New Mexico Oil Conservation Division, District I 1625 N. French Drive FORM APPROVED Hobbs, SUBMITTER ZRIDLICATE\* Form 3160-3 · OMB NO. 1004-0136 (July 1992) UNITED STATES Expires: February 28, 1995 (Other instructions on 5. LEASE DESIGNATION AND SERIAL NO. reverse side) DEPARTMENT OF THE INTERIOR NM27572 BUREAU OF LAND MANAGEMENT / 6, IF INDIAN, ALLOTTES OR TRIBE NAME APPLICATION FOR PERMIT TO DRILL OR DEEPEN 1a. TYPE OF WORK 7. UNIT AGREEMENT NAME DRILL X DEEPEN 1b. TYPE OF WELL Laguna Deep Unit 8910169050 MULTIPLE SINGLE GAS OIL 8. FARM OR LEASE NAME, WELL NO WEL WELL OTHER ZONE ZONE 2. NAME OF OPERATOR Laguna Deep Unit No. 9 Gruy Petroleum Management Co. 9. API WELL NO. 3. ADDRESS AND TELEPHONE NO 30-025-P.O. Box 140907 Irving TX 75014 972-401-3111 10. FIELD AND POOL, OR WILDCA 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*) Gem; Morrow, East (Gas) P.111.P 54.46 11. SEC. T. R.,M., BLOCK AND SURVEY Sec: 35 T19S R33E 1980' FSL & 1980' FEL 13 STATE 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE 12, COUNTY OR PARISH 25 miles Southwest of Hobbs, NM NM Lea 17. NO. OF ACRES ASSIGNED 15. DISTANCE FROM PROPOSED\* 16. NO, OF ACRES IN LEASE LOCATION TO NEAREST TO THIS WELL PROPERTY OR LEASE LINE, T.O. E/2 320 (Also to nearest drig. unit line, if any) 320 18. DISTANCE FROM PROPOSED LOCATION\* 20. ROTARY OR CABLE TOOLS 19. PROPOSED DEPTH TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 14,000' 1650' Rotary 22. APPROX. DATE WORK WILL START 21. ELEVATIONS (Show whether DF, RT, GR, etc.) 01-15-06 3593' GR PROPOSED CASING AND CEMENTING PROGRAM QUANTITY OF CEMENT SIZE OF HOLE WEIGHT PER FOOT SETTING DEPTH GRADE, SIZE OF CASING 103 0505 H-40 13-3/8" ST&C 590' 220sx Prem circ surf 17-1/2" 48# Circulal J-55 9-5/8" LT&C 40# 3500' 12-1/4" 2000sx IntC/Prem circ surf 8-3/4" 14000 1830sx TOC 2700' P-110 5-1/2" LT&C 17# From the base of the surface pipe through the running of production casing, the well will be equipped with a 5000 - psi BOP 13-3/8" casing and BOP system to 1000# psi and to use rig pumps instead of an independent service company.

system. We are requesting a variance for the 13-3/8" surface casing and BOP testing from Onshore Order No. 2, which states all casing strings below the conductor shall be pressure tested to 0.22 psi per foot or 1500#, whichever is greater, but not to exceed 70% of the manufacturer's stated maximum internal yield. During the running of the surface pipe and the drilling of the intermediate hole, we do not anticipate any pressures greater than 1000# and are requesting a variance to test the

attached

•				ata on present productive zone			
If proposal is to drill or deepen	directionally, give pertinent data on subsu	urface locations	s and measured a	nd true vertical depths. Give t	plowout prever		
SIGNED	suot ans	TITLE	Mgr. Ops. A	dmin	DATE	11-17-05	<u> </u>
(This space for Federal or State Office of PERMIT No.	use)		APP	ROVAL DATE			
Application approval does not warrant of CONDITIONS OF APPROVAL	ecertify that the applicant holds legal or equitable title to	to those rights in t	he subject lease which	would entitle the applicant to conduct op	perations thereon.		
	inda S. C. Rundell	TITLE	STATE	DIRECTOR	DATE	<u>JAN 2 6 20</u>	<u> 106 </u>
APPROMALICE CO.	cuon 10010 makes it a crime for any	person kno	ons On Revers wingly and willfo	ully to make to any departn	PPPC ient or agen	WAL FOR 1	YEAF
Benerald Regul	y felse ficilities or fraudulent statem	ents or repr	esentations as t	to any matter within its juris	sdiction.		
special stipul	ations						



# Operator - Landowner Agreement

Company:	Gruy Petroleum Management Co.
Proposed Well:	Laguna Deep Unit No. 9
Federal Lease Number:	NM-27572
Smith, Inc.; 267 Smith Ranch	etroleum Management Co. has an agreement with: Kenneth Road; Hobbs, NM 88240, the surface owner, concerning entry completion of drilling operations at the above described well.
•	l, all pits will be filled and levelled and all equipment and trash site. No other requirements were made concerning
November 18, 2005	Zeno Fans
Date	Signature Zeno Farris Manager, Operations Administration



# Gruv Petroleum Management Co.

600 East Las Colinas Blvd. • Suite 1100 • Irving, TX 75039 • (972) 401-3111 • Fax (469) 420-2710

Mailing Address: P.O. Box 140907 • Irving, TX 75014-0907

A wholly-owned subsidiary of Cimarex Energy Co., a NYSE Listed Company, "XEC"

# STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

Bureau of Land Management 2909 West Second Street Roswell, New Mexico 88201 Attn: Ms. Linda Askwig

Gruy Petroleum Management Co. accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land, or portion thereof, as described below: NEX469

Lease No.:

NM-27573 – NW/4 NE/4 Sec 35-T19S-R33E, containing 40 acres

Lease No.:

NM-9824 – S/2 N/2, NE/4 NE/4 Sec 35-T19S-R33E, containing 160 acres

Lease No.:

NM27572 - SE/4 Sec 35-T19S-R33E, containing 120 acres

County:

Lea County, New Mexico

Formation (S):

Morrow

Bond Coverage:

Statewide BLM Bond

BLM Bond File No.: NM 2575

Authorized Signature:

Representing Gruy Petroleum Management Co.

