FORM APPROVED OMB No. 1004-0136 pires November 30, 2000

Form 3160-3 (August 1999)

# **UNITED STATES** DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAG	GEMENT \S	2	NM-65/4428			
APPLICATION FOR PERMIT TO DE	GEMENT RILL OR REENTER	95557	6. Alondian, Allottee or Tribe	: Name		
Ia. Type of Work: ☑ DRILL ☐ REENTE	R	AVEG	7. If Unit or CA Agreement, NORTH SQUARE LAKE			
1b. Type of Well: 😡 Oil Well 🔲 Gas Well 🔲 Other	Single Zone 🔲 Multi	ple Zone	8. Lease Name and Well No. NORTH SOUARE LAKE	UNIT P		
2. Name of Operator  GP II ENERGY, INC.	F359		9. API Well No.	3/11/		
3a. Address P O BOX 50632	3b. Phone No. (include area code)		10. Field and Pool, or Explorate	ory		
MIDLAND TX 79710	915/685.0878		SQUARE LAKE G	ORTH SQUARE LAKE UNIT  9. API Well No.  O. Field and Pool, or Exploratory  SQUARE LAKE GB-SA  1. Sec., T., R., M., or Blk. and Survey or Area  Sec. 31, T16S, R31E  2. County or Parish.  EDDY  Init dedicated to this well		
4. Location of Well (Report location clearly and in accordance with At surface 2630' FSL & 1310' FWL I	any State requiremen SUBJECT	70	11. Sec., T., R., M., or Blk. and	Survey or Area		
At proposed prod. zone Same 4x 2 (717 0) 64 4			Sec. 31, T16S,	, R31E		
14. Distance in miles and direction from nearest town or post office* 5.4 air miles NE of Loco Hill	ls		12. County or Parish. EDDY			
15. Distance from proposed*	16. No. of Acres in lease	17. Spacin	g Unit dedicated to this well			
location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	30.99(Unit 6125	) 40	ACRES			
18. Distance from proposed location*	19. Proposed Depth	20. BLM/I	BLA Bond No. on file			
to nearest well, drilling, completed, applied for, on this lease, ft.	3800'	В	303128			
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3800 GR	22. Approximate date work will sta MAY 1, 2000			0 DAYS		
	24. Attachments	ELL CO	INTROLLED WATER	Basin		
The following, completed in accordance with the requirements of Onshor	re Oil and Gas Order No.1, shall be att	ached to this	s form:			
Well plat certified by a registered surveyor.		ne operation	ns unless covered by an existing	bond on file (see		
2. A Drilling Plan.	Item 20 above).					

- 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).
- 5. Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signati	11c/ A	· dusc	Name (Printed/Typed) M. A. SIRGO, III	Date 3-22-00
Title	AGENT			
Approved t	y (Signature)	ISILAHAY U. BAAY	Name (Printed/Typed)	Date
Title	Ass Lar	sistant Field Manager,	Office	REPORTED TO THE YEAR

Application approval 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 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.

ATTACAS

<sup>\*(</sup>Instructions on reverse)

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PARSON SOUND SOU

The state of the s

DISTRICT I P.O. Box 1980, Hobbs, NM 88241-1980

#### State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT II P.O. Drawer DD, Artesia, NK 88211-0718

DISTRICT III 1000 Rio Brazos Rd., Aztec, NW 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

# OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name	
	57570	SQUARE LAKE GB-SA	
Property Code	-	erty Name NSLU	Well Number
OGRID No.		rator Name	Elevation 3800
008359	GP II EI	NERGY, INC.	3000

#### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 3	31	16 S	31 E		2630	SOUTH	1310	WEST	EDDY

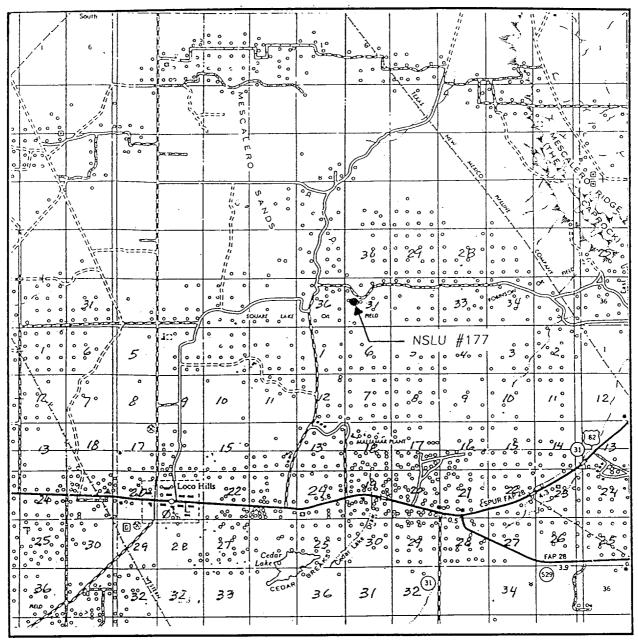
#### Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acre	Joint o	r Infill Co	nsolidation	Code Or	der No.				

