

NM OIL CON. COMMISSION  
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEYSUBMIT IN . . . LIGATE\*  
(Other instructions on  
reverse side)Form approved.  
Budget Bureau No. 42-R1425.

30-015-26375

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

## 1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

## b. TYPE OF WELL

OIL  
WELL ☐GAS  
WELL ☒

OTHER

SINGLE  
ZONE ☐MULTIPLE  
ZONE ☐

## 2. NAME OF OPERATOR

Oryx Energy Company

## 3. ADDRESS OF OPERATOR

P. O. Box 1861, Midland, Texas 79702

## 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

C, 860' FNL &amp; 1980' FWL

At proposed prod. zone

## 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

4 miles West of Loco Hills

## 15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drlg. unit line, if any)

860

## 16. NO. OF ACRES IN LEASE

160

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

320

18. DISTANCE FROM PROPOSED LOCATION\*  
TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

1st well

## 19. PROPOSED DEPTH

11,200'

## 20. ROTARY OR CABLE TOOLS

Rotary

## 21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3594.1' GR

## 22. APPROX. DATE WORK WILL START\*

Upon Approval

## PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8"	54.5#	400'	425 sxs to Surface
11"	8-5/8"	32#	4500'	1775 sxs to Surface
7-7/8"	5-1/2"	17#	10950"	1025 sxs Est. TOC 6800'

Regular Location

Communitization: Consolidate Oryx 160 acres, NW/4, Sec. 23, LC-028793-C with Phillips 160 acres, NE/4, Sec. 23, LC-028784-B and LC-028793-B to make the 320 acre proration unit.

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, 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 and true vertical depths. Give blowout preventer program, if any.

24.

A/C 915-688-0375

SIGNED

Larry L. Perry

TITLE

Proration Analyst

DATE

5-2-90

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Orig. Signed by Richard L. Manys

AREA MANAGER

APPROVED BY

TITLE

CARLSBAD RESOURCE

DATE

5-21-90

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions On Reverse Side

Submit to Appropriate  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

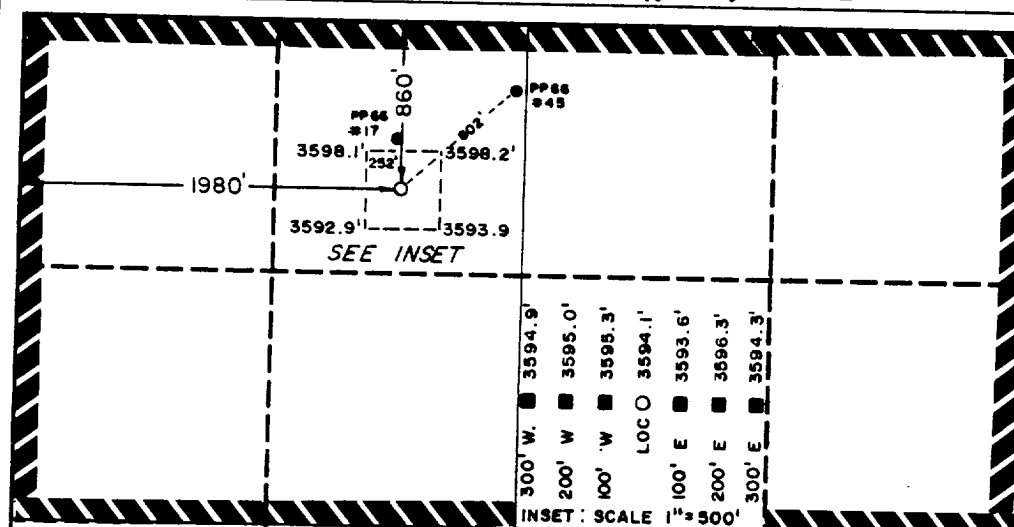
DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator ORYX ENERGY COMPANY			Lease DIAMOND WING FEDERAL		Well No. 1
Unit Letter C	Section 23	Township 17 SOUTH	Range 29 EAST	County EDDY	
Actual Footage Location of Well: 860 feet from the NORTH line and 1980 feet from the WEST line					
Ground level Elev. 3594.1'		Producing Formation Morrow		Pool Grayburg-Morrow	Dedicated Acreage: 320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?  
☒ Yes ☐ No If answer is "yes" type of consolidation Communitization  
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary).  
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Printed Name

Maria L. Perez

Position

Proration Analyst

Company

Oryx Energy Company

Date

April 14, 1990

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 knowledge and belief.

