

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

1a. Type of Work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other

☒ Single Zone ☐ Multiple Zone

2. Name of Operator

JICARILLA APACHE ENERGY CORP

3a. Address

P.O. Box 710 DULCE, NEW MEXICO 87528

3b. Phone No. (include area code)

505-759-3224

4. Location of Well (Report location clearly and in accordance with any State requirements. \*)

At surface 1295' FNL & 1980' FWL

At proposed prod. zone AS ABOVE

14. Distance in miles and direction from nearest town or post office\*

30 MILES SSW OF DULCE, NM

15. Distance from proposed\*  
location to nearest  
property or lease line, ft.  
(Also to nearest drig. unit line, if any)

1980'

16. No. of Acres in lease

8863.50

17. Spacing Unit dedicated to this well

NORTH HALF - 320 ACRES

18. Distance from proposed location\*  
to nearest well, drilling, completed,  
applied for, on this lease, ft.

3236'

19. Proposed Depth

6254'

20. BLM/BIA Bond No. on file

ON FILE

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

7167' UGL

22. Approximate date work will start\*

SEPTEMBER 15, 2006

23. Estimated duration

15 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature

Name (Printed/Typed)

Date

CHARLES NEELEY

7/26/06

Title

CONTRACT DRILLING ENGINEER

Approved by (Signature)

Name (Printed/Typed)

Date

Title

Office

3/14/07

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on reverse)

RCVD MAR16'07  
OIL CONS. DIV.  
DIST. 3

NOTIFY AZTEC OGD  
IN TIME TO WITNESS

24hrs  
ESG & Cement

DRILLING OPERATIONS AUTHORIZED ARE  
SUBJECT TO COMPLIANCE WITH ATTACHED  
"GENERAL REQUIREMENTS".

NMOCOD  
3/22/07

This action is subject to technical and  
procedural review pursuant to 43 CFR 3165.3  
and appeal pursuant to 43 CFR 3165.4

DISTRICT I  
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II  
1301 W. Grand Ave., Artesia, N.M. 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV  
1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-039-30007</b>		<sup>2</sup> Pool Code <b>72319</b>	<sup>3</sup> Pool Name <b>BLANCO-MESAVERDE</b>
<sup>4</sup> Property Code <b>36388</b>	<sup>5</sup> Property Name <b>JAECO 28-3</b>		<sup>6</sup> Well Number <b>2</b>
<sup>7</sup> GRID No. <b>11859</b>	<sup>8</sup> Operator Name <b>JICARILLA APACHE ENERGY CORP.</b>		<sup>9</sup> Elevation <b>7167'</b>

<sup>10</sup> Surface Location

UL or lot no. <b>C</b>	Section <b>36</b>	Township <b>28-N</b>	Range <b>3-W</b>	Lot Idn	Feet from the <b>1295'</b>	North/South line <b>NORTH</b>	Feet from the <b>1980'</b>	East/West line <b>WEST</b>	County <b>RIO ARriba</b>
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres <b>N/320 Acres</b>		<sup>13</sup> Joint or Infill <b>N</b>		<sup>14</sup> Consolidation Code		<sup>15</sup> Order No. <b>RCUD MAR 15 '07 OIL CONS. DIV. DIST. 3</b>			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16

FD 2 1/2" BC 1917 GLO	N 89-44-34 E 5274.43' (M)	FD 2 1/2" BC 1917 GLO
1980'	1295'	
	LAT: 36.59994' N. (NAD 83) LONG: 107.10436' W. (NAD 83)	
N 00-00-45 W 5281.79' (M)	36	
FD 2 1/2" BC 1917 GLO		

<sup>17</sup> OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Charles Nealey* 7-26-06  
Signature Date  
*Charles Nealey*  
Printed Name

<sup>18</sup> SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

APRIL 25, 2006

Date of Survey

Signature

JOHN A. VUKOBICH  
NEW MEXICO  
REGISTERED PROFESSIONAL SURVEYOR  
14831

Certificate Number

Submit 3 Copies To Appropriate District Office  
District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Ave., Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
May 27, 2004

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

WELL API NO. <b>30-039-30007</b>	
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name Jicarilla Apache MDA 701-04-0014	
8. Well Number JAECO 28-3 No. 2	
9. OGRID Number 11859	
10. Pool name or Wildcat Blanco Mesaverde	

