August 14, 1973

Memorandum

To: The Files (Lease OR-7372)

From: M. V. Adams, Staff Engineer

Subject: Abandonment of Blue Mountain Unit No. 1

Well Location: 2,430' from the south line and 200' from the west line of section 34, T. 37 S., R. 41 E., of the Willamette Base and Meridian, Malheur County, Oregon. Location is at an approximate bearing of S. 80° W. true 1.5 miles from Blue Mountain Peak.

Elevations: Ground level - 5,591'
Kelly Bushing- 5,608'

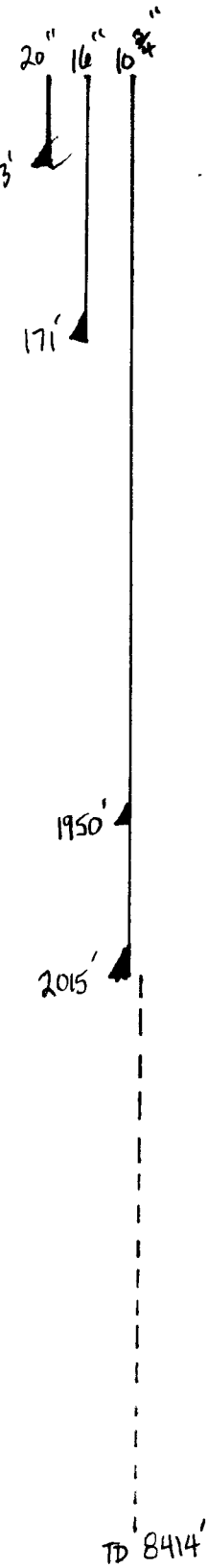
Casing: 20" cemented at 33' in 36" hole
16" cemented at 171' in 24" hole
10 3/4" cemented at 2,015' in 15" hole
NOTE: After drilling to 3,400', a cement bond log was run which indicated poor cement bond on the 10 3/4" casing. A bridge plug was set at 1,995' and the 10 3/4" casing was perforated with 4 - ½" holes at 1,950' - 51'. The perforations were squeezed with 100 sacks of Class G cement mixed with 3% $CaCl_2$. Squeezed away 90 sacks. Cleaned out past perforations and tested them to 1,400 psi - OK. Removed bridge plug and found no cement below 10 3/4" casing shoe. Therefore, cement job at 10 3/4" casing shoe had been good.

Total Depth: 8,414' K.B.

Hole Size: 9 7/8" from 2,015' to total depth.

Cores: No. 1 - 3,406' to 3,420', Recovered 14'.
No. 2 - 7,819' to 7,847', Recovered 28'.
No. 3 - 8,369' to 8,388', Recovered 19'.

Contractor: R. B. Montgomery Drilling, Inc. Rig No. 7



Equipment:

- Oilwell 96 drawworks powered by 3 Superior diesel engines.
- 2 - G-1000 National Supply Co. pumps powered by drawworks engines.
- 20½" National rotary table powered by separate Superior diesel engine.
- 3 - Cameron single ram blowout preventers with 2 - 4½" pipe rams and 1 blind ram and 1-GK Hydril powered by hydraulic accumulator and equipped with Swaco choke and kill manifold.
- 143' Lee C. Moore mast with 860,000 pound hook load capacity.
- Active mud system - 1 - 300 bbl. settling tank, 1 - 370 barrel suction tank, and 1 - shaker tank with 2 shale shakers.

Details of Abandonment: Up to 6:00 a.m. August 6, 1973, with open-end drill pipe hanging at 1,966' KB and GK Hydril closed, pumped away into hole 1,400 barrels of sump mud at a pressure of 0 psi and a rate of 7 barrels per minute. Up to 6:00 a.m. August 7, 1973, pumped away 2,310 barrels of sump mud at a pressure of 0 to 50 psi and a rate of 7 barrels per minute. Up to 6:00 a.m. August 8, 1973, pumped away 2,010 barrels of mud at a pressure of 200 psi and a rate of 8 barrels per minute. During the day of August 8, 1973 pumped away 1,500 barrels of mud at a pressure of 200 psi and a rate of 8 barrels per minute. Total mud pumped from sump into hole 7,220 barrels. This left sump essentially empty of liquid until some old mud and water were dumped on August 9, 1973.

First Plug: With open-end 4½" full hole drill pipe at 5,254' KB, mixed 140 sacks of Class C cement with 3% $CaCl_2$ at a slurry weight of 118 pounds per cubic foot (161 cu. ft. of slurry). Pumped 60 cubic feet of water ahead of cement. Equalized cement with 5 cu. ft. of water and 383 cu. ft. of mud. Cement in place at 5:15 a.m. August 9, 1973. Placement of plug witnessed and approved by USGS. Calculated top of plug at 4,954' K.B.

Mixed new 67 pound per cubic foot gel mud. With open-end drill pipe at 2,308' changed over to gel mud.

Second Plug: With open-end drill pipe at 2,183' KB, mixed 223 sacks of Class G cement with 3% $CaCl_2$ to a slurry weight of 118 pounds per cubic foot (256 cu. ft. of slurry). Pumped 50 cubic feet of water ahead of cement. Equalized cement with 5 cubic feet of water and 123 cubic feet of mud. Cement in place at 5:48 p.m. August 9, 1973. Placement of plug witnessed and approved by USGS. Calculated top of cement at 1,700' KB.

At 10:00 p.m. August 9, 1973, ran in hole with 9 7/8" bit and found top of cement at 1,950'KB. Plug took 12,000 pounds of weight. Top of cement witnessed but not approved by USGS.

Third Plug: Pulled out of hole with 9 7/8" bit. Ran back in with open-end drill pipe to 1,950' KB. Circulated bottoms up. Mixed 50 sacks of Class G neat cement to a slurry weight of 118 pounds per cubic foot (58 cu. ft. of slurry). Pumped 50 cubic feet of water ahead of cement. Equalized cement with 5 cubic feet of water and 136 cubic feet of mud. Cement in place at 12:06 a.m. August 10, 1973. Placement of plug witnessed and approved by USGS. Calculated top of cement at 1,843' KB. Shoe plug of 10 3/4" casing approved by USGS.

At this point, State of Oregon Department of Geology and Mineral Industries will take over responsibility for well and will use it for temperature observations. Standard will cut off base plate and weld on 10 3/4" riser to reach above ground level. They will put a hinged and locked lid on the top of the 10 3/4". When the State of Oregon finishes their observations on the well, they will put in the top plug and install the marker.

(Orig. Sgd.) MAURICE V. ADAMS

Maurice V. Adams

cc:
Blue Mountain Unit-General Correspondence
Blue Mountain Unit No. 1 well file
Bakersfield District (2)
Mr. Vern Newton, Petroleum Engineer,
State Department of Geology and Mineral Industries,
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