	640 643 645		rigi	osl.	we11	

Sticky blue shale	12	822	
Gray sandy shale hard on bottom	20	842	
hard on bottom Black basalt, soft on top,	16	858	
Hard gray basalt	89	947	
	4	951	
Hard brown basalt			
Hard red rock	28	979	
		ļ	Bottom of hole
		ļ	
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Woods Well name				Index File n		7-211			
Meli name		-		(Code:		R.,	Sec.		Sec.
LOCATION:						_	_	_	
Gilliam	Count	_				D	c	В	A
						E	7	G	H
Arlington	Quadrangl	9				¥	L	ĸ	J
1N 21B						N	P	•	R
Tp. Range Sec	tion Fractional	section					Ľ	·	ت
Driven	I face)abovebelow		in u irri auni	stic* strial_ gation_ sipal	_		dry		ed e
	above below		intu	strial_ gation_ cipal_ s stock	_		dry	hol	
Final depth 3541 Rollo Woods Owners name	pelow	H.	inturiri gunic *include: E. Wilbern ginal dril	strial_ gation_ cipal_ s stock	wells		dry	hol duce	e . r x
Final depth 3541 Rollo Woods Owners name	above below	H. Ori	inturi zuni *include *include E. Wilburn ginal dril ddress 812	strial gation cipal s stock	wells		dry	hol duce	e . r x
Final depth 3541 Rollo Woods Owners name	pelow	H. Ori	inturiri gunic *include: E. Wilbern ginal dril	strial gation cipal s stock	wells		dry	hol duce	e . r x
Final depth 3541 Rollo Woods Owners name Address Umat This record compil data secured from	below	H. Ori A	inturi zuni *include *include E. Wilburn ginal dril ddress 812	strial gation cipal s stock	wells		dry	hol duce	e . r x
Final depth 3541 Rollo Woods Owners name Address Umat This record compil data secured from	above below tilla, Oregon	H. Ori A	inturirri guni *include: E. Wilborn ginal dril- ddress 812 ate of dril- Deepened re-cased	strial gation cipal s stock lers nas E. 7th	wells		dry	hol duce	e . r x
Final depth 3541 Rollo Woods Owners name Address Umat This record compil data secured from	below tilla, Oregon to by Dole the following sou	E. Ori A From rees:	inturirri guni *include: E. Wilborn ginal dril- ddress 812 ate of dril- Deepened re-cased	strial gation cipal s stock lers nas E. 7th	wells		dry	hol duce	e . r x

Material	Thickness (feet)	Depth (feet)	Remarks
Sand and conglomerate	100	100	
Basalt	254	354	Bottom of hole. Water
			encountered in soft honey- comb formation. Around 80
			feet of water standing in hole. Apparently quite a
			strong domestic well.
	i	İ	
	i		
	i		

Well name	File number (Code: Tp., R., Sec., 2 S					
LOCATION:				[p	c	В
Norrow County	7			E	,	å
Unmapped Quadrangle	•			1	L	,
38 258 34 HEL of HEL Tp. Range Section Fractional	section			N	P	Q
STATISTICS:						
Well type-Dug Elevation (1: Drilled x face)		dome	stic*x	We	11 .	
Drivenabove below		irri	strial		dry	ndon hol
Final depth 192			cipal s stock well		pro	duce
Address Heppner, Oregon This record countled by M.S.W.	Dat	e of dri	Walla Wall			
This record compiled by M.S.W. data secured from the following sour Driller	from Decrees: re-					
This record compiled by M.S.W. data secured from the following sour Driller	Pat from Derces: reces: cl.	e of dri epened cased eaned te	lling Sp		1947	
This record compiled by M.S.V. data secured from the Policeving sour Driller Date compiled January 1948	from Decrees: re-	e of dri epened cased eaned te	lling Sp	ring	1947	
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Key to Well Index System

All logs have been given a number for index purposes in this report. This number appears on the upper right hand corner of each log. The number for any given well corresponds to that used to spot the location of that well on the base map showing well distribution. Letters following the number refer to the county in which the well is situated, as follows:

G . . . Gilliam

M . . . Morrow

U . . . Umatilla

Un . . Union

In the index below, well logs are listed alphabetically; following this index, the logs are listed in numerical order.