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

		JARD UNII HAS BEEL	
LOT 1			OPERATOR CERTIFICATION  I hereby certify the the information contained herein is true and complete to the best of my knowledge and ballef.  If
30.82 ACRES LOT 2			M. A. SIRGO, III  Printed Name  AGENT Title  MARCH 22, 2000  Date
30.91 ACRES			 SURVEYOR CERTIFICATION
LOT 3 SEE DETAIL  30.99 ACRES LOT 4	3809.0' 3799.2'		I hereby certify that the well location shown on this plat was plotted from field nates of actual surveys made by me or under my supervison and that the same is true and correct to the best of my beliaf.  MARCH 3: 2000.  Date Surveyed Signature & Sami of Professional Surveyor.  Certificate No. RONALD J. EIDSON 3238 GARY EIDSON 12641 MACON McDONALD 12165
31.08 ACRES			ALCON MEDICAL MANAGEMENT

# VICINITY MAP



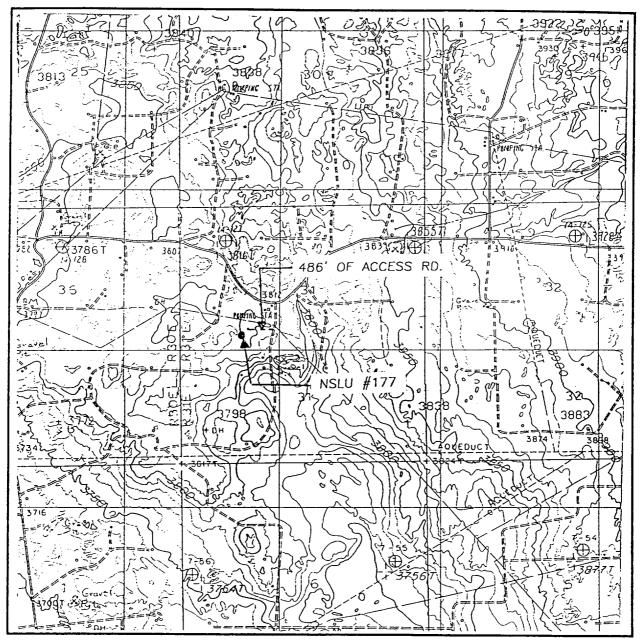
SCALE: 1" = 2 MILES

SEC. <u>31</u> TWF	P. <u>16-S</u> RGE. <u>31-E</u>
SURVEY	N.M.P.M.
COUNTY	EDDY
DESCRIPTION_2	630' FSL & 1310' FWL
ELEVATION	3800
OPERATOR	GP II ENERGY, INC.
LEASE	NSLU

JOHN WEST SURVEYING HOBBS, NEW MEXICO (505 393-3117



# LOCATION VERIFICATION MAP



SCALE: 1'' = 2000'

CONTOUR INTERVAL: HENSHAW TANK - 10' LOCO HILLS - 10'

SEC. 31 TW	P. <u>16-S</u> RGE. <u>31-E</u>
SURVEY	N.M.P.M.
COUNTY	EDDY
DESCRIPTION 2	630' FSL & 1310' FWL
ELEVATION	3800
OPERATOR	GP II ENERGY, INC.
LEASE	NSLU
U.S.G.S. TOPO	GRAPHIC MAP
HENSHAW TAN	K, LOCO HILLS, N.M.