11. Elevation (Show whether DR, RKB, RT, GR, etc.) 7167' UGL	
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Pit or Below-grade Tank Application <input checked="" type="checkbox"/> or Closure <input type="checkbox"/>	
Pit type Drilling Reserve Pit Depth to Groundwater >100 ft Distance from nearest fresh water well >1000 ft Distance from nearest surface water <200 ft	
Pit Liner Thickness: 15 mfl	Below-Grade Tank: Volume bbls; Construction Material Location Dirt

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

2. Name of Operator  
Jicarilla Apache Energy Corp

3. Address of Operator  
P.O. Box 710, Dulce NM, 87528

4. Well Location

Unit Letter C : 1295 feet from the North line and 1980 feet from the West line

Section 36 Township 28 North Range 3 West NMPM Rio Arriba County New Mexico

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
7167' UGL

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: Application for New Drilling Reserve Pit ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ P AND A ☐  
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Drilling reserve pit to be located approximately 40 feet from well head. Pit to be lined, constructed, operated and closed in accordance with NMOCD guidelines and BLM, BIA, Jicarilla Apache Oil & Gas Administration and JAECO procedures.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Charles Neeley TITLE Contract Drilling Engineer DATE 7-26-06

Type or print name Charles Neeley E-mail address: neelece@msn.com Telephone No. 505-486-0211  
For State Use Only

APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. # DATE MAR 22 2007

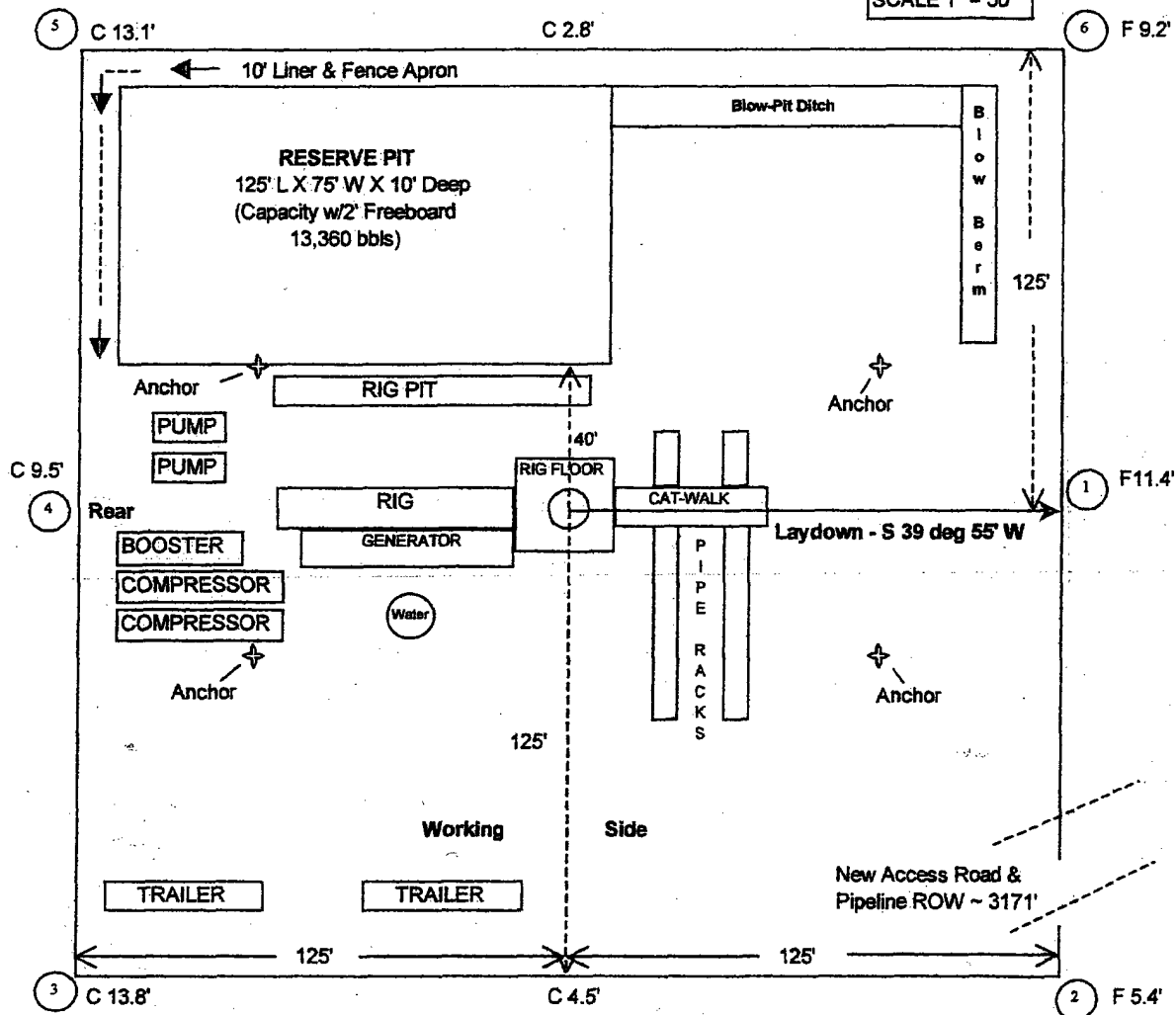
Conditions of Approval (if any):



