

WELL HISTORY

Reichhold Energy Corporation
Well Columbia County No. 4

API No. 36-009-00011
Section 15-6N-5W, W.B. & M.
Columbia County, Oregon

May, 1979

- 2 Taylor Drilling Co. commenced moving in Rig No. 4.
- 7 Spudded in at 2:00 P.M. with 9 7/8" bit and drilled ahead.
237' Gray clay and silt stone.
- 8 410' Clay
Ran 7" 23# casing equipped with a guide shoe and cemented around shoe at 401' with 150 sacks of Class 2 cement treated with 3% CaCl₂. No cement returns at surface. Cement in place at 2:20 P.M. Ran 1" pipe to top of cement in annulus at 63'. Pumped in 125 sacks through 1" pipe at 63'. Had cement returns at surface. Cement in place at 9:15 P.M.
- 9 Backed out landing joint and installed 6" series 900 screw in casing head. Installed BOP equipment and tested pipe rams and Hydril with 600 psi. Tested complete shut off with 800 psi. Test Witnessed and approved by Mr. Vern Newton of D O G A M I Commenced drilling out cement with 6 1/4" bit.
- 10 1,310' Drilled out shoe with 6 1/4" bit and drilled ahead.
Clay and shale
- 11 2,012' Clay and shale
- 12 2,325' Clay and sand
Circulated and conditioned hole for tester.
Ran Halliburton tester which failed to go to bottom. Pulled tester.
- 13 Ran 6 1/4" bit and cleaned out to 2325'/ Circulated and conditioned mud.

DST No. 1 Ran Halliburton tester with no cushion and set packers at 2306 and 2313 with tail to 2325'. Opened tool for pre-flow at 6:35 A.M. on 3/4" bottom bean and 5/8" surface bean and 5/8" surface bean. Gas to surface in 1 minute. Rate stabilized at 5300 Mcf/D with 510 psi on 5/8" bean. Closed for initial shut in pressure at 6:45 A.M. Opened for flow on 1/4" surface bean at 7:15 A.M. Rate stabilized at 1425 Mcf/D with 950 psi surface pressure on 1/4" bean. Closed for final shut in pressure at 7:40 A.M. Pulled loose at 8:40 A.M. Recovered 15' of drilling fluid with a salinity of 750 ppm Cl.

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Pressures	Top Chart 2297'*	Bottom Chart
IHP	1211	Clock
IF 1	585	Stopped
FF 1	764	
ISIP	1014	
IF 2	694	
FF 2	939	
FSIP	1009	
FHP	1198	

* Office readings

- Ran 6 1/4" bit and conditioned hole and mud and drilled ahead.
- 2584' Sand and siltstone
- 14 2925 Sand and basalt
- 15 Ran Welex Induction-electric log from 2920' to 401'.
Ran Welex Compensated Acoustic Velocity Log from 2922' to 401'.
Ran Welex Dip meter.
Ran 6 1/4" bit and drilled ahead
- 2936' Basalt
- 16 Laid down drill pipe and drill collars.
Ran 64 joints or 2474.82' of 4 1/5" 10.5# K-55 casing equipped with a Baker guide shoe and a Hon Co insert fill-up valve on top of 2nd joint above shoe. Cemented around shoe at 2473' with 120 sacks of Class 2 cement. Used bottom rubber plug and displaced top plug with 222 cu.ft. of water which was 7 cu.ft. over calculated displacement. Bumped plug with 1500 psi which was held for 3 min. Bled off and check held. Cement in place at 6:32 A.M.
- Casing Details:
- | | |
|-----------|---------|
| Shoe | .80 |
| 2 joints | 77.29 |
| Insert | - |
| 62 Joints | 2396.73 |
| On Hook | 2474.82 |
| Above KB | - 1.82 |
| Shoe @ | 2473.00 |

Installed slips and packing
Installed tubing spool with secondary seal and tested seal with 3000 psi.
Re-installed BOP equipment.
Picked up 2 3/8" tubing
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- 17 Ran Welex Neutron - Microseismogram Log from 2391' to 1100'.
Ran tubing to 2395' and treated water in casing with 3% potassium Chloride. Landed 2 3/8" 4.7# EUE tubing as follows:
- | | |
|--------------|----------|
| KB to flange | 12.00' |
| 71 joints | 2242.41' |
| | 2254.41' |
- Installed Xmas tree.
- 18 Welex ran through tubing with 1 11/16" ceramic jet gun and located casing collars. Shot 4 holes per foot in the interval 2316-2324. Removed water from casing and tubing with Nitrogen. Blew well to clean up.
Flowed well as follows:
- | Choke | Tubing
Pressure | Casing
Pressure | Est.
Rate |
|--------|--------------------|--------------------|--------------|
| 14/64" | 720 | 720 | 865 Mcf/D |
| SI | 950 | 950 | |
- Well shut in awaiting pipeline connection.

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