

PLUG AND ABANDONMENT PROCEDURE

March 12, 2013

Jicarilla 460-16 #4

East Blanco PC / Cabresto Canyon Ojo Alamo Ext.
840' FSL, 1180' FWL, Section 16, T30N, R3W, Rio Arriba County, NM
API 30-039-25785 / Long: _____ / Lat: _____

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 B, mixed at 15.6 ppg with a 1.18 cf/sx yield.

1. This project requires a NMOCD C-144 CLEZ Closed-Loop System Permit for the 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 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.
3. Rods: Yes _____, No _____, Unknown _____.
Tubing: Yes X, No _____, Unknown _____, Size 2-3/8", Length 3814'
Packer: Yes X, _____, Unknown _____, Type A-1X packer at 3742'
If this well has rods or a packer, then modify the work sequence in step #2 as appropriate.

NOTE: Due to high probability of holes in tubing (bradenhead test indicated casing and tubing had 53# pressure) and scale buildup and restricted ID through Ojo Alamo perforations above packer, the decision was made to leave the packer in the well. PU on tubing and release from on/off tool. TOH and LD tubing. PU workstring.

4. **Plug #1 (Pictured Cliffs interval, Fruitland, Kirtland and Ojo Alamo tops, (3742' – 3194')):** TIH with workstring and tag packer. Mix 53 sxs Class B cement (note: 100% excess over perforations) and spot a plug above the packer to isolate the PC interval and cover through the Ojo Alamo perforations. PUH and WOC. TIH and tag cement. Plug should be at least 50' above the top of the Ojo Alamo. PUH.
5. **Plug #2 (Nacimiento top, ²⁰⁷⁶2101' – ¹⁹⁷⁶2001')**: Mix 12 sxs Class B cement and spot a balanced plug inside the casing to cover the Nacimiento top. PUH.
6. **Plug #3 (8-5/8" Surface casing shoe, 594' - 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 50 sxs cement and spot a balanced plug from 594' 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 from 594' and the annulus from the squeeze holes to surface. Shut in well and WOC.
7. ND BOP and cut off wellhead below surface casing flange. Install P&A marker with cement to comply with regulations. RD, MOL and cut off anchors. Restore location per BLM stipulations.

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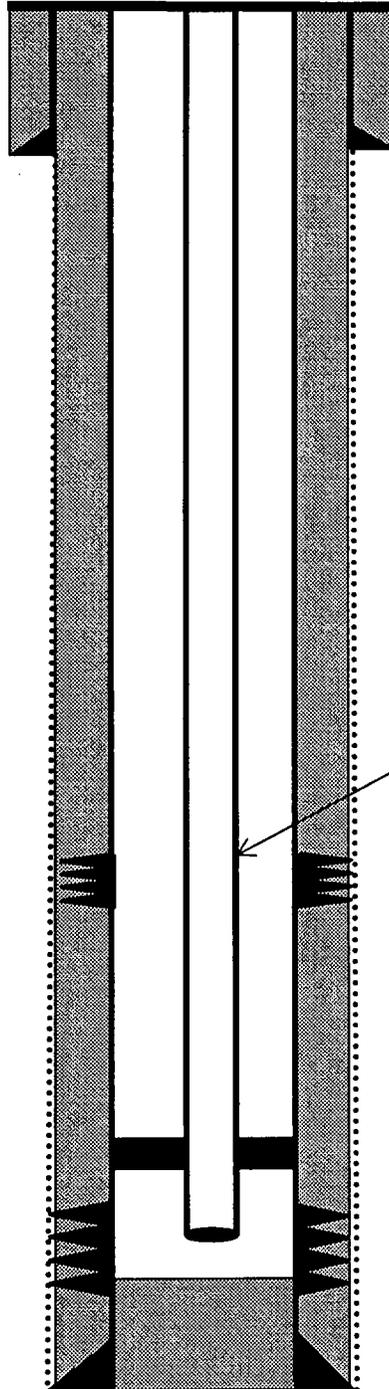
Current

East Blanco PC/ Cabresto Canyon Ojo Alamo Ext.