Neeley Consulting Service, LLC  
3001 Northridge Dr., Farmington, NM  
505-486-0211

0' 50'

SCALE 1" = 50'



Construction Zone & Arche Buffer = 25' outside of location perimeter, all sides.

### JAECO

#### Wellsite Layout Plat with Cut & Fills

JAECO 28-3 No. 2

1295' FNL & 1980' FWL

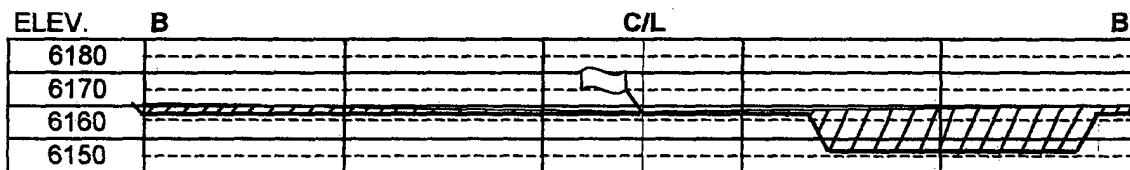
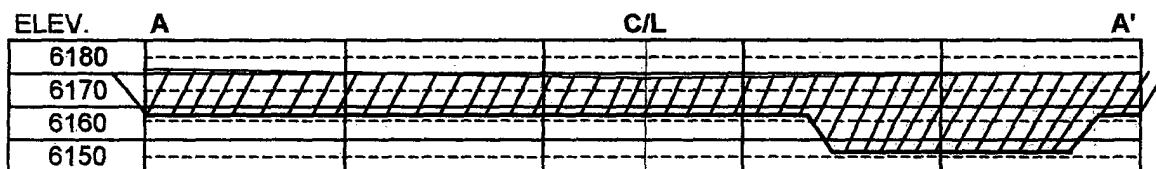
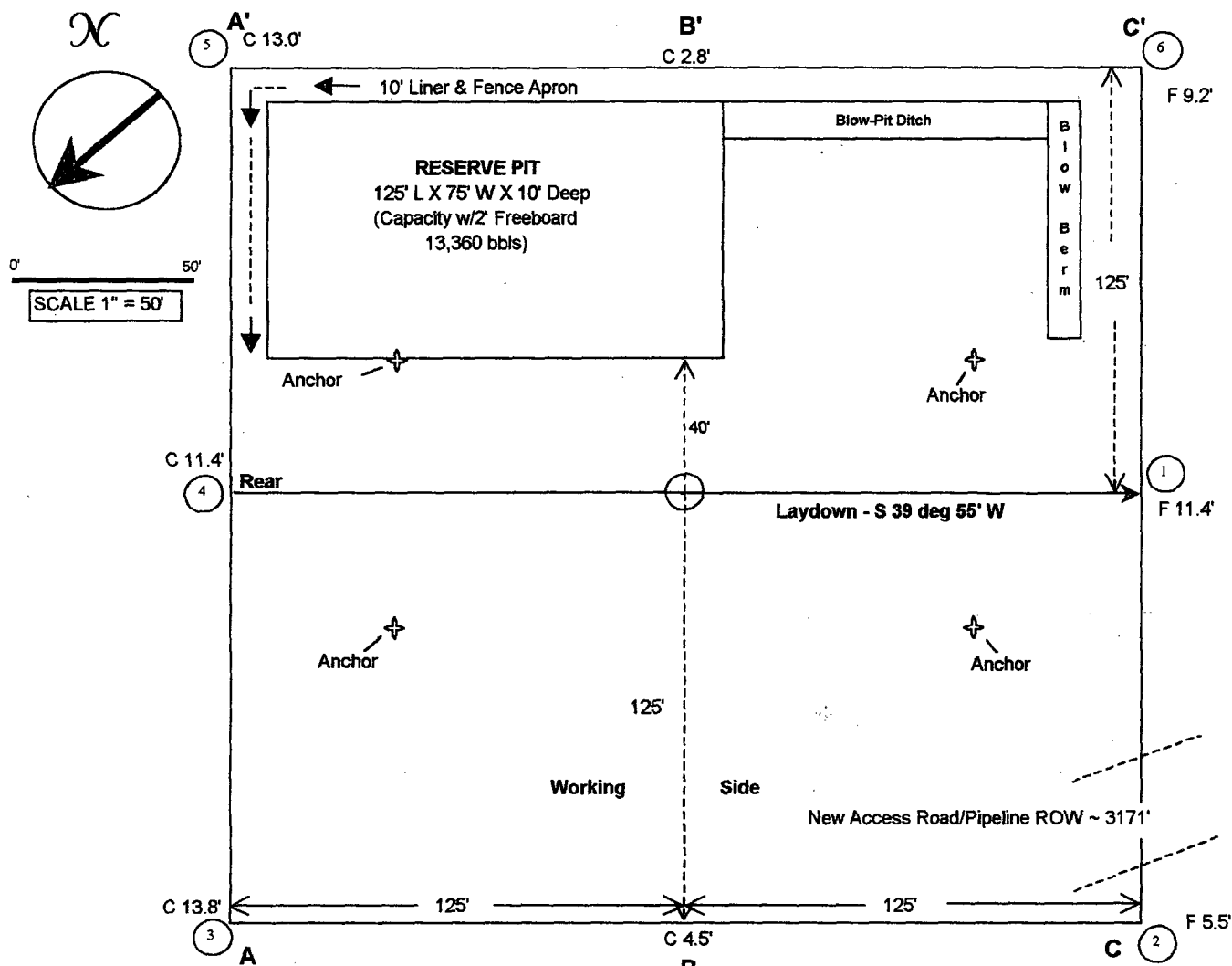
Sec 36, T28N, R3W, NMPM

