Form 3160-3
(October 2001)

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NOV 02 2011
Farmington Field Office
Bureau of Land Management

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☑ DRILL ☐ REENTER	5. Lease Serial No. MDA 701-02-0014
1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone	6. If Indian, Allottee or Tribe Name Jicarilla Apache Nation
2. Name of Operator Jicarilla Apache Energy Corporation	7. If Unit or CA Agreement, Name and No. Joint Venture Agreement
3a. Address P.O. Box 710, Dulce, New Mexico 87528	3b. Phone No. (include area code) 575-759-3224
	8. Lease Name and Well No. Apache JVA 3C
	9. API Well No. 30-039-31099
	10. Field and Pool, or Exploratory Blanco Mesa Verde
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1515' FNL & 2100' FWL SENW At proposed prod. zone A/A	11. Sec., T., R., M., or Blk. and Survey or Area F Sec 21, T27N, R2W, NMPM
14. Distance in miles and direction from nearest town or post office* Approximately 30 miles South of Dulce, NM	12. County or Parish Rio Arriba / 13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1500'	16. No. of Acres in lease 5975 / 17. Spacing Unit dedicated to this well West 1/2 of 21-27N-2W 320.00
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1806' SE of JVA 3A	19. Proposed Depth 6692' / 20. BLM/BIA Bond No. on file CD @ BIA
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 7462' UGL	22. Approximate date work will start* December 1, 2011 / 23. Estimated duration 15 Drilling Days

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

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

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
Title: Contract Petroleum Engineer	Charles Neeley	11/1/2011
Approved by (Signature) AFM	Name (Printed/Typed)	Date 11/22/11
Title	Office FFO	

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)

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

RCVD NOV 29 '11
OIL CONS. DIV.
DIST. 3

NMOCD

DEC 05 2011

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

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NOV 02 2011

Farmington Field Office
Bureau of Land Management

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 & 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 Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-039-31099	72319	Blanco Mesaverde

4 Property Code	5 Property Name	6 Well Number
5415	APACHE JVA	3C

7 OGRID No.	8 Operator Name	9 Elevation
11859	JAECO	7462

10 Surface Location

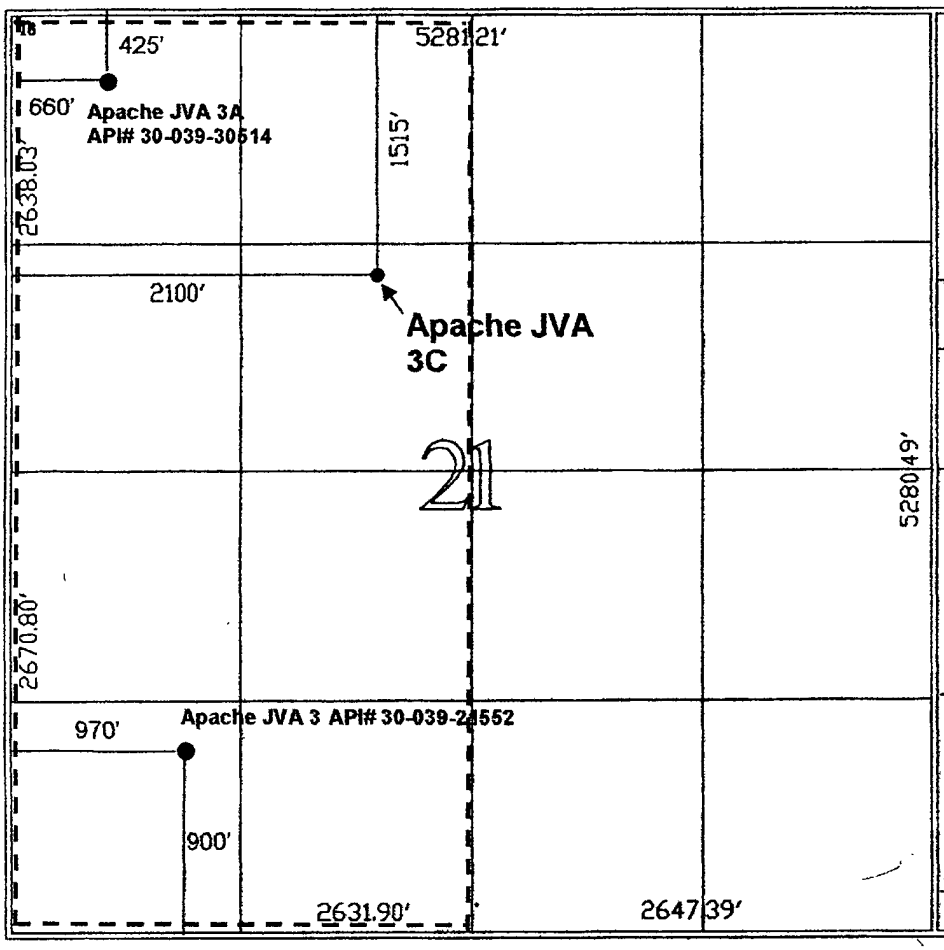
UL or Lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	21	27N	2W		1515	NORTH	2100	WEST	RIO ARRIBA

