

STATE ENGINEER
Salem, Oregon

UMAT
1544

OBSERVATION WELL
Well Record

STATE WELL NO. 4N/27-22pl ^{cad}
COUNTY Umatilla
APPLICATION NO.

OWNER: U.S. Army Installation

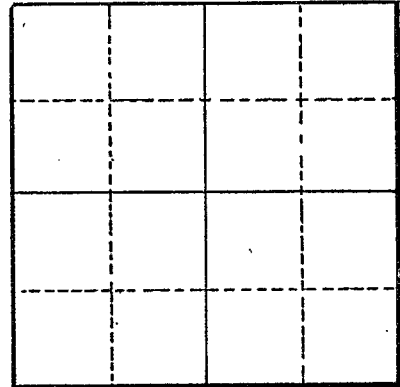
MAILING ADDRESS:

LOCATION OF WELL: Owner's No. 1

CITY AND STATE:

NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 22 T. 4 N. S., R. 27 E. W., W.M.

Bearing and distance from section or subdivision corner



Section

Altitude at well 585 ft.

TYPE OF WELL: Drilled Date Constructed

Depth drilled 327 ft. Depth cased 150 ft.

CASING RECORD: 12 inches.

FINISH:

AQUIFERS: Basalt

WATER LEVEL: 18 ft. below land surface - 5/1/53

PUMPING EQUIPMENT: Type Turbine H.P.
Capacity 1,000 G.P.M.

WELL TESTS:
Drawdown ft. after hours G.P.M.
Drawdown ft. after hours G.P.M.

USE OF WATER Industrial and Public Supply Temp. °F., 19....

SOURCE OF INFORMATION USGS report - Umatilla River Basin

DRILLER or DIGGER

ADDITIONAL DATA:
Log Water Level Measurements Chemical Analysis X Aquifer Test

REMARKS:

STATE ENGINEER
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UMAT
1544

State Well No. ^{cad} LN/27-2271
County ~~Wasco~~ UMATILLA
Application No. _____

Well Log

Owner: U. S. Army Ordnance Depot Owner's No. 1

Driller: A. A. Durand and Son Date Drilled 1941

CHARACTER OF MATERIAL	(Feet below land surface)		Thickness (feet)
	From	To	
Dug pit, no record	0	4	4
Glaciofluvial deposits:			
Gravel and sand, loose	4	61	57
Gravel and boulders	61	63	2
Gravel	63	66	3
Gravel and clay	66	87	21
Gravel, fine	87	102	15
Gravel and sand	102	104	2
Gravel, fine, loose, and sand	104	149	45
"Shale"	149	151	2
Gravel	151	157	6
Columbia River basalt:			
Basalt, black	157	160	3
Gravel, cemented	160	180	20
Basalt, black	180	195	15
Basalt and clay	195	200	5
Basalt	200	206	6
Basalt, black, hard	206	263	57
Basalt, gray, hard	263	295	32
Basalt, black, with clay	295	301	6
Basalt, gray, hard	301	308	7
Basalt, black, honeycomb	308	318	10
Basalt, gray very hard	318	327	9

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UMAT 1544

State Well No. ^{cad} 4N/27-22pl

County Umatilla

Application No.

Chemical Analysis

OWNER U.S. Army Installation OWNER'S NO.

ANALYST Chilton Laboratories Address Portland

Date of Collection 4/26/41

Point of Collection

	P.P.M.	E.P.M.
Silica (SiO ₂)	XX 5	
Iron (Fe) Total	.15	
Manganese (Mn)		
Calcium (Ca)	38.	
Magnesium (Mg)	11.	
Sodium (Na)		
Potassium (K)		
Bicarbonate (HCO ₃)	148.	
Carbonate (CO ₃)		
Sulfate (SO ₄)	11.	
Chloride (Cl)	11.	
Fluoride (F)		
Nitrate (NO ₃)		
Boron (B)		
Dissolved Solids		
Hardness as CaCO ₃	140.	
Specific Conductance (Micromhos at 25°C)		
pH	7.7	
Percent Sodium		
Sodium Absorption Ratio (S.A.R.)		
CLASS		

Water Level Record

OWNER: Umatilla Army Depot

OWNER'S NO. 1

Description of measuring point: S.W. 1/4 Sec. 22 T4N R27E Umatilla

Date	Water Level Feet (below) Land Surface	Remarks	Date	Water Level Feet (below) Land Surface	Remarks
Mar. 50	90		Jan 54	80	
Apr	90		Feb	80	
May	90		Mar	80	
Jun	90		Apr	81	
Jul	90		May	81	
Aug	90		Jun	80	
Sep	90		Jul	80	
Oct	90		Aug	84	
Nov	90		Sep	83	
Dec	90		Oct	84	
Jan 51	90		Nov	84	
Feb	90		Dec	84	
Mar	90		Jan 55	84	
Apr	90		Feb	85	
May	90		Mar	86	
Jun	90		Apr	86	
			May	85	
			Jun	85	

REMARKS: Records unavailable July 1951 thru December 1953
No static levels recorded before March 1950.

