

PLUG AND ABANDONMENT PROCEDURE

May 21, 2018

NEBU 489

Basin Fruitland Coal

2230' FSL & 1240' FWL, Section 12, T-31-N, R-7-W

San Juan County, New Mexico / API 30-045-27705

Note: All cement volumes use 100% excess outside pipe and 50' excess inside. The stabilizing wellbore fluid will be 8.3 ppg, sufficient to balance all exposed formation pressures. All cement will be Class G, mixed at 15.8 ppg with a 1.15 cf/sx yield.

1. Install and test location rig anchors. Comply with all NMOCD, 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.
2. Rods: Yes , No , Unknown .
Tubing: Yes , No , Unknown , Size 2-3/8" , Length 3426' .
Packer: Yes , No , Unknown , Type .
3. **Plug #1 (Fruitland perforations and top, 3062' - 2962')**: Round trip 7" gauge ring to 3062' or as deep as possible. RIH and set 7" CR at 3062'. Circulate well clean. Pressure test casing to 800#. If casing does not test then spot or tag subsequent plugs as appropriate. Spot 29 sxs Class G cement inside casing from 3062' to cover the Fruitland top. PUH.
4. **Plug #2 (Kirtland and Ojo Alamo tops, 2330' – 2050')**: Mix 64 sxs Class G cement inside casing to cover the Kirtland and Ojo Alamo tops. TOH and LD tubing. PUH.
5. **Plug #3 (Nacimiento and 7" surface casing shoe, 362' - Surface)**: Attempt to pressure test the bradenhead annulus to 300 PSI; note the volume to load. If the BH annulus holds pressure, then establish circulation out casing valve with water. Mix approximately 70 sxs cement and spot a balanced plug from 362' to surface, circulate good cement out casing valve. TOH and LD tubing. Shut well in and WOC. If the BH annulus does not test, then perforate at the appropriate depth and attempt to circulate cement to surface filling the casing and annulus from the squeeze holes to surface. Shut in well and WOC.
6. ND cementing valves and cut off wellhead. Fill annuli with cement as necessary. Install P&A marker to comply with regulations. Record GPS coordinate for P&A marker on tower report. Photograph P&A marker in place. RD, MOL and cut off anchors. Restore location per BLM stipulations

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Proposed P&A

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Today's Date: 5/21/2018

Spud: 5/26/90

Completed: 7/14/90

Elevation: 6525' GL

12.25" hole

9.625" 36# Casing set @ 312'
Cement with 250 sxs, circulated

Plug #3: 362 - 0'
Class G cement, 70 sxs

Ojo Alamo @ 2100'

Plug #2: 2330' - 2050'
Class G cement, 64 sxs

Kirtland @ 2280'

Plug #1: 3062' - 2962'
Class G cement, 29 sxs

Fruitland @ 2980'

Set CR @ 3062'

Fruitland Coal Perforations:
3112' - 3457'

8.75" hole

7" 23# Casing set at 3112'
Cement with 565 sxs

PBTD N/A
TD 3275'

5.5" Liner hanger @ 3085'
Open Hole to 3457'