JOHN WEST SURVEYING HOBBS, NEW MEXICO (505 393-3117

NOTICE OF STAKING		6.	Lease Number	
(Not to be used in place of			NM-54428	
Application for Permit to Dri	11 Form 3160-3)		NIVE 54428	
1. Oil well X Gas well	1	If Indian, Allotte Tribe Name	ee or	
2. Name of Operator		8.	Unit Agreement Nam	ne
GP II ENERGY INC.		NO	DRIH SQUARE LAKE U	NIT
3. Name of Specific Contact	Person	9.	Farm or Lease Name	2
M. A. SIRGO, III		NO	ORTH SQUARE LAKE U	NIT
4. Address & Phone No. of Op	erator or Agent	10.	Well No.	
MIDLAND TX 79710 (915)	685-0878 684-4748		177	
5. Surface Location of Well			Field or Wildcat	
2630' FSL & 1310' FWL			JACKSON-7 RIVERS	
Attach: a) Sketch showing	•	<del>-</del>	RAYBURG-SAN ANDRES	
pad, pad dimens	ions, and reserve	112.	Sec., T., R., M.	•
b) Topographical o	or other accent-		and Survey or I	Area
	g location, access		SEC 31, T16S, R31	LE
15. Formation Objective(s)	16. Estimated Well	1-		
3	Depth	1	County, Parish	14. State
	•		or Borough	l'iv beace
GRAYBURG-SAN ANDRES	4000'		EDDY	NEW MEXICO
17. Additional Information (	as appropriate; mus	st in	nclude surface own	ner's
name, address, and telep	hone number)			
	1	<u>-</u>		
18. Signed	・ 近 ひらの Title ENG	INEE	R Date	3-8-00
M. A. SIRGO, III	/		-	

Note: Upon receipt of this Notice, the Bureau of Land Management (BLM) will schedule the date of the onsite predrill inspection and notify you accordingly. The location must be staked and access road must be flagged prior to the onsite.

Operators must consider the following prior to the onsite:

- a) H<sub>2</sub>S Potential
- b) Cultural Resources (Archeology)
- c) Federal Right of Way or Special Use Permit

# LUCATION VERIFICATION MAP



SCALE: 1'' = 2000'

CONTOUR INTERVAL: HENSHAW TANK - 10' LOCO HILLS - 10'

SEC. 31 TWP. 16-S RGE. 31-E
SURVEYN.M.P.M.
COUNTYEDDY
DESCRIPTION 2630' FSL & 1310' FWL
ELEVATION3800
OPERATOR GP II ENERGY, INC.
LEASENSLU
U.S.G.S. TOPOGRAPHIC MAP
HENSHAW TANK, LOCO HILLS, N.M.