Name: Zeno Farris

Title: Manager, Operations Administration

Date: November 18, 2005

# **Application to Drill**

Gruy Petroleum Management Co. Laguna Deep Unit No. 9 Unit J Section 35 T19S - R33E Lea County, NM

In response to questions asked under Section II B of Bulletin NTL-6 the following information is provided for your consideration:

1 Location:

1980' FSL & 1980' FEL

2 Elevation above sea level:

GR 3593'

3 Geologic name of surface formation:

**Quaternery Alluvium Deposits** 

4 <u>Drilling tools and associated equipment:</u>

Conventional rotary drilling rig using fluid as a

circulating medium for solids removal.

5 Proposed drilling depth:

14000'

6 Estimated tops of geological markers:

Delaware	5225'	Strawn	12065'
Bone Spring	8125'	Atoka	12330'
Wolfcamp	10890'	Morrow	13050'

7 Possible mineral bearing formation:

Atoka

Gas

Morrow

Gas

8 Casing program:

 Hole Size	Interval	Casing OD	Weight	Thread	Collar	Grade
17-1/2"	0- <b>500</b> 1357/	13-3/8"	48	8-R	ST&C	H-40
12-3/4"	0-3500'	9-5/8"	40	8-R	LT&C	J-55
8-3/4"	0-14000'	5-1/2"	17	8-R	LT&C	P-110

### **Application to Drill**

Gruy Petroleum Management Co. Laguna Deep Unit No. 9 Unit J Section 35 T19S - R33E Lea County, NM

# 9 Cementing & Setting Depth:

13 3/8"	Surface	Set 500' of 13 3/8" H-40 48# ST&C casing. Cement with 320 Sx. Of Premium Plus cement + additives, circulate cement to surface.
9 5/8"	Intermediate	Set 3500' of 9 5/8" J-55 40# LT&C casing. Cement lead with 1385 Sx. Of Interfill C Cement + additives, tail with 800 Sx. Of Interfill C/Premium Plus + additives, circulate cement to surface.
5 1/2"	Production	Set 14000' of 5 1/2" P-110 17# LT&C casing. Cement in two stages, first stage cement with 685 Sx. of Interfill H/Super H + additives. Second stage cement with 1145 Sx of Interfill H/Super H. Estimated top of cement 2700'.

### 10 Pressure control Equipment:

Exhibit "E". A 13 3/8" 5000 PSI working pressure B.O.P. consisting of one set of blind rams and one set of pipe rams and a 5000 # annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 6000'. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor. BOP unit will be hydraulically operated. BOP will be nippled up on the 9 5/8" casing and will be operated at least once a day while drilling and the blind rams will be operated when out of

### 11 Proposed Mud Circulating System:

Depth	Mud Wt	Viscosity	Fluid Loss	Type Mud
0 - 500'	8.7 - 9.2	32 - 34	May lose circ.	Fresh water spud mud add paper to control seepage and high viscosity sweeps to clean hole.
500' - 1600'	10 - 10.3	28 - 29	May lose circ	Fresh water. Add paper as needed to control seepage and add lime to control pH (9-10).  Use high viscosity sweeps to clean hole.
1600' - 3500'	8.4 - 9.9	28 - 29	NC	Brine water. Paper for seepage. Lime for pH (9 - 9.5)
3500' - 8300'	8.4 - 9.9	28 - 29	NC	Brine water. Paper for seepage. Lime for pH (9 - 9.5)
8300' - 10000'	9.2 - 9.4	28 - 29	NC	Cut brine. Caustic for pH control.
10000' - 14000'	9.2 - 10.6	32 - 34	NC	XCD Polymer mud system.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs. Mud system monitoring equipment with derrick floor indicators and visual/audio alarms shall be installed and operative prior to drilling into the Wolfcamp formation. This equipment will remain in use until production casing is run and cemented.

# **Application to Drill**

Gruy Petroleum Management Co. Laguna Deep Unit No. 9 Unit J Section 35 T19S - R33E Lea County, NM

# 12 Testing, Logging and Coring Program:

- A. Mud logging program: One-man unit from 8000' to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
- C. No DSTs or cores are planned at this time.

### 13 Potential Hazards:

No abnormal pressures or temperatures or H2S gas are expected. Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used. Estimated BHP  $\underline{3000}$  PSI, estimated BHT  $\underline{190}$ .

### 14 Anticipated Starting Date and Duration of Operations:

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take <u>35 - 45</u> days. If production casing is run an additional 30 days will be required to complete and construct surface facilities.

# 15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals. The Morrow / Atoka pay will be perforated and stimulated. The well will be tested and potentialed as a gas well.

### **Hydrogen Sulfide Drilling Operations Plan**

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
  - A. Characteristics of H2S
  - B. Physical effects and hazards
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H2S detectors, warning system and briefing
  - E. Evacuation procedure, routes and first aid.
  - F. Proper use of 30 minute pressure demand air pack.

### 2 H2S Detection and Alarm Systems

- A. H2S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
- 3 Windsock and/or wind streamers
  - A. Windsock at mudpit area should be high enough to be visible.
  - B. Windsock at briefing area should be high enough to be visible.
  - C. There should be a windsock at entrance to location.
- 4 Condition Flags and Signs
  - A. Warning sign on access road to location.
  - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H2S present in dangerous concentration. Only emergency
- 5 Well control equipment
  - A. See exhibit "E"
- 6 Communication
  - A. While working under masks chalkboards will be used for communication.
  - B. Hand signals will be used where chalk board is inappropriate.
  - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

### 7 Drillstem Testing

- Exhausts will be watered.
- B. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
- If location is near any dwelling a closed DST will be performed.

# Hydrogen Sulfide Drilling Operations Plan

- 8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.
- 9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with H2S scavengers if

Gruy Petroleum Management Co.
Laguna Deep Unit No. 9
Unit J Section 35
T19S - R33E Lea County, NM

- 1 Existing Roads: Area maps, Exhibit "B" is a reproduction of Lea Co. General Highway Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing roads and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.
  - A. Exhibit "A" shows the proposed well site as staked.
  - B. From the junction of US Hwy #62-180 and Co Rd H-35 (Smith Ranch Road), go NW on Co Rd H-25 for approx 2.2 miles. Turn left (SW) and go approx 0.7 miles. Turn left (South) and go approx 0.1 miles to a proposed road survey. Follow proposed road survey approx 994' to this location.
- 2 PLANNED ACCESS ROADS: 994' of new access road will be constructed on lease.
- 3 LOCATION OF EXISTING WELLS IN A ONE-MILE RADIUS EXHIBIT "A"

A. Water wells -

None known

B. Disposal wells -

None known

C. Drilling wells -

None known

D. Producing wells -

As shown on Exhibit "A"

E. Abandoned wells -

As shown on Exhibit "A"

Gruy Petroleum Management Co. Laguna Deep Unit No. 9 Unit J Section 35 T19S - R33E Lea County, NM

4 If, on completion this well is a producer Gruy Petroleum Management Co. will furnish maps and/or plats showing on site facilities or off site facilities if needed. This will be accompanied by a Sundry Notice.

