

PLUG AND ABANDONMENT PROCEDURE

May 30, 2014

Ferguson #1 F-4

Red Mesa Gas Field

2130' FSL, 100' FEL, Section 33, T33N, R12W, LaPlata County, Colorado

API #05-067-06133 / Long: -108.14677 W Lat:37.05893 N

Note: All cement volumes use 10% excess per 1000 foot of depth or 100% excess outside pipe and 50' excess inside pipe, whichever is greater. The stabilizing wellbore fluid will be 8.3 ppg, sufficient to balance all exposed formation pressures. All cement will be Class B, mixed at 15.8 ppg with a 1.18 cf/sx yield.

1. This project will use of an A-Plus steel tank to handle waste fluids circulated from the well and cement wash up.
2. Install and test location rig anchors. Comply with all COGCC, BLM, and Operator safety regulations. MOL and RU daylight pulling unit. Conduct safety meeting for all personnel on location. Record casing, tubing and bradenhead pressures. NU relief line and blow down well. Kill well with water as necessary and at least pump tubing capacity of water down the tubing. ND wellhead and NU BOP. Function test BOP.

3. Rods: Yes ☐, No ☒, Unknown ☐.
Tubing: Yes ☒, No ☐, Unknown ☐, Size 2", Length 3410'.
Packer: Yes ☐, No ☒, Unknown ☐, Type .

Note: If unable to set wireline CR or CIBP in this well then LD 2" tubing and PU 2-3/8" tubing workstring.

4. **Plug #1 (Dakota perforations and top, 338' – 3288')**: Round trip 4.5" gauge ring to 3388' or as deep as possible. RIH and set 4.5" wireline CR at 3388'. Pressure test tubing to 1000#. Attempt to pressure test casing to 800#. If casing does not test then spot or tag subsequent plugs as appropriate. Mix 12 sxs Class B cement inside casing above CR to isolate the Dakota interval. TOH with tubing.
5. **Plug #2 (Gallup top, 2609' – 2509')**: Perforate 3 squeeze holes at 2609'. Attempt to establish rate if the casing pressure tested. Set 4.5" wireline cement retainer at 2559'. Establish rate into squeeze holes. Mix and pump 51 sxs Class B cement, squeeze 39 sxs outside casing and leave 12 sxs inside casing to cover the Gallup top. TOH with tubing.
6. **Plug #3 (Point Lookout top, 1055' – 955')**: Perforate 3 squeeze holes at 1055'. Attempt to establish rate if the casing pressure tested. Set 4.5" wireline cement retainer at 1005'. Establish rate into squeeze holes. Mix and pump 51 sxs Class B cement, squeeze 39 sxs outside casing and leave 12 sxs inside casing to cover the Point Lookout top. TOH with tubing.
7. **Plug #4 (Cliff House top, 485' – 385')**: Perforate 3 squeeze holes at 485'. Attempt to establish rate if the casing pressure tested. Set 4.5" wireline cement retainer at 485'. Establish rate into squeeze holes. Mix and pump 51 sxs Class B cement, squeeze 39 sxs outside casing and leave 12 sxs inside casing to cover the Cliff House top. TOH with tubing.

8. **Plug #5 (10-3/4" surface casing shoe, 100' – Surface):**. Establish circulation out bradenhead with water and circulate the BH annulus clean. Mix approximately 10 sxs Class B cement and top off surface and annulus. Shut in well and WOC.
9. ND BOP and cut off wellhead below surface casing flange. Install P&A marker with cement to comply with regulations. Record GPS coordinate for P&A marker on tower report. Photograph P&A marker in place. Cut off anchors and clean up location. Restore location per BLM stipulations.