

WELL HISTORY

Reichhold Energy Corporation
Well Columbia County No. 1 R/D

API No. 36-009-00007
Section 11-6N-5W, W.B. & M.
Columbia County, Oregon

April, 1979

- 19 Taylor Drilling Inc. moved in Rig No. 4 and rigged up. Installed casing head and BOP equipment.
- 20 Drilled rat hole. Pressure tested BOP equipment with 800 psi.
- 21 Ran 6 1/4" bit and drilled out cement from 294' to 366'. Ran Dyna-drill with 6 1/4" bit and drilled ahead.
- 622' Sand and Clay.
Survey 463' 4° N 13° W
523' 4° N 62° W
583' 7°45' N 84° W
613' 8° W
- 22 769' Sand and Clay.
Survey 643' 8°15' S 75° W
769' 10° 0' S 52° W
- Laid down Dyna-drill. Ran drilling assembly and drilled ahead.
- 1143' Sand and clay.
Survey 828' 10°45' S 53° W
954' 13° 0' S 51° W
1143' 12°45' S 53° W
- 23 1830' Sand and clay.
Survey 1319' 13° 0' S 49° W
1570' 12°45' S 49° W
1725' 12°30' S 51° W
- 24 2450' Sand and Clay
Survey 2001' 11°15' S 51° W
2216' 10°45' S 57° W
- 25 2468' Sand
Survey 2468' 10°30' S 56° W
- DST No. 1 Ran Halliburton tester and set packer at 2448' with tail to 2468'. Open for initial flow at 2:16 P.M. Immediate moderate blow increasing to strong blow. Gas to surface in 2 minutes on 5/8" bottom hole bean and 1/2" surface bean. After 4 min., reduced surface bean to 1/4" and had 750 psi. Dry gas with occasional mist of mud. Had 760 psi after 7 min. Shut in for initial shut in pressure at 2:32 P.M.. Opened for flow at 3:02 P.M. on 1/4" surface bean. Surface pressure stabilized at 780 psi in 25 min. and remained at 780 psi for 10 min. Estimated rate 1170 Mcf/D.

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- 25(cont.) Closed for final shut in pressure at 3:37 P.M.. Pulled loose at 4:52 P.M.. Recovered 1 quart of thick gassy rat hole mud. No water.
- Pressures:
- | | |
|------|------|
| IHP | 1207 |
| IF 1 | 903 |
| FF 1 | 892 |
| ISIP | 924 |
| IF 2 | 861 |
| FF 2 | 871 |
| FSI | 923 |
- Ran 6 1/4" bit and circulated and conditioned mud.
- 26 3105' Drilled ahead.
Sand
Survey 3104' 15°30' S 61° W
- 27 Ran Welx Induction-electric Log from 361' - 3099'.
Ran Welx Compensated Acoustic Velocity Log from 361' - 3100'.
Ran Welx Dipmeter from 400' - 3100'.
Waiting for cement truck.
- 28 Ran in hole and circulated and conditioned mud.
Laid down drill pipe, hevi - wate drill pipe and drill collars.
Measured 4 1/2" casing.
- 29 Ran 67 joints or 2590.76'(inc. equip) of 4 1/2" 10.5# K-55 St & C casing equipped with a Halliburton guide shoe and a Baker insert fill-up valve on top of 2nd joint above shoe. Cemented around shoe at 2950' with 115 sacks of cement. Used bottom plug and displaced top rubber plug with 229 cu.ft. of water which was 4 cu.ft. over the calculated displacement. Bumped plug with 1500 psi. Cement in place at 3:20 A.M.
- Casing Details
- | | |
|-----------|----------|
| Shoe | 1.00 |
| 2 joints | 77.31 |
| Insert | -- |
| 65 joints | 2,513.45 |
| On Hook | 2,591.76 |
| Above KB | 1.76 |
| Shoe @ | 2,590.00 |
- Casing equipped with centralizers on 38' spacing 2590-2324 and 76' spacing 2324 to 1944.
Landed casing and installed tubing spool. Tested secondary seal with 2000 psi.

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29(cont) Re-installed BOP equipment.
Ran 2 3/8" 4.7# EUE tubing to top of cementing plugs at 2513'.
Pulled tubing.