Rio Arriba Co., New Mexico

Elevation: 7167' UGL

Jicarilla Apache Energy Corp.  
 JAECO 28-3 No. 2, 1295' FNL & 1980' FWL  
 Section 36, T28N, R3W, NMPM, Rio Arriba County, NM  
 Ungraded Ground Elevation: 6167', Date: July 22, 2006

Lat. = 36.59994 Deg N  
 Long. = 107.10436 Deg W  
 NAD 83



**Note:** Contractor Should Call **One-Call** For Location Of Any Marked Or Unmarked Buried Pipelines Or Cables On Well Pad And Or Access Road At Least Two (2) Working Days Prior To Construction.

**Jicarilla Apache Energy Corp**  
**JAECO 28-3 No. 2**  
 1295' FNL & 1980' FWL  
 Section 36, T28N, R3W, NMPM  
 Rio Arriba County, New Mexico

**TEN POINT DRILLING PLAN**

1. **Surface Formation:** San Jose

2. **Surface Elevation:** 7167' UGL      Est KB, ft: 7179

3. **Estimated Formation Tops:**

Formation	Top MD (KB), ft	Top Subsea, ft	Rock Type	Comments
San Jose	Surface	Surface	Sandstone & Shale	Sticking
Nacimiento	2303	4876	Shale & Sandstone	Bit balling, sticking & LC
Ojo Alamo	3408	3771	Sandstone	Gauge Hole
Kirtland	3553	3626	Shale w/Sandstone	
Fruitland	3648	3531	Coal, Shale, Sandstone	Gas, Water
Pictured Cliffs	3709	3470	Sandstone, Shale, Coal	Gas - Mud Loss
Lower PC	3875	3304	Sandstone & Shale	Gas - Mud Loss
Lewis	4093	3086	Shale	
Huerfano	4469	2710	Shale	Bentonite
Cliff House	5753	1426	Sandstone	Gas
Menefee	5781	1398	Coal, Shale, Sandstone	Gas & Oil
Pt. Lookout	6009	1170	Sandstone & Shale	Gas
Mancos	6179	1000	Shale	
Total Depth:	6254	925		