840' FSL & 1180' FWL, Section 16, T-30-N, R-3-W, Rio Arriba County, NM

Long: _____ / Lat: _____ / API 30-039-25785

Today's Date: 3/12/13
Spud: 3/23/98
PC Comp: 4/12/98
Ojo Alamo Ext. Comp: 3/22/05
Elevation: 7251' GI
7263' KB



TOC circulated to surface per completion report

8-5/8" 24#, K-55 Casing set @ 544'
Cement with 300 sxs, circulated 84 sx to surface

Nacimiento @ 2051' *est

2-3/8" tubing at 3814'
(121 jts, 4 pup jts, on-off tool, R nipple, A-1X pkr)

Ojo Alamo @ 3244'

Ojo Alamo Perforations:
3247' - 3291'

Kirtland @ 3482'

Fruitland @ 3665'

A-1X packer at 3742'

Pictured Cliffs @ 3780'

Pictured Cliffs Perforations:
3780' - 3856'

7-7/8" Hole

4.5" 10.5#, J-55 Casing @ 4049'
Cement with 870 sxs, circ 10 sxs to surface

4070' TD
3841' COTD

Jicarilla 460-16 #4

Proposed P&A

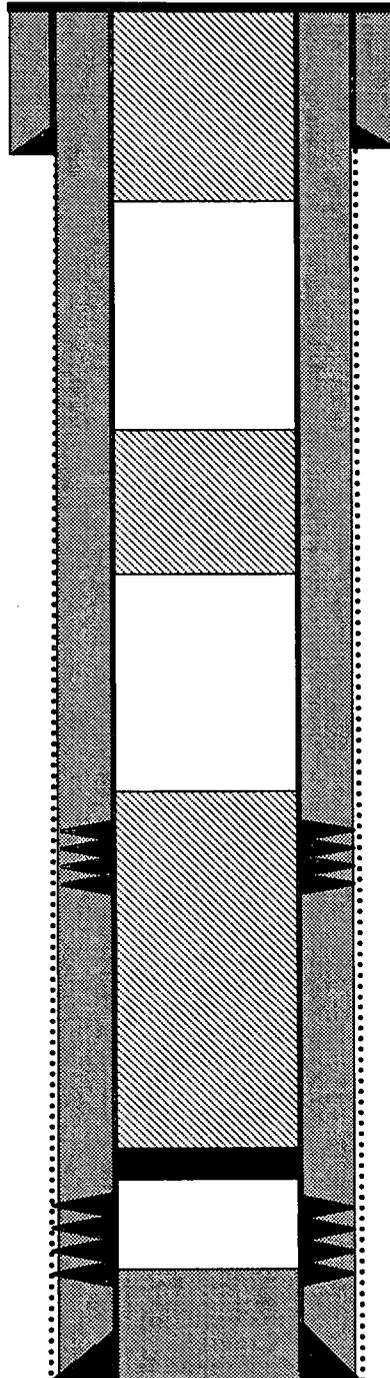
East Blanco PC/ Cabresto Canyon Ojo Alamo Ext.

840' FSL & 1180' FWL, Section 16, T-30-N, R-3-W, Rio Arriba County, NM

Long: _____ / Lat: _____ / API 30-039-25785

Today's Date: 3/12/13
 Spud: 3/23/98
 PC Comp: 4/12/98
 Ojo Alamo Ext. Comp: 3/22/05
 Elevation: 7251' GI
 7263' KB

12-1/4" Hole



TOC circulated to surface
 per completion report

8-5/8" 24#, K-55 Casing set @ 544'
 Cement with 300 sxs, circulated 84 sx to
 surface

Plug #3: 594' - 0'
 Class B cement, 50 sxs

Plug #2: 2101' - 2001'
 Class B cement, 12 sxs

Nacimiento @ 2051' *est

Ojo Alamo @ 3244'

Ojo Alamo Perforations:
 3247' - 3291'

Plug #1: 3742' - 3194'
 Class B cement, 53 sxs
 (100% excess over perms)

Kirtland @ 3482'

Fruitland @ 3665'

A-1X packer at 3742'

Pictured Cliffs @ 3780'

Pictured Cliffs Perforations:
 3780' - 3856'

7-7/8" Hole

4.5" 10.5#, J-55 Casing @ 4049'
 Cement with 870 sxs, circ 10 sxs to surface

4070' TD
 3841' COTD

The Jicarilla Apache Nation requires 45 days to evaluate this well beginning from February 22, 2013 in order to determine if they would like to assume ownership of the well. If the Jicarilla Apache Nation has not contacted your office before the end of the 45 days you may proceed with plugging operations.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE
6251 COLLEGE BLVD.
FARMINGTON, NEW MEXICO 87402

Attachment to notice of
Intention to Abandon:

Re: Permanent Abandonment
Well: 4 Jicarilla 460-16

CONDITIONS OF APPROVAL

1. Plugging operations authorized are subject to the attached "General Requirements for Permanent Abandonment of Wells on Federal and Indian Lease."
2. Farmington Office is to be notified at least 24 hours before the plugging operations commence (505) 564-7750.
3. The following modifications to your plugging program are to be made:
 - a) Place the Nacimiento plug from 2076'- 1976'.
 - b) You are required to have H2S monitoring equipment and personnel on location during plugging operations.

You are also required to place cement excesses per 4.2 and 4.4 of the attached General Requirements.

Office Hours: 7:45 a.m. to 4:30 p.m.