JOHN WEST SURVEYING HOBBS, NEW MEXICO (505 393-3117

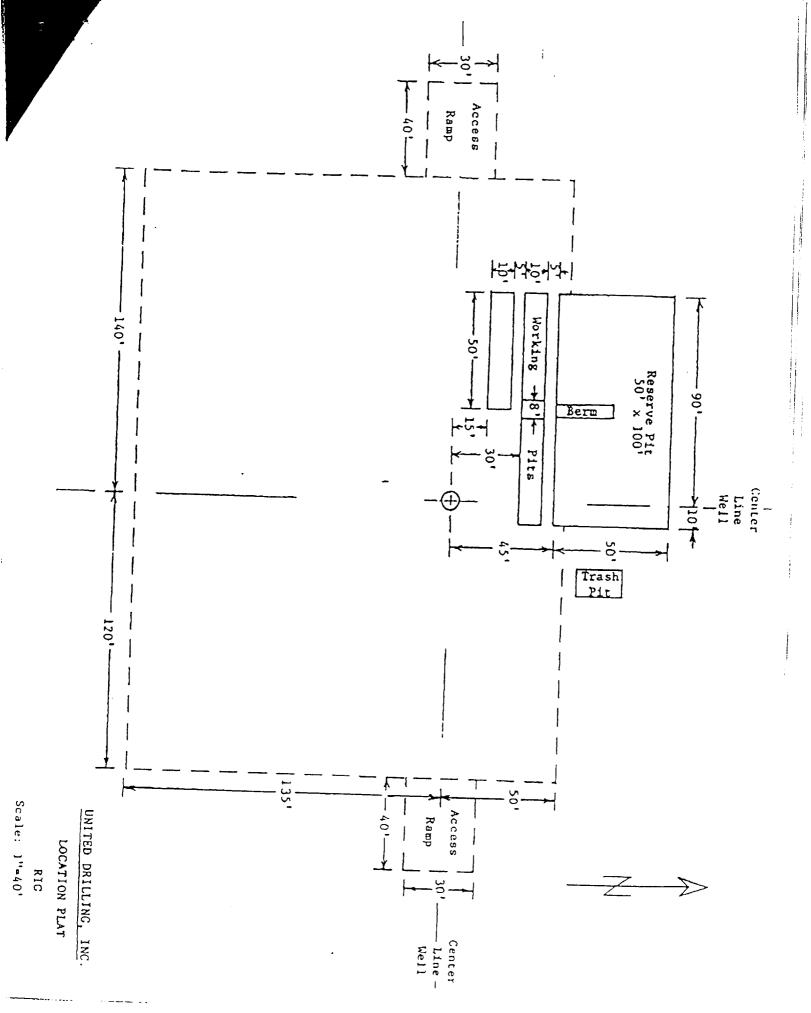


EXHIBIT C

#### **PERTINENT INFORMATION**

For

GP II ENERGY, INC.
No. 177 North Square Lake Unit
2630' FSL & 1310' FWL Sec. 31, T16S, R31E
Eddy County, New Mexico
Federal Lease No. NM-54428

LOCATED: 5.4 air miles northeast of Loco Hills, New Mexico

FEDERAL LEASE NUMBER: NM-54428

DATE ISSUED: January 1, 1983

ACRES IN LEASE: 30.99 acres in Tract 26 of 6125 Unit acres

RECORD LESSEE: Robert E. Boling

BOND COVERAGE: Federal State Wide Blanket Bond

Federal Bond No. B03128

AUTHORITY TO OPERATE: Transfer of Operating Rights to GP II Energy, Inc.

**SURFACE OWNERSHIP:** Federal

GRAZING PERMITTEE: Charles Martin, Inc.

P. O. Box 706

Artesia, New Mexico 88210

**POOL RULES:** Square Lake Grayburg-San Andres

EXHIBITS: A. Road and Contour Map

B. Lease and Well Map

C. Drill Pad Layout

D. BOP Diagram

E. Flow Line/Power Map

# SUPPLEMENTAL DRILLING DATA

GP II ENERGY, INC.
No. 177 North Square Lake Unit
2630' FSL & 1310' FWL Sec. 31, T16S, R31E
Eddy County, New Mexico
Federal Lease No. NM-54428

The following items supplement Form 3160-3 in accordance with instructions contained in Onshore Oil and Gas Order No. 1:

1. SURFACE FORMATION: Current

#### 2. ESTIMATED TOPS OF GEOLOGIC MARKERS:

T. Salt	525	Queen	2200
B. Salt	1360	Grayburg	2852
Yates	1570	San Andres	3208
Seven Rivers	1590		

#### 3. ESTIMATED DEPTHS TO WATER, OIL OR GAS FORMATION:

Water - Possible groundwater from 0' to 75'

Oil - 2100' to TD

Gas - None anticipated

### 4. PROPOSED CASING PROGRAM:

8-5/8" Casing – Set at 550' +- 24# J-55 Surface casing 5-1/2" Casing – Set at 3800' +- 15.50# J-55 Production casing All strings of casing will be satisfactorily tested to 1000 psi

#### 5. PRESSURE CONTROL EQUIPMENT:

Install a 3000# 10" Shaffer double hydraulic BOP on the 8-5/8" casing prior to drilling into the Queen. Due to depleted nature of the reservoir, it is requested that a waiver be granted to test pressure control equipment to 1000 psi, using rig pump, instead of the normal 2000 psi test. Exhibit D is a diagrammatic sketch of the BOP equipment.

## 6. <u>CIRCULATING MEDIUM</u>:

Drill with fresh water from surface to setting depth of surface casing. Drill remainder of hole with brine water, using additives to control water loss, viscosity and mud weight.

# No. 177 North Square Lake Unit

# 7. <u>AUXILIARY EQUIPMENT</u>:

Equipment will include a gas detector, pit level monitor and a full-opening safety valve.

#### 8. TESTING, LOGGING AND CORING PROGRAM:

Samples: Samples will be caught at 10' intervals from below the

surface casing to total depth.

DST and Cores: None anticipated

Logging: Density-Neutron Log, Gamma Ray-Neutron Log

#### 9. ABNORMAL PRESSURES, TEMPERATURES OR HYDROGEN SULFIDE:

No abnormal pressure or temperatures anticipated. Precautions will be taken to monitor possible traces of hydrogen sulfide gas in the Grayburg. See H2S Plan attachment.

