

Jack Frost "B" Well No. 1 was spudded on February 26, 1959 and on February 27, 1959, 9-5/8" casing was landed at 490' with 350 sacks of cement. After waiting on cement, casing and water shut-off were tested with 800 pounds pressure for thirty minutes, which held with no drop in pressure. Reduced hole at 490' to 8-3/4" and resumed drilling operations.

On March 28, 1959, ran electric and sonic log. 7" casing was landed at 6956' with DV tool at 2544'. Cemented first stage with 325 sacks 6% gel cement with 2 pounds Tuf-Plug per sack, followed by 100 sacks neat cement. Lost partial mud returns twice while cementing first stage. Bumped plug with 2500 pounds which held ok. After 5 hours, cemented second stage with 200 sacks 4% gel cement with full mud returns on second stage. Closed DV tool with 2000 pounds which held ok. Tested casing and found casing leaking at 2544', squeezed with 50 sacks of cement. After waiting on cement, tested casing with 2800 pounds for thirty minutes, which held with no drop in pressure. Completion operations were begun.

Spotted 500 gallons breakdown acid on bottom. Perforated 6824-62 with two shots per foot 6884-90 with four shots per foot and 6920-25 with two shots per foot. Sand-water fracked with 90,000 gallons water and 50,000 pounds sand. Breakdown pressure 1300 pounds first 25,000 gallons treatment 1450-1800 pounds. Dropped 30 ball sealers and pressure increased to 1900 pounds. After pumping 37,800 gallons dropped 30 ball sealers and pressure increased to 2800 pounds. Flushed with 10,500 gallons. Formation sanding off, lacking 1050 gallons of displacement. Average injection rate 33 barrels per minute. Cleaned out to 6040'. Released rotary rig April 6, 1959. Flowed Dakota 27 hours, gauged 1948 MCFPD with tubing pressure flowing 125-150 psi and casing pressure flowing 450 psi. Shut in tubing pressure 1810 psi 18 hours. Moved in completion unit, pulled tubing and set bridge plug at 6237'. Tested bridge plug with 2800 pounds for thirty minutes, which held ok. Displaced water with oil and spotted 500 gallons breakdown acid. Perforated Gallup with four shots per foot 6161-6186. Sand-oil fracked with 40,000 gallons oil and 40,000 pounds sand. Breakdown pressure 1400 pounds. Treating pressure 1900 pounds, injection rate 49 barrels per minute. 2" tubing was landed at 6292'. Ran rods and pump. Released completion unit.

After well was recovering oil at a low rate from Gallup formation, moved in pulling unit on July 21, 1959, for re-stimulation. Re-sand oil fracked existing Gallup perforations 6161-6187 with 39,800 gallons oil and 40,000 pounds sand. Sanded off. Breakdown pressure none, maximum treating pressure 3100 psi, minimum treating pressure 1900 psi, average injection rate 33 barrels per minute. Maximum injection rate 41 barrels per minute. After flush pressure dropped from 3100 psi to 500 psi instantly, casing leak was suspected. Ran tubing with RTTS tool and located casing leak 2972-3000. Attempted to squeeze with 150 sacks retarded cement, but could not squeeze. Squeezed again with 100 sacks retarded cement with maximum pressure 2200 psi. Pulled tubing and RTTS tool. After waiting on cement 36 hours ran RTTS tool set at 3030 and tested casing with 2000 psi for thirty minutes which held with no indication of pressure drop. Ran rods and pump. Released rig on July 30, 1959. Recovering lead oil. Moved in pulling unit on August 25, 1959. Pulled rods and pump to dual complete well and use Dakota gas to recover lead oil. Pulled tubing and killed well with water. Ran tubing with Baker retrieving tool and latched onto bridge plug at 6237'. Ran Baker Model K packer set at 6800'. Dakota tubing landed at 6835'. Tested Dakota tubing with 3500 psi for thirty minutes, which held ok. Landed 2" Gallup tubing at 6322. Strabbed Dakota in and released rig on August 31, 1959.

Usually completed well as pumping oil well Angels Peak Gallup and shut in gas well Angels Peak Dakota October 30, 1959. Potential test Gallup pumped 16 barrels oil per day, 12-44" strokes per minute with 1-1/4" pump. On Gallup packer leakage test October 23, 1959, Dakota starting 3 day shut in tubing pressure 1751 psig and ending 4 day shut in tubing pressure 1757 psig indicating packer holding. Dakota potential test October 27, 1959 flowed 1053 MCFPD after 3 hours thru 3/4" choke. On Dakota packer leakage test October 27, 1959 Gallup starting 3 day shut in casing pressure 1057 psig and ending shut in casing pressure 1068 psig indicating packer holding.

