

Dugan Production Corp.  
Storey #3  
Plugging Procedure Sundry Dated 5-2-91  
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Abandonment procedure dated 4-25-91 is herein modified to incorporate plugging requirements stipulated by the New Mexico Oil Conservation Division.

Plan to plug and abandon as follows:

1. Rig up pulling unit & install BOP.
2. Pump 15 BW down tubing with bradenhead & casing valves open.
3. P.O.O.H. with 2-3/8" tubing & bit. Remove bit, bit sub, float & perforated tubing.
4. Run in with 2-3/8" tubing open-ended.
5. Clean out open hole to at least 715'.
6. With tubing 1' above ETD, mix & pump 10 sacks (11.8 cf) class "B" cement with 2%  $\text{CaCl}_2$  from 724' to  $\pm 579'$ .
7. Pull tubing to 670' and circulate hole clean of cement. Slowly pull tubing  $\pm 60'$  and shut in minimum of 4 hours for cement to set.
8. Pressure test 4-1/2" casing to 500 psi for 15 minutes. If leak is indicated, locate using tubing and packer. Repair of leak to be done during Step #11 and after CBL.
9. Circulate 4-1/2" casing with water. Pull tubing and fill casing with water.
10. Run Cement Bond Log from  $\pm 670'$  to surface.
11. If bonding is acceptable, proceed with Step #14. If questionable bonding is detected, perforate 4-1/2" casing and attempt to circulate cement to surface.
12. Clean out and pressure test squeeze holes.
13. If cement on Step #11 was circulated, proceed with Step #14. If cement was not circulated, run bond log and repeat Steps #11 and 12 as indicated.
14. Run tubing to  $\pm 670'$ . Mix and pump 46 sacks class "B" cement (54.3 cf) from 670' to surface.
15. Pull tubing and finish filling 4-1/2" casing with  $\pm 5$  sacks cement (6.0 cf).
16. Leave bradenhead valve open and pressure up 4-1/2" casing to 100 psi for cement to set.
17. Test bradenhead - if can pump into bradenhead, mix and pump  $\pm 10$  sacks cement.
18. Remove casing heads.
19. Cut off any casing above ground level.
20. Install dry hole marker.
21. Clean location.

BLM and NMOCDD will be given 24 hour notice prior to commencing abandonment procedure.