# 5 LOCATION AND TYPE OF WATER SUPPLY:

Water will be purchased locally from a commercial source and trucked over the access roads or piped in flexible lines laid on top of the ground.

### 6 SOURCE OF CONSTRUCTION MATERIAL:

If possible construction will be obtained from the excavation of drill site, if additional material is needed it will be purchased from a local source and transported over the access route as shown on Exhibit "C".

### 7 METHODS OF HANDLING WASTE MATERIAL:

- A. Drill cuttings will be disposed of in the reserve pit.
- B. All trash, junk and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary land fill.
- C. Salts remaining after completion of well will be picked up by supplier, including broken sacks.
- D. Sewage from living quarters will drain into holes with a minimum depth of 10'. These holes will be covered during drilling and will be back filled upon completion. A Porta-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of the well.
- E. Remaining drilling fluids will be allowed to evaporate in the reserve pit until the pit is dry enough for breaking out. In the event that drilling fluids do not evaporate in a reasonable time they will be hauled off by transports and be disposed of at a state approved disposal facility. Later pits will be broken out to speed drying. Water produced during testing will be put in reserve pits. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

### 8 ANCILLARY FACILITIES:

A. No camps or airstrips to be constructed.

Gruy Petroleum Management Co. Laguna Deep Unit No. 9 Unit J Section 35 T19S - R33E Lea County, NM

### 9 WELL SITE LAYOUT

- A. Exhibit "D" shows location and rig layout.
- B. This exhibit indicates proposed location of reserve and trash pits and living facilities.
- C. Mud pits in the active circulating system will be steel pits and the reserve pit is proposed to be unlined, unless subsurface condition encountered during pit construction indicates that lining is needed for lateral containment of fluids.
- D. If needed, the reserve pit is to be lined with PVC or polyethylene line. The pit liner will be 12 mils thick. Pit liner will extend a minimum 2'00" over the reserve pits dikes where the liner will be anchored down.
- E. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

### 10 PLANS FOR RESTORATION OF SURFACE

Rehabilitation of the location and reserve pit will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

However, in either event, the reserve pit will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be recountered to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.

Gruy Petroleum Management Co. Laguna Deep Unit No. 9 Unit J Section 35 T19S - R33E Lea County, NM

### 11 OTHER INFORMATION:

- A. The location is located in 1 m coppice dunes in loose tar sands. Vegetation in the area is mesquite, shin oak, and grasses.
- B. The wellsite is on surface owned by Kenneth Smith, Inc., 267 Smith Ranch Road, Hobbs, NM 88240. Minerals are owned by the Bureau of Land Management, Department of the Interior. The land is used mainly for farming, cattle ranching and oil and gas production.
- C. An Archaeological survey will be conducted by Southern New Mexico Archaeological Services on the location and access road, and this report will be on file with the Bureau of Land Management in the Carlsbad BLM office.
- D. There are no known dwellings within 1-1/2 miles of this location.

### 12 OPERATORS REPRESENTATIVE:

Gruy Petroleum Management Company P.O. Box 14097 Irving, TX 75014 Office Phone: (972) 443-6489

Zeno Farris

13 CERTIFICATION: I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Gruy Petroleum Management Company and/or its contractors/subcontractors and will be in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of U.S.C. 1001 for the filing of a false statement.

NAME: Zeno Fany

DATE: November 17, 2005

TITLE: Manager, Operations Administration

#### State of New Mexico

DISTRICT I 1625 N. FRENCH DR., HOBBS, NM 88240

Energy, Minerals and Natural Resources Department

Form C-102

Revised JUNE 10, 2003 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

### DISTRICT II 1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410 OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe. New Mexico 87505

DISTRICT IV 1220 s. st. Francis dr., santa fr, nm 87505	WELL LOCATION AND	ACREAGE DEDICATION	PLAT	□ AMENDED REPORT
API Number	Pool Code		Pool Name	
30-025-3768	77380	Gem; Morrow.	, East (Gas)	
Property Code	Prop	erty Name		Well Number
300523	LAGUNA	DEEP UNIT		9
OGRID No.		ator Name		Elevation
162683	GRUY PETROLEUM I	MANAGEMENT COMPA	YY	3593'