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List of Flowing Wells

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	Um	atilla	County
Adam City	35 - U	163	Brought-in in 1938; still flows; no measured rate.
Athena City no.1	27 - U	68 0	Original flow of 15 g.p.m. ceased when pumping operations were commenced on city's no. 2 well.
Athena City no.2	28 - U	1206	Flow of estimated 40 to 50 g.p.m. ceased after pumping began; SWL now 15 feet.
Cockburn	3 - U	636	(Still drilling.) Estimated at 165 g.p.m.
Hermiston City no.2	87 - U	500	Original flow estimated at 125 g.p.m. Less now but still flows when not pumped.
Kilkinney	92 - U	140 170	Flows periodically at low g.p.m. rate.
Morton	41 - 0	146	Flowed originally; must be pumped now.
Nolin	74 - U	233	Estimated at 100 g.p.m.
Pilot Rock City	49 - U	309	Measured at 1420 g.p.m.
Rogers Canning Co. Athena no.3	31 - U	1148	Estimated at 40 g.p.m.
Stevens	8 - U	1007	Measured $61\frac{1}{2}$ g.p.m. in 1939. Well still flows; stronger in spring than summer.

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Nam e	no.	Depth	Flow Characteristics
Umatilla City no.2	84 - 0	580	Original flow in 1940 was an estimated 125 g.p.m. Ceased flowing in 1944. SWL now -32 feet.
Union Pacific, Meacham	48-U	279	Reported as 25 g.p.m.
Ward	86 - U	1000	Large flow reportedly encountered before well was lost and abandoned.
Wattenburgher	156 - 0	72	Estimated at 15 g.p.m.
Weber	67 - U	not known	Flowed originally; believed caved now.
		Morrow Co	unty
Baker no.1	161 -ж	98	Flow pressure unmeasured, but sufficient to service domestic water system without mechanical boost; flow persisted for 20 yrs.
Baker no.2	162 -M	86	Estimated at 20 g.p.m., but mechanical pressure boost needed to service domestic system.
Ball	163 -m	70	Unmeasured but at low g.p.m. rate and persistent for 28 yrs.
Boardman City	96 -m	178	Reported at 115 g.p.m.
Briggs	164 -m	96	Flow and pressure unmeasured but sufficient to service domestic water system without mechanical boost.
Cassidy	165 -1	85	Estimated at about 1 g.p.m.
Growder	166-M	85	Flow reportedly good and consistent, but mechanical pressure boost needed to service domestic water system.
Cutsforth no.2	109-M	46	Unmeasured but low g.p.m. rate.
Dillon	168 - ₩	100	Flow and pressure unmeasured but sufficient to service domestic water system without mechanical boost.
Doherty no.2	101 -M	125	Unmeasured, but reportedly strong and persistent for about 30 years.
Eades (C. D.)	169 - M	72	Flow and pressure unmeasured but sufficient to service domestic water system without mechanical boost.
Ely	171 -1	90	Very light now, but flow and pressure were originally strong enough to service domestic water system without mechanical boost (1924).
Fortner	172-M	85	Unmeasured, but supplies domestic water system by natural pressure.
Heppner City no.1	125 -M	211	Very strong for 3 years. SWL now deep.
Hodson	108-M	not known	Unmeasured, but low g.p.m. rate.
McEntire	173-м	127	Flow reportedly encountered but cased out.
McFarlane no.1	174-M	94	Measured at 54 g.p.m.

List of Flowing Wells (cont.)

