

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK <div style="display: flex; justify-content: space-around;"> DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> </div>		5. LEASE DESIGNATION AND SERIAL NO. Joint Venture Agreement	
b. TYPE OF WELL <div style="display: flex; justify-content: space-between;"> <div> OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> </div> <div> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/> </div> </div>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Jicarilla Apache Tribe	
2. NAME OF OPERATOR Jicarilla Apache Energy Corporation		7. UNIT AGREEMENT NAME Joint Venture Agreement	
3. ADDRESS AND TELEPHONE NO. P.O. Box 710, Dulce, New Mexico 87528 Mr. Jesse Evans (505)759-3224		8. FARM OR LEASE NAME, WELL NO. Jicarilla Apache JV5 #7	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 1981' FNL & 588' FWL, Sec 5, T23N, R3W, NMPM At proposed prod. zone A/A		9. API WELL NO. 30-039-27092	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 10 miles WSW of Lindrith, New Mexico		10. FIELD AND POOL, OR WILDCAT West Lindrith Gallup-Dakota	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 588' <small>(Also to nearest drg. unit line, if any)</small>		11. SEC., T., R., M., OR BLK AND SURVEY OR AREA Sec 5, T23N, R3W, NMPM	
16. NO. OF ACRES IN LEASE		12. COUNTY Rio Arriba	
17. NO. OF ACRES ASSIGNED TO THIS WELL 160 NW 1/4		13. STATE New Mexico	
18. DISTANCE FROM PROPOSED* LOCATION TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1622'		19. PROPOSED DEPTH 7760'	
20. ROTARY OR CABLE TOOLS Rotary		21. APPROX. DATE WORK WILL START* July, 2002	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 7369' GL		22. APPROX. DATE WORK WILL START* July, 2002	

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	J-55, 8 5/8"	24	320'	225 sks (266cf) - Circ to surface
6 1/4" 7 1/8"	K-55/N-80 4.5"	10.5, 11.6	7760'	1714 sks (3240 cf) - 2 stg - Circ to surface

Jicarilla Energy Corporation will spud this well in the San Jose formation. A 12 1/4" hole will be drilled to 320' using a fresh water base gel mud. 8 5/8" surface casing will be run and cemented with sufficient volume to circulate cement to surface. WOC 12 hours. Nipple up 11" 2000# BOPE and test to a minimum of 600 psi for 30 minutes. A 7 7/8" hole will be drilled to TD using a fresh water non-dispersed system. Run Induction and Density/Neutron logs at TD. All Gal/DK zones will be analyzed to total depth, and if potentially commercial, a 4 1/2" production casing will be set to TD. The casing will be cemented in 2-stages with sufficient cement volume to circulate to surface. Release drilling rig. Move in completion unit. Run cased hole correlation logs. Pressure test casing to 3000 psi for 30 minutes. Perforate selected Gal/DK intervals and fracture stimulate, if necessary.

This program includes a 50' right-of-way for access road and gas pipeline construction.

Surface: Jicarilla Apache Reservation.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured true vertical depths. Give blowout preventer program, if any.

24. SIGNED Charles Hickey TITLE Agent DATE 5/30/02

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

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:

APPROVED BY S. J. Anderson TITLE Asst. Field Mgr DATE OCT 22 2002

HOLD C104 FOR NSL

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1000 Rio Brazos Rd., 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 August 15, 2000

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-27092		² Pool Code 39189		³ Pool Name West Lindrith Gallup-Dakota	
⁴ Property Code 15646		⁵ Property Name JIC Apache JV 5			⁶ Well Number 7
⁷ OGRID No. 11859		⁸ Operator Name Jicarilla Apache Energy Corporation			⁹ Elevation 7369'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	Rio	County
E	5	23N	3W		1981	North	588	West	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 160	¹³ Joint or Infill Y	¹⁴ Consolidation Code	¹⁵ Order No.
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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 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Charles Neeley Agent Date: 05/28/02
	¹⁷ 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. May 17, 2002 Date of Survey Signature and Seal of Professional Surveyor