Date Surveyed

March 30, 1990

Signature & Seal of  
Professional Surveyor



Certificate No. JOHN W. WEST, 676  
RONALD J. EIDSON, 3239

TEN POINT DRILLING PLAN  
ORYX ENERGY COMPANY

DIAMOND WING FEDERAL #1  
860' FNL & 1980' FWL  
SECTION 23 - T17S - R29E  
EDDY COUNTY, NEW MEXICO

1. Geologic Surface Formation: Quaternary

2. Estimated Tops of Important Geologic Markers:

Queen*	1850	Atoka Shale	10,250
San Andres*	2500	Atoka "C" Sand*	10,450
Abo	6150	Middle Morrow*	10,720
Wolfcamp*	7290	Lower Morrow*	10,820
Strawn*	10,000	Barnett	10,885
		T.D.	10,950

3. Estimated Depth of Anticipated Water, Oil, Gas or Minerals:

Possible hydrocarbon-bearing formations are indicated with an asterisk above.

4. Proposed Casing Program:

<u>Size</u>	<u>Csg Seat</u>	<u>Footage</u>	<u>Weight</u>	<u>Grade</u>	<u>Connection</u>
13-3/8	400	400	54.5#	K-55	STC
8-5/8	4,500	4,500	32.0#	K-55	STC
5-1/2	10,950	950	17.0#	K-55	BTC
		8,300	17.0#	K-55	LTC
		1,700	17.0#	N-80	LTC
2-7/8		10,700	6.5#	N-80	EUE

5. Proposed Cementing Program:

13-3/8" Cement to surface 400' of 13-3/8" casing in a 17-1/2" hole w/ 425 sacks Class 'C' + 1/4#/sx cellophane flakes + 2% CaCl<sub>2</sub>.  
Cement Properties: Weight 14.8 ppg, Yield 1.32 cu.ft./sx  
Per Cent Excess: 100% over theoretical fill for 13-3/8" x 17-1/2" annulus

5. Proposed Cementing Program: (cont'd)

- 8-5/8" Cement to surface with 1200 sx 65:35:6 'C' lite + 10% BWOW salt + 10#/sx gilsonite, tail in with 575 sx Class 'C'.  
Top of tail cement to be at 3500'.  
Cement Properties: Lead slurry; 12.2 ppg, 2.29 cu.ft./sx  
Tail slurry; 14.8 ppg, 1.32 cu.ft./sx  
Per Cent Excess: 200% over theoretical fill for 8-5/8" x 12-1/4" annulus. Actual volume to be adjusted by fluid caliper + 15%.
- 5-1/2" Cement to 6800' with 1025 sx 50:50:2 'H' pozmix + fluid loss additives + dispersants.  
Cement Properties: 14.2 ppg, 1.26 cu.ft./sx  
Per Cent Excess: 80% over theoretical fill for 5-1/2" x 7-7/8" annulus. Actual volume to be adjusted by electric caliper + 15%.

6. Mud System and Characteristics:

<u>From</u>	<u>To</u>	<u>Type</u>	<u>Wt.</u>	<u>Vis</u>	<u>WL</u>
0	400	Fresh Water w/Gel & Lime sweeps	8.3-8.6	28	NC
400	4,500	Sat. Brine w/Lime & Paper sweeps	10.0-10.3	28	NC
4,500	9,000	Fresh Water w/Paper & Lime sweeps	8.4-8.5	28-30	NC
9,000	10,950	Cut Brine + 2% KCL & Drispac	8.8-9.3	32-36	10-12

7. Blowout Preventer and Auxillary Equipment:

B.O.P. and Choke Manifold will be set up as in Exhibit 'D'.

Accumulator volume will be sufficient to function annular preventer and rams with a 50% reserve.

A full-opening safety valve to fit all drill pipe connections in use will be kept on the floor in the open position at all times.

An Upper and Lower Kelly Cock will be used.

PVT, Hydraulic Choke, and Mud Gas Separator will be installed and in service by 8000'. Flow Sensors will be installed by 6100'.

8. Test Procedures and Drills:

Ram type preventers will be tested to working pressure, or 80% of burst rating of casing, whichever is less. Annular preventer will be tested to 50% of working pressure. Pipe rams will be function tested daily. Blind rams will be function tested on trips. Approved shut-in procedure will be posted on the rig floor. Weekly B.O.P. drills will be held with each crew.

9. Testing Program:

Drillstem Tests may be run from 7500' to total depth as dictated by shows. Such tests, if performed, will be conducted using prudent industry practices.

Openhole Logging Program: Dual Laterolog/MSFL from TD to 4500',  
Density/Neutron Porosity from TD to 8000',  
Wireline Formation tests, Sidewall Cores,  
and Sonic Logs may be run.