11 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

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
320 Acres W/2	Y		

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.



17 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.

Signature Date

Charles Neeley 9/26/11

Printed Name

PE/Agent
neelece@msn.com

18 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 the the same is true and correct to the best of my belief.

DECEMBER 19, 2009

Date of Survey

Signature and Seal of Professional Surveyor

CERTIFICATE NUMBER 9672

Certificate Number 9672

The Jicarilla Apache Energy Corp is applying to the BLM for approval of their proposed Apache JVA 3C location. A Notice of Staking was filed with the BLM on September 29, 2011. A Jicarilla Apache Tribal Onsite was conducted by the Jicarilla Apache Oil and Gas Administration on 10/19/2011. The proposed location, access road and pipeline ROW was archaeological surveyed by Velarde Energy Service and an Environmental Assessment was prepared by Joseph Savage. The proposed location, access road and pipeline ROW was onsited by and the negative findings of CR-2009-1165 (NMCRIS #115662) reviewed by Jeffrey Blythe, Tribal Historic Preservation Officer; with a concurrence of a determination of no historic properties affected for the proposed undertaking. A copy the EA is attached to this APD.
With BLM approval, JAECO plans to drill this well as part of their 2011 drilling program and anticipates being ready to spud by early December 2011.
Expedited BLM approval of this APD is appreciated.

Jicarilla Apache Energy Corp
Apache JVA 3C
1515' FNL & 2100' FWL
Section 21, T27N, R2W, NMPM
Rio Arriba County, New Mexico

TEN POINT DRILLING PLAN

1. **Surface Formation**: San Jose

2. **Surface Elevation:** 7462' UGL Est **KB**, ft: 7475

3. **Estimated Formation Tops**:

Formation	Top MD (KB), ft	Top Subsea, ft	Rock Type	Comments
San Jose	Surface	Surface	Sandstone & Shale	Sticking
Nacimiento	1788	5687	Shale & Sandstone	Bit ballling, sticking & LC
Ojo Alamo	3590	3885	Sandstone	Gauge Hole
Kirtland	3710	3765	Shale w/Sandstone	
Fruitland	3761	3714	Coal, Shale, Sandstone	Gas, Water
Pictured Cliffs	3788	3687	Sandstone, Shale, Coal	Gas - Mud Loss
Lower PC	3950	3525	Sandstone & Shale	Gas - Mud Loss
Lewis	4168	3307	Shale	Fractures, Oil & Gas
Huerfanito	4518	2957	Shale	Bentonite
Cliff House	5798	1677	Sandstone	Gas
Menefee	5868	1607	Coal, Shale, Sandstone	Gas & Oil
Pt. Lookout	6152	1323	Sandstone & Shale	Gas
Upper Mancos	6320	1155	Sandy Silty Shale	Oil & Gas
Total Depth:	6692	783		