	HISC OF		HOLLS (GOLIGE)
Name	Index no.	Depth	Flow Characteristics
McFarlane no.2	175-M	115	Estimated at 5 to 6 g.p.m.
Messenger	176-M	110	Unmeasured but low g.p.m. yield.
Moore	177 -M	116	Very light but persistent year round.
Nickerson	178-M	86	Unmeasured, but of domestic water system proportions.
Pool	181-M	96	Unmeasured, but supplies domestic water system by natural pressure.
Potts	182-M	93	Unmeasured, but supplies domestic water system by natural pressure.
Rasmussen (R. E.)	184-M	80	Reportedly flowed originally, but flow cased out later due to contaminated surface water.
Rice	107-M	350	Original flow reported as 600 g.p.m. (1915). Well still flows an estimated 40-60 g.p.m.
Rogers	185-M	87	Light periodic flow.
Rugg no.1	69 -1	161	Reported at 465 g.p.m.
Waagbo	187-M	83	Unmeasured. Mechanical boost needed to service domestic water system.
Wagner	188-M	76	Unmeasured. Reportedly consistent; ample for domestic water system.
Wasmer	189 -M	7 ⁴	Unmeasured. Reportedly consistent; ample for domestic water system.
Wells Springs	102 -x	425	Flow over casing measured at 25 g.p.m., but well was drilled in center of a strong natural spring which still flows.
		Union	County
Elgin City no.l	191 - Un	290	Original flow reported as 125 g.p.m.; adversely affected by city's no.2 well; flow resumes when no.2 is not pumped.
Elgin City no.2	192-Un	350	Original flow reported as 85 g.p.m.; flows when not pumped.
Elgin City no.3	193 - Un	655	Reported as 350 g.p.m.
LaGrande City no.1	151-Un	1093	Original flow reported as 500 g.p.m.; 300 g.p.m. in 1947.
LaGrande City no.2	152-Un	1370	Original flow reported as 1500 g.p.m.; 600 g.p.m. in 1947.
Union Pacific, LaGrande no.1	153 - Un	1557	Measured at 75 g.p.m. in 1947.
Union Pacific, LaGrande no.2	154-Un	1536	Measured at 289 g.p.m. in 1948.

Tabulation of Wells Having a Depth of 300 Feet or More

	Index Depth		Index	Depth
Name	no. (ft.)	Name	no.	(ft.)
Dallas	68 - ʊ 300	Milton City no.3	18-U	550
Krebs no.1	103-M 304	Rietman (Victor)	105-M	550
Pilot Rock City	49-U 309	Lundell	121-M	574
Mann	39 - U 315	Umatilla City no.2	84-U	580
Heppner Lumber Company no.1	127-M 319	Krebs no.2	145-G	609
Taylor	104-M 321	French no.2	64 - υ	624
Ordnance Depot no.1	194 - U 327	McClintock	122-M	630
Siebold	-U 344	Cockburn	3-Ծ	636*
Miller	9 - 0 345	Milton City no.l	21 - U	651
Elgin City no.2	192-Un 350	Elgin City no.3	193-Un	655
Rice	107-M 350	Smith Canning Co	56 - ℧	665
Heppner City no.2	126-м 352	Weatherford	150-G	666
Woods	148-G 354	Smith (Frank)	149-G	667
Ordnance Depot no.2	195 - U 360	Athena City no.1	27 - U	680
Tucker	93-м 365	Kincaid	115-м	685
Freewater City no.1	17 - 0 375	Cotter	12 0- M	690
McBride	5 - 0 376	Rogers Canning Co., Milton no.1	19 - U	702불
Gillanders	47 - ℧ 383	Eastern Oregon Food Co-op no.1	23 - U	737
Till	- ʊ 385	Umatilla City no.3	85 - 0	785
State Highway, Meacham	46 - 0 388	Pendleton Airport	58-ช	825
Olden	113-м 397	Mumm	59 - U	844
Schomp	-G 398	Smyth	146-G	895
U.S. Forest Service, Ukiah	129 - U 400	Milton City no.2	20-U	902
Vais no.l	- ℧ 400	Pendleton City	57 - 0	934
French no. 1	62 - U 416	Halvorsen no.2	116-м	946
Lexington City	111-M 420	Barnett	42-U	968
Wells Springs	102-м 423	Woodward	33 - U	979
Rietman (David)	106-M 427	Union Pacific, Kamela	155-Un	996
Corrigal	94-M 447	Ward	86 - U	1000
Ordnance Depot no.3	196-м 453	Stevens	8 - U	1007
Union Pacific, Munley no.2	99 - M 457	Halvorsen no.1	117-M	1040
Hermiston City no.2	87 - 0 500	Rogers Canning Co., Athena no.1	29-U	1069
Palmer	123-M 500	La Grande City no.1	151-Un	1093
Freewater City no.2	16-U 502	Rogers Canning Co., Athena no.3	31-V	1148
Birchman	79 - 0 505	Rogers Canning Co., Athena no.2	30 - U	1156
Echo City	77 - U 520	Athena City no.2	28-U	1206
Utah Canning Co	14-U 528	Eastern Oregon Food Co-op no.2	24 - U	1218
Roberts	112-M 529	La Grande City no.2	152 - Un	1370
Nolan	114 -м 533	Union Pacific, La Grande no.2	154-Un	1536
Weston City	25 - U 534	Union Pacific, La Grande no.1	153 - Un	1557
Ordnance Housing Project	90 - U 543	Milton Nursery	15 - 0	2000

