



UMAT 3962
3962
OBSERVATION WELL

5N/35-12 F(2)
UMATILLA

Application No. U 159
Permit No. U 150
Well No. 2

REPORT ON COMPLETION OF WELL

(Note: This report should be submitted to the State Engineer, Salem, Oregon, as soon as possible after the well is completed. If more than one well is covered by this permit, a separate report shall be filed for each)

Date of Report October 10, 1945

1. Location of well: SE 1/4 of NW 1/4 of Section 12 Twp. 5 N Rge. 35E, W. M.
2. Name of nearest natural surface stream Walla Walla River
3. Distance from well to that stream: 1,500 feet.
4. If the well is less than 1300 feet from a natural surface stream, give the difference in elevation between the ground surface at the well and the lowest point in stream channel: _____ feet.
5. Date of beginning drilling or digging May 6, 1944
6. Date well was completed _____

7. LOG OF MATERIALS ENCOUNTERED

Character of Material	Depth at which encountered	Thickness of stratum
Gravel	At surface	ft.
Gravel (cement)	28 ft.	42 ft.
Black Basalt	70 ft.	146 ft.
Brown Rock	216 ft.	14 ft.
Black & Brown Basalt	230 ft.	331 ft.
Gray Basalt	561 ft.	93 ft.
Black & Gray Basalt	654 ft.	67 ft.
Brown Basalt	721 ft.	40 ft.
Red & Gray Rock	761 ft.	4 ft.
Remarks Black & Gray Basalt	765 - 902'	137 ft.

Remarks: 902' total depth of well. From 230' - 902' static water level was 105'.

WELL INFORMATION

8. Diameter of well _____ inches. Depth of well 902' feet.
9. Depth at which water was first encountered 230 feet.
10. Water level when completed: 105 feet below ground surface.
11. Additional information regarding well; such as soil conditions, quick sand, caves, obstructions, rock, etc.: Water first encountered at 57' depth of well with water level 17' 6" below ground level. Cased out, casing extending to a depth of 99'.

PUMP INFORMATION

- 12. Manufacturer of pump: Peerless Pump Company - Los Angeles, Calif.
- 13. Address: _____
- 14. Data on name or base plate: Serial No. 24875 Bottom bowl is 260' column Size 12" MA, Stage 10., Type head 14B., Suction 10" Standard, Size discharge 10" Std.
- 15. Data on pump bowl assembly: _____
- 16. Size of pump: 12" MA
- 17. Rated capacity: 1,000 gallons per minute.
- 18. Rated speed: 1,800 RPM revolutions per minute.
- 19. Number of stages: 10
- 20. Size of intake pipe: 12
- 21. Size of discharge pipe: 10"
- 22. Length of intake pipe: 260' (Column)
- 23. Length of discharge pipe: 30'
- 24. Suction lift: (difference in elevation between water surface in well and pump) 170'
- 25. Discharge lift: (difference in elevation between pump and end of discharge line) Pumping against 65 lb. main pressure.
- 26. Depth of pump intake below ground surface: 260' feet.
- 27. Remarks: _____

MOTOR OR ENGINE INFORMATION

- 28. Name of manufacturer: U. S. Electric
- 29. Address: Los Angeles, Calif.
- 30. Type of motor or engine: C. F. U.
- 31. Data on name or base plate: Serial No. 49#345., HP - 125., RPM - 1800., Frame 984A., Volts 2300., Phase 3., Cycle 60.
- 32. Rated horsepower: 125
- 33. Rated speed of motor or engine: 1800 revolutions per minute.

34. Rated Capacity of Pump (with described motor)	1000	g.p.m. at	<u>400</u>	ft. head
		g.p.m. at		ft. head
		g.p.m. at		ft. head
		g.p.m. at		ft. head
		g.p.m. at		ft. head

- 35. Remarks: _____

CAPACITY TEST

36. Date of test: 9-21-45 37. Temperature of water 55 °F. or °C.
 38. Motor speed during test: 1780 & 1785
 39. Test made by (weir, tank or other means): 6" Orifice - calibrated.

40. Pounds pressure	TOTAL HEAD	*Total lift in feet	Gallons per min.	°Feet to water level	□ Draw-down	+Time
<u>101</u> lbs., Gauge at pump		Total <u>178</u> ft. <u> </u> in.	<u>986</u>	<u>107</u> ft.	<u>71</u> ft.	<u>11:30</u> M. A.M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.
<u>60</u> lbs., Gauge at pump		Total <u>195</u> ft. <u> </u> in.	<u>1135</u>	<u>107</u> ft.	<u>88</u> ft.	<u>1:40</u> M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.
<u>100</u> lbs., Gauge at pump		Total <u>172</u> ft. <u> </u> in.	<u>990</u>	<u>107</u> ft.	<u>65</u> ft.	<u>1:30</u> P.M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.
<u> </u> lbs., Gauge at pump		Total <u> </u> ft. <u> </u> in.		<u> </u> ft.	<u> </u> ft.	<u> </u> M.