4. **Casing and Cementing Program:**

Drill a 12 1/4" Hole to 320'. A string of new 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% $CaCl_2$ 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, a temperature survey will be run to determine top of cement, cement will be topped off with 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 OD	Wt/FT	Grade	Thread	Collapse (psi)	Burst (psi)	Jt. Strength (Lbs.)
12 1/4"	9 5/8"	36	J-55	STC	2,020	3,520	394,000
		36	K-55	STC	2,020	3,950	423,000

WOC 4 HOURS. Cut off Casing, weld on head, test csg hd, 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, and pressure test casing/blind rams at 600 psi for 30 minutes.
WOC A TOTAL OF 12 HOURS - prior to drilling out of casing shoe.

4. Casing and Cementing Program: Continued

Drill an 8 3/4" hole to 4208' feet, approximately 40' feet into the Lewis Shale.

Run Induction and Compensated density/neutron logs from 4208' to the surface casing shoe.

A string of new 7" 20#, J-55, STC Intermediate casing will be set at 4208' with a mechanical DV tool set at 2452'. Stage 1 (4208' - 2448', 1760') will be cemented with 125 sacks (260 cf) of 35/65 Poz/G + 6% Gel + 5#/sk Gilsonite + 1/8 #/sk Poly-E-Flake + 3% KCL mixed at 12.1 ppg, yield 2.076 cf/sk. Followed by 145 sacks (184 cf) Class G + 5#/sk Gilsonite + 1/8 #/sk Poly-E-Flake + 3% KCL and mixed at 15.2 ppg, yield 1.269 cf/sk.
Circulate and WOC between stages for six (6) hours.
Stage 2 (2448' to surface) will be cemented with 370 sks (695 cf) 35/65 poz/G + 6% Gel + 10 lbs/sk Gilsonite + 1/8 lbs/sk Poly-E-Flake + 3% KCL mixed at 12.5 ppg, yield 1.877 cf/sk followed by by 50 sks (63 cf) Class G + 5 lbs/sk Gilsonite + 1/8 lbs/sk Poly-E-Flake + 3% KCL mixed at 15.2 ppg, yield 1.269 cf/sk.
Slurry volumes calculated at 64% excess over gauge hole volume for stage 1 and 106% excess over gauge volume for stage 2 (consistant with our experience in the area). Cement volume and type are subject to change after review of open hole and 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	Casing Data				Collapse	Burst	Jt. Strength
Dia	OD	Wt/FT	Grade	Thread	(psi)	(psi)	(Lbs.)
8.75"	7.0"	20	J-55	STC	2,270	3,740	234,000

WOC 4 Hours: Nipple up BOP, Pressure test Blind rams/choke lines and manifod at 2000 psi for 30 minutes. Pressure test casing/blind rams at 2000 psi for 30 minutes. Drill out DV, TOH and pressure test casing/BOPE to 2000 psi for 30 minutes. Trip in hole with 6 1/8" hammer bit on air hammer, drill DV remenants, FC, cement to Float shoe. WOC a total of 12 hours prior to drilling out of casing shoe.

Air drill a 6 1/8" hole to TD.
Run: Temperature, Dual Induction, and Compensated density/neutron logs from TD to the intermediate casing.

A new 4 ½" 10.5#, J-55, STC production liner will be run from 6692' TD to a minimum overlap of 120 feet inside the 7" intermediate casing (6692' - 4088', 2604'). This string will be cemented in a single stage with 5 bbls water containing 1 gal/10 bbls Clafix II + 0.2 gal/bbl LGC-36 followed by 30 sks (55 cf) POZ A + 4% Bentonite + 0.2% H9 + .15 lb FE-2 + 3% KCL, mixed at 11.0 ppg, yield 1.84 cf/sk followed by 5 bbls water containing 1 gal/10 bbls Clafix II +0.2 gal/bbl LGC-36 spacer all followed by 275 sks (363 cf) 50/50 POZ/G cmt + 2% gel + 5 lbs/sk Gilsonite + 3% KCL + 1/8 #/sk Poly-E-Flake + 0.4 % Hallid 9 + 0.2% HR-5 mixed at 13.5 ppg, yield 1.32 cf/sk. Clearence between couplings and hole is 1.125". 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	Casing Data				Collapse	Burst	Jt Strength
Dia	OD	Wt/FT	Grade	Thread	(psi)	(psi)	(Lbs.)
6 1/8"	4.5"	10.5	J-55	STC	4,010	4,790	132,000

