

b) DV Tool: None

c) Marker Joints: None

d) Sand Blasting: None

e) Centralizers: None

f) Torque: 7"/23/J55/LTC = 3910 max/ 2350 min/ 3130 opt lb-ft
7"/26/J55/LTC = 4590 max/ 2750 min/ 3670 opt lb-ft

g) Thread Lubricant: API modified thread lubricant after cleaning threads on box and pin down to white metal.

h) Drift: 6.151" drift run through each joint of casing.

i) Fillup: Fill casing every 1000-1500' run.

6. Land casing patch and pull necessary tension to activate seals. Land casing, cut off, pull BOP, NU wellhead, NU BOP and clean out inside casing patch with mill. RIH to PBD at approx. 8800' and circulate casing full of clean 2% KCl water. Test casing to 2000 psi.

7. RU lubricator and run GR/CCLCBL from PBD to TOC with 1000 psi inside casing. Cementing technique will be modified as necessary if TOC is not at 6200'.

8. Assuming TOC is 6200', shoot 4 holes at 90 deg. phasing at approx. 6100'. Tie onto casing and pump into cementing holes to establish circulation outside the 7" casing. RIH with retainer on tubing to 5950', set retainer, establish circulation, test annulus and RU squeeze manifold.

9. RU cementers and pump cement as follows:

a) Pump 50 bbl. fresh water spacer
Pump 975 sx. Class "H" with 8 lb/sk CSE, 0.5% CF-14 FLA,
0.35% Thrifty Lite, 5 lb/sk Gilsonite
Pump 34 bbl. FW flush.
Sting out of retainer, reverse tubing clean and TOOH.

b) Pump Rate: 5-8 BPM when cementing and circulating.

c) Mixing Technique: Batch mix/recirculation combination. Use one or two trucks to pump cement and have a third truck available for backup/displacement.

d) Cement Properties:

Class "H" with 8 lb/sk CSE, 0.5% CF-14 FLA, 0.35% Thrifty Lite,
5 lb/sk Gilsonite (13.57 ppg, 1.75 cfps, 75% water)

Note: Adjust CF-14 as necessary based on pilot testing of slurry.

e) Volume Summary: Used 30% excess over caliper and design TOC of 3800'.