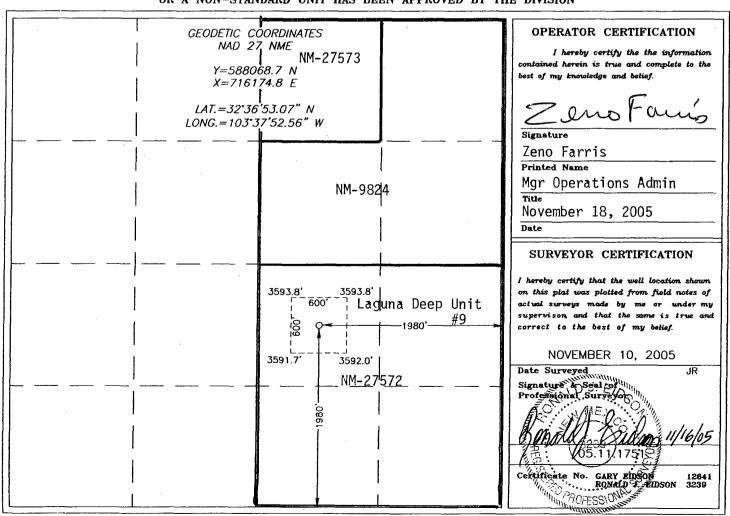
#### Surface Location

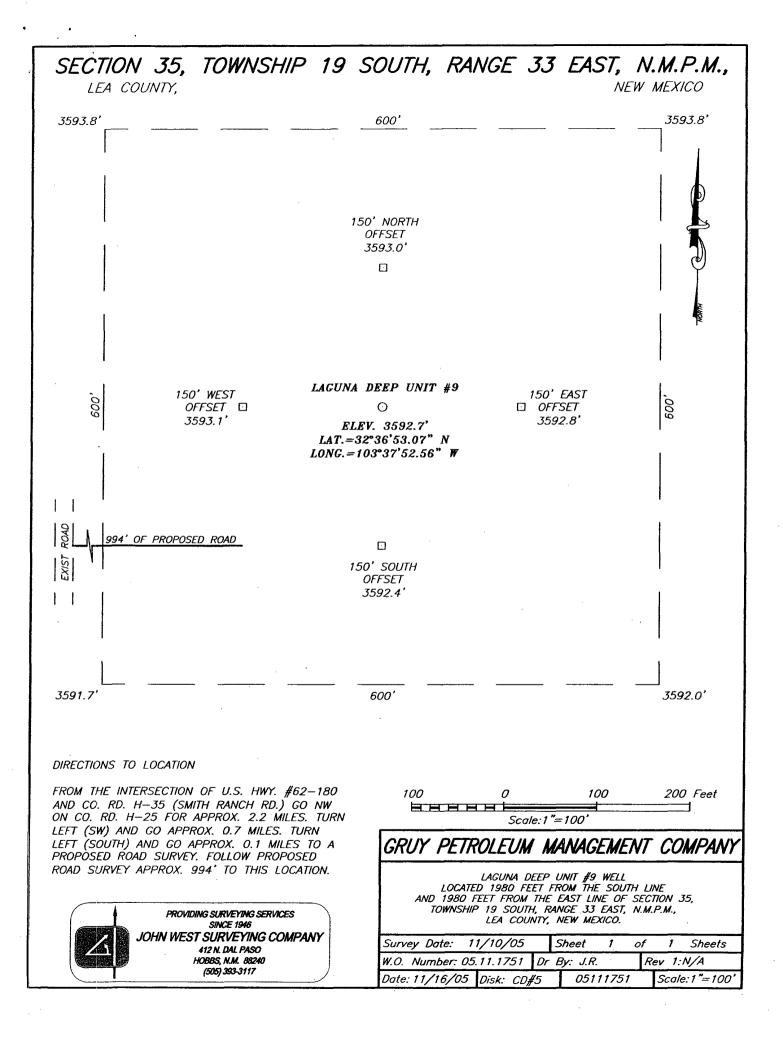
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	Bast/West line	County
J	35	19-S	33-E		1980	SOUTH	1980	EAST	LEA

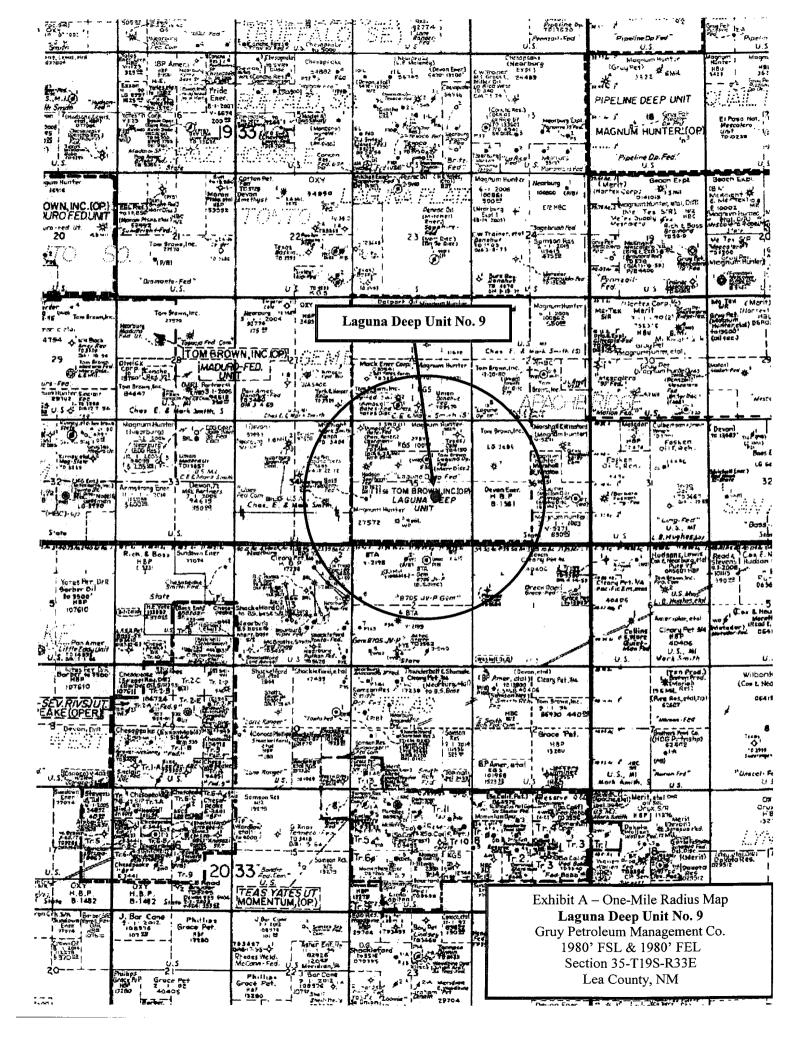
#### Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint of	r Infill (	Consolidation (	ode Or	der No.				
320	N		U						

# 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







# VICINITY MAP

	1	T	1	1	T	1	1	1	<del></del>			· ·	
	22	23	24	19	50	21	55	23	88	ж 19	S. S. S.	21	28
	27	.26	25	30	29	28	27	26	25	30	29	28	27
	34	35	36	31	32.	33	34	35	36	31	32	33	34
	3	2	1	6	5	4	3		1	6	5	4	3
	10	11	15	7	8	9	10	11	12	7	8	9	10
	15	14	13	18	17	16	15	14		ж 18 3	17	16	15
	55	23	24	19	20	21	22	53	24	19	20	21	28
	27	26	25	30	29 LAGUI	28 VA DEEP	27 UNIT #9	26	25	30	29	28	27
	34	35	36	31	32 LAGUNA TONTO		34	1	SMITT IS	31	32	33	-
LATA	3	N. Park	1	6	5	4	3	s	RANCH	٠	5	4	
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	10	33 n	12	, NID <	8	9	10	ıı	12	7 L	H27 8	9	1
	15	14		55	LAGUNA GATUNA 17	S. 62-180	15	14	13	18	17	16	15
	22	23	LAG	19	20	21	22	23	24.	19	20	21	æ

