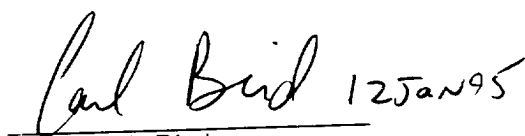


8. Test steering tool by orienting motor to high side on surface and enter tool face offset to obtain  $0^\circ$  tool face reading. Surface function test motor.
9. TIH with 4-3/4" Reed EHP53AJK or Hughes ATJ-33 insert bit, 3-3/4" short radius angle build motor set for 43' radius of curvature. 2 joints of 2-7/8" Monel collars, 900' of 2-7/8" 8.7 ppf P105 PH6, 3-1/8" drill collars, 2-7/8" 10.4 ppf E grade AOH drill pipe. Dress off to kickoff point by rotating motor.
10. Pull 2 jts of pipe. Rig up side entry sub and wireline equipment, RIH with surface readout gyro. Survey every 100' from surface to KOP. POH with gyro, run steering tool and seat. RU power swivel. Pick up 1 jt of pipe, establish correct motor/tool face orientation and break circulation. Establish off bottom pressure at operating flow rates. Put motor on bottom, adjusting toolface as necessary to compensate for reactive torque. Drill and survey the curve to desired azimuth and inclination.
11. Circulate the curve clean and TOH with angle build BHA and lay the angle build motor down.
12. Perform crosslinked gel gas-block treatment:
  - a. TIH with 8' bull plugged perforated sub, 1 jt tailpipe, squeeze packer and plug landing collar on work string. Set the packer at 5965'. Pressure annulus to 500 psi.
  - b. MIRU polymer pumping equipment. Establish rate with produced water to determine injectivity.
  - c. Pump 110 bbl MARASEAL (crosslinked 5% solution polyacrylamide; 8-10% hydrolysis)
  - d. Displace with plug and fresh water, displace plug to landing collar. WO gel 12 hrs. TOH.
13. Test steering tool by orienting motor to high side on surface and enter tool face offset to obtain  $0^\circ$  tool face reading. Surface function test motor.
14. TIH with 4-3/4" Reed EHP53AJK or Hughes ATJ-33 insert bit, 3-3/4" short radius angle build motor with 1 foot extended housing set for angle hold, 2 joints of 2-7/8" Monel collars, 900' of 2-7/8" 8.7 ppf P105 PH6, 3-1/8" drill collars, 2-7/8" 10.4 ppf E grade AOH drill pipe.
15. Clean out gel to end of curve. Pull back up to kickoff point. Install side entry sub, run steering tool and seat. RU power swivel. Establish off bottom pressure at operating flow rates. Put motor on bottom, adjusting toolface as necessary to compensate for reactive torque. Drill lateral section with produced water, pump XCD sweeps as needed to clean the hole and reduce drag.
16. At the end of drilling the lateral, TOH and LD drill pipe and tools. TIH with packer on tubing work string, swab well to test.
17. Run production assembly. ND BOPE. RD PU. TOTPS.

  
C. U. Bird  
Drilling Engineer