4. **Casing and Cementing Program:**

Drill a 12 1/4" Hole to 320'. A string of 9 5/8" 36# J-55 or K-55 ST&C casing will be set and cemented to the surface in a single stage with 180 sacks (212.5 cf) of Class "B" cement (yield = 1.18 cf/sk) containing 2% CaCl<sub>2</sub> and 1/4 lb/sack cellophane flake. Slurry volume assumes 100% excess over calculated hole volume. Clearance between couplings and hole is 1.625". If cement does not circulate to surface, cement will be topped off using 1" pipe down the 12 1/4" by 9 5/8" annulus.

Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8 or 100,000 lb overpull whichever is greater.

Hole Dia	Casing Data				Collapse (psi)	Burst (psi)	Jt. Strength (Lbs.)
	OD	Wt/FT	Grade	Thread			
12 1/4"	9 5/8"	36	J-55	STC	2,020	3,520	394,000
		36	K-55	STC	2,020	3,950	452,000

**WOC 12 HOURS.** Nipple up 11" 2000# BOPE. Install proper size test plug, calibrated test guage and recorder. Pressure test BOPE at 250 psi for 5 minutes and 2000 psi for 10 minutes. Pull test plug, drill wiper plug, float collar and cement to within 10' of casing shoe. Close pipe rams and pressure test surface casing to 1500 psi for 30 minutes.

**Drilling Plan**  
**Jicarilla Apache Energy Corporation**  
**JAECO 28-3 No. 2**

**4. Casing and Cementing Program: Continued**

Drill an 8 3/4" hole to 4163' feet, approximately 70' feet into the Lewis Shale.

Run Induction and Compensated density/neutron logs from 4163' to the surface casing shoe.

A string of 7" 20#, J-55, STC Intermediate casing will be set at 4163' with a mechanical DV tool set at 2358', 55' below Nacimiento top. Stage 1 ( 4163' - 2358', 1805' ) will be cemented with 167 sacks ( 314.3 cf ) of 35/65 Poz/B + 6% Gel + 5#/sk Gilsonite and 1/4 #/sk cellophane flake mixed at 12.1 ppg, yield 1.88 cf/sk. Followed by 136 sacks ( 170.7 cf ) Class B with 5#/sk Gilsonite, 1/4#/sk cellophane flake and mixed at 15.2 ppg, yield 1.26 cf/sk.

Circulate and WOC between stages for four ( 4 ) hours. Stage 2 ( 2358' - surface ) will be cemented with 289 sacks ( 548.9 cf ) of 35/65 Poz/B + 6% Gel + 10#/sk Gilsonite and 1/4 #/sk cellophane flake mixed at 12.5 ppg, yield 1.90 cf/sk. Followed by 50 sks (63cf) Class B with 5#/sk Gilsonite and 1/4 #/sk cellophane flake, mixed at 15.2 ppg, yield 1.26 cf/sk. Slurry volumes assume a 75% excess over gauge hole volume for stage 1 and 83% over gauge volume for stage 2 (consistent with our experience in the area). Cement volume is subject to change after review of open hole caliper logs.

Clearance between couplings and hole is 1.094 ". Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8 or 100,000 lb over pull, whichever is greater.

Hole Dia	Casing Data				Collapse (psi)	Burst (psi)	Jt. Strength (Lbs.)
	OD	Wt/FT	Grade	Thread			
8.75"	7.0"	20	J-55	STC	2,270	3,740	234,000

WOC 12 Hours: Nipple up BOP, tag cement & drill out DV, pressure test casing to 500 psi, drill out float collar and cement to within 10' of casing shoe, close pipe rams and pressure test casing/BOPE to 2000 psi for 30 minutes.

Air drill a 6 1/4" hole from 4163' to 6254' TD, approximately 75' feet into the Upper Mancos.