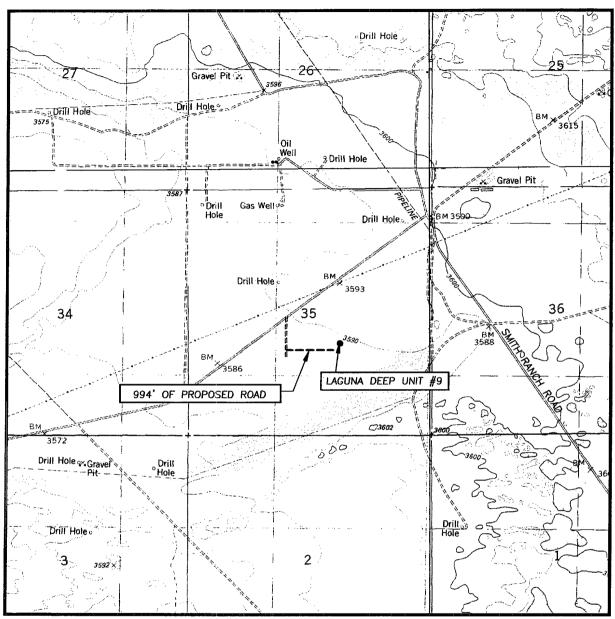
SCALE: 1" = 2 MILES

SEC. <u>35</u>	TWP. <u>19-S</u> RGE. <u>33-E</u>
SURVEY	N.M.P.M.
COUNTY	LEA
DESCRIPTIO	N 1980' FSL & 1980' FEL
ELEVATION_	3593'
OPERATOR_	GRUY PETROLEUM MANAGEMENT COMPANY
LEASE	LAGUNA DEEP UNIT



PROVIDING SURVEYING SERVICES JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240 (505) 393-3117

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

LAGUNA GATUNA, N.M.

CONTOUR INTERVAL: LAGUNA GATUNA, N.M. – 10'

SEC. 35 TWP. 19-S RGE. 33-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1980' FSL & 1980' FEL

ELEVATION 3593'

