

would not unload and lost 200 barrels of mud. Pulled to 2077', circulated hole for 2-1/2 hours and lost 300 barrels of mud but was holding steady for last 30 minutes. Went to 2300', hole circulated but lost 500 barrels of mud from 1:00 am to 4:00 am (3 hours). Pulled to 1761' at 4:05 am. Now mixing mud to 45 viscosity - 400 barrels.

4-6-72:

Lost circulation. Mixed Diacel 'M' plug (50 barrels), 48 sacks Diacel 'M', 8 salt gel, 1/4 sack of lime, 10 sacks tuff plug, 8 mud fiber, 10 chipseal (15#/barrel loss circulation material). Went in hole to 2469', bridged, pushed pipe 10' and drug 30,000# over weight while pulling out of hole. Spotted plug at 2460'. Displaced with 20 barrels of mud at 2:00 pm. Pulled to 1417' at 2:30 pm. Drug to 120,000# (50,000# over weight of pipe) at 1900 to 1840'. Pumped 80 barrels mud in hole, did not fill up. No pump pressure. Shut down 30 minutes then pumped 85 barrels of mud without circulating. Pulled up to drill collars at 4:00 pm. Waited on plug and jet subs until 3:00 am. Ran to 1913' with jet subs at 935' (2-3/16" nozzles) at 3:40 am. Unloaded hole in 5 minutes, circulated with aerated mud 20 minutes with no loss. Ran to 2420' and hit bridge. Broke circulation in 5 minutes. (1 jet sub at 520'). Drilled bridge to 2447', circ out loss circulation material from plug. Made connection and lost 340 barrels of mud while attempting to circulate. Pressure built up to 400# before drilling bridge. Took 550# to unload hole. Started out of hole @ 5:15. Pulled 175,000# first stand or 100,000# over weight. Came free 15' of second stand. Coming out of hole.

4-7-72:

Waiting on cement. Reran drill pipe to 2410'. Hole drug 30,000# over weight of pipe. Pulled to 2350'. Spotted 150 sacks regular 25#/sack Gilsonite, 1/4# sack, 1/4# tuff plug per sack, 2% NaCl, 2% CaCl<sub>2</sub> at 5:30 am. Pulled to 1100'. Hole circulated while spotting cement. Pumped in 7 barrels and pressured up to 200#. Shut down 10 minutes. Pressured up to 425# and bled to 70# in 5 minutes. Pumped in 1 barrel and pressured up to 425#. Bled to 80# in 10 minutes. Pumped in 1 barrel. Pressured up to 425#. Held 125# for 30 minutes. Job completed at 6:45 am. Now waiting on cement.

4-8-72:

Cleaning out at 2476' w/bit #3. Went in hole @ 3:40 pm. Hit top of cement at 1840'. Drilled out cement to 2410'. Have good circulation with aerated mud. Working on one joint at a time.

4-9-72:

Trip out at 3566' with bit #4 in shale. Mud weight 8.5, viscosity 43, water loss 9.8, pH 11.5. Made 170' in 24 hours. 29 hours washing and drilling cement. Washed loss circulation material and fill to 7:45 pm. Drilled to 3563', hole started heading. Made short trip to remove jet subs, moved lower sub from 2533 to 1440', and upper sub from 1042 to 481'. Went in hole to 3539' at 2:15 am. Worked on weight indicator 1 hour. Finished trip to bottom at 3:15 am. Had 15' fill. Washed to bottom at 4:30 am. Drilled to 3566' at 4:35 am. Bit or top of collars booted off. Worked to 170,000# or 70,000# over weight for first two stands and worked on weight indicator 30 minutes. Pipe came free at 6:15 am. Now pulling out of hole. Taked 1/2 pit or 200 barrels to unload hole after trip, 100 to 200 barrels on connection. Running 1 & 1/2 compressors to unload hole, 1 compressor to drill. Drilling pressure 250#. 450 to 500# on connection.