#### 10. <u>ANTICIPATED STARTING DATE</u>:

Drilling will commence upon Federal and State approval. Drilling and completion will require about 30 days.

#### GP II ENERGY, INC.

#### **ATTACHMENT**

#### HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

I. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- 1. The hazards and characteristics of hydrogen sulfide (H2S).
- 2. The proper use and maintenance of person protective equipment and life support systems.
- 3. The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- 4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- 1. The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- 3. The contents and requirements of the H2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probably H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

#### II. H2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H2S.

#### 1. Well Control Equipment:

- A. Flare line with electronic igniter or continuous pilot.
- B. Choke manifold with a minimum of one remote choke.
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
- D. Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head, and flare gun with flares.

#### 2. Protective Equipment for Essential Personnel:

A. Mark II Surviveair 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.

### 3. H2S Detection and Monitoring Equipment:

- A. Two portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.
- B. One portable SO2 monitor positioned near flare line.

#### 4. Visual Warning Systems:

- A. Wind direction indicators as shown on well site diagram.
- B. Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

#### 5. Mud Program:

- A. The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.
- B. A mud-gas separator and an H2S gas buster will be utilized.

#### 6. Metallurgy:

- A. All drill strings, casings, tubing, wellhead, blowout preventors, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
- B. All elastomers used for packing and seals shall be H2S trim.

#### 7. Communication:

- A. Radio communications in company vehicles including cellular telephone and two-way radio.
- B. Land line (telephone) communications at field office.

# 8. Well Testing:

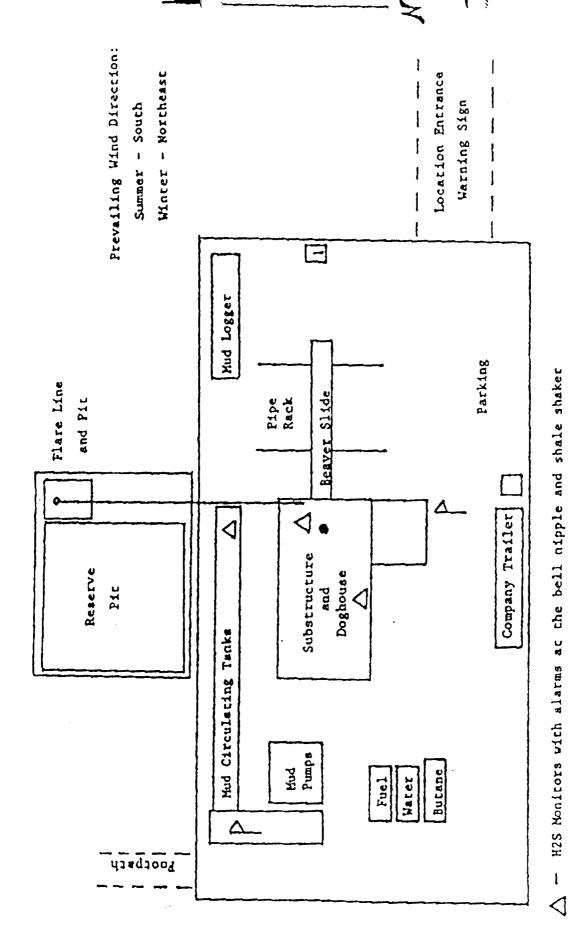
A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill stem testing operations conducted in an H2S environment will use the closed chamber method of testing.

# WARNING

# YOU ARE ENTERING AN H₂S AREA AUTHORIZED PERSONNEL ONLY

- 1. BEARDS OR CONTACT LENSES NOT ALLOWED
- 2. HARD HATS REQUIRED
- 3. SMOKING IN DESIGNATED AREAS ONLY
- 4. BE WIND CONSCIOUS AT ALL TIMES
- 5. CHECK WITH GP II ENERGY BEFORE ENTERING

GP II ENERGY, Inc. 1-915-684-4748



Wind Direction Indicators Δ.

Safe Briefing areas with caution signs and protective breathing equipment Min. 150 feet from wellhead, I designates primary area

#### MULTI-POINT SURFACE USE AND OPERATIONS PLAN

GP II ENERGY, INC.
No. 177 North Square Lake Unit
2630' FSL & 1310' FWL Sec. 31, T16S, R31E
Eddy County, New Mexico
Federal Lease No. NM-54428

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved, and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal can be made of the environmental effects associated with the operation.

