

4. The proposed casing program including size, grade, weights, type of thread and coupling, and the setting depth of each string and its condition (new or acceptably reconditioned). For exploratory wells, or for wells as otherwise specified by the authorized officer, the operator shall include the minimum design factors for tensions, burst, and collapse that are incorporated into the casing design. In cases where tapered casing strings are utilized, the operator shall also include and/or setting depths of each portion.

EXISTING CASING:

17 1/2" hole, 13 3/8" 61 & 54.4# csg, set @ 348'

12 1/4" hole, 8 5/8" 28#/24# csg, set @ 2905'

7 7/8" hole, 5 1/2" 17# csg, set @ 11,449'

OPEN HOLE LATERAL:

Top of whipstock/Tie on point will be @ 11,005' MD. Estimated KOP will be at 11,025' MD, 40 Deg./100', 3.00 Inc/270.00 Azimuth, 89 DEP Length of lateral is to be an estimated 1991', 4-1/2" open hole.. Target MD 13,016'.

5. The amount and type(s) of cement, including anticipated additives to be used in setting each casing string, shall be described. If stage cementing techniques are to be employed, the setting depth of the stage collars and amount and type of cement, including additives, and preflush amounts to be used in each stage, shall be given. The expected linear fill-up of each cemented string, or each stage when utilizing stage-cementing techniques, shall also be given.

EXISTING CEMENT:

- a. 13 3/8" csg: Cmt'd w/350 sxs 'C' + 2% CaCl<sub>2</sub>.  
Cmt circ'd to surface.
- b. 8 5/8" csg: Cmt'd w/350 sxs Lite 15# salt, tailed w/ 200 sxs C  
2% CaCl<sub>2</sub>. Cmt circ'd to surface.
- c. 5 1/2" csg: Cmt'd 1st state w/955 sxs premium plus cmt.  
DV Tool at 7992'. Cmt'd 2nd state w/1975 sxs premium plus followed  
by 200 sxs premium plus. Topped out to surface w/100 sxs premium plus.