UNITED STATES
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SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT--" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other	5. Lease Designation and Serial No. Joint Venture Agreement 701 99 0014
2. Name of Operator Jicarilla Apache Energy Corporation	6. If Indian, Allottee or Tribe Name Jicarilla Apache Tribe
3. Address and Telephone No. P.O. Box 710, Dulce New Mexico 87528 Mr. Jesse Evans (505) 759-3224	7. If Unit or CA, Agreement Designation
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 1981' FNL & 588' FWL, Sec 5, T23N, R3W NMPM	8. Well Name and No. Jicarilla Apache JV5 #7
	9. API Well No. Not yet assigned
	10. Field and Pool, or Exploratory Area W. Lindrith Gallup-Dakota
	11. County or Parish, State Rio Arriba, NM

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input checked="" type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Other	<input type="checkbox"/> Dispose Water

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface location and measured and true vertical depths for all markers and zones pertinent to this work.)

Due to wildlife habbitat, grade and road visibility concerns discussed during the onsite construction on 7-9-02, JAECO proposes to change their APD - Surface use plan to include an Access Road/PL ROW entering location from the southwest verses the original ROW entering location from the north east.

Attached is the updated Surface Use Plan including Vicinity Map, Area Map and Wellsite Layout with Cut & Fills. Archaeological & EA surveys were conducted on the proposed ROW by Velarde Energy Service on 7-25-02.

Concurrence with this proposal is appreciated.

14. I certify the foregoing is true and correct

_____ Special Agent in Charge (Federal or State office use)	Title Agent	Date 7-28-02
_____ Approved	Title Lands and Mineral Resources	Date OCT 2 4 2002
_____ Concurrence (Approval, Denial)		