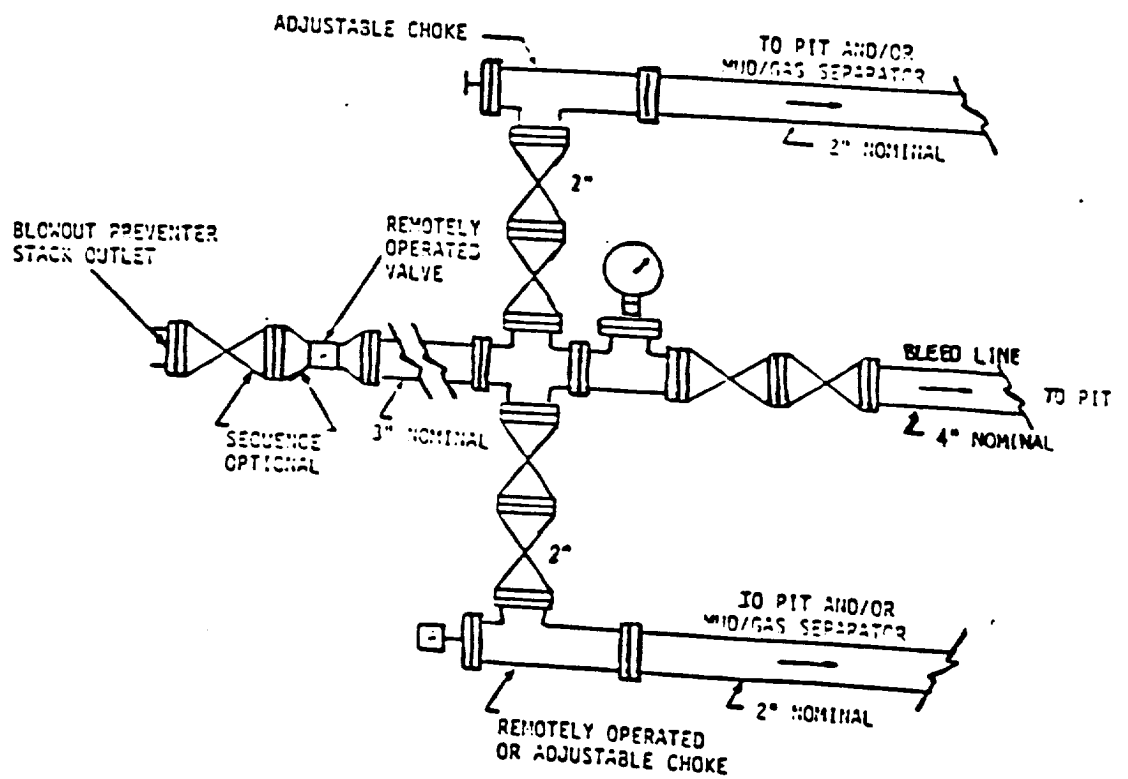
10. Potential Hazards:

No H<sub>2</sub>S or abnormal pressures are anticipated at this location.  
Maximum anticipated pore pressures are 9.0 ppg equivalent mud weight.