Run Dual Induction and Compensated density/neutron logs from TD to the intermediate casing.

A 4 1/2" 10.5#, J-55, STC production liner will be run from 6254' TD to a minimum overlap of 120 feet inside the 7" intermediate casing ( 6254' - 4043', 2211' ). This string will be cemented in a single stage with 10 bbls POZ spacer w/4% gel, .2% Halad 9, .15# Fe & 3% KCl mixed at 11.0 ppg followed by 257 sacks ( 339.8 cf ) 50/50 Poz/H containing 2% Gel, 5#/sk Gilsonite, 1/4 #/sk Flocele, 4% H-9 and 0.2% HR-5, mixed at 13.5 ppg, yield 1.32 cf/sk. Slurry volume assumes a 50% excess over gauge hole volume. Cement volume is subject to change after review of the open hole caliper log. Clearance between couplings and hole is 1.25". Safety factors utilized in the design of this casing string were burst = 1.1; collapse = 1.125; and tension = 1.8 or 100,000 lb overpull, whichever is greater.

Hole Dia	Casing Data				Collapse (psi)	Burst (psi)	Jt Strength (Lbs.)
	OD	Wt/FT	Grade	Thread			
6.25"	4.5"	10.5	J-55	STC	4,010	4,790	132,000

**Drilling Plan**  
**Jicarilla Apache Energy Corporation**  
**JAECO 28-3 No. 2**

**4. Casing and Cementing Program: Continued**

**Bits:** 12 1/4" surface hole - MT class 115 or 116 to ~320 feet.  
8 3/4" intermediate hole - TCI class 447 to ~4163'.  
6 1/4" production hole - Air hammer and bit - to TD

**Centralizers:**

Surface string: 3 - 9 5/8" X 12 1/4": One centralizer run in middle of shoe joint with lock ring and one centralizer each on the next two joints of casing.

Intermediate string: 4 - 7" X 8 3/4" turbolizers will be spaced such that one is just below the Basal Fruitland Coal, three (3) across the Fruitland/Kirtland and one (1) into the Ojo Alamo. One centralizer will be run on the 1st jt of casing, the PC will be centralized, a centralizer will be run above and one centralizer will be run below the DV tool.

Production string: 7 - 4 1/2" X 6 1/4" bow spring centralizers will be run across all prospective pays; provided well control conditions permit.

**Float Equipment:**

Surface string: Texas pattern guide shoe w/insert float (1 jt above shoe).

Intermediate string: Cement nose guide shoe, float collar and DV tool with 2 cement baskets below DV tool.

Production string: Cement nose float shoe and a float collar (1 jt above shoe).

**5. Pressure Control Equipment:**

A 2,000 psi BOP well control system will be utilized. BOP's and choke manifold will be installed and pressure tested to a minimum of 2000 psig before drilling out of surface casing. Pipe rams will be operated daily. Pipe and blind rams will be operated on each trip. BOP's, intermediate casing and choke manifold will be pressure tested to 2000 psi prior to drill out of the 7" intermediate casing shoe.

7" & 4 1/2" casing rams will be installed prior to running intermediate and production casing, respectfully.

A full opening internal blowout preventor or drill pipe safety valve (capable of fitting all connections) will be on the rig floor at all times.

An upper kelly cock will be utilized. The handle will be available on rig floor at all times.

A BOPE pit level drill shall be conducted weekly for each drilling crew.

