Form 3160-3 (August 1999)

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED				
OMB No. 1004-0136				
Expires Nove	mber 30, 2000			

OME	No.	1004	0136	
Expires	Nove	mber :	30, 20	00

	L	Ci	ISC	Sei	ria	1	N	١.	
_			-	_	_	_	_	_	

<b>NMSF</b>	-080	238
-------------	------	-----

6	10	Indian.	Allottee	or Tribe	Name

N	II	Δ
1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	~

						<u> </u>	1377	
la.	Type of Work:	₫ DRILL		REENTER	070.5		7. If Unit or CA Agreement, N/A	Name and No.
Ib.	. Type of Well:	Oil Wel	Gas Well	Other		Minglon, NM  Multiple Zone	8. Lease Name and Well No.	
2.	Name of Oper	ator SALPINE	<b>WATER</b>	<del>L GAS</del> L. P.	Pogo Pro	od.	9. API Well No. 30-045- 3/9	907 t
3a.	Address	7415 EAS	ST MAIN S	TREET	3b. Phone No. (include a (505) 327	rea code)	10. Field and Pool, or Explora BASIN FRUITLA	·
4.					any State requirements.*)		11. Sec., T., R., M., or Blk. an	d Survey or Area
	At surface At proposed p	99 rod. zone S		1190' FWL			1-26n-13w N	ИРМ
4.				vn or post office*	)N		12. County or Parish SAN JUAN	13. State NM

Distance from proposed\* 16. No. of Acres in lease 17. Spacing Unit dedicated to this well location to nearest property or lease line, ft. 2,373.98 **WEST HALF (320.24 ACRES)** 990' (Also to nearest drig, unit line, if any) 20. BLM/BIA Bond No. on file 19. Proposed Depth Distance from proposed location<sup>4</sup> to nearest well, drilling, completed, 2,421' 1,460' BLM NMB000019 (STATE WIDE) applied for, on this lease, ft.

21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5,977' GL 22. Approximate date work will start\*

23. Estimated duration 2 WEEKS

**UPON APPROVAL** 

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

#### Comments

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

This action is subject to technical and procedural review pursuant to 43 CFR 31c and appeal pursuant to 43 CFR 3165.4



) now Brad Salzman

cc:BIA, BLM (& OCD), Cartaya, NAPI, Thompson, Tribe

Name (Printed/Typed)

**BRIAN WOOD** 

9-20-03

Title

25. Signature

CONSULTANT

PHONE: 505 466-8120

FAX: 505 466-9682

Approved by (Signature)

Name (Printed/Typed)

Office

FARMING-TON DISTRICT OFFICE Application applied al does not warrant or certify the the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct

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.

Ostract I PO Box 1980, Hobbs, NM 88241-1980

District II PO Drawer DD, Antesia, NM 88211-0719

District III 1000 Rio Brazos Rd., Aztec, NM 87410

District IV PO Box 2088, Santa Fe, NM 87504-2088 State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION PO Box 2088 Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

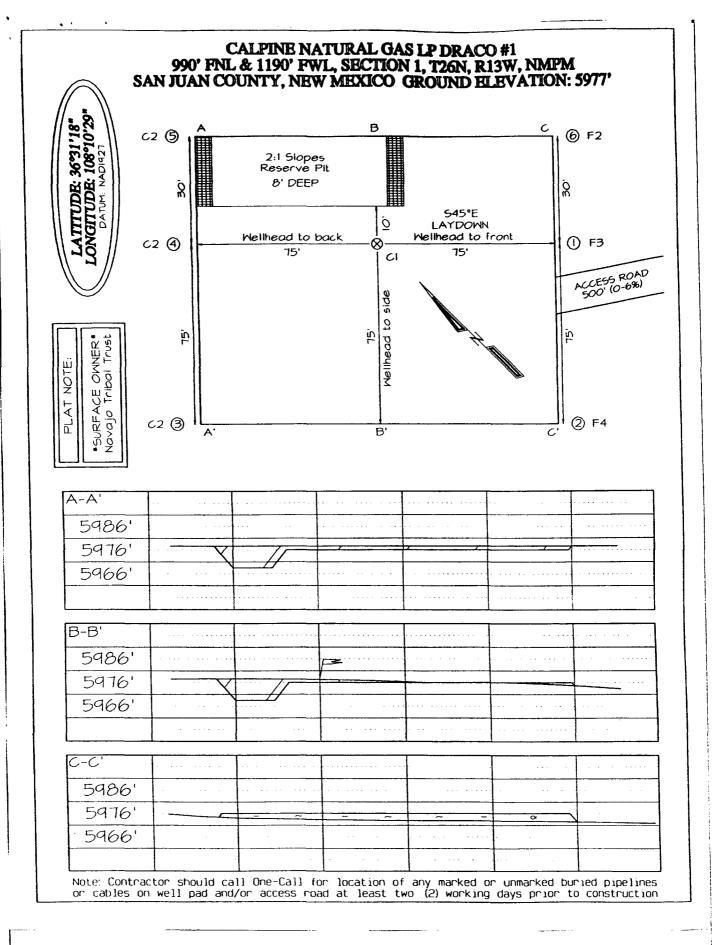
AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