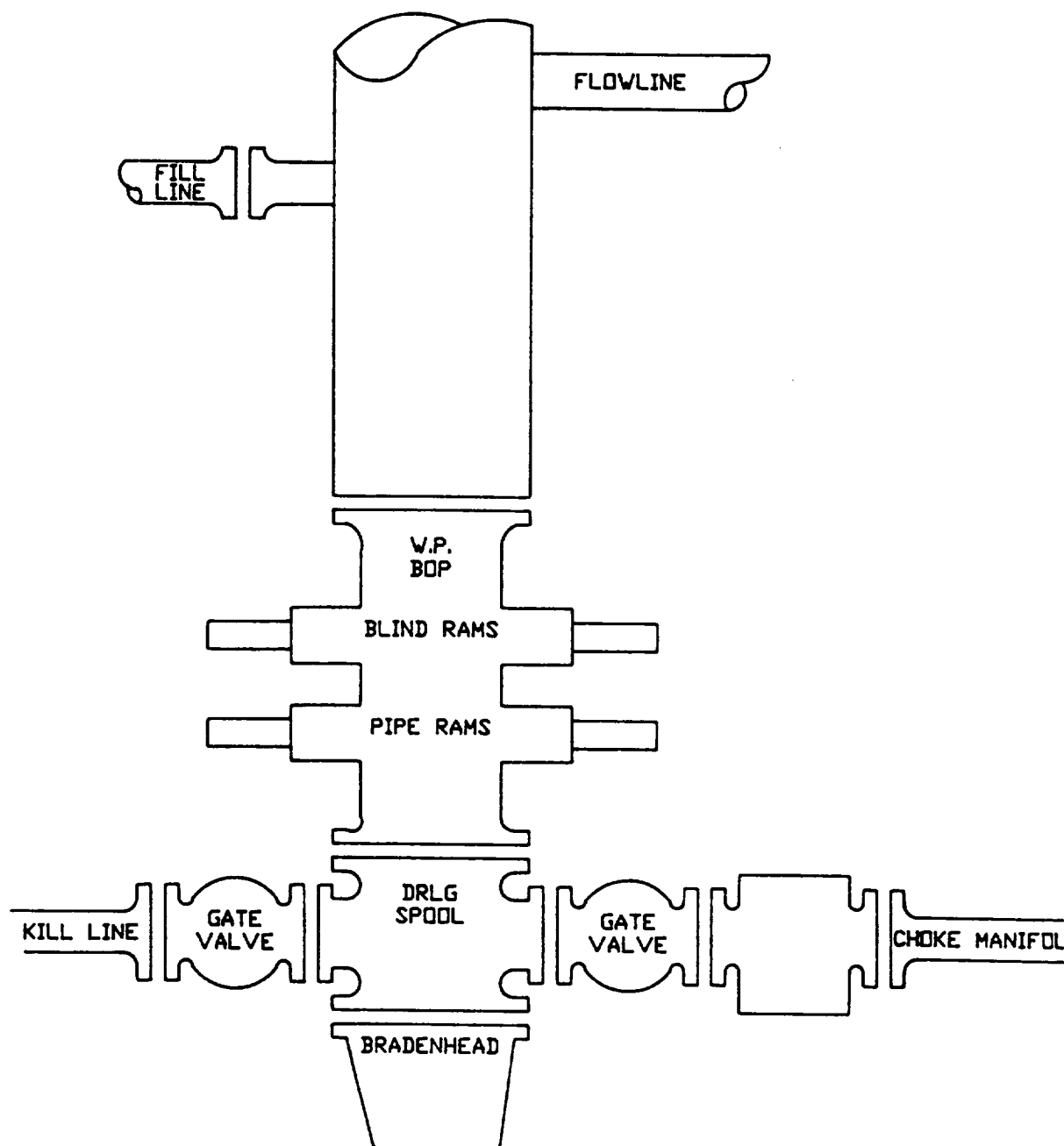
# 3 M CHOKE MANIFOLD

400 - T.D.

