

STATE OF OREGON  
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
910 State Office Building Portland, OR 97201

HISTORY OF OIL OR GAS WELL

(In compliance with rules and regulations pursuant to ORS 520)

Oregon Natural Gas Development Corp. ONGDC 1W 42<sup>C</sup>-10  
(Company or operator) (Lease) (Well No.)

Sec. 10, T. 6N, R. 5W W.B.&M. Surveyed Coordinates: From the east 1/4  
corner of sec. 10; 221' N and 451' SW

Wildcat: \_\_\_\_\_ (or) Field Name: Mist Underground Storage County: Columbia

Date: August 25, 1988 Signature: Yad Thomas  
Position: Drilling + Prod. Supt.

Use this form in reporting the daily operations at the well. (Operator may use his own forms, but heading of this form must also be completed and submitted.) Please submit a complete history of the well. Include such information as bit sizes, mud weights, casing sizes and depths set, amount of cement used, drilling depths, fishing, logging, perforating, and plugging procedures, and anything else pertinent to the operation. Do not include lithology.

Date	
7-17-1988	Weld on Conductor. Unload mud and casing. Spud well with 17 1/2" bit. Drilling to 283'.
7-18	Drilling 17 1/2" hole to 501'. Work drillpipe. Run gel/nut plug sweep. POH and wait on pump parts. Ream and wash to bottom.
7-19	Drilling to 536'. Circulate sweep. Wiper trip to surface. Circulate and POH for casing. Rig up and run 13 joints (516 feet) of 13 3/8", 54.5#, K-55 casing to 532'. Rig up and cement with 640 sacks class G cement mixed with 2% CaCl <sub>2</sub> and 1/4#/sack cellophane. Good mud and cement returns. WOC. Cut off casing. Weld on wellhead.
7-20	Test wellhead. Nipple up BOPE and test with state representative witnessing. Drill float and cement to 525'. Pressure test casing to 1000 psi. Drill cement and shoe Drilling 12 1/4" hole to 570'.
7-21	Drill to 997'. Circulate and survey. POH and pick up mud motor. RIH and drill and survey every 30 feet to 1201'. POH for new BHA.
7-22	RIH with rotating assembly. Ream 50' to bottom. Drilling to 1286'. Circulate and survey. Trip to change BHA. Drilling to 1596'. Circulate and survey every 90'. Wiper trip to 921'. Ream 60' to bottom. Drilling to 1780'. Circulate and survey every 90'.
7-23	Drilling to 1872'. Wiper trip to shoe. Drilling to 2024'. Circulate and clean mud sleeve. Trip to clean bit and stablizers. RIH. Ream to bottom. Drilling to 2057'. Circulate for logger. Drilling to 2037'. Circulate and survey. Wiper trip to shoe.
7-24	Ream to bottom. Circulate 10 standwiper trip. Circulate. POH for logs. Rig up Atlas and run logs. Strap in hole and circulate. POH for casing. Rig up, hydrotest and run 50 joints (2074') of 8 5/8", 32#, K-55 casing to 2070'.

Date

- 7-25 Rig down and circulate casing. Rig up Halliburton and cement casing as follows:  
 Lead slurry: 320 sacks premium cement, mixed 1:1 with perlite, 2% Gel, 2% CaCl<sub>2</sub>, 3% KCl, and .75% Halad - 4.  
 Tail slurry: 520 sacks premium cement mixed with 1% CaCl<sub>2</sub>, 3% KCl, .25% Halad-4, 1% CFR-3.  
 Good cement returns. Set casing slips. WOC. Pick up BOP. Cut off casing. Nipple up tubing head and test to 2000 psi. Nipple up BOP. WOC.
- 7-26 Pressure test BOPE with state representative witnessing. RIH. Drill out plugs, float and cement to 2065'. Trip for casing scraper. RIH and work scraper from 2025' to 2065'. Circulate. POH for logs. Rig up Atlas and run logs. Make up BHA and RIH.
- 7-27 Drill cement and shoe. Drilling 7 7/8" hole to 2769' (TD). Circulate and survey. Wiper trip to shoe. POH for logs.
- 7-28 Rig up Atlas and run wireline logs. RIH open ended to 2281'. Set 145' cement plug from 2281' - 2136'. WOC. RIH and tag plug at 2198'. Set 44' plug from 2200' - 2156'. WOC.
- 7-29 Tag plug at 2165'. POH for bit. Strap in hole. Wash to 2197'. POH and stand back BHA. RIH open ended. Set 15 sack plug. WOC. RIH and tag at 2197'. Rig up and set 15 sack plug at 2197'. WOC.
- 7-30 RIH and tag plug at 2197'. Rig up Halliburton and set plug from 2197' - 2128'. WOC. RIH to 2148. No plug. WOC. RIH to 2159'. No plug. WOC.
- 7-31 RIH to 2169'. No plug. WOC. RIH and tag cement and 2197'. Circulate out cement. Clean mud pits. Mix and displace hole with HEC-10 polymer mud. Circulate and clear mud. Rig up and set cement plug from 2197' - 2130'. WOC.
- 8-1-88 RIH to 2145'. No plug. WOC. RIH to 2155'. No plug. WOC. RIH and tag cement at 2197'. Circulate out cement. POH and pick up cement diverter. RIH to 2196' and set plug from 2196' - 2111'. WOC. RIH to 2159'. No plug. WOC. RIH and tag plug at 2160'. POH for new BHA. Strap BHA and RIH.
- 8-2 Drill cement from 2160' - 2190'. POH and pick up under reamer. RIH and ream to 15" from 2075' - 2189'. Pull into casing. Run to bottom and check for fill. POH for log. Rig up Atlas and run 4-arm caliper. Trip into shoe. Mix new HEC-10 polymer mud system.
- 8-3 Displace hole with HEC-10 mud. Re-ream 15" hole from 2075' - 2189'. Pull into shoe. Run to bottom and check for fill. POH for liner. Rig up and run 4 joints (144.36') of 5 1/2" wirewrapped liner and 1 joint (41.22) of blank pipe. Rig up gravel packing tools and trip in with liner to 2189'. Rig up and gravel pack with 130 sacks 20-40 gravel. Pressure up to 350 psi. Wait 10 minutes. Re-pressure to 350 psi. immediately. Close Hydril and back scuttle 7 sacks. Pull out of liner POH. Rig up Atlas and run Photon log. Pick up lead seal, RIH and set at 1998'. POH.

Date

- 8-4 Make up packer and tail. Set packer at 1931' with Atlas wireline. RIH with test overshot. Test through DP at 1100 psi. Test annulus to 500 psi. Mix and displace corrosion inhibitor into well. Nipple down and laydown BOP. Rig up, hydrotest, run 5 1/2" tubing.
- 8-5 Run 57 joints (1829') of 5 1/2", 17<sup>16</sup>/<sub>16</sub>, K-55 tubing with Otis sliding sleeve and side pocket mandrel. Rig up Atlas and run vertilog. Land tubing head. Nipple up and test tree. Released rig.