

- 1/21/72 1000 ft. L. 1" tubing in 1000' - 1100' zone. No gas and fluid in 1000' zone. No indication of communication with upper perforations and casing log. Perforations are 6244' - 6250', 6250' - 6255', 6255' - 6260' and 6260' - 6265' by Dresser open hole log.
- 1/22/72 Plugged up 2 3/8" ebg. and submergence packer with Baker "B" nipple. Ran Baker packer. Set packer above perforations - pressure tested ebg. by Benoit with 4000 psi, held O.K. Ran ebg. to bottom reverse circulated hole clean and spotted 300 gal. 15% HCl. Pulled 1 jct. and 6" ebg, set packer and broke down perforations from 6244' - 6250' with 2000 psi through ebg. Displaced acid at 3 bbls. per min. at 2700 psi, broke down upper perforations 6250' - 6255' with 2000 psi, displace acid at 4 bbls. per minutes at 2000 psi. Prepare to snub.
- 1/23/72 Snubbed under packer perforations from 6244' - 6250', snubbed approximately 75 bbls. Slight show of gas ahead of snub each run. No indication of communication with upper perforations. Had fluid level snubbed to approximately 6000' with 500' - 750' fluid entry between each snub run. Left shut in overnight.
- 1/24/72 Tubing had 75 - 100 psi - blew down in one minute. Found fluid level at 700' (ebg. was on very slight vacuum). Snubbed down to 4500' - no change in gas show. Moved packer to above top perforations. Snubbed all perforations together. Water approximately the same with slight increase in gas show.
- 1/25/72 Snubbed 3 hrs. all Dakota perforations - no increase in gas - pulled and laid down 2" ebg.
- 1/26/72 Set HOU25 case from bridge plug at 6260' SNF by Benoit with 3000 H.M.P. Pumped 100 bbl. pad before starting job. Used 20,755 gals. water treated with 2 1/2% J-100 per 1000 gals., 20,000# 20-A. sd. to fracture. Flushed with 3000 gals. water. Initial frac 3700 psi, Min. 3200 psi, Ave. 3800 psi, Max. 4000 psi. Dropped 10 rubber balls in one stage - pressure increased from 3200 psi to 3500 psi - overall ave. I.R. 40 bbls/min. Immediate std. press. 2200 psi, 15 min. shut in press. 1500 psi. Set case from bridge plug at 6260' perforated by Dresser Atlas two jets/ft. 7316' - 7320', 7316' - 7312', 7298' - 7294', 7248' - 7247', 7224' - 7220', 7210' - 7216', 7192' - 7194', 7197' - 7199', 7184' - 7188', 7170' - 7172', 7122' - 7126'. Pumped 300 gals. 15% HCl displaced to perforations
- 1/26/72 (Cont'd) with 50 balls, spotted 10/100 gals. acid. Formation broke down at 2400 psi, ball action increased pressure to 2700 psi, shut down for four minutes to allow acid to eat on formation and balls to drop off. SNF Gallup perforations with 3000 H.M.P. used 31,752 gals. water to frac, 20,000# 20-40 sd and 5124 gals. water to flush (water treated with 2 1/2% J-100 per 1000 gals.). Initial frac press. 2700 psi, Min. frac press. 2700 psi, Max. frac press. 4000 psi, Ave. frac press. 3800 psi, dropped 10 rubber balls in one stage. Pressure increased from 2700 psi to 3700 psi. Before balls hit formation cut sand for one minute, started sand back and completed job at 3500 psi at 23 bbls. per minute; overall Ave. I.R. 30 bbls. per min. Immediate std. press. 1500 psi, 15 min. std. press. 1100 psi. Shut in.