EXHIBIT D-3

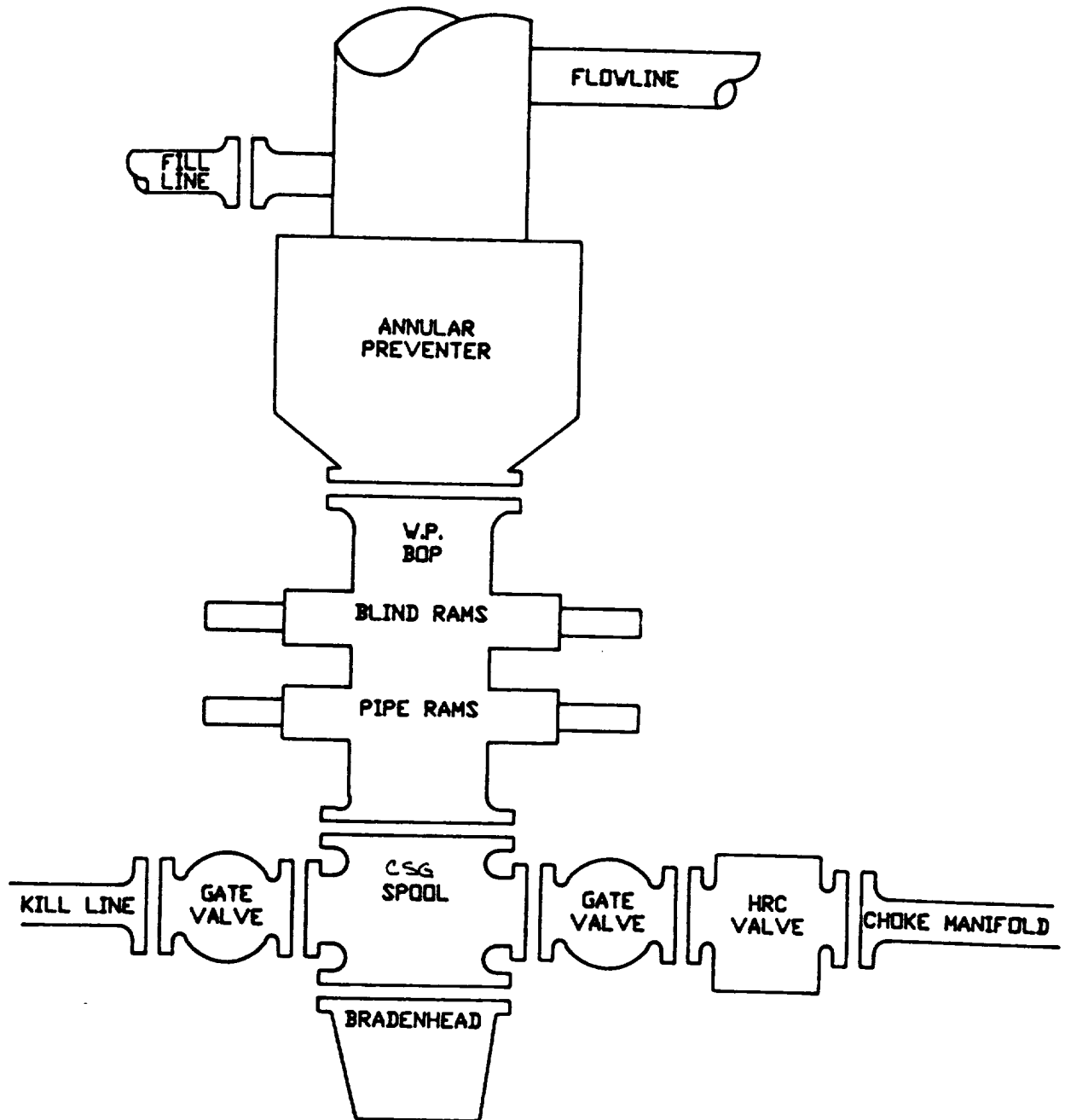


11" 3M B.O.P.  
400'- 4500'



11" 3 M B.O.P.  
4500 - T.D.

L 171311





MULTI-POINT USE AND SURFACE OPERATIONS  
ORYX ENERGY COMPANY

DIAMOND WING FEDERAL #1  
860' FNL & 1980' FWL  
SECTION 23 - T17S - R29E  
EDDY COUNTY, NEW MEXICO

1. Existing Roads:

The proposed wellsite, existing roads to the proposed location and a topographical map indicating the proposed location are shown in Exhibits #1 and #2.

Directions are as follows: From Loco Hills, New Mexico, go west approximately 3 miles on Highway 82; then North approximately 1/4 mile on an Improved Road; then West approximately 3/4 mile; then turn South into the location.

2. Planned Access Roads:

Access to location will be via an existing access road. (See Exhibit 2)

3. Location of Existing Wells:

Existing wells within a one mile radius are shown in Exhibit #3.

4. Location of Existing and or Proposed Facilities:

A. See Exhibit 2.

B. If the proposed well is productive, plans are to construct a tank battery at the well pad. No additional surface disturbance will occur.

5. Location and Type of Water Supply:

Water will be purchased from the Double Eagle waterline on Kewanee Road or trucked in.

6. Source of Construction Materials:

Caliche will be obtained from a pit located in Section 14 T-17-S R-29-E.

7. Methods of Handling Waste Disposal:

- A. Drill cuttings will be disposed of in the reserve pit.
- B. Drilling fluids in the pit will be allowed to evaporate in the reserve pit until the pits are dry.
- C. Water produced during tests will be disposed of in the reserve pit. Oil produced during tests will be stored in a test tank and sold. Gas produced during tests will be flared.
- D. Salts and chemicals will be deposited in the reserve pit.
- E. A septic borehole will be constructed for the disposal of human waste.
- F. Trash, waste paper, garbage and junk will be buried in a separate trash pit (see Burn Pit on Exhibit #4) and covered with a minimum of 24 inches of soil.
- G. All trash and debris will be buried or removed from the wellsite after drilling and completion activities are finished.

8. Ancillary Facilities:

None anticipated.

9. Wellsite Layout:

- A. Exhibit #4 shows the general location and dimensions of the Well Location, Mud Pits, Reserve Pit, Burn Pit, and the location of major rig components.
- B. No significant cuts or fills will be required. Some levelling may be necessary.
- C. The Reserve Pit will be plastic lined.