^{*}Still drilling, March 1948.

	Municipal Wells			Industrial Wells		
		Index	Depth		Index	Depth
Name	7	no.	(ft.)	Name .	no.	(ft.)
Adam City	Umatilla County	35 - U	163	Umatilla County		
	no.1	27 - ℧	680	Eastern Oregon Food Co-op no.1 Eastern Oregon Food Co-op no.2	23 - U	737
Athena City		28-U	1206	Jones & Scott	24 - U	1218
Echo City		77 - U	520	Kik	95 - 0 81 - 0	160
Freewater Ci		17-U	375	Kilton Nursery	15-U	2000
Freewater Ci	•	16-U	502	• •	194-U	
Hermiston Ci	•	91 - 0	160	Ordnance Depot no.1	•	327 360
Hermiston Ci	•	87 - 0	500	Pendleton Airport	195-U 58 - U	825
Milton City	•	21-U	651	Rogers Canning Co., Athena no.1	29 - U	1069
-	no.2	20 - U	902	Rogers Canning Co., Athena no.2	30-U	1156
Milton City		18-U	550	Rogers Canning Co., Athena no.3	31 - U	1148
· · · · · · · · · · · · · · · · · · ·	using Project	90 - U	543	Rogers Canning Co., Milton no.1	19-U	703
	ity	57 - 0	9 34	Smith Canning Co.,	- 56-υ	665
Pilot Rock (~	ر 49 - ت	309	Union Pacific, Barnhart no.1	63 - 0	161
	ity	78-U	187	Union Pacific, Cayuse	44-U	85
Umatilla Cit		83 - U	133	Union Pacific, Field Station	89-U	275
Umatilla Ci		84 - 0	580	Union Pacific, Gibbon	43-U	80
Umatilla Ci	-	85 - U	785	Union Pacific, Meacham	48~U	279
	no.l	25 - U	534	Union Pacific, Rieth no.1	-55 - ∇	188
		-,		Union Pacific, Rieth no.2	54 - 0	287
	Morrow County			Union Pacific, Umatilla	82 - U	192
Boardman Gi	•	96 -m	178	Utah Canning Company	14-U	528
Heppner City	•	125-14	211	oun company	2 1-0	720
Heppner City		126-M	325	Morrow County		
• • • •	ity	111-M	420	Heppner Lumber Co. no.1	127-M	319
	•			Heppner Lumber Co. no. 2	128-M	229
	Union County			Union Pacific, Messner	97-M	162
Elgin City	no.1	191-Un	290	Union Pacific, Munley no.1	98-M	165
Elgin City		192-Un	350	Union Pacific, Munley no.2	99-M	457
Elgin City		193-Un	655		//	.)/
La Grande C	=	151-Un		Union County		
La Grande C	ity no.2	152-Un	1370	Union Pacific, Kamela	155-Un	996
		. •	- •	Union Pacific, LaGrande no.1	153-Un	
				Union Pacific, LaGrande no.2	154-Un	
				, =		-,,,
					-	
	1h			Dun 9-33-		
	Abandoned Wells			Dry Wells		
Halvorsen n	0.2	116- M	946	Halvorsen no.1	117-M	1040
Pendleton A:	irport	58 - 0	825	Hulden	147 - G	200
Rogers Cann	ing Co., Athena no. 2	30-U	1156	Palmer	123-M	500
Union Pacif:	ic, Munley no.1	98 -m	165	Smith (Frank)	149 - G	667
Ward		86 - U	1000	Smyth	146-G	895
Weber		67 - 0		Union Pacific, Kamela	155 - Un	996