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 ~ 4208'.
6 1/8" 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 ¾" 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. Fresh water sands will be centralized.
Production liner: None

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.
Production liner: 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 ½" casing rams will be installed prior to running intermediate casing and production liner, 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 PHPA/Drispac mud system will be utilized to drill the well from surface casing to intermediate casing depth.
Cedar Fiber and Wallnut Hulls will be used for LCM and scouring the drill string to prevent balling.
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.

6. **Mud Program:** Continued

Mud Property Guidelines:

Interval (ft)	Weight (ppg)	Vis (sec/qt)	pH	Fluid Loss (cc/30 min)
0 – 320'	8.6 – 9.2	40 - 35	9 – 9.5	No Control
320' - 1788'	8.8 – 9.1	32 – 35	8.0 - 8.5	8 - 10 cc
1788' - 4092'	8.8 - 9.1	45 - 50	8.0 - 8.5	8 - 10 cc
4088' - 4208'	8.8 - 9.1	45 - 60	7.5 - 8.5	3 - 7 cc
4208' – TD	Air	Air	Air	Air

Note: Raise mud viscosity to 60 – 65 for logging. Thin mud viscosity to 55 – 60 to run casing. Lost Circulation: may occur anywhere from the Nacimiento formation to intermediate depth. Have a minimum of 20% LCM in mud prior to running and cementing intermediate casing. Mud pH will be maintained with soda ash at the recommended levels to assure drill pipe corrosion protection.

7. **Auxiliary Equipment:**

All applicable equipment defined in Onshore Order No. 2 will be in place and operational during **Air Drilling Operations**.

8. **Logging Program:**

Dual Induction with GR and Neutron / Density logs will be run from TD to surface casing shoe. .

