



## PLUG AND ABANDONMENT PROCEDURE

July 9, 2003

### AXI Apache K #2

Blanco Mesaverde

807' FNL and 1354' FEL, Section 4, T26N, R5W

Rio Arriba County, New Mexico, API 30-039-06745

Lat: N 36° 31' 16.6" / Long: W 107° 21' 32.0"

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 ASTM Type II, mixed at 15.6 ppg with a 1.18 cf/sx yield.

1. Install and test rig anchors. Prepare blow pit. Comply with all NMOCD, BLM and ConocoPhillips safety rules and regulations. Conduct safety meeting for all personnel on location. MOL and RU daylight pulling unit. NU relief line and blow well down; kill with water as necessary.
2. Pick up on rods and unseat pump. If necessary hot oil tubing. Re-seat pump and pressure test tubing to 1000#. POH and LD rods. ND wellhead and NU BOP; test BOP.
3. TOH tallying and visually inspecting 2-3/8" tubing (5397'). If necessary LD tubing and use a tubing workstring. Round-trip a casing scraper or wireline gauge ring to 4820'.
4. **Plug #1 (Mesaverde perforations, 4814' – 4714'):** TIH and set a 5-1/2" CR at 4814'. Load casing with water and circulate the well clean. Pressure test casing to 500 psi. If casing does not test, spot or tag subsequent plugs as appropriate. Mix 17 sxs cement and spot a balanced plug inside the casing above the CR to isolate the Mesaverde perforations. PUH to 3294'.
5. **Plug #2 (Pictured Cliffs perforations and Fruitland, Kirtland and Ojo Alamo tops, 3294' – 2600' ~~2750'~~):** Mix 70 sxs cement and spot a balanced plug inside the casing to cover the Pictured Cliffs perforations and tops through the Ojo Alamo. POH to 810'.
6. **Plug #3 (Nacimiento top, 810' – 710'):** Mix 17 sxs cement and spot a balanced plug inside the casing to cover the Nacimiento top. TOH and LD tubing.
7. **Plug #4 (10-3/4" Surface casing shoe, 360' - Surface):** Perforate 3 HSC holes at 360'. Establish circulation out the bradenhead with water. Mix approximately 180 sxs cement and pump down the 5-1/2" casing, circulate good cement to surface. Shut in well and WOC.
8. 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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## Proposed P&A

Blanco Mesaverde

807' FNL & 1354' FEL, Section 4, T-26-N, R-5-W

Rio Arriba County, NM / API #30-039-06745

Lat: N 36° 31' 16.6" / Long: W 107° 21' 32.0"

Today's Date: 7/9/03  
Spud: 4/21/56  
Completed: 7/2/56  
Elevation: 6556' KB

14-1/4" hole

10-3/4" 40.5# Casing set @ 310'  
Cmt with 175 sxs (Circulated to Surface)

Nacimiento @ 760'

Casing Repair:  
903' - 599'  
185 sxs (1998)

Perforate @ 360'

Plug #4: 360' - Surface  
Cement with 180 sxs

Casing Repair:  
2241' - 2522'  
185 sxs (1977)

Plug #3: 810' - 710'  
Cement with 17 sxs

Ojo Alamo @ 2670'

Casing Repair:  
2618' - 2681'  
95 sxs (2000)

Kirtland @ 2800'

TOC @ 2800' (TS)

Fruitland @ 3000'

Plug #2: 3294' - <sup>2600</sup>~~2750~~  
Cement with 70 sxs

Pictured Cliffs @ 3220'

Pictured Cliffs Perforations:  
3220' - 3244' Sqzd w/ 150 sxs (1979)

DV Tool @ 4528'  
Cmt with 1000 sxs ( 1550 cf)  
TOC @ 4528' (Calc 75%)

Mesaverde @ 4860'

Set Cmt Rt @ 4814' Plug #1: 4814' - 4714'  
Cement with 17 sxs

Mesaverde Perforations:  
4864' - 4940'  
5402' - 5484'

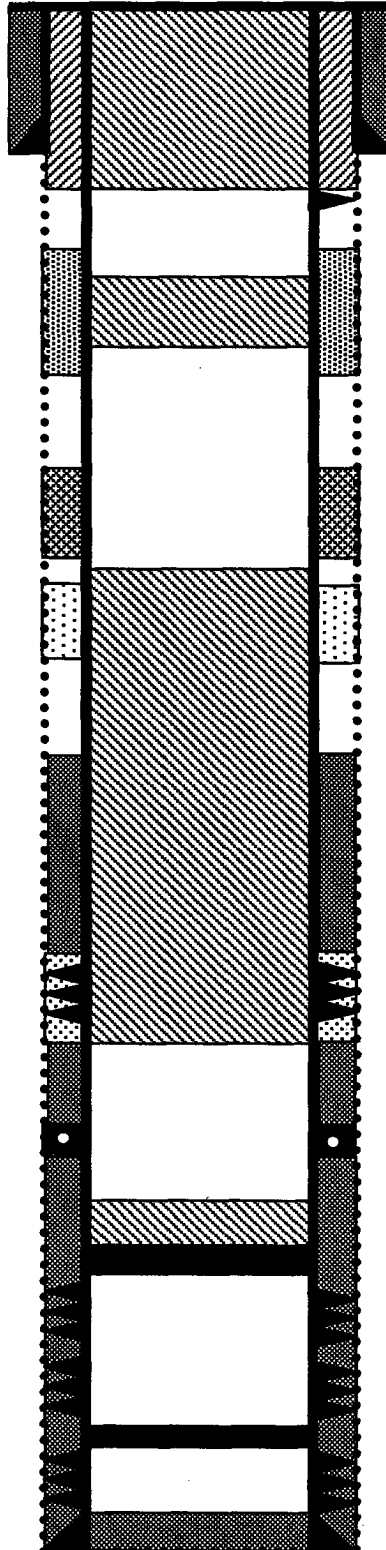
CIBP @ 5507' (1956)