#### 1. <u>EXISTING ROADS</u>:

- A. Exhibit A is a portion of a road map showing the location of the proposed well as staked. The well is approximately 5.4 air miles northeast of Loco Hills, New Mexico.
- B. <u>Directions</u>: Go east from Loco Hills, New Mexico on Hwy 82 a distance of 3.0 miles. Turn north on Skelly Road, which is County Road 221. Go 6.75 miles north and turn east on lease road. Follow lease road 1.0 miles and turn south. Travel 486' down new access road to proposed location.

#### 2. PLANNED ACCESS ROAD:

- A. <u>Length and Width</u>: The new road will be about 486' long and about 12' wide.
- B. <u>Surfacing Material</u>: The new road and well pad will be surfaced with 6" of existing surface material supplemented with caliche where necessary.
- C. Maximum Grade: Less than 1%.
- D. Turnouts: No traffic turnouts are necessary.
- E. <u>Drainage Design</u>: The road will be constructed with a 6" crown to provide proper drainage.
- F. <u>Culverts</u>: None necessary.
- G. <u>Cuts and Fills</u>: Construction of the drill pad will require 8' of cut with 8' of fill. Surface soil will be stockpiled on the edge of the location for use in rehabilitating the disturbed area.
- H. Gates, Cattle Guards: None necessary.

#### 3. LOCATION OF EXISTING WELLS:

#### A. See Exhibit B

#### 4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. The flow line for the NSLU No. 177 well will travel down existing lease roads 750' to the east where an existing North Square Lake Unit battery is located, or a new facility will be constructed on the well pad depending on well results.
- B. The power line will be constructed from the NSLU No. 177 well, to the existing lease power line located 300' north of the pad. See Exhibit E.

#### 5. LOCATION AND TYPE OF WATER SUPPLY:

A. Fresh water for drilling from surface to 500'+- will be obtained from a commercial source and trucked over existing roads. Lease brine water will be used to finish drilling and completing.

#### 6. SOURCE OF CONSTRUCTION MATERIALS:

A. Any caliche necessary for surfacing the road and pad will be purchased from a federal pit located in the SESE Sec. 5, T17S, R31E.

# 7. METHODS OF HANDLING WASTE DISPOSAL:

- A. Drill cuttings will be disposed of in the drilling pits.
- B. Drilling fluids will be allowed to evaporate in the drilling pits until the pits are dry.
- C. Water produced during test will be disposed of in the drilling pits. Oil produced during test will be stored in test tanks until sold.
- D. Current laws and regulations pertaining to the disposal of human waste will be compiled with.
- E. Trash, waste paper, garbage, debris or junk will be removed from the wellsite within 30 days after finishing drilling and/or completion operations.

#### 8. ANCILLARY FACILITIES:

A. None required.

### No. 177 North Square Lake Unit

#### 9. WELL SITE LAYOUT:

- A. The wellsite, surrounded by a 400' x 400' area has been surveyed and flagged.
- B. Dimensions and relative location of the drill pad and pit are shown on Exhibit C.

#### 10. PLANS FOR RESTORATION OF THE SURFACE:

- A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Pits will be filled and the location cleaned of all trash and junk to leave the wellsite in an aesthetically pleasing condition as possible.
- B. Any unguarded pits containing fluids will be fenced until they are filled.
- C. If the well is nonproductive, the disturbed area will be rehabilitated to surface owner requirements and will be accomplished as expeditiously as possible.

#### 11. OTHER INFORMATION:

- A. <u>Topography</u>: The wellsite and access road are flat except for sand dunes. The project area generally drains southwest toward Cedar Lake Draw.
- B. <u>Soil</u>: The surface soil is fine with occasional caliche and chert inclusions.
- C. <u>Flora and Fauna</u>: Vegetation consists of oak shinnery, mesquite, sagebrush, yucca, and various weeds and grasses. Ground cover is about 15%. Wildlife in the area is that typical of semiarid desert land, such as coyotes, rodents, reptiles and birds.
- D. Ponds or Streams: None.
- E. Residences and Other Structures: None in this area.
- F. Archaeological, Historical and Other Cultural Sites: A review by Archaeological Survey Consultants indicated that there are no cultural sites within the project area. An Archaeological report has been furnished to BLM.
- G. <u>Land Use</u>: The surface is used for cattle grazing.
- H. <u>Surface Ownership</u>: The drillsite and access road are located on federal surface. The grazing lessee is Charles Martin, Inc., P. O. Box 706, Artesia, New Mexico 88210.