10. Surface Reclamation Plans:

- A. Upon completion of drilling and testing operations, all equipment and other materials not needed for operations will be removed. Pits will be filled and location cleared of trash and junk.
- B. Any unguarded pits containing fluids will be fenced until they are dry and filled.
- C. Any agreement between the B.L.M. and drilling contractor regarding stacking the rig on location will be the responsibility of the drilling contractor.
- D. After abandonment of the well, surface restoration will be in accordance with the requirements of the surface management agency. Pits will be filled and the location will be cleaned. The pit area and surface locations will be ripped to promote revegetation.

11. Surface Ownership:

Surface Lessee:

Bogle Farms  
1206 Pecan  
Artesia, NM 88210  
Attn: Lewis Derrick

Mineral Ownership:

Bureau of Land Management  
P. O. Box 1778  
Carlsbad, NM 88220

12. Other Information:

- A. Topography: Stabilized and Coppice sand dunes or mesquite anchored hummocks covered with shin oak, mesquite, yucca, broom snakeweed and various grasses. Ground level elevation at the wellsite is 3594'.
- B. Soil: Loamy sands with inclusions of chert and quartzite gravel.
- C. Ponds and Streams: There are no rivers, streams, lakes or major ponds in the area. Bear Grass Draw is located approximately 1-1/2 miles west.
- D. Archeological Survey: An archaeological clearance survey was conducted on April 11, 1990 by New Mexico Archeological Services. The clearance report is attached as Exhibit #5. One site was recorded, located 25 meters north of the 400'x400' pad. Pecos Archeological Consultants recommend moving 100 feet south to avoid interference with this site. The location, as permitted (860' FNL & 1980' FEL, Sec. 23, T17S, R29E), is 200' south of the stake and pad surveyed by Pecos Archeological Consultants.
- E. Land Use: Grazing

13. Compliance:

The company representatives responsible for assuring compliance with the approved Surface Use and Operations Plan are as follows:

