

DISCUSSION

The #2 Phelps-Dodge experienced a great deal of lost circulation problems, the last time being just a few feet above the top of the Dakota. The remainder of the hole was drilled with reduced pump pressure which may have helped eliminate the problem.

The only oil show found was in one cutting out of the sample caught at 3230', lagged to a true depth of 3222'. Log calculations indicate 91% water saturation at this depth, thus precluding any possibility of oil or gas production.

SAMPLE DESCRIPTIONS

Study starts at 2400', unlagged

<u>Depth</u>	<u>Description</u>
2400-2420	Dark gray shale, silty in part
2440	As above
2480	As above, trace calcite
2500	As above & white soft mottled granular limestone
2520	Dark gray soft silty shale
2540	Light gray silty micaceous shale
2560	As above
2580	As above
2600	Light gray shale
2610	As above
2620	As above
2630	As above
2640	Gray shale, trace calcite
2650	Light gray shale, some hard, some soft
2660	As above, trace pyrite
2670	Light gray shale
2680	As above
2690	As above, trace pale gray shale
2700	Gray shale
2720	As above, trace white-gray limestone
2730	Gray shale, tan & white, some brown amorphous limestone
2740	Tan, some mottled white firm limestone
2750	Dark gray pyritic shale, some limestone as above
2760	As above
2770	As above
2780	As above
2790	Dark gray pyritic shale, some white & tan mottled limestone some gray hard siltstone
2800	Gray smooth shale
2810	As above
2820	Gray to dark gray shale
2830	As above
2840	As above, pyritic, trace tan limestone
2850	As above, trace tan & nodular pyritic limestone
2860	Dark gray pyritic shale
2870	As above
2880	As above
2890	As above, some gray calcareous siltstone, trace tan limestone
2900	As above