

IVED

3961 UMAT 3961 OBSERVATION WELL

5N/35-12-771 F(1) UMATILLA

1938 STATE ENGINEER SALEM, OREGON

Milton Freewater * 1

Application No. U 109 Permit No. U 102 Well No. * 1

G 5389

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 _____, 193__

- #. 40' of Lot 5, Block 7, McCoy's Addition to Milton City, Oregon. 1. Location of well: S. W. 1/4 of Section 12 Twp. 5 NBge. 35 E. W. M. 2. Name of nearest natural surface stream Walla Walla River 3. Distance from well to that stream: 1000 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: 9.5 feet. 5. Date of beginning drilling or digging January 2, 1937 6. Date well was completed March 1, 1938

LOG OF MATERIALS ENCOUNTERED

Table with 3 columns: Character of Material, Depth at which encountered, Thickness of stratum. Includes entry '(SEE SHEET ATTACHED)' and multiple rows of 'ft.' measurements.

Remarks: _____

WELL INFORMATION

- 8. Diameter of well 12" inches. Depth of well 652 feet. 9. Depth at which water was first encountered 90' feet. 10. Water level when completed: 87' feet below ground surface. 11. Additional information regarding well; such as soil conditions, quick sand, caves, obstructions, rock, etc.: See log attached.

This well for "standby" service only.

RECEIVED
MAY 1 1938
STATE ENGINEER
SALMON C. COOK

UMAT 3961

F 11)
5N/35-12 (#7)
UMATILLA

PUMP INFORMATION

- 12. Manufacturer of pump: Fairbanks-Morse & Company
- 13. Address: 1220 First Avenue South, Seattle, Washington
- 14. Data on name or base plate: #32523 - Seattle No. 7310
o Stage 12" Imp. 7472, Figure 0920, 1750 R.P.M.
Outside column 9" O. D., Length 150', Shaft 1 5/8" Dia.
- 15. Data on pump bowl assembly: _____
- 16. Size of pump: 12"
- 17. Rated capacity: 1000 gallons per minute. 80 pounds pressure
- 18. Rated speed: 1800 revolutions per minute. water to water hd.
- 19. Number of stages: 0
- 20. Size of intake pipe: 9"
- 21. Size of discharge pipe: 12"
- 22. Length of intake pipe: 150'
- 23. Length of discharge pipe: Direct into 12" city main
- 24. Suction lift: (difference in elevation between water surface in well and pump)
- 25. Discharge lift: (difference in elevation between pump and end of discharge line)
- 26. Depth of pump intake below ground surface: 187' feet.
- 27. Remarks: 187' to bottom of intake pipe

MOTOR OR ENGINE INFORMATION

- 28. Name of manufacturer: Fairbanks-Morse & Co.
- 29. Address: 1220 First Avenue South, Seattle, Washington
- 30. Type of motor or engine: 100 H.P., Morse Type, 1750 R.P.M., 3 phase,
0 cy., 440 volts, vertical ball bearing, hollow shaft squirrel cage.
- 31. Data on name or base plate: _____
- 32. Rated horsepower: 100
- 33. Rated speed of motor or engine: 1750 revolutions per minute.

34. Rated Capacity of Pump (with described motor)	1000	g.p.m. at	305	ft. head
	1200	g.p.m. at	250	ft. head
	1250	g.p.m. at	240	ft. head
		g.p.m. at		ft. head
		g.p.m. at		ft. head

35. Remarks: _____

VED

1933

CAPACITY TEST

36. Date of test: April 22 37. Temperature of water 58F. or °C.
58. Motor speed during test: _____
39. Test made by (weir, tank or other means): Orifice

