

STATE ENGINEER
Salem, Oregon

UMAT
440

OBSERVATION WELL
Well Record

STATE WELL NO. 2N/27-1F(1)
COUNTY Umatilla
APPLICATION NO. U-750

OWNER: Ammon Bros.

MAILING ADDRESS:

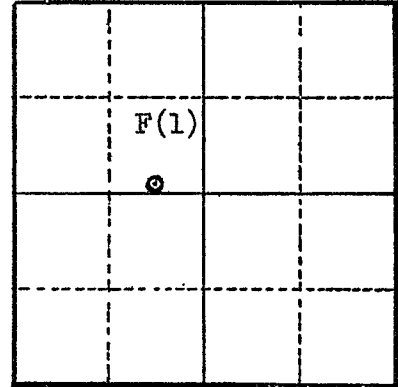
LOCATION OF WELL: Owner's No.

CITY AND STATE:

Echo, Oregon

SE 1/4 NW 1/4 Sec. 1 T. 2 N. 27 E. W.M.

Bearing and distance from section or subdivision corner N.47°34'W. 3942.2' from SE cor. of sec. 1



Section 1

Altitude at well 760'+

TYPE OF WELL: Drilled Date Constructed 1952

Depth drilled 554' Depth cased 140'

CASING RECORD:

- 15 inch set from 0 to 140 feet
- 15 inch open hole from 140 to 240 feet
- 12 inch from 240 to 554 feet

FINISH:

Open hole

AQUIFERS:

Basalt

WATER LEVEL:

327 feet

PUMPING EQUIPMENT: Type Turbine

H.P. 150

Capacity 1000 G.P.M.

WELL TESTS:

Drawdown 20 ft. after 1000 hours G.P.M.

Drawdown ft. after hours G.P.M.

USE OF WATER Irrigation Temp. °F. 19

SOURCE OF INFORMATION U-682

DRILLER or DIGGER Ben Dreyer

ADDITIONAL DATA:

Log X Water Level Measurements Chemical Analysis Aquifer Test

REMARKS:

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

STATE ENGINEER, SALEM 10, OREGON within 30 days from the date of well completion.

WATER WELL REPORT

STATE OF OREGON (Please type or print)

State Well No. 2N/27-1F

State Permit No. _____

RECEIVED
SEP 9 1963

(1) OWNER:

Name Claudia H. STATE ENGINEER
Address Echo One SALEM, OREGON

(11) WELL TESTS:

Drawdown is amount water level is lowered below static level
Was a pump test made? Yes No If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes No

(2) LOCATION OF WELL:

County Umatilla Driller's well number _____
1/4 1/4 Section T. R. W.M.
Bearing and distance from section or subdivision corner
Well No 2

(12) WELL LOG:

Diameter of well below casing _____
Depth drilled ft. Depth of completed well ft.
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

(3) TYPE OF WORK (check):

Well Deepening Reconditioning Abandon
Abandonment, describe material and procedure in Item 12.

(4) PROPOSED USE (check):

Domestic Industrial Municipal Rotary Driven
Irrigation Test Well Other Cable Jetted
Dug Bored

(5) TYPE OF WELL:

MATERIAL	FROM	TO
Encountered steel object at 890' was unable to drill by it or fish it out 14 hrs at top Diameter of 6 1/4"		
Well was checked for loss of Artesian water through existing seals there being no losses		

(6) CASING INSTALLED:

Threaded Welded
8 3/4" Diam. from 880 ft. to 890 ft. Gage _____
" Diam. from _____ ft. to _____ ft. Gage _____
" Diam. from _____ ft. to _____ ft. Gage _____

(7) PERFORATIONS:

Perforated? Yes No
Type of perforator used _____
Size of perforations in. by in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

(8) SCREENS:

Well screen installed Yes No
Manufacturer's Name _____ Model No. _____
Diam. Slot size Set from _____ ft. to _____ ft.
Diam. Slot size Set from _____ ft. to _____ ft.