Steve Limke  
(915) 688-0494 (Office)  
(915) 684-9791 (Home)  
Midland, Texas

Rick Sievert  
(915) 688-0448 (Office)  
(915) 682-6068 (Home)  
Midland, Texas

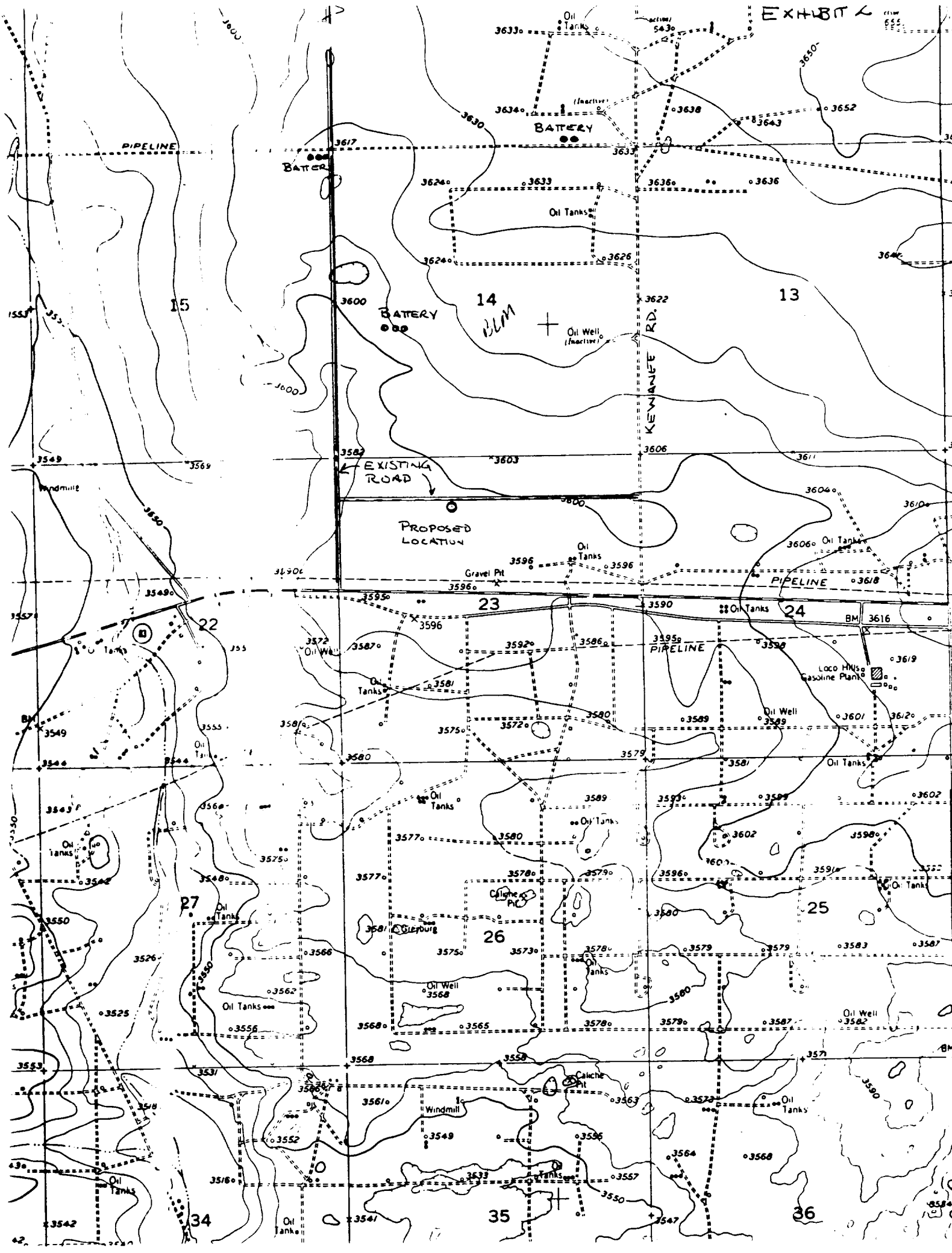
CERTIFICATION

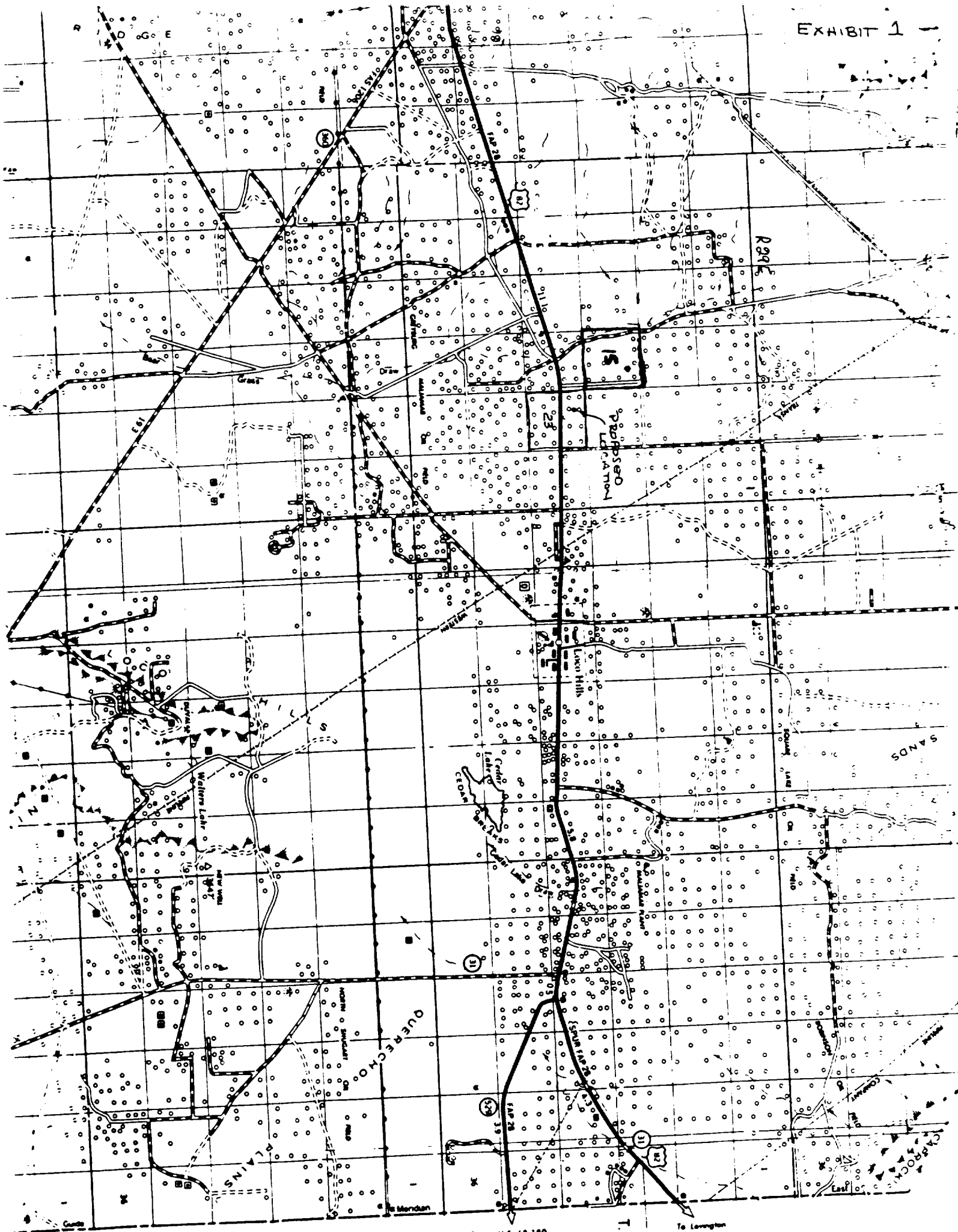
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Oryx Energy Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