40. Pounds pressure	TOTAL HEAD	*Total lift in feet	Gallons per min.	°Feet to water level	□ Draw-down	*Time
___ lbs., Gauge at pump	Total	___ ft. ___ in.		___ ft.	___ ft.	___ M.
___ lbs., Gauge at pump	Total	___ ft. ___ in.		___ ft.	___ ft.	___ M.
___ lbs., Gauge at pump	Total	___ ft. ___ in.		___ ft.	___ ft.	___ M.
___ lbs., Gauge at pump	Total	___ ft. ___ in.		___ ft.	___ ft.	___ M.
___ lbs., Gauge at pump	Total	___ ft. ___ in.		___ ft.	___ ft.	___ M.
___ lbs., Gauge at pump	Total	___ ft. ___ in.		___ ft.	___ ft.	___ M.
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___ lbs., Gauge at pump	Total	___ ft. ___ in.		___ ft.	___ ft.	___ M.
___ lbs., Gauge at pump	Total	___ ft. ___ in.		___ ft.	___ ft.	___ M.
___ lbs., Gauge at pump	Total	___ ft. ___ in.		___ ft.	___ ft.	___ M.

(See report of Pa banks- se Engineer attached)

* Difference in elevation between water level in well and outlet of pump test line.
° Distance from ground level to water surface in well.
□ 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 305 ft.
42. Water is discharged into: 12" city water main
43. Was water lowered to pump intake by test? _____
44. Remarks: _____

GENERAL INFORMATION

45. Name of contractor or other party who drilled or dug well: A. A. Durand
Address: Walla Walla, Washington
46. Pump and motor were installed by: Carleton M. Mull, Fairbanks-Morse Co.
Address: Yakima, Washington
47. Capacity test was made by: Carlton M. Mull
Address: Yakima, Washington
48. General remarks: Checked by Mr. White, Engineer, Oregon Insurance Rating Bureau, Portland, Oregon

Report made by Milton City
(sign here)
Ken ...
Res. Mgr.

LOG OF MILTON WELL - UMATILLA COUNTY

From 1 to 30 ft. gravel
 30 to 37 " Cement & Gravel
 37 to 40 " Gravel & Clay
 40 to 60 " Black Rock
 60 to 98 " Rock & Clay
 98 to 115 " Black Rock
 115 to 122 " Hard Black Rock
 122 to 140 " Medium Rock
 140 to 145 " " " Soft Red Brown
 145 to 180 " " " Black
 180 to 186 " Hard Black Rock
 186 to 202 " Medium Grey Rock
 202 to 212 " Soft " "
 212 to 249 " Medium Brown Rock
 249 to 256 " Hard Brown "
 256 to 280 " Soft Brown Rock
 280 to 367 " Medium Grey Rock
 367 to 416 " " Black Rock
 416 to 440 " " Grey "
 440 to 450 " " Black "
 450 to 651 " " Grey "

RECEIVED
 JUN 14 1908
 STATE ENGINEER
 SALT LAKE CITY

UMAT 3961

SN/35-12-~~44~~ F111
UMATILLA

MILTON CITY, OREGON

APRIL 22, 1938

Test made Fairbanks, Morse Turbine Pump

Pump #32523, Seattle No. 7316

6 Stage 12" Imp. -747-E Fig 6920 - 1750 R.P.M.

Outside column 9" O.D. Length 150 ft. shaft 1-5/8" Dia.

Capacity 1000 G.P.M. at Water to Water head 300 Ft.

Motor Fairbanks, Morse 100 H.P. Type HSZU - 1800 R.P.M.

Motor No.324047 - Fr.JL163B - 3 ph. 60 cycle 440 Volt.

118 Amps. F.Load Speed 1755 R.P.M.

Test Data:-Pump Started at 2:55 P.M.; Stopped at 5:30 P.M.

Length of air line below pump floor level 177' + 5'7" =182'7"

Draw down gauge before pumping = 37 lbs. = 85.5 ft.

Pumping at no pressure on discharge.

Draw gauge 10# = 23.1 Ft.

Pumping level 140 Ft.

Capacity thru 9.5" orifice in 12" O.D. Pipe 10" = 1400 G.P.M.

K. W. demand at power 1 mile distance 90 K.W. X 1.34 = 1201 H.P.

Discharge pressure 30# = 69.3 Ft.

Draw down gauge reading 14# = 32.25 Ft.