**6. Mud Program:**

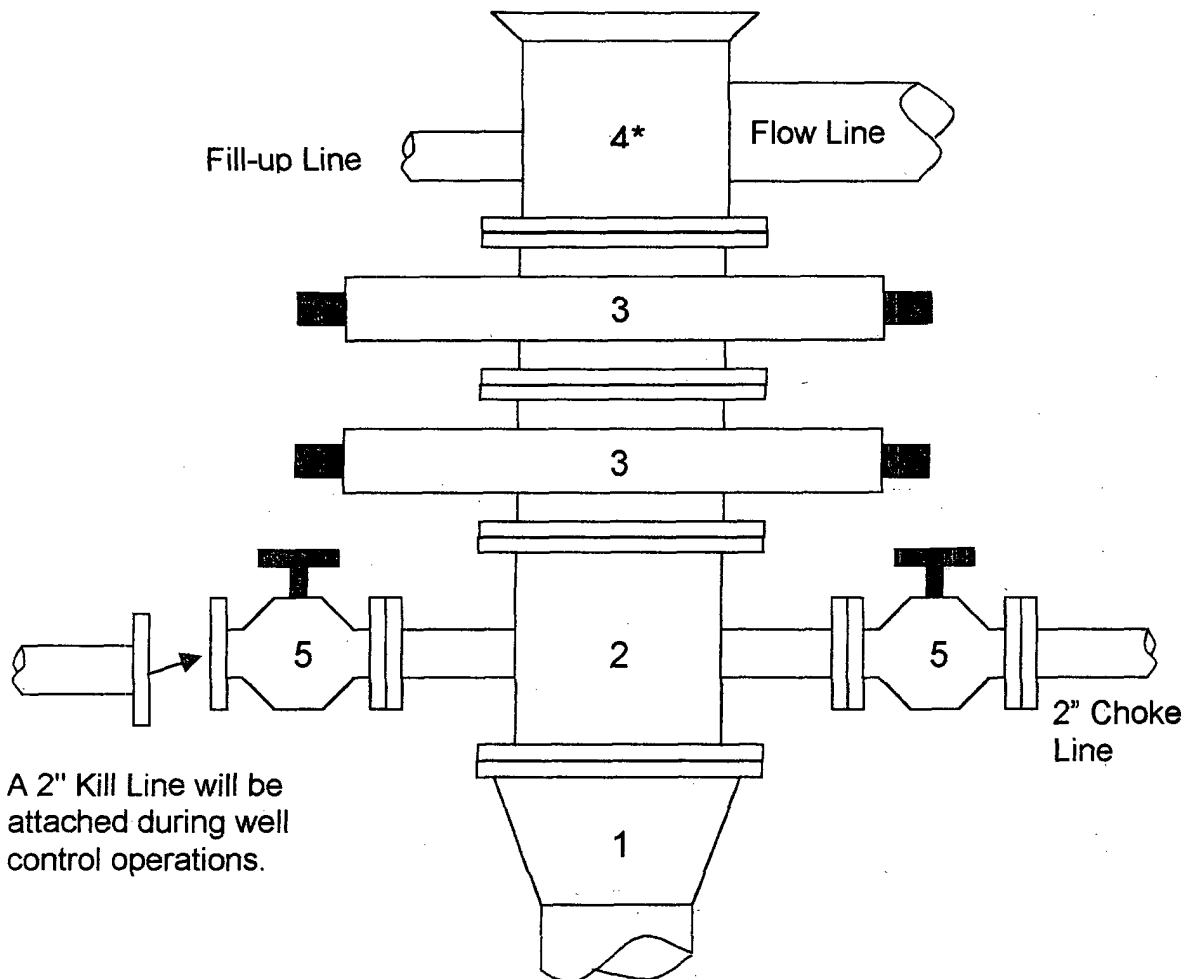
The well will be spudded and drilled to surface casing depth with a high viscosity slurry of bentonite, lime and fresh water. A fresh water, low solids, non-dispersed mud system will be utilized to drill the well from surface casing to intermediate casing depth. Air will be used to drill from intermediate casing depth to total TD; Mud circulating equipment, water, and mud materials (not mixed) sufficient to maintain the capacity of the hole and circulating pits will be in place and operational during air drilling operations.

Sufficient mud materials will be on location at all times to maintain mud properties and to control any lost circulation problem or unforeseen abnormal pressures.

Mud volume markers will be in place and visually monitored and recorded on a routine basis.



**JAECO 28-3 No. 2**  
2000 psi BOP Stack  
Minimum Requirements



A 2" Kill Line will be attached during well control operations.

**Components**

- 1 - Wellhead 9-5/8" (2M)
  - 2 - Drilling spool 11" (2M)
  - 3 - A double or two single rams with blinds on bottom 11" (2M)
  - 4 - Bell nipple\*
  - 5 - 2" Manual valves (2M)
- \*Note: A Rotating Head will replace the Bell nipple during air drilling operations.
- All line and valve sizes listed are minimum requirements.

**JAECO 28-3 No. 2**  
**2000 psi Choke Manifold**  
**Minimum Requirements**