#### 12. OPERATOR'S REPRESENTATIVE:

Representative responsible for assuring compliance with the approved Surface Use Plan:

## No. 177 North Square Lake Unit

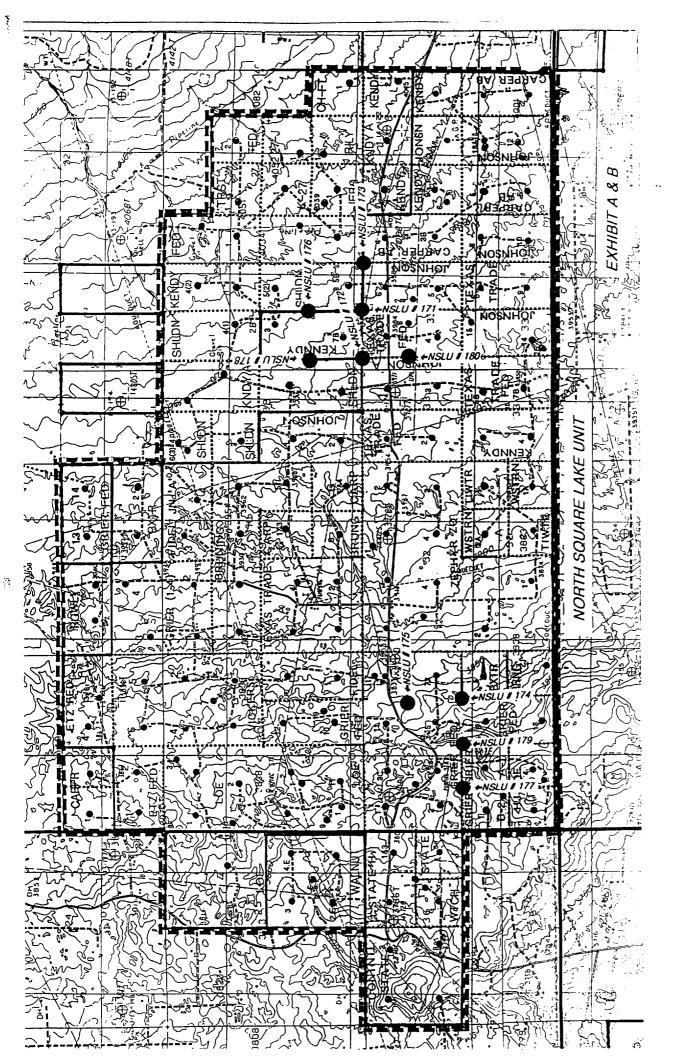
#### 13. <u>CERTIFICATION</u>:

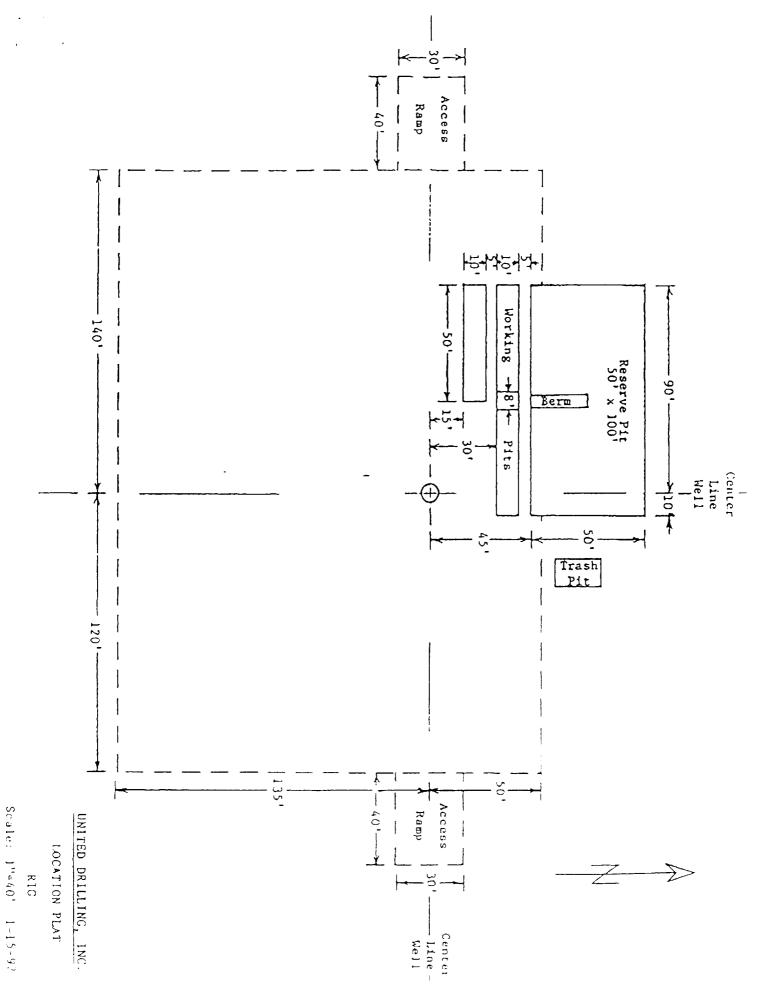
I hereby certify that I, or person under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge true and correct; that the work associated with the operations proposed herein will be performed by GP II Energy, Inc. and its sub-contractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