GRUY PETROLEUM

OPERATOR MANAGEMENT COMPANY

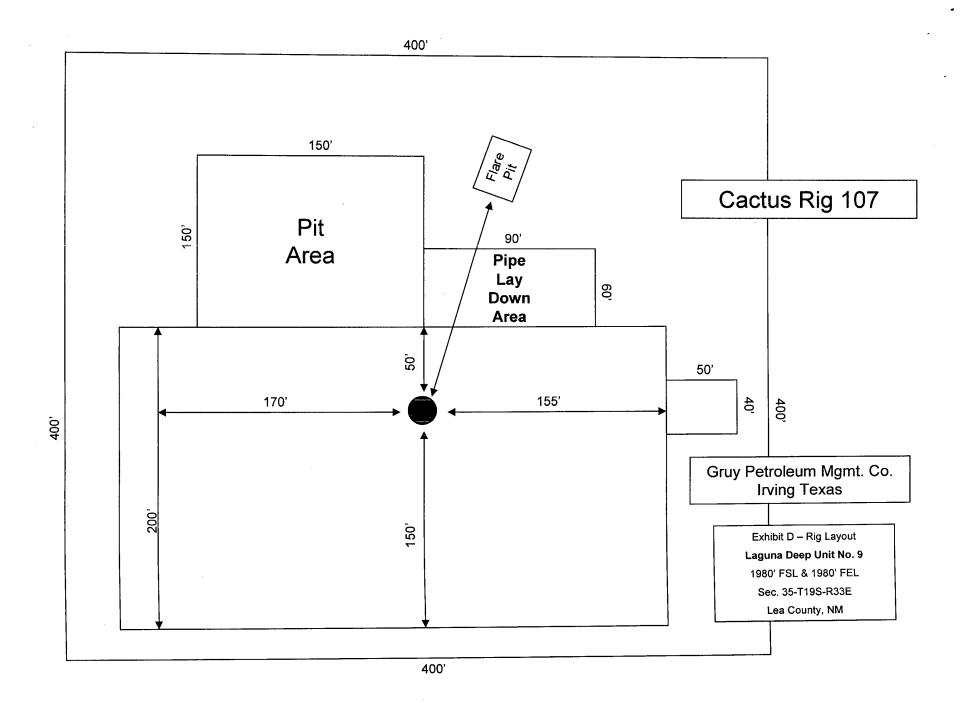
LEASE LAGUNA DEEP UNIT

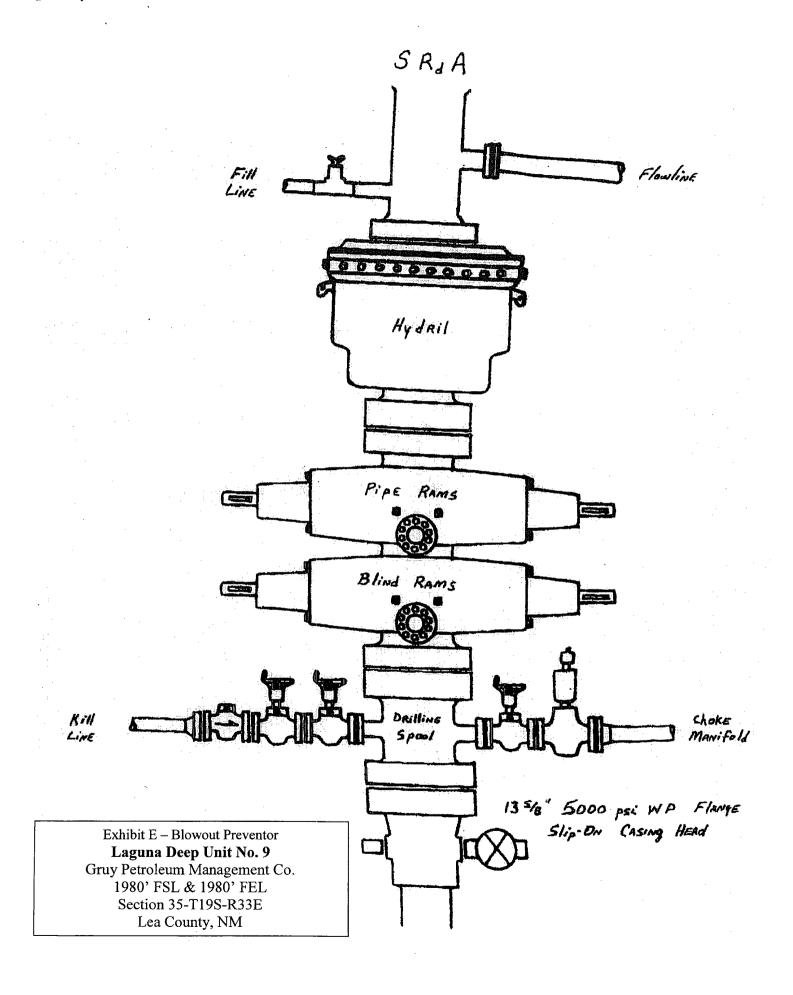
U.S.G.S. TOPOGRAPHIC MAP

PROVIDING SURVEYING SERVICES SINCE 1946 JOHN WEST SURVEYING COMPANY 412 N. DAL PASO HOBBS, N.M. 88240 (505) 393-3117

-Exhibit C

пана





# ORILLING OPERATIONS CHOKE MANIFOLD 5M SERVICE

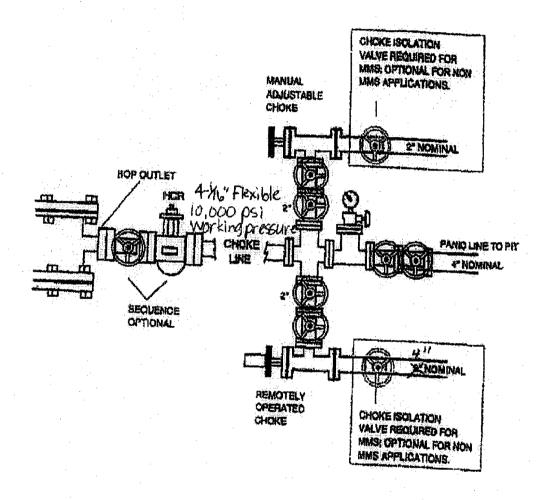


Exhibit E-1 – Choke Manifold Diagram

Laguna Deep Unit No. 9

Gruy Petroleum Management Co.

Gruy Petroleum Management Co 1980' FSL & 1980' FEL Section 35-T19S-R33E Lea County, NM



# Specification Sheet Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium componets. The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, harmmer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

Working Pressure:

5,000 or 10,000 psi working pressure

Test Pressure:

10,000 or 15,000 psi test pressure

Reinforcement:

Multiple steel cables

Cover:

Stainless Steel Armor

Inner Tube:

Petroleum resistant, Abrasion resistant

End Fitting:

API flanges, API male threads, threaded or butt weld hammer

unions, unibolt and other special connections

Maximum Length:

110 Feet

ID:

2-1/2", 3", 3-1/2", 4"

**Operating Temperature:** 

-22 deg F to +180 deg F (-30 deg C to +82 deg C)

# SPECIAL DRILLING STIPULATIONS

# THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

Operator's Name: Gruy Petroleum Management Co. Well Name & #: Laguna Deep Unit #9
Location 1980 F S L & 1980 FE L; Sec.35, T.19 S., R.33 E.
Lease #: NM-27572 County: Lea State: New Mexico
The Special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the General Requirements. The permittee should be familiar with the General Requirements, a copy of which is available from a Bureau of Land Management office. EACH PERMITTEE HAS THE RIGHOF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CRF 3165.3 AND 3165.4.
This permit is valid for a period of one year from the date of approval or until lease expiration or termination whichever is shorter.
I. SPECIAL ENVIRONMENT REQUIREMENTS
( ) Lesser Prairie Chicken (stips attached) ( ) Flood plain (stips attached) ( ) Other
II. ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING
(x) The BLM will monitor construction of this drill site. Notify the (x) Carlsbad Field Office at (505) 234-5972 ( ) Hobbs Office (505) 393-3612, at least 3 working days prior to commencing construction.
( ) Roads and the drill pad for this well must be surfaced with inches of compacted caliche upon completion of well and it is determined to be a producer.
( ) All topsoil and vegetation encountered during the construction of the drill site area will be stockpiled and made available for resurfacing of the disturbed area after completion of the drilling operation. Topsoil on the subject location is approximatelyinches in depth. Approximatelycubic yards of topsoil material will be stockpiled for reclamation.
( ) Other.
III. WELL COMPLETION REQUIREMENTS
( ) A Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the BLM. The effective date of the agreement must be prior to any sales.
(x) Surface Restoration: If the well is a producer, the reserve pit(s) will be backfilled when dry, and cut-and-fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be re-contoured to resemble the original contours of the surrounding terrain, and topsoil must be re-distributed and re-seeded with a drill equipped with a depth indicator (set at depth of ½ inch with the following seed mixture, in pounds of Pure Live Seed (PLS), per acre.
(x) A. Seed Mixture 1 (Loamy Sites) ( ) B. Seed Mixture 2 (Sandy Sites)
Side Oats Grama (Bouteloua curtipendula) 5.0 Sand Dropseed (Sporobolus crptandrus) 1.0
Sand Dropseed (Sporobolus cryptandrus) 1.0 Sand Lovegrass (Eragostis trichodes) 1.0
Plains Bristlegrass (Setaria magrostachya) 2.0
( ) C. Seed Mixture 3 (Shallow Sites) Side oats Grama (Boute curtipendula) 1.0  ( ) D. Seed Mixture 4 (Gypsum Sites) Alkali Sacaton (Sporobollud airoides) 1.0 Four-Wing Saltbush (Atriplex canescens) 5.0
( ) OTHER SEE ATTACHED SEED MIXTURE
Seeding should be done either late in the fall (September 15 - November 15, before freeze up, or early as possible the following spring take advantage of available ground moisture.
( ) Other

# RESERVE PIT CONSTRUCTION STANDARDS

The reserve pit shall be constructed entirely in cut material and lined with 6-mil plastic. Mineral material extracted from within the boundary of the APD during construction of the well pad and reserve pits and be used for the construction of this well pad and its immediate access road only, as long as that portion of the access road it is use on remains on-lease. Removal of any additional material from this location for construction or improvement of other well pads and other access or lease roads must first be purchased from BLM.