- * Difference in elevation between water level in well and outlet of pump test line. 107'
 ° Distance from ground level to water surface in well. 105' Static
 □ Distance water level is lowered during time interval.
 + Hour and minute at which observation was made.

41. Installation will work efficiently under normal head of 400 ft.
 42. Water is discharged into: City water mains.

43. Was water lowered to pump intake by test? Drawn down to depth of 178'

44. Remarks: While running only. Returned to 107' static level when stopped.

GENERAL INFORMATION

45. Name of contractor or other party who drilled or dug well: A. A. Durand & Son
 Address: Walla Walla, Wash.
 46. Pump and motor were installed by: A. A. Durand & Son under supervision of
B.M.Kunes Address: Peerless Pump Co. Los Angeles Calif.
 47. Capacity test was made by: B. M. Kunes, Peerless Pump Co.
 Address: Los Angeles, Calif.
 48. General remarks: _____

Report made by _____ (sign here)

Water Level Record

OWNER: MILTON FREEWATER OWNER'S NO. # 2

Description of measuring point: _____

Date	Water Level Feet (above) (below) Land Surface	DATE	WATER LEVEL	Date	Water Level Feet (above) (below) Land Surface	DATE	WATER LEVEL
9-21-45	105	11-55	140	10-58	152	2-62	167
9-17-51	132	12	140	3-59	142	3	167
3-54	138	1-56	140	5	152	6	182
4	138	2	142	7	170	8	187
5	135	3	140	8	165	12	183
6	147	5	144	12	165	1-63	176
7	155	6	155	2-60	175	2	178
9	136	7	164	4	160	3	176
10	132	8	155	6	175	4	172
11	135	10	160	7	184	6	197
12	148	10-57	163	11	173	8	202
1-55	136	11	160	12	170	9	203
2	133	12	158	1-61	168	11-18	185
3	134	4-58	165	3	165	12-21	180
4	134	5	166	6	180	1-20-64	178
5	150	7	170	7	175	2-24	175
6	147	8	165	11	170	3-17	175
9	142	9	165	1-62	169	4-27	170

REMARKS: _____

STATE ENGINEER
Salem, Oregon

UMAT 3962

State Well No. SN/35-12F(2)

County UMATILLA

Application No.

Water Level Record

OWNER: MILTON FREDWATER OWNER'S NO. # 2

Description of measuring point:

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Date	Water Level Feet (above) (below) Land Surface	Remarks	Date	Water Level Feet (above) (below) Land Surface	Remarks
5-25-64	172				
6-22	180				
7-13	195				
8-24	194				
10-26	194				
11-23	188				
12-21	182				

REMARKS:

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STATE ENGINEER
Salem, Oregon

UMAT 3962

State Well No. 5/35-1272

County Umatilla

Application No.

Chemical Analysis

OWNER City of Milton-Freewater OWNER'S NO. 2

ANALYST U S G S Address

Date of Collection Nov. 18, 1946

Point of Collection

	P.P.M.	F.P.M.
Silica (SiO ₂)		
Iron (Fe) Total	0.0	
Manganese (Mn)		
Calcium (Ca)	17.	
Magnesium (Mg)	7.4	
Sodium (Na)	33.	
Potassium (K)		
Bicarbonate (HCO ₃)	104.	
Carbonate (CO ₃)		
Sulfate (SO ₄)	9.9	
Chloride (Cl)	5.8	
Fluoride (F)	0.3	
Nitrate (NO ₃)	0.2	
Boron (B)		
Dissolved Solids	106.	
Hardness as CaCO ₃	73.	
Specific Conductance (Micromhos at 25°C)	18.	
pH		
Percent Sodium	30.	
Sodium Absorption Ratio (S.A.R.)		
CLASS		

Umatilla

Oregon State Board of Health

SANITARY ENGINEERING LABORATORY

REPORT OF MINERAL ANALYSIS OF WATER

Location of source Hilton-Frazier Description of source Well #2
 Analysis by MFP Date 11/12/54 Collected by Date 6/25/54

RESULTS

	REMARKS
Turbidity	0
Color: Apparent	2
True	
Odor: Hot	0
Cold	
Total Solids	167
Loss on Ignition	63
Silicon (SiO ₂)	61
Chloride (Cl)	4.3
Sulfate (SO ₄)	3.5
Calcium (Ca)	26
Magnesium (Mg)	10
(P ₂ O ₅)	
Metaphosphates (PO ₃) ₆	
Alkalinity (as CaCO ₃): Carbonate	0
Bicarbonate	85
Hardness (as CaCO ₃)	71
Sodium and Potassium (as Na)	22
Iron (Fe)	.15
Manganese (Mn)	0
Fluoride (F)	.2
Carbon Dioxide (CO ₂)	2.3
pH	7.9
Remarks	