STATE ENGINEER
Salem, Oregon

State Well No.

County

Application No. 4

Water Level Record

OWNER: Umatilla Army Depot

OWNER'S NO. 1

Description of measuring point: S.W. 1/4 Sec. 22 T4N R27E Umatilla

Date	Water Level Feet (above) (below) Land Surface	Remark	Date	Water Level Feet (above) (below) Land Surface	Remarks
Jul 55	85		Jan 57	84	
Aug	85		Feb	84	
Sep	84		Mar	84	
Oct	91		Apr	84	
Nov	92		May	84	
Dec	92		Jun	84	
Jan 56	85		Jul	83	
Feb	86		Aug	83	
Mar	86		Sep	83	
Apr	86		Oct	83	
May	86		Nov	83	
Jun	85		Dec	83	
Jul	85		Jan 58	84	
Aug	84		Feb	84	
Sep	84		Mar	84	
Oct	84		Apr		Pump Out
Nov	79		May		Air Line Out
Dec	84		Jun		Air Line Out

REMARKS:

Water Level Record

OWNER: Uastilla Army Depot

OWNER'S NO. 1

Description of measuring point: S.W. 1/4 Sec. 22 T4N R27E Uastilla

Date	Water Level Feet (above) (below) Land Surface	Remarks	Date	Water Level Feet (above) (below) Land Surface	Remarks
Jul 58		Air Line Out	Jan 60	90	
Aug	89		Feb	90	
Sep	89		Mar	90	
Oct	89		Apr	91	
Nov	89		May	91	
Dec	89		Jun	90	
Jan 59	90		Jul	89	
Feb	90		Aug	89	
Mar	91		Sep	88	
Apr	91-		Oct	89	
May	91		Nov	89	
Jun	90		Dec	89	
Jul	89		Jan 61	90	
Aug	89		Feb	90	
Sep	88		Mar	90	
Oct	88		Apr	91	
Nov	89		May	90	
Dec	89		Jun	89	

REMARKS: _____

Water Level Record

OWNER: Umatilla Army Depot

OWNER'S NO. 1

Description of measuring point: S. W. $\frac{1}{4}$ Sec. 22 T4N R27E Umatilla

Date	Water Level Feet (below) Land Surface	Remarks	Date	Water Level Feet (below) Land Surface	Remarks
Jul 61	89		Jan 63	92	
Aug	89		Feb	92	
Sep	89		Mar	92	
Oct	89		Apr	92	
Nov	89		May	91	
Dec	90		Jun	91	
Jan 62	90		Jul	90	
Feb	90		Aug	90	
Mar	91		Sep	91	
Apr	91		Oct	91	
May	90		Nov	91	
Jun	90		Dec	91	
Jul	90		Jan 64	92	
Aug	90		Feb	92	
Sep	89		Mar		Under Repair
Oct	91		Apr	90	
Nov	91		May	90	
Dec	91		Jun		Air Line Plugged

REMARKS: _____

Water Level Record

OWNER: Umatilla Army Depot

OWNER'S NO. 1

Description of measuring point: S. W. 1/4 Sec. 22 T4N R27E Umatilla

Date	Water Level Feet (below) Land Surface	Remarks	Water Level Feet (above) Land Surface	Remarks
Jul 64		Air Line Plugged		
Aug	94			
Sep	94			
Oct	94			
Nov	94			
Dec	94			
Jan 65	95			
Feb	95			
Mar	94			
Apr	94			
May	94			

REMARKS:

M E M O

On January 27, 1964, Mr. Robert DeBow and myself contacted Mr. Williams at the U. S. Army Ordnance Depot at Ordnance, Oregon. We conducted a current meter survey of Well #~~2~~ in Building #25 at the Depot. The well ~~depth~~ ^(K-1000000) 4N/27-22~~01~~ ^{4-1-32744?} was measured and found to be 325 feet deep not ~~360~~ ³²⁷ feet as reported. The static water level was 78.64 feet below top of casing at land surface. The water level was reported to be 100 feet below land surface datum at date of construction in 1941. In 1951 the static level was reported 90 feet below land surface datum and in March 1963 it was 90 feet. It is not known whether or not these earlier measurements were made with air lines or tapes. The most recent depth of 78.64 was measured by electric tape and may represent the most accurate water level data in the area.

The well did not reveal any zones of detectable ground-water movement. The current meter was placed at numerous depth in the well and no water movement was noted.

Mr. Williams said that another well will be opened up in about 3 weeks and that they would like us to return for a similar test. This will be in the latter part of February 1964. Submersible pumps are being installed for lower pumping rates and lower horse power requirements.

I mentioned water rights on these wells and will send them the ground water usual literature.

By

Wm. S. Bartholomew,
Geologist