<u>Reclamation</u>: Reclamation of this type of deep pit will consist of pushing the pit walls into the pit when sufficiently dry to support track equipment. The pit liner is NOT TO BE RUPTURED to facilitate drying; a ten month period after completion of the well is allowed for drying of the pit contents.

The pit area must be contoured to the natural terrain with all contaminated drilling mud buried with at least 3 feet of clean soil. The reclaimed area will then be seeded as specified in this permit.

# OPTIONAL PIT CONSTRUCTION STANDARDS

The reserve pit may be constructed in predominantly fill material if:

- (1) Lined as specified above and
- (2) A temporary or emergency pit may be constructed immediately adjacent to the reserve pit as long as the pit remains within the APD boundary. Mineral material removed from this pit may be used for the construction of this well pad only and its immediate access road, as long as that portion of the access road the material is used on remains on-lease. Removal of any material from the APD boundary for use on other well locations or roads must first be purchased from BLM.

Reclamation of the reserve pit consists of bulldozing all reserve pit contents and contaminants into the borrow pit and covering with a minimum of 3 feet of clean soil material. The entire area must be re-contoured, all trash removed, and reseeded as specified in this permit.

# **CULTURAL**

Whether or not an archaeological survey has been completed and notwithstanding that operations are being conducted as approved, the lessee/operator/grantee shall notify the BLM immediately if previously unidentified cultural resources are observed during surface disturbing operations. From the time of the observation, the lessee/operator/grantee shall avoid operations that will result in disturbance to these cultural resources until directed to process by BLM.

# TRASH PIT STIPS

All trash, junk, and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

BLM SERIAL NO: NM-27572 COMPANY REFERENCE: Gruy Petroleum Mgmt Co. WELL NO. & NAME: Laguna Deep Unit #9

Seed Mixture 1, for Loamy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be <u>no</u> primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0

<sup>\*</sup>Pounds of pure live seed:

Pounds of seed x percent purity x percent gemination = pounds pure live seed

### CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Gruy Petroleum Management Well Name & No: Laguna Deep Unit No 09

Location: Surface: 1980' FNL & 1980' FWL, Sec.35, T. 19 S., R. 33 E.

Lease: NMNM 27572 Lea County, New Mexico

Lea County, New Mexico

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

- A. Spudding
- B. Cementing casing: 13 1/2 inch; 9 1/2 inch; 5 1/2 inch.
- C. BOP Tests
- 2. A Hydrogen Sulfide (H2S) Drilling Plan shall be in operations three days or 500 feet prior to drilling into the top of the Yates formation estimated to be at 3257 ft.
- 3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
- 4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.
- 5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

### II. CASING:

- 1. The 13 % inch shall be set at 1350 Feet with cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.
- 2. The minimum required fill of cement behind the \_9 \( \frac{5}{4} \) inch Intermediate casing is to circulate to surface.
- 3. The minimum required fill of cement behind the 5 ½ inch Production casing is to Fie back to the 9 ½ by at least 200 [feet.]

### III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13% inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

### III · Con't.

- 2. <u>Minimum working pressure</u> of the blowout preventer and related equipment (BOPE) shall be <u>5 M</u> psi. A variance to to test the surface BOPE to 1000 psig using the rig pumps is approved. The 5 M BOPE shall be in operations prior to drilling below the 9 % inch shoe.
- 3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the test.
- -The test shall be done by an independent service company
- -The results of the test shall be reported to the appropriate BLM office.
- -Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures.
- -Use of drilling mud for testing is not permitted since it can mask small leaks.
- -Testing must be done in safe workman-like manner. Hard line connections shall be required.
- -Both low pressure and high pressure testing of BOPE is required.

G Gourley 12/06/2005 BLM Roswell

### BLM Serial #:NM-27572

Company Reference: Gruy Petroleum Management Co.
Well # & Name: Laguna Deep Unit #9

# STANDARD STIPULATIONS FOR PERMANENT RESOURCE ROADS CARLSBAD FIELD OFFICE

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

The holder/grantee/permittee shall hereafter be identified as the holder in these stipulations. The Authorized Officer is the person who approves the Application for Permit to Drill (APD) and/or Right-of-Way (ROW).

### GENERAL REQUIREMENTS

- A. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
- B. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et. seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.
- C. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et. seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et. seq.) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
- D. If, during any phase of the construction, operation, maintenance, or termination of the road, any oil or other pollutant should be discharged, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil of other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all

damages to Federal lands resulting there from the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

E. The holder shall minimize disturbance to existing fences and other improvements on public domain surface. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times.

The holder will make a documented good-faith effort to contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence.

F. The Holder shall ensure that the entire right-of-way, including the driving surface, ditching and drainage control structures, road verges and any construction sites or zones, will be kept free of the following plant species: Malta starthistle, African rue, Scotch thistle and salt cedar. The Holder agrees to comply with the following stipulations:

### 1. ROAD WIDTH AND GRADE

The road will have a driving surface of 14 feet (all roads shall have a minimum driving surface of 12 feet, unless local conditions dictate a different width). The maximum grade is 10 percent unless the box below is checked. Maximum width of surface disturbance from construction will be 30 feet.

/\_\_/ Those segments of road where grade is in excess of 10% for more than 300 feet shall be designed by a professional engineer.

### 2. CROWNING AND DITCHING

Crowning with materials on site and ditching on one side of the road on the uphill side will be required. The road cross-section will conform to the cross section diagrams in Figure 1. If conditions dictate, ditching may be required for both sides of the road; if local conditions permit, a flat-bladed road may be considered (if these conditions exist, check the appropriate box below). The crown shall have a grade of approximately 2% (i.e., 1" crown on a 12' wide road).

/ <u>X</u>	/ Ditching will be required on both sides of the roadway as shown on the	9
	attached map or as staked in the field.	

/\_\_/ Flat-blading is authorized on segment(s) delineated on the attached map.

### 3. DRAINAGE

Drainage control shall be ensured over the entire road through the use of borrow ditches, out-sloping, in-sloping, natural rolling topography, lead-off (turnout) ditches, culverts, and/or drainage dips.

A. All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval for lead-off ditches shall be determined according to the following table, but may be amended depending upon existing soil types and centerline road slope (in %):

SPACING INTERVAL FOR TURNOUT DITCHES

Percent slope	Spacing interval
0% - 4%	400' - 150'
4% - 6%	250' - 125'
6% - 8%	200' - 100'
8% - 10%	150' - 75'

A typical lead-off ditch has a minimum depth of 1 foot below and a berm 6 inches above natural ground level. The berm will be on the down-slope side of the lead-off ditch. The ditch end will tie into vegetation whenever possible.