Coring and Drill Stem Testing Program:
No cores or drill stem tests are planned

9. **Abnormal Pressure and/or Temperature:**

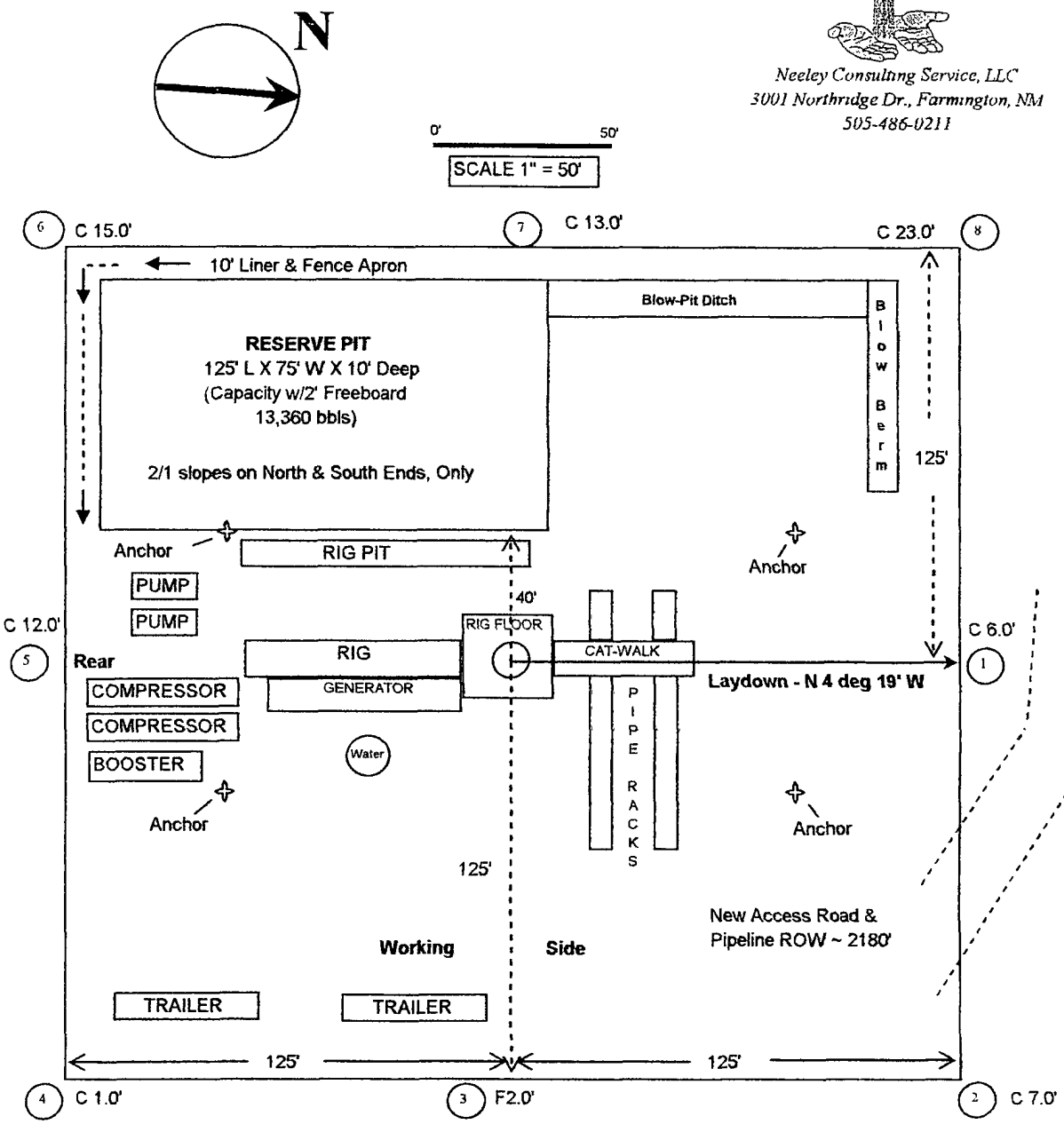
Although not expected, abnormal pressures are possible in the Fruitland formation. Abnormal temperatures are not expected.

Estimated Bottom Hole, Pressure: 1770 psig BHT: 165 deg F

10. **Anticipated Starting Date:** December 1, 2011

Duration of Operations: It is estimated a total of 15 days will be required for drilling operations.

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



Construction Zone/Arche Buffer = 50'/200' outside of location perimeter.

JAECO

Wellsite Layout Plat with Cut & Fills
APACHE JVA 3C
1515' FNL & 2100' FWL
Sec 21, T27N, R2W, NMPM
Rio Arriba Co., New Mexico
Elevation: 7462' UGL

THE JICARILLA APACHE NATION

P.O. BOX 507 • DULCE, NEW MEXICO • 87528-0507

October 17, 2011

Jesse Evans
JAECO Petroleum
P.O. Box 710
Dulce, NM 87528

Re: Section 106 Consultation for JAECO JVA #3C,
Jicarilla Apache Tribal Lands

Dear Mr. Evans,

Thank you for consulting with our office regarding effects to historic properties from the proposed construction of the well pad and pipeline/access for JAECO JVA #3C on the Jicarilla Apache reservation in Section 21, T27N, R2W.

We have reviewed the negative findings presented in *An Archaeological Survey of One Well Location and its Pipeline/Access for JAECO Petroleum* (CR-2009-1166; October 26, 2009), prepared by Velarde Energy Service. Based on these findings, we concur with a determination of no historic properties affected for the proposed undertaking with the following stipulation.

- In the event of the inadvertent discovery of cultural deposits or human remains during any project activities, all ground disturbing activities shall be halted within 100' of the discovery and our office contacted immediately.

If you have questions, please contact me at (575) 756-8659 or janthpo@gmail.com.

Sincerely,

Jeffrey Blythe
Tribal Historic Preservation Officer

Cc: Gifford Velarde, Director, Cultural Affairs
President Levi Pesata