



DRILLING SUMMARY

Loffland Brothers Drilling Co. of Casper, Wyoming was contracted to drill the #1 Federal Spurrier. The type rig was a National "75", using three Cummings Diesel power plants to supply 948 horsepower.

The well was spudded Nov. 25, 1954 and drilling discontinued Jan. 12, 1955. The well was plugged and abandoned Jan. 17, 1955 and the rig released. The derrick was laid down and stacked on the location because Loffland Bros. had no location to which to move it.

The surface hole drilling caused most of the trouble. Basalt was encountered at 165' and drilled very rough. A 12 $\frac{1}{4}$ " hole was drilled to 309' and reamed to 17 $\frac{1}{2}$ ". Surface pipe was ran and cemented.

The casing head was delayed in arriving, which caused two days delay in drilling. A nine-inch hole was drilled to total depth with very few delays. The hole was drilled to a total depth of 7470' in 48 days using 51 H.T.C. bits.

No zones of lost circulation or blowouts were encountered. A small amount of crooked hole trouble at approximately 4500' was corrected by running less weight for a few hours. The bottom hole temperature at T.D. was estimated to be 250°.

Because mud becomes contaminated with carbonates and delays the action of the caustic-tannex solution for as long as three days, the water loss should be lowered with driscose quickly or the mud should be kept in coring condition all the time. Baroid Mud Co. had the chemicals to approximately 6000' and had both the gel and chemicals after 6000'. Native bentonite was used to approximately 6000', but it had a low yield and contained impurities which may have made drilling hazardous after that depth; therefore, Baroid aquagel was used to total depth with very good success. The upper Payette formation has a tendency to wash out so clear water is not recommended; by using gel and water this can be controlled.

Conclusion: The area can be drilled economically to the depth the #1 Federal Spurrier penetrated. However, the formation that the well reached total depth was very hard and should drilling have continued, a diamond drill bit would have