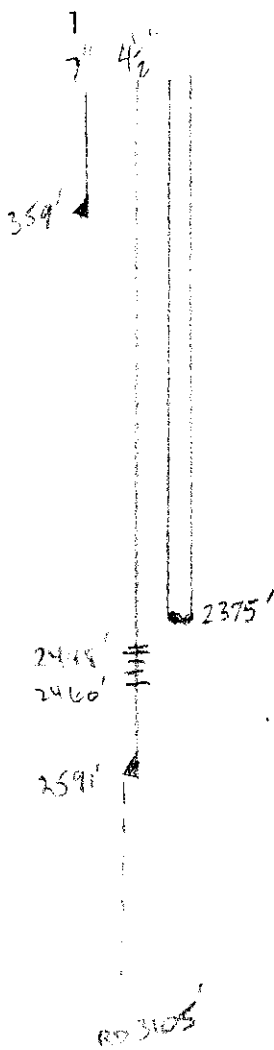
30 Ran Welex Neutron - Micro Seismogram Log - Cased hole from
2500 - 1300.
Ran 2 3/8" tubing to 2513 and conditioned water in casing
with 3% potassium chloride.

Landed 2 3/8" tubing as follows:

KB to flange	10.70
75 joints	<u>2,365.22</u>
	2,375.92

Removed BOP equipment and installed Xmas tree.

May, 1979



Welex ran through the tubing with a 1 11/16" ceramic jet gun
and located casing collars. Shot 4 holes per foot in the
interval 2448 - 2460.

Unloaded water from casing and tubing with Nitrogen
Flowed well to clean up.

Flowed well as follows:

<u>Tubing Press.</u>	<u>Est. Rate</u>
890	Shut in
800	1629 Mcf/D
730	2320 Mcf/D

Well shut in awaiting pipe line connection.

WELL HISTORY

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August, 1977

28 Paul Graham Drilling and Service Company moved in and rigged up Rig No. 1.

29 Spudded in at 7:00 AM with 9-7/8" bit and drilled ahead.

214' Sand and gravel.

Lost and regained circulation. Drilled ahead.

364' Sand, clay, and shale.

Survey at 335' 0°-15'

Conditioned mud and hole.

30 Ran 9 joints of 7" 20# K casing equipped with a B&W guide shoe and cemented around shoe at 359' with 140 sacks of Class G cement treated with 2% CaCl₂. Lost returns while displacing cement. No cement returns at surface. Cement in place at 1:30 AM.

Ran 1" pipe to 150' in annulus and pumped in 100 sacks of cement premixed with 8% gel. Cement rose to surface then dropped in annulus. Cement in place at 11:30 AM.

Ran 1" pipe to top of cement at 90'. Pumped in 65 sacks of cement premixed with 8% gel and treated with 3% CaCl₂. Cement in place at 6:00 PM.

Ran 1" pipe to top of cement in annulus at 71'. Pumped in 75 sacks of cement premixed with 8% gel and treated with 3% CaCl₂. Cement in place at 8:15 PM.

31 Ran 1" pipe to top of cement in annulus at 40'. Pumped in 70 sacks of cement, filling annulus to surface.

Landed casing and installed 6" series 900 screw on casing head.

Installed BOP equipment.

Tested BOP equipment with 1000 psi.

Drilled out cement and shoe with 6-1/4" bit and drilled ahead.

1,240' Shale.

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September, 1977

1 2,315' Shale.

Survey at 1,326' 1°-15'

2 3,111' Sand and shale.

Survey at 3,111' 2°- 0'

Conditioned hole for logs.

3 Welex ran Induction-electric log from 361' to 3,099'.

Welex ran Compensated Acoustic Velocity Log from 361' to 3,093'.

Welex ran Dipmeter from 675' to 3100'.

Welex took Sidewall samples. Descriptions attached.

Laid down drill collars.

Waited for cementers.

4 Plug No. 1. Hung drill pipe at 2,684' and pumped in 100 sacks of Class G cement. Calculated to fill to 2100'. Cement in place at 4:30 PM.

Located top of cement at 2,240' at 8:30 PM.

Plug No. 2. Hung drill pipe at 409' and pumped in and equalized 35 sacks of Class G cement treated with 2% CaCl₂. Cement in place at 9:00 PM.

5 Located top of plug at 279' at 3:00 AM.

Location and hardness of top of plug witnessed and approved by Mr. Vernon Newton of Division of Geology and Mineral Industries.

Capped top of surface casing.

Well suspended in this condition.

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