VICINITY MAP

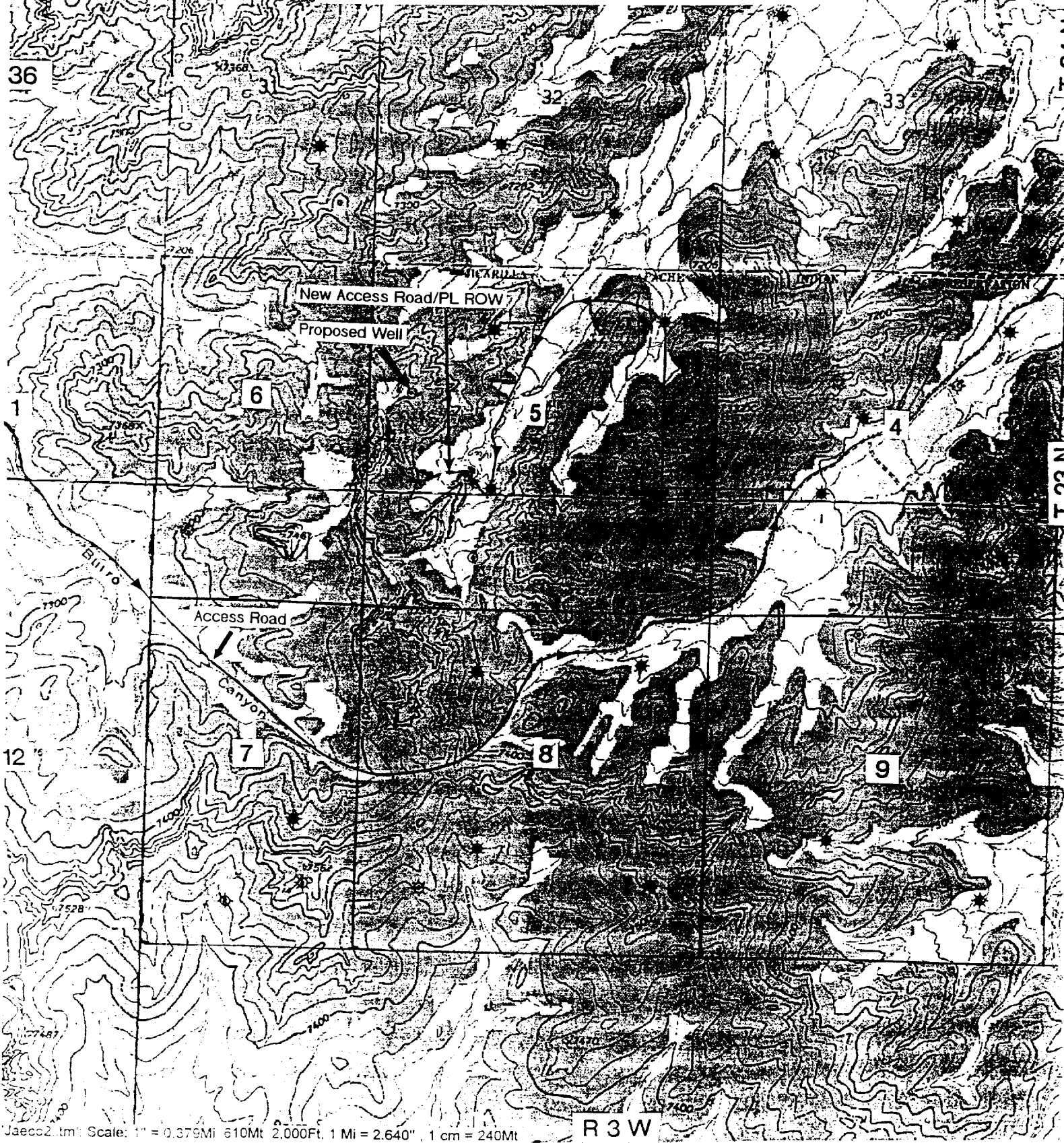
Jicarilla Apache Energy Corporation

Jicarilla Apache JV5 #7

1981' FNL & 588' FWL

Section 5, T23N, R3W, NMPM

Rio Arriba County, New Mexico



JICARILLA APACHE ENERGY CORPORATION
APACHE JV 5-7
1981' FNL & 588' FWL
Section 5, T23N, R3W, NMPM
Rio Arriba County, New Mexico

TEN POINT DRILLING PROGRAM

1. **Surface Formation:** San Jose
2. **Surface Elevation:** 7369' GL.

3. **Estimated Formation Tops:**

<u>Formation</u>	<u>Top - feet</u>	<u>Expected Production</u>
Nacimiento	1510'	
Ojo Alamo	2785'	
Fruitland	3120'	GAS
Pictured Cliffs	3225'	GAS
Lewis	3290'	
Huerfanito	3560'	
Chacra	4035'	GAS
Mesa Verde (OCD Top)	4310'	
Cliff House	4770'	GAS
Menefee	4850'	GAS
Pt. Lookout	5315'	GAS
Upper Mancos	5540'	
Gallup	6385'	GAS / OIL
Lower Mancos	7130'	
Greenhorn	7310'	
Graneros	7380'	
Dakota:	7390'	GAS / OIL
Burro Canyon	7670'	
Morrison	7760'	
TOTAL DEPTH	7760'	

4. **Casing and Cementing Program:**

- Drill a 12 1/4" Hole to 320'. A string of 8 5/8" 24# J-55 ST&C casing will be set and cemented to the surface in a single stage with 225 sacks (266 cf) of Class "B" cement (yield = 1.18 cf/sk) containing 3% CaCl₂ and 1/4 lb/sack celloflake. Slurry volume assumes 100% excess over calculated hole volume. If cement does not circulate to surface, cement will be topped off using 1" pipe down the 12 1/4" by 8 5/8" annulus. Minimum clearance between couplings and hole is 2.625". Prior to drilling out the shoe, casing and BOPE will be tested to a minimum of 600 psig. 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.