(9) CONSTRUCTION:

Well seal—Material used in seal Checked seals
Depth of seal _____ ft. Was a packer used? _____
Diameter of well bore to bottom of seal _____ in.
Were any loose strata cemented off? Yes No Depth _____
Was a drive shoe used? Yes No
Was well gravel packed? Yes No Size of gravel: _____
Gravel placed from _____ ft. to _____ ft.
Did any strata contain unusable water? Yes No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(10) WATER LEVELS:

Static level 0 ft. below land surface Date _____
Artesian pressure lbs. per square inch Date _____

(13) PUMP:

Manufacturer's Name _____
Type: _____ H.P. _____

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Hagan Hellberg (Type or print)
Address P.O. Box 40 Bowden Wash
Drilling Machine Operator's License No. _____
[Signed] Klyff P. Leaman (Water Well Contractor)
Contractor's License No. 3776 Date Sept 19 1963

UMAT 439

STATE ENGINEER
Salem, Oregon

State Well No. 2N/27-1F (1)

County Umatilla

Application No. U-750

Water Level Record

OWNER: Ammon's OWNER'S NO. # 1

Description of measuring point: Lip of port pipe on north side of well - MP - 1.7 feet above LSD.

Date	Water Level Feet (above) (below) Land Surface	Remarks	Date	Water Level Feet (above) (below) Land Surface	Remarks
5-25-61	63.92	WSB (STATIC)			
8-23-61	282.0	WSB - Pumping			
11-7-61	24.31	RD & WSB (STATIC)			

REMARKS: _____

2N/27-1F1
Well No. 1
Umatilla

Notes from Claussie Ammon

1960

February 1 Static water level 334'

1961

January 1 Drilling on well
February 1 Drilling on well
March 16 Static water level 7'
April 9 Well started flowing pressure at pump 3 lbs.

1962

February 6 Started flowing about 50 gallons per minute
April 25 Well stood at 40" with the west well pumping before
starting the east pump
July 3 After 6 hours of pumping at 55 lbs. pressure static
water level 322 feet.

1963

May 22 Started well at 9:00 A. M.
Static water level of well before the pump was started
was 128 feet. After 6 hours of pumping on both wells
static water level of Well No. 1 was 285 feet.
423 sprinklers were being run between both wells, with
an average of 40 lbs pressure or better at the first
sprinkler on each line. Gauges at both pumps registered
an average of 50 lbs. pressure or slightly over.

May 28 Static water level in Well No. 1 before either Well No. 2
or Well No. 1 were turned on was 128 feet. 10 hours
later of continuous pumping of both wells, No. 1 stood
at 294 feet.

June 4 Static water level before either well No. 2 or Well No. 1
were turned on was 122 feet. After 6 hours pumping of
both wells, well No. 1 stood at 289 feet.
After 6 hours pumping of both wells, Well No. 2 would
suck air which 40 lbs of pressure at pump. Well No. 1
turned off.

June 11 Before starting either well, No. 1 started 124" After
6½ hours pumping of both wells, No. 1 stood 293'

June 20 After 7 hours pumping on both wells, No. pumping level
was 298'

June 21 Before starting either pumps, No. 1 stood at 132'.

2N/27-1F1
Well No. 1
Umatilla

Claussie Ammon

1963

June 27 Static level 110' after 9 hours rest.
June 29 Static level 100' after 9 hours rest.
After 6 hours pumping of both wells, No. 1 pumping
level 298'
July 10 Static level 112' after 10 hours rest.
Pumping 292' after 6 hours rest.
July 21 Static level 115' after 7 hours rest
Pumping 298' after 6 hours rest.



State Engineer

47-1F(1)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
GROUND WATER BRANCH
Box 3418 - 1001 N. E. Lloyd Boulevard
Portland 8, Oregon

RECEIVED
FEB 27 1961
STATE ENGINEER
SALEM, OREGON

February 24, 1961

Mr. Claussie Ammon

Echo, Oregon

Dear Claussie:

Enclosed is a copy of the drawing I made on the meter survey of your number 1 well.

I talked to Cecil Garbe of Pump, Pipe and Power about the peculiar surging of your wells. He offered two suggestions from his well-setting experiences.

He says that sometimes the shaft of a pump will stretch and cause the impellers to rub on the plate of each bowl in such a way as to give a surging effect, but that this commonly occurs only in deep settings of a pump. Also, he couldn't visualize it happening in two wells simultaneously.