Capacity thru 9.5" orifice 8" = 1200 G.P.M.

Discharge pressure 50# = 115.5 Ft.

Draw down gauge 16 lbs = 36.98 Ft.

Discharge thru 9.5" orifice 7" = 1150 G. P. M.

Motor Speed 1762 - 1775 - 1760 R.P.M.

Motor In Put 127 Amps - 121 - 125 - P.Factor 90%

Discharge pressure 80 lbs. = 184.8 Ft.

Draw down gauge = 21 lbs. = 48.5 Ft.

Discharge thru 9.5" orifice 5-1/4" = 1000 G.P.M.

Motor Speed 1752 - 1754 - 1760 R. P. M.

Motor In Put 125 Amps - 124 - 122. P. Factor 88%

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JUN 4 1938
STATE ENGINEERING
SALMON DIVISION

Umatilla

Oregon State Board of Health

215

SANITARY ENGINEERING LABORATORY

REPORT OF MINERAL ANALYSIS OF WATER

Location of source Hillside - Freewater Description of source W

Analysis by MP Date 11/19/53 Collected by _____ Date 6/25/51

RESULTS

	Parts per million
Turbidity	5
Color: Apparent	3
Odor: Hot	Cold
Total Solids	178
Loss on Ignition	0.2
Silicon (SiO ₂)	19
Chloride (Cl)	4.8
Sulfate (SO ₄)	5.4
Calcium (Ca)	34
Magnesium (Mg)	2.3
Aluminum (Al)	0
Orthophosphates (PO ₄)	.10
Metaphosphates (PO ₃) ₆	
Alkalinity (as CaCO ₃): Carbonate	0
Bicarbonate	78
Hardness (as CaCO ₃)	78
Sodium and Potassium (as Na)	25
Iron (Fe)	0
Manganese (Mn)	0
Fluoride (F)	.1
Carbon Dioxide (CO ₂)	2.5
pH	7.9
Remarks	

UMAT 3961

STATE ENGINEER
Salem, Oregon

State Well No. 5N/35-12F(1)

County UMATILLA

Application No. _____

Water Level Record

OWNER: MILTON FREEWATER OWNER'S NO. # 1

Description of measuring point: _____

Date	Water Level Feet (above) (below) Land Surface	Remarks		Date	Water Level Feet (above) (below) Land Surface	Remarks	
		DATE	WATER LEVEL			DATE	WATER LEVEL
5-28-37	85.5	6-55	145	4-57	140	10-59	173
7-45	107	8	149	8	160	11	164
5-52	136	9	140	9	165	12	165
2-15-54	137	10	139	10	160	1-60	168
2-30	136	11	142	11	156	2	174
4	138	12	140	12	158	3	186
5	135	2-56	140	1-58	155	4	165
6	145	3	138	3	155	5	170
7	147	4	145	4	153	6	175
9	136	5	142	5	155	7	183
10	132	7	151	8	165	8	180
11	125	8	154	10	150	9	176
12	132	9	155	11	157	10	174
1-55	135	10	150	12	150	11	173
2	132	11	148	3-59	145	1-61	169
3	134	12	145	4	150	2	182
4	130	1-57	148	8	164	4	195
5	134	2	147	9	173	5	190

REMARKS: _____

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Salem, Oregon

State Well No. 5N/35-12F(1)

County UMATILLA

Application No. _____

Water Level Record

OWNER: MILTON FREEWATER OWNER'S NO. #1

Description of measuring point: _____

Date	Water Level Feet (above) (below) Land Surface	Remarks	Date	Water Level Feet (above) (below) Land Surface	Remarks
6-61	182		4-20-64	181	
7	180		5-18	183	
11	170		6-15	196	
12	172		7-13	205	
11-62	190		8-24	204	
12	188		9-21	205	
1-63	200		10-26	202	
2	200		12-28	193	
3	200				
4	204				
5	195				
6	207				
10-28	200				
11-20	193				
12-2	194				
1-13-64	188				
2-24	185				
3-17	210				

REMARKS: _____