D	ection Too	Palle Pan	2406.	CAL		.20		15 i		ell Number  2 5 Elevation
UL or lot no. So	1 2	. 1	Range			MAL GAS L.P.			1	C077:
UL or lat no. S	1 2	. 1	Range		10 Cumfaca 1	Location		<del></del>		5977
			13W	Lot Idn	Surface   Feet from the 990	NORTH	1	from the	East/Mest line WEST	SAN JUAN
2 Dedicated Acres	ection To	11 BC	ottom •	Hole L	ocation I	f Different North/South line		n Sur f	East/Nest line	County
	320.24	Acres	5 - (W,	/2)	<sup>19</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>25</sup> Order	No.		1
NO ALLOWAE	BLE WILL					ON UNTIL •ALL EEN APPROVED				DNSOL IDATED
1325.28 . 101.	940'	LO 3	) T	80.00	LOT 2	LOT 1	1320.00			information and complete sign land belief
2640.00°	-0802	238	4 A	1 -	ON CONTROLLED	\$ 1475 TO THE STATE OF THE STAT	1320.00.	Date  Date  18 SURV I hereby shown on notes of my superiand corres of Survey Signature	BKIA	well location sited from field de by me or under he same is true finy belief finy belief ST 15, 2003 fessional Surveyor

1E:11 W (8 au au)

RECEVED



Calpine Natural Gas L. P. Draco #1 990' FNL & 1190' FWL Sec. 1, T. 26 N., R. 13 W. San Juan County, New Mexico

# **Drilling Program**

#### 1. ESTIMATED FORMATION TOPS

<u>Formation</u>	GL Depth	KB Depth	<u>Elevation</u>
Nacimiento	000'	5'	+5,977'
Ojo Alamo Sandstone	50'	55'	+5,927'
Kirtland Shale	100'	105'	+5,877'
Top Fruitland	874'	879'	+5,103'
Lowest Fruitland Coal	1,157'	1,162'	+4,820'
Pictured Cliffs Sandstone	1,195'	1,200'	+4,782'
Total Depth (TD)*	1,460'	1,465'	+4,557'

<sup>\*</sup> all elevations reflect the ungraded ground level of 5,977'

#### 2. NOTABLE ZONES

Gas Zones	Water Zones	<u>Coal Zones</u>
Fruitland	Ojo Alamo	Fruitland
Pictured Cliffs	Fruitland	

Water zones will be protected with casing, cement, and weighted mud. Fresh water encountered during drilling will be recorded by depth, cased, and cemented. Oil and gas shows will be tested for commercial potential based on the well site geologist's recommendations.

### 3. PRESSURE CONTROL

The drilling contract has not yet been awarded, thus the exact BOP model to be used is not yet known. (A typical 2,000 psi model is on PAGE 3.) Double ram or annular 2,000 psi system with a rotating head will be used. All ram



Calpine Natural Gas L. P.
Draco #1
990' FNL & 1190' FWL
Sec. 1, T. 26 N., R. 13 W.
San Juan County, New Mexico

preventers and related equipment will be hydraulically tested at nipple up and after any use under pressure to 1,000 psi.

Blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2,000 psi. Maximum expected pressure is ≈585 psi.