Drilling Program
Jicarilla Apache Energy Corporation
APACHE JV 5-7

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4. Casing and Cementing Program: - Continued

- WOC 12 HOURS. Nipple up 11" 2000# BOPE. Pressure test surface casing and BOPE to 600 psi for 30 minutes.
- Drill an 7 7/8" hole through the Dakota formation.
- Run Induction and Compensated density/neutron logs from TD to surface casing shoe.
- Run 4 1/2" 10.5/11.6# K-55 & 11.6# N - 80 production casing from surface to Total Depth and cement in 2 stages with DV tool installed at 4064'. **Stage 1** (TD - 4064') will be cemented with 650sacks (1255cf) 65/35 Class "B"/Poz containing 6% gel, 0.6% Halad 9 and 1/2 cf Perlite/sack - mixed at 12.7 PPG, 1.93 yield. Followed with 100 sks 50/50 Class "B"/Poz with 2% gel, 10 1/4 #/sk Gilsonite and 10% NaCl mixed at 13.4 PPG, 1.24 yield (Total: 1379 cf of slurry; 70% excess to 4064'). Circulate with mud for 4 hours. **Stage 2** (4064' - 0') will be cemented with 964 sacks (1861 cf) 65/35 Class "B"/Poz containing 6% gel, 2% CaCl, 1/2 cf Perlite/sack – mixed at 12.7 PPG, 1.93 yield (1861 cf of slurry, 100% excess to Surface).
- Run temperature survey after 12 hours if cement does not circulate to surface.
- WOC 18 hours.

Cement volume is subject to change after review of open hole caliper log to caliper volume + 30%. Minimum clearance between couplings and hole is 2.875". 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.

Bits: 12 1/4" surface hole - MT class 115 or 116 to ~ 320'.

7 7/8" production hole - PDC to ~ 7505' – top of DK "B" Sand.

7 7/8" production hole – TCI class 637 - 7505' to 7760' TD

Centralizers:

Surface string: 3 – 8 5/8" x 12 1/4": One centralizers run in middle of shoe joint with lock ring and two centralizers spaced evenly between shoe joint and 100'.

Production string: 25 - 4 1/2" x 7 7/8" centralizers will be run across all prospective pays in the Dakota and Mesa Verde formations. 1 – 4 1/2" x 7 7/8" centralizer will run below the DV tool and 5 – 4 1/2" x 7 7/8" centralizers will be run every other joint above DV tool. In addition 5 – 4 1/2" x 7 7/8" turbolizers will be spaced such that one (1) is just below the Basal Fruitland Coal, three (3) across the Fruitland and one (1) into the Ojo Alamo

Drilling Program
Jicarilla Apache Energy Corporation
APACHE JV 5-7

Page Three

4. Casing and Cementing Program: - continued

Float Equipment:

Surface string: Saw tooth guide shoe w/insert float, 1 jt above shoe.

Production string: Cement nose float shoe, 1 jt 4 ½" csg, float collar, and DV tool set at 4064' with 2 cement baskets below DV.

5. Pressure Control Equipment:

A 2M psi BOP well control system will be utilized. BOP's and choke manifold will be installed and pressure tested to a minimum of 600 psig before drilling out from under surface casing. The mechanical operating condition of the BOP will be checked daily. 4 1/2" rams will be installed before running production casing. Full opening drill string safety valves to fit all pipe in the drill string will be maintained on the rig floor during drilling operations.

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 PHPA polymer, low solids, non-dispersed mud system will be utilized to drill the well from surface casing to total depth. 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. The mud volume will be visually monitored and recorded on a routine basis.

Mud Property Guidelines:

<u>Interval (ft)</u>	<u>Weight (ppg)</u>	<u>Vis (sec/qt)</u>	<u>pH</u>	<u>Fluid Loss (cc/30 min)</u>
0 – 320'	8.6 – 9.2	40 – 35	9 – 9.5	No Control
320' - 4720'	8.6 – 9.0	30 – 35	9 – 9.5	15 – 20
4720' – 7760'	8.8 – 9.0	40 – 45	9 – 9.5	8 – 10

Note: Raise mud viscosity to 45 – 60 for logging. Thin mud viscosity to 40 – 45 to run casing.

Mud pH: to be maintained with lime or caustic soda at the recommended levels to assure drill pipe corrosion protection and gel hydration.

Lost Circulation: can occur anywhere from the Pictured Cliffs formation to TD. Mud weights should be controlled as low as possible with solids control equipment then as low as practical with water dilution.