Well Logs That Give Temperature Data

Name	Index no.	Temp.	Name	Index no.	Temp.
Baker no.2	162 -1	420	Eastern Oregon Food Co-op no.1	23 - U	600
McEntire	173-M	450	Birchman	79 - U	63°
Smith Canning Co	56 - 0	51늘이	Pilot Rock City	49 - 0	. 65°
Elgin City no.1	191-Un	52°	Echo City	77 - 0	67°
Elgin City no.3	193-Un	53°	Heppner City no.2	126-M	68°
Ordnance Housing Project	90 - U	53°*	Stevens	8 - u	69°
Lexington City	111-M	54°	Eastern Oregon Food Co-op no.2	24-U	70°
Nolin	74-U	55°	Umatilla City no.3	85 - 0	71°
Miller	9 - U	57°	Hermiston City no.2	87 - U	76°
Cockburn	3-V	58°	Union Pacific, LaGrande no.2	154 - Un	78°
Rogers Canning Co., Milton no.1	19 - U	58°	Wells Springs	102-M	800
Pendleton City	57 - 0	59°	LaGrande City no.2	152-Un	81°

^{*}Standing. After considerable pumping, temperature rises to 58°.

Suggestions Regarding Preparation of Well Logs

Well logs are rendered more valuable if certain important data are recorded accurately, concisely, and completely. In such form they will prove more readily usable to both the driller, the engineer, or the geologist. The job of recording a log in such fashion is not difficult if proper log forms are used. The log forms used in this report are not necessarily recommended except as a general pattern. Instead of submitting a finished model of a well log blank, some of the items that should be included on such a form are discussed below as a guide to anyone desiring to prepare a suitable blank.

1. A name should be given to all wells for future reference purposes. The owner's name is usually most appropriate, but the well should be further designated by an appropriate well number, and also by the ranch name if the owner has one or more ranches.

Example: Jones, Wilmot G., no. 3, Dry Creek.

- 2. Location should include description by county, township, range, section, and quarter section.
- 3. The driller should not only identify himself with his name and address, but where the job involves work on an old well, the original driller's name and the original date of drilling should be given also.
- 4. The nature of the new work on an old well should be set forth in the log; that is, the reconditioning, deepening, pump testing, and servicing.
- 5. The recording of drilling results should state why, if the hole was abandoned, and whether it was dry or a producer.
- 6. Depth of the hole; hole diameter at top and at bottom; final standing water level or rate of flow. Date on which drilling was commenced and finished should be recorded.

- 7. Records should list the number of feet of each size of casing used, the depths between which each size was set, together with comments on perforations, lining, and any other information considered pertinent. Casing diameters should be specified as OD (outside diameter) or ID (inside diameter) when listed.
- 8. In describing formations the driller should endeavor to be consistent in his descriptions of color. This is particularly important when two drillers are working in shifts, lest they each describe the same formation by different colors. Drillers should record regularly the color, drilling characteristics, and evidence of porosity or fracture for each formation penetrated. Although the original driller's log should show each change in the formation encountered, a condensed log can often be substituted later in cases where variations in the formation have been repeated.

Example: Black, massive basalt formation from 4 to 6 feet thick alternating with gray soft basalt from 5 to 10 feet in thickness. Total thickness 97 feet.

- 9. All changes in hole diameter should be indicated together with the depth at which the change was made.
- 10. All changes in standing water level and the depth at which the change occurred should be noted.
- 11. Tests should be described and their results should be summarized as comprehensively as possible. Reference is made to the discussion of this subject in the text. For bail tests, drillers should take pains to state bailer capacity and the number of bail loads when practicable.