For this road the spacing interval for lead-off ditches shall be at

/\_x\_/ 400 foot intervals.
\_\_\_\_\_ foot intervals.
\_\_\_\_\_ foot intervals.
\_\_\_\_\_ locations staked in the field as per spacing intervals above.
\_\_\_\_\_ /\_ / locations delineated on the attached map.

- B. Culvert pipes shall be used for cross drains where drainage dips or low water crossings are not feasible. The minimum culvert diameter must be 18 inches. Any culvert pipe installed shall be of sufficient diameter to pass the anticipated flow of water. Culvert location and required diameter are shown on the attached map (Further details can be obtained from the Roswell District Office or the appropriate Resource Area Office).
- C. On road slopes exceeding 2%, drainage dips shall drain water into an adjacent lead-off ditch. Drainage dip location and spacing shall be determined by the formula:

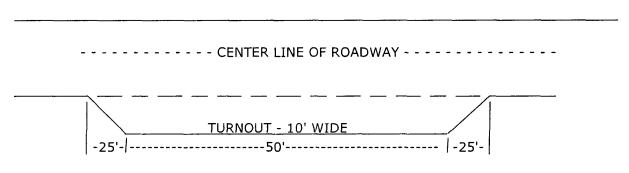
spacing interval = 
$$\frac{400'}{\text{road slope in }\%}$$
 + 100'

Example: 4% slope: spacing interval = 
$$\frac{400}{1}$$
 + 100 = 200 feet

3

### 4. TURNOUTS

Unless otherwise approved by the Authorized Officer, vehicle turnouts will be required. Turnouts will be located at 2000-foot intervals, or the turnouts will be intervisible, whichever is less. Turnouts will conform to the following diagram:



STANDARD TURNOUT - PLAN VIEW

### 5. SURFACING

Surfacing of the road or those portions identified on the attached map may, at the direction of the Authorized Officer, be required, if necessary, to maintain traffic within the right-of-way with caliche, gravel, or other surfacing material which shall be approved by the Authorized Officer. When surfacing is required, surfacing materials will be compacted to a minimum thickness of six inches with caliche material. The width of surfacing shall be no less than the driving surface. Prior to using any mineral materials from an existing or proposed Federal source, authorization must be obtained from the Authorized Officer.

A sales contract for the removal of mineral materials (caliche, sand, gravel, fill dirt, etc.) from an authorized pit, site, or on location must be obtained from the BLM prior to using any such mineral material from public lands. Contact the BLM solid minerals staff for the various options to purchase mineral material.

### 6. CATTLEGUARDS

Where used, all cattleguard grids and foundation designs and construction shall meet the American Association of State Highway and Transportation Officials (AASHTO) Load Rating H-20, although AASHTO U-80 rated grids shall be required where heavy loads (exceeding H-20 loading), are anticipated (See BLM standard drawings for cattleguards). Cattleguard grid length shall not be less than 8 feet and width of not less than 14 feet. A wire gate (16-foot minimum width) will be provided on one side of the cattleguard unless requested otherwise by the surface user.

#### MAINTENANCE

The holder shall maintain the road in a safe, usable condition. A maintenance program shall include, but not be limited to blading, ditching, culvert installation, culvert cleaning, drainage installation, cattleguard maintenance, and surfacing.

### 8. PUBLIC ACCESS

Public access along this road will not be restricted by the holder without specific written approval being granted by the Authorized Officer. Gates or cattleguards on public lands will not be locked or closed to public use unless closure is specifically determined to be necessary and is authorized in writing by the Authorized Officer.

### 9. CULTURAL RESOURCES

Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the authorized officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the authorized officer after consulting with the holder.

### 10. SPECIAL STIPULATIONS:

See reclamation stipulations attached.

District I
1625 N French Dr. Hobbs NM 88240
District II
1301 W. Grand Avenue Artesia NM 88210
District III
1000 Rio Brazos Road Aztec. NM 87410
District IV
1220 S St Francis Dr. Santa Fe. NM 87505

# State of New Mexico **Energy Minerals and Natural Resources**

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-144 March 12, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Is pit or below-grade tan	ide Tank Registration or Closur k covered by a "general plan"? Yes 囗 No or below-grade tank 図 Closure of a pit or below-gra	
Address: P.O. Box 140907, Irving, Tx 75014-0907	e-mail address: zfarris@cimarex.com  272-443-6489 e-mail address: zfarris@cimarex.com  272-443-6489 e-mail address: zfarris@cimarex.com  272-443-6489 e-mail address: zfarris@cimarex.com  272-443-6489 e-mail address: zfarris@cimarex.com	NS_R33E_ Wner Federal [] State [] Private [] Indian []
Pit  [ype: Drilling ☑ Production ☐ Disposal ☐  Workover ☐ Emergency ☐  ined ☑ Unlined ☐  iner type: Synthetic ☒ Ihickness 12 mil Clay ☐ Volume  2000 bbl	Below-grade tank	•
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more but less than 100 feet 100 feet or more	(20 points) (10 points) (0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source or less than 1000 feet from all other water sources.)	Yes No	(20 points)
Distance to surface water: (horizontal distance to all wetlands playas irrigation canals ditches and perennial and ephemeral watercourses)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) (0 points)
	Ranking Score (I otal Points)	-0-
If this is a pit closure: (1) attach a diagram of the facility showing the pit s onsite  offsite  If offsite name of facility date. (4) Groundwater encountered: No  Yes  If yes show depth belo diagram of sample locations and excavations	(3) Attach a general description of remedial act	ion taken including remediation start date and en
I hereby certify that the information above is true and complete to the best of been/will be constructed or closed according to NMOCD guidelines , a Date: 11-18-05  Printed Name/Title Zeno Farris Manager Operations Administration  Your certification and NMOCD approval of this application/closure does not	general permit [], or an (attached) alternative O  Signature Foundation of liability should the contents of	CD-approved plan
Otherwise endanger public health or the environment. Nor does it relieve the regulations  Approval: Date: 2/1/2006  Printed Name/Title CHRIS WILLIAMS - DYST SUPA		<u> </u>