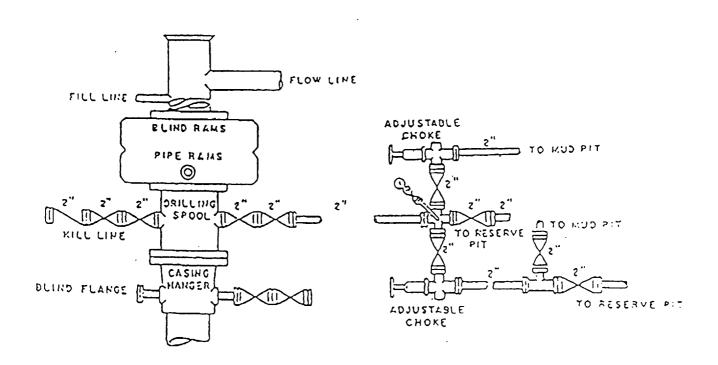
Date: 3-27-00

M. A. Sirgo, III

Permit Agent for: GP II Energy, Inc.

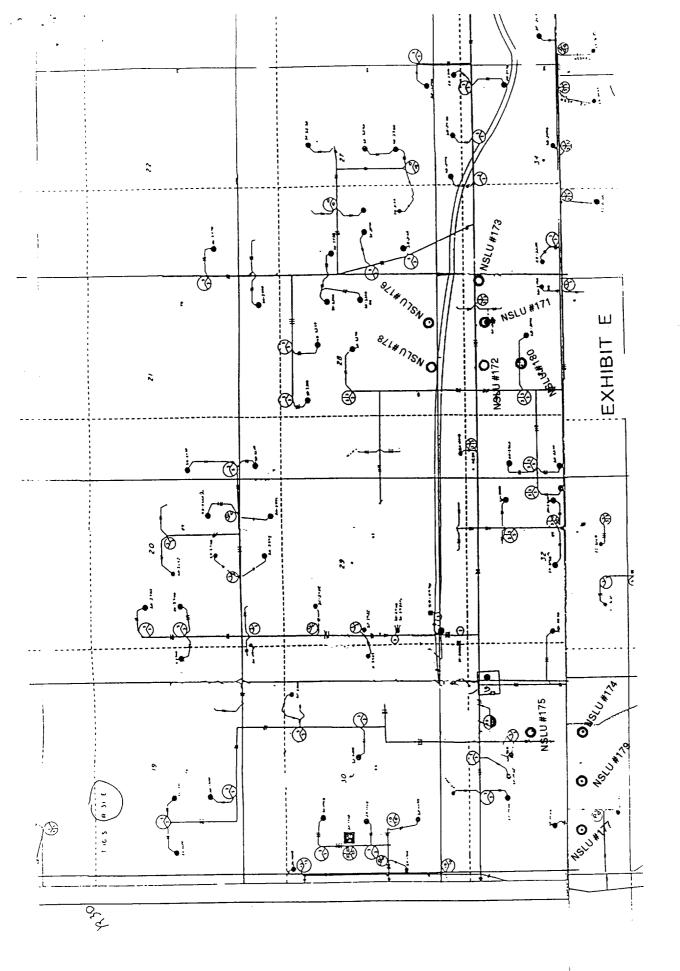






# BOP DINGRAM

3000# Working Pressure Rams Operated Daily



R30