PUBLICATIONS

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Bullet	The state of the s	postpaid
1.	Mining laws of Oregon, 1948, 2d rev., contains Federal placer mining regulations \$	-
2.	Progress report on Coos Bay coal field, 1938: F. W. Libbey	0.10
3•	Geology of part of the Wallowa Mountains, 1938: C. P. Ross	0.50
4.	Quicksilver in Oregon, 1938: C. N. Schuette	0.50
5•	Geological report on part of the Clarno Basin, 1938: Donald K. MacKay (out	of print)
6.	Preliminary report on some of the refractory clays of	
	Western Oregon, 1938: Wilson & Treasher (out	of print)
7•	The gem minerals of Oregon, 1938: H. C. Dake (out	of print)
8.	Feasibility of steel plant in lower Columbia area, rev. ed., 1940: R. M. Miller	0.40
9.	Chromite deposits in Oregon, 1938: J. E. Allen (sut	of print)
10.	Placer mining on Rogue River in relation to fish and fishing, 1938: H. B. Ward (out	of print)
11.	Geology and mineral resources of Lane County, Oregon, 1938: W. D. Smith	0.50
12.	Geology and physiography of northern Wallowa Mountains, 1941:	
	, W. D. Smith, J. E. Allen, et al	of print)
13.	First biennial report of the Department, 1937-38 (out	of print)
14.	Oregon metal mines handbook: by the staff	
	A. Baker, Union, and Wallowa counties, 1939 (out	of print)
	B. Grant, Morrow, and Umatilla counties, 1941 (out	of print)
	C. Vol. I, Coos, Curry, and Douglas counties, 1941 (out	of print)
	Vol.II, Section 1, Josephine County, 1942(out	of print)
	Section 2, Jackson County, 1943	
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	T. P. Thayer (map only)	of print)
16.	Field identification of minerals for Oregon prospectors and collectors,	
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	1939: J. E. Allen	0.20
19.	Dredging of farmland in Oregon, 1939: F. W. Libbey (out	of print)
20.	Analyses and other properties of Oregon coals, 1940: H. F. Yancey & M. R. Geer (out	of print)
21.	Second biennial report of the Department, 1939-40	Free
23.	Investigation of reported occurrence of tin at Juniper Ridge,	
	●regon, 1942: H. C. Harrison & J. E. Allen	0.40
24.	Origin of the black sands of the coast of southwestern Oregon, 1943: W. H. Twenhofel	0.30
25.	Third biennial report of the Department, 1941-42	of print)
26.	Soil: Its origin, destruction, and preservation, 1944: W. H. Twenhofel	0.45
27.	Geology & coal resources of Coos Bay quad., 1944: J. E. Allen & E. M. Baldwin	1.00
28.	Fourth biennial report of the Department, 1943-44	Free
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	F. W. Libbey, W. D. Lowry, & R. S. Mason	1.00
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	from Coos Bay to the mouth of the Columbia River, 1945: W. H. Twenhofel	0.35
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33.	Bibliography (supplement) of the geology and mineral resources of	
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35•	Geology of the Dallas and Walsetz quadrangles, Oregon, 1947: E. M. Baldwin	0.75
36.	Five papers on foraminifera from the Tertiary of Western Oregon, 1947:	
	J. A. Cushman, R. E. Stewart, & K. C. Stewart	1.00
38.	Sixth biennial report of the Department, 1947-48	Free
39•	Geology and mineralization of the Morning Mine and adjacent region,	
	Grant County, Oregon, 1948: Rhesa M. Allen, Jr	0.50

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G.M.I	SHORT PAPERS	Price	postpaid
1.	Preliminary report upon Oregon saline lakes, 1939: 0. F. Stafford	(out	of print)
2.	Industrial aluminum - a brief survey, 1940: Leslie L. Motz	\$	0.10
3.	Advance report on some quicksilver prospects in Butte Falls quadrangle,		
	Oregon, 1940: W. D. Wilkinson	(out	of print)
4.	Flotation of Oregon limestone, 1940: J. B. Clemmer & B. H. Clemmons		0.10
5.	Survey of nonmetallic mineral production of Oregon for 1940-41: C. P. Holdredge		0.10
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8.	Strategic and critical minerals, a guide for Oregon prospectors,		
** :	1942: Lloyd W. Staples	(out	of print)
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15.	Reconnaissance geology of limestone deposits in the Willamette Valley,		
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16.	Perlite deposits near the Deschutes River, southern Wasco County,		-
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	Geologic map of the Medford quadrangle, 1939: F. G. Wells & others		0.40
,	Geologic map and geology of the Round Mountain quadrangle, 1940:		
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	Geologic map of the Coos Bay quadrangle, 1944: J. E. Allen & E. M. Baldwin		
	(sold with Bull. 27)		
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	E. M. Baldwin (also in Bull 31)		0.35
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