He also stated that sometimes a well will surge when the pump is set so tightly that air can't get down to the water surface in the well. This causes the dropping water level to be helped upward by vacuum suction. As the water level is being lowered by the pump faster than it is being maintained by the artesian pressure in such a pumping situation, there will be a point where it will develop a vacuum. At this point it will be held up momentarily by the vacuum, then break the vacuum and drop suddenly, then re-establish the vacuum lift and rise, etc. The whole operation, he says, gives a surging as though the pump was breaking suction. He says this type of thing might have happened in your artesian well if the pump is sealed tight, but he didn't see how it would happen in the two wells simultaneously.

It seems a possibility that this type of surging might have started in your artesian well and the resultant ground-water wave might have produced a similar effect in your newly deepened well. Anyway, it's the most logical clue I have run across. The possibility of this causing your surging could be determined by lifting the pump an inch or two so as to eliminate any vacuum seal on your artesian well.

From the enclosed chart of the water movement in your well, I can't see anything that might cause a pump to surge. You'll note that the zone which is apparently taking water is only about 15 feet (from 550 to 565).

The small amount of water moving rather puzzles me. From the pressure difference and the known productive capacity of the upper aquifer, one would expect it to be taking much more water. I would suspect that the reason more water isn't moving out lies in the plugging of the upper aquifer by drill cuttings and other debris that have risen with the water and traveled out into the pore spaces of the upper aquifer.

I hope this type of information will be of some help in your problem.

Sincerely yours,

R. C. Newcomb
Research Geologist

Enclosure

Copy: State Engineer

RECEIVED
APR 17 1963
STATE ENGINEER
SALEM, OREGON

GROUND WATER BRANCH
Box 3087
Portland 8, Oregon

April 4, 1963

Mr. Claussie Axmon
Butter Creek Road
Echo, Oregon

Dear Claussie:

Enclosed are three copies of the chart we made on the vertical flow measurements in your eastern well on April 2, 1963.

During the charting of the readings, we didn't find anything of importance except what we talked about at the well.

Summarized, I would say these measurements show about 200 gpm coming out of the 770-830 feet zone and flowing from the top of the well. The water speeds up or slows down about in proportion to the size of the pipe or hole through which it is flowing. I can't see that you're losing any water from the well.

The 10-inch liners are probably shown inaccurately because we didn't get a copy of Ben Dreyer's last report, and I didn't copy it from your log because I assumed we would have that data in the office.

Let us hear from you at least occasionally. I would like the opportunity to collect similar data in your western well.