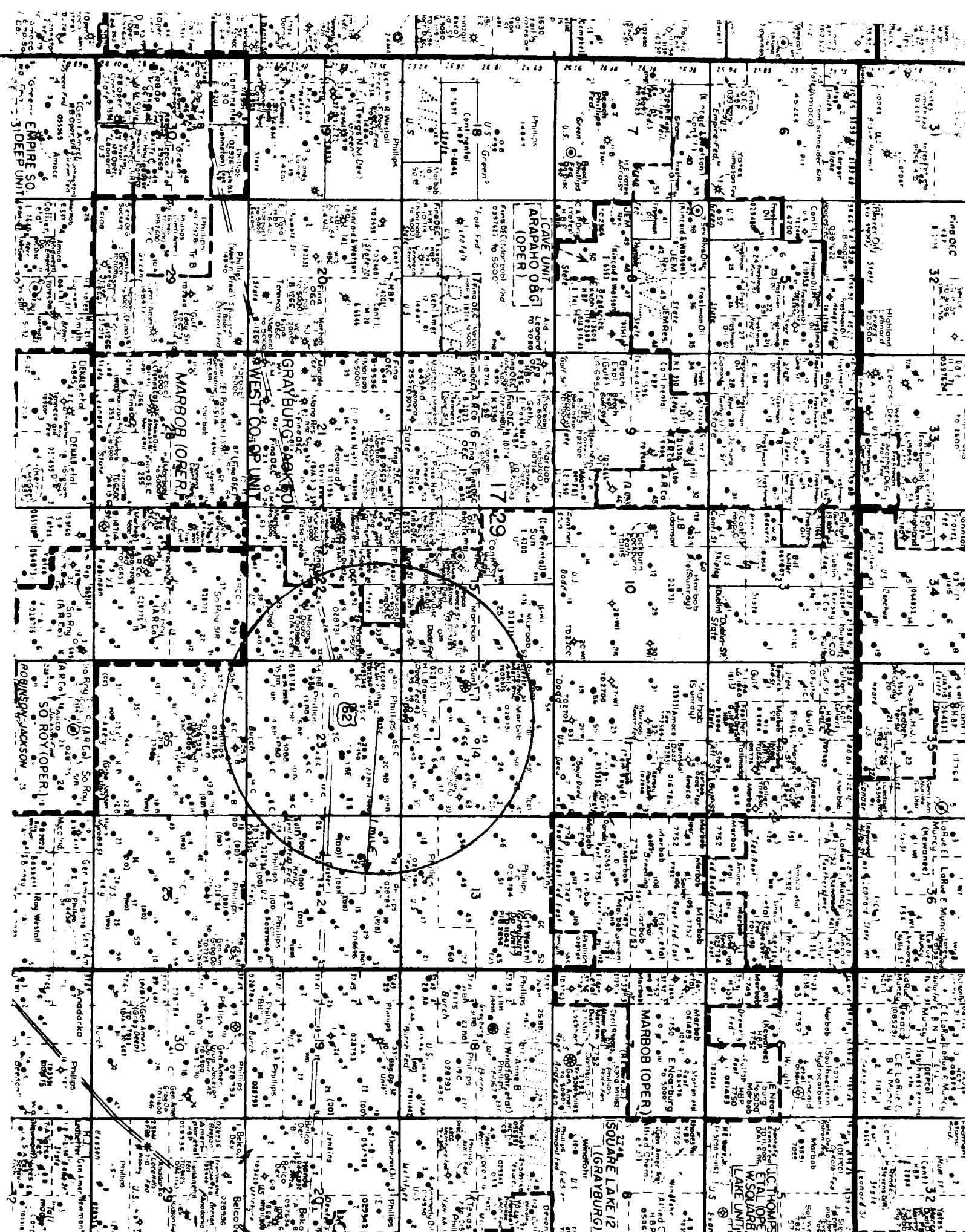
April 16, 1990  
Date

