

Thermex 22-2 Drill History  
Phase II Rotary Drilling

(4546A)

- 11/01/83 Stewart Bros. of Grants, New Mexico moved a Failing 2500 on location at 1:30 p.m. Began setting up, digging pits and built cellar. Crews working days until rig is set up.
- 11/02/83 Setting up rig, installed wellhead flange to hang 8 5/8" casing. Ran 8 5/8" to 290' but packer failed to engage.
- 11/03/83 Unable to engage packer, pulled 8 5/8" casing and modified packer springs. Ran casing again and packer finally engaged at 4 p.m. after several attempts. Installed wellhead flange and BOP equipment.
- 11/04/83 Completed rigging up BOP and tested both blind and pipe rams at 200 psi for 20 minutes. Ward Wagstaff from Utah Div. of Water Resources observed test. Nipple up rotating head and finished Blewie line installation. RIH with 6 3/4" hammer and drilled from 295 to 913 feet, penetration of 80-150 feet per hour. First water at 450 feet, making about 150 gpm at 913 feet. Flood out hammer, POH and changed to journal bearing rock bit. Total footage cut was 618' with foam.
- 11/05/83 RIH with a Smith 6 1/2 journal bearing bit and drilled from 913 to 1390' with aeriated mud for a daily total of 477'. Hole caving below 1,150', increased mud weight at 1,174'. Lost circulation at 1,390 and stuck the pipe briefly. Conditioned hole with heavy mud, POH. Penetration 38-92'/hr. Mud temp in 58°F, out 89°F. Weight varies from 8.3 to 9.5, vis varies from 31 to 80 and pH is 6.2.
- 11/06/83 RIH to clean hole, no returns, washed and drilled to 1,448' but unable to make a connection. Pumped heavy mud and condition hole, POH and waiting for cementers to arrive. Halliburton on site at 9:30 p.m., set first plug at 1,448' by 11:30 p.m. using 20 ft.<sup>3</sup> cement, pulled drill pipe back to 1,240 and WOC. Penetration of 30'/hr. The hole was drilled from 1,390 ft. to 1,448 ft. for a daily total of 68'. Mud temperature is 59°F and 90°F out, wt. 9.3, vis 80, pH 6.0.
- 11/07/83 WOC, RIH, tag cement at 3 a.m., drilled to 1450' and set second cement plug (20 ft.<sup>3</sup>), WOC. Change rotating head rubber, repairs on rig. Condition hole and began drilling ahead at 3:30 p.m. Drilled from 1448' to 1585' for a daily total of 97'. Have returns but also high fluid loss. Penetration 20 to 84'/hr. Mud temp. in 55°F, 97°F out. Wt. 8.5, vis. 35 and pH 12.

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- 11/08/83 Drilled from 1545' to 2214' for a daily total of 669'. Penetration is 45 to 100 feet/hour. Ward Wagstaff from Utah Div. of Water Resources visited site to inspect operations. Mud temperature in is 82<sup>o</sup>F and 106<sup>o</sup>F out, wt. 8.7, vis. 41, pH 7.0.
- 11/09/83 Drilled from 2214 to 2690' for a daily total of 476'. POH and put on new Smith bit at 2560', RIH and drilling ahead. Penetration 15 to 60'/hr. Mud temp in 80<sup>o</sup>F and 102<sup>o</sup>F out. Wt 9.0, vis 33 and pH 9.
- 11/10/83 Drilled from 2690' to 3312' for a daily total of 622'. Penetration rate varies from 1 to 4 minutes per foot. Mud temp in 93<sup>o</sup>F and 104<sup>o</sup>F out, wt 9.0, vis 33 and pH 9.
- 11/11/83 Drilled from 3312' to 3580' for a daily total of 268'. POH at 3580' for bit change. Drill pipe would not go back down hole and had to be drilled to bottom. Percy Wicklund believes that a chunk of cement (from bottom of casing) is obstructing drill pipe. Bit on bottom at 7:30 p.m. and then ran temperature survey through drill pipe until end of shift. Mud temp in 93<sup>o</sup>F and 104<sup>o</sup>F out, wt 9.1, vis 34 and pH 9.
- 11/12/83 Drilled from 3580 to 3945 for a total footage of 365', penetration has slowed to 3 to 6 min per foot. Mud temperature in 93<sup>o</sup>F and 103<sup>o</sup>F out, wt 8.5, vis 31 and pH 9.
- 11/13/83 Drilled from 3945 to 4000 (T.D.) for a total footage of 55'. Hole reached T.D. at 4 a.m., circulated heavy muds for 3 hours and then ran Sperry sun multi shot survey through drill pipe (3<sup>o</sup> at 3900'). P.O.H. and started running electric logs by Gearhart, logged temperature and gamma going into hole and compensated neutron and density plus gamma and caliper coming out. Second survey was to include SP and induction logs but could not get tool past 740'. T.I.H. with 1,000 feet drill pipe and fought obstruction all the way to 1,000' so second survey was called off. Mud temperatures in 94<sup>o</sup>F and 104<sup>o</sup>F out, wt 9.3, vis 33 up to 50, and pH 8.6.
- 12/14/83 Broke down drill pipe and removed rotating head and BOPE. Pulled 8 5/8 welded casing out of hole and started rigging down. Supply companies notified to pick up equipment. Well has been capped with a 2" gate valve and the area backfilled.

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Well History

Interval	Hole Size	Casing
0-64	30"	30" (0-20')
64-177	24"	24" (0-106.5')
177-295	20"	16" (0-295)
removed from hole		8 5/8" (0-275)
295-913	6 3/4	---
913-4000 (TD)	6 3/4	---