5513' - 5524'

7-7/8" hole

5-1/2" 14.0# Casing set @ 5586'  
Cement with 250 sxs ( 295 cf)

TD 5590'



# AXI Apache K #2

## Current

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14-1/4" hole

10-3/4" 40.5#, Csg set @ 310'  
Cmt with 175 sxs (Circulated to Surface)

### Well History:

**Dec 77':** Repair casing leak from 2241' to 2522' with 185 sxs cement. PT to 500#.

**Jul '79:** Squeeze off Pictured Cliffs perforations with 150 sxs.

**Feb '98:** Repair casing leak from 870' to surface with 180 sxs plus again with 25 sxs. Did not circulate out BH. Mill out Model N packer at 4827' and CO to 5464'.

**Dec '99:** Isolate casing leak for 2618' to 2681', no repair. Set packer & test well.

**Mar 00':** Repair casing leak from 2618' to 2681' with 95 sxs cement. Drill out and PT to 500#. Land tubing, no packer.

**Oct 00':** Run rods and pump.

TOC @ 2800' (TS)

2-3/8" Tubing set at 5397'  
(171 joints, with 3/4" rods)

Pictured Cliffs Perforations:  
3220' - 3244' Sqzd w/ 150 sxs (1979)

DV Tool @ 4528'  
Cmt with 1000 sxs (1550 cf)

TOC @ 4528' (Calc 75%)

Mesaverde Perforations:  
4864' - 4940'  
5402' - 5484'

CIBP @ 5507' (1956)

5513' - 5524'

5-1/2" 14.0# Casing set @ 5586'  
Cement with 250 sxs (295 cf)

Nacimiento @ 760'

Casing Repair:  
870' - Surface  
185 sxs (1998)

Casing Repair:  
2241' - 2522'  
185 sxs (1977)

Ojo Alamo @ 2670'

Casing Repair:  
2618' - 2681'  
95 sxs (2000)

Kirtland @ 2800'

Fruitland @ 3000'

Pictured Cliffs @ 3220'

Mesaverde @ 4860'

7-7/8" hole

TD 5590'

CONDITIONS OF APPROVAL FOR PERMANENT ABANDONMENT

Operator ConocoPhillips Co. Well Name AXI Apache K #2

1. Plugging operations authorized are subject to the "General Requirements for Permanent Abandonment of Wells on Federal Leases."
2. For wells on Federal leases, Al Yepa with the Cuba Field Office is to be notified at least 24 hours (48 hours if possible) before the plugging operations commence. His phone number is (505) 289-3748. Office hours are 7:45 a.m. to 4:30 p.m.

For wells on Jicarilla leases notify Bryce Hammond with the Jicarilla Apache Tribe at least 24 hours (48 hours if possible) before the plugging operations commence. His phone number is (505) 759-3485 ext. 31.

3. Blowout prevention equipment is required.
4. The following modifications to your plugging program are to be made :

None

## BLM CONDITIONS OF APPROVAL

The following surface rehabilitation Conditions of Approval must be complied with as applicable, before this well can be approved for final abandonment (see 43 CFR 3162.3-4). Surface rehabilitation work shall be completed within one year of the actual plugging date. Notification for completion of this work should be submitted with a Sundry Notice. Questions? Call Lucas Vargo (505) at 289-3748 or (505) 761-8700.

1. All fences, production equipment, purchaser's equipment, concrete slabs, deadman (anchors), flowlines, risers, debris and trash must be removed from the location. Non-retrieved flowlines and pipelines will be abandoned in accordance with State Rule 714. Information supporting the non-retrieval will be included in the subsequent report or final abandonment Sundry Notice.

2. Production pits will be closed according to the Unlined Surface Impoundment Closure Guidelines, as approved in the Environmental Assessment of December 1993. Any oil stained soils can be remediated on-site according to these guidelines or disposed of in an approved facility.

3. The well pad will be shaped to the natural terrain and left as rough as possible. All compacted areas and areas devoid of vegetation shall be ripped/disked to a minimum of 12" in depth before reseeding.

4. Access roads will be shaped to conform to the natural terrain and left as rough as possible to deter vehicle travel. Access will be ripped to a minimum of 12" in depth, water barred and reseeded. All erosion problems created by the development must be corrected prior to acceptance of release. Water bars should be spaced as shown below along the fall line of the slope:

% Slope	Spacing Interval
Less than 20%	200'
2 to 5 %	150'
6 to 9 %	100'
10 to 15 %	50'
Greater than 15%	30'

5. All disturbed areas will be seeded with the prescribed certified seed mix (reseeding may be required). Seed mix must be certified weed free to avoid the introduction of noxious weeds. Refer to the original APD for seed mix.

6. Notify Surface Managing Agency seven (7) days prior to seeding so that they may be present to witness.

7. The period of liability under the bond of record will not be terminated until the well is inspected and the surface rehabilitation approved.

Other Surface Managing Agencies (SMA's) may vary slightly in their restoration requirements. It is your responsibility, as the operator, to obtain surface restoration requirements from other SMA's. We need to be provided with a copy of these requirements. Any problems concerning stipulations received from other SMA's should be brought to us. On private land, a letter from the fee owner stating that the surface restoration is satisfactory will be provided to the office. Questions? Call Lucas Vargo at (505) 289-3748 or (505) 761-8700.