#### 4. CASING & CEMENT

Hole Size	<u>Q. D.</u>	Weight (lb/ft)	<u>Grade</u>	<u>Age</u>	GL Setting Depth
8-3/4"	7"	20	K-55	New	120'
6-1/4"	4-1/2"	10.5	K-55	New	1,460'

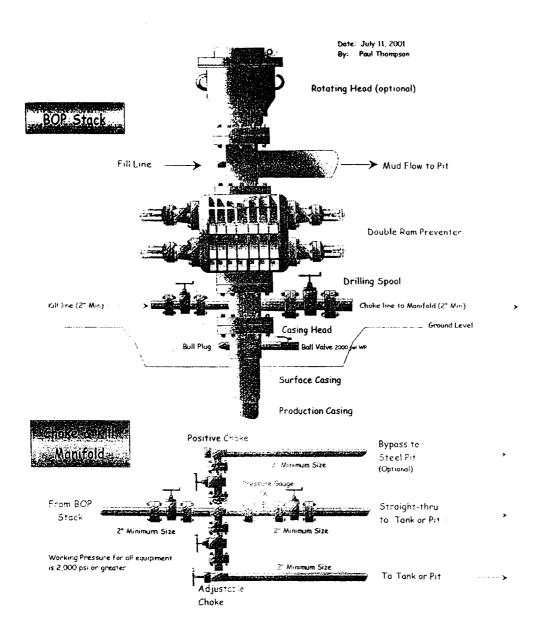
Surface casing will be cemented to surface with  $\approx 59$  cubic feet ( $\approx 50$  sacks) Class B + 2% CaCl<sub>2</sub>. Volume is based on 100% excess, yield of 1.18 cubic feet per sack, and slurry weight of 15.6 pounds per gallon. W. O. C. = 12 hours. Pressure test surface casing to 600 psi for 30 minutes.

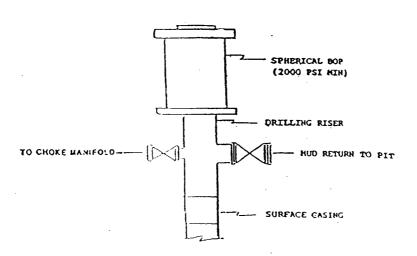
Production casing hole will be cleaned of rock chips by circulating  $\geq 150\%$  of hole volume with mud. Thirty barrels of fresh water will next be circulated. Lead with  $\approx 247$  cubic feet ( $\approx 120$  sacks) of Class B with 2% metasilicate (yield = 2.06 cubic feet per sack, slurry weight = 12.5 pounds per gallon). Tail with  $\approx 59$  cubic feet ( $\approx 50$  sacks) of Class B with 2% CaCl<sub>2</sub> (yield = 1.18 cubic feet per sack, slurry weight = 15.6 pounds per gallon). Total cement volume = 306 cubic feet @ 100% excess and circulating to surface.

Production casing will have 4-1/2" cement guide shoe and self fill float collar. Float will be placed one joint above the shoe. Five centralizers will be spaced on every other joint starting above the shoe. Five turbolizers will be placed on every other joint starting from the top of the well.



# Calpine Natural Gas Company Well Control Equipment Schematic for 2M Service





Calpine Natural Gas L. P. Draco #1 990' FNL & 1190' FWL Sec. 1, T. 26 N., R. 13 W. San Juan County, New Mexico

## 5. MUD PROGRAM

Surface casing hole will be drilled with fresh water. Production casing hole will be drilled with a fresh water polymer mud. Weighting material will be drill solids or, if needed, barite. Maximum expected mud weight will be 8.5 pounds per gallon.

## 6. CORING, TESTING, & LOGGING

No cores or drill stem tests are planned.

Spectral Density/Dual Spaced Neutron and Dual Induction/Guard with GR, SP, and Caliper and logs will be run from TD to at least the base of the surface casing.

### 7. DOWN HOLE CONDITIONS

No abnormal pressures, temperatures, nor hydrogen sulfide are expected. Maximum pressure will be  $\approx 585$  psi.

#### 8. OTHER INFORMATION

The anticipated spud date is upon approval. It is expected it will take one week to drill the well and one week to complete the well.