Sincerely yours,

R. C. Newcomb
Research Geologist

Enclosure

cc: District Geologist, Portland
Oregon State Engineer, Salem ✓

RCN/nj

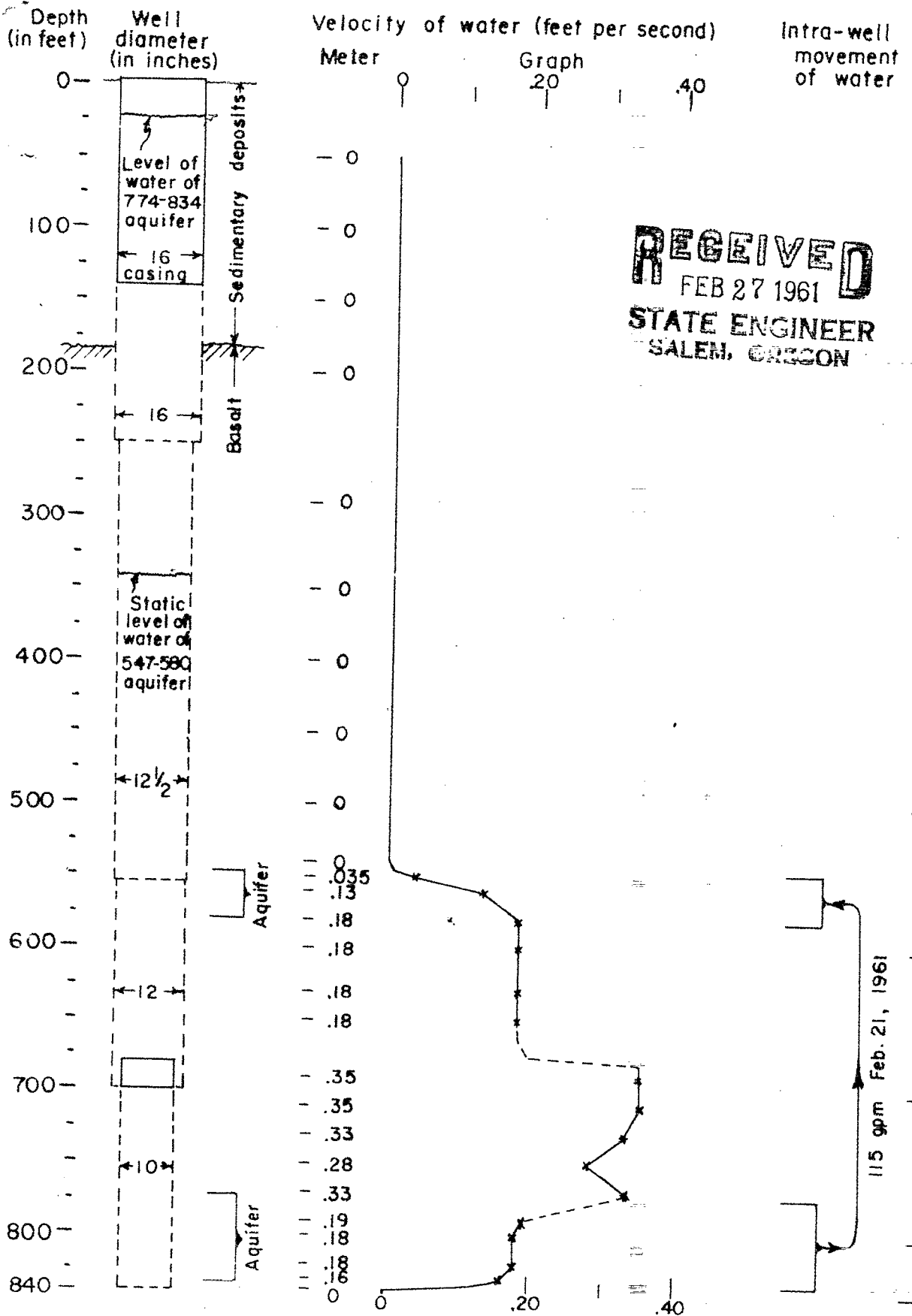
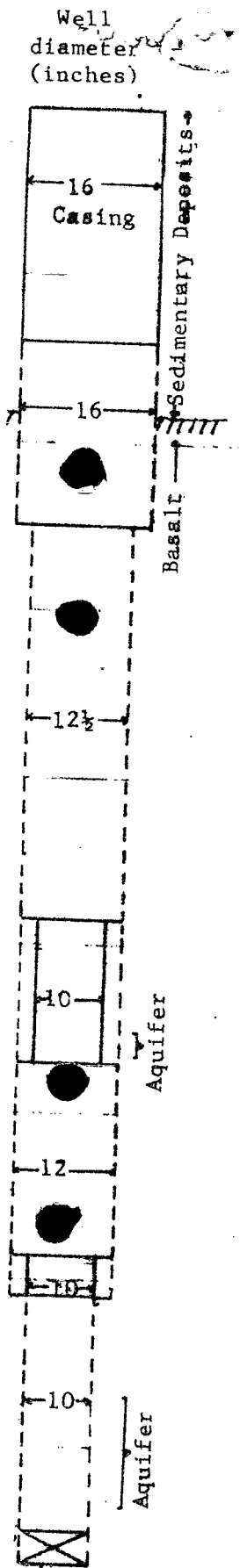


Figure - Movement of water between basalt aquifers in the C. Ammon well no. 1 (2/27-1961) near Echo, Oreg.

MOVEMENT OF WATER IN THE C. AMMON WELL NO. 2N/27-1F1 NEAR ECHO, OREGON



Current Meter (clicks/min)
16
16
14
27
24
28
51
50
48
30
29
29
32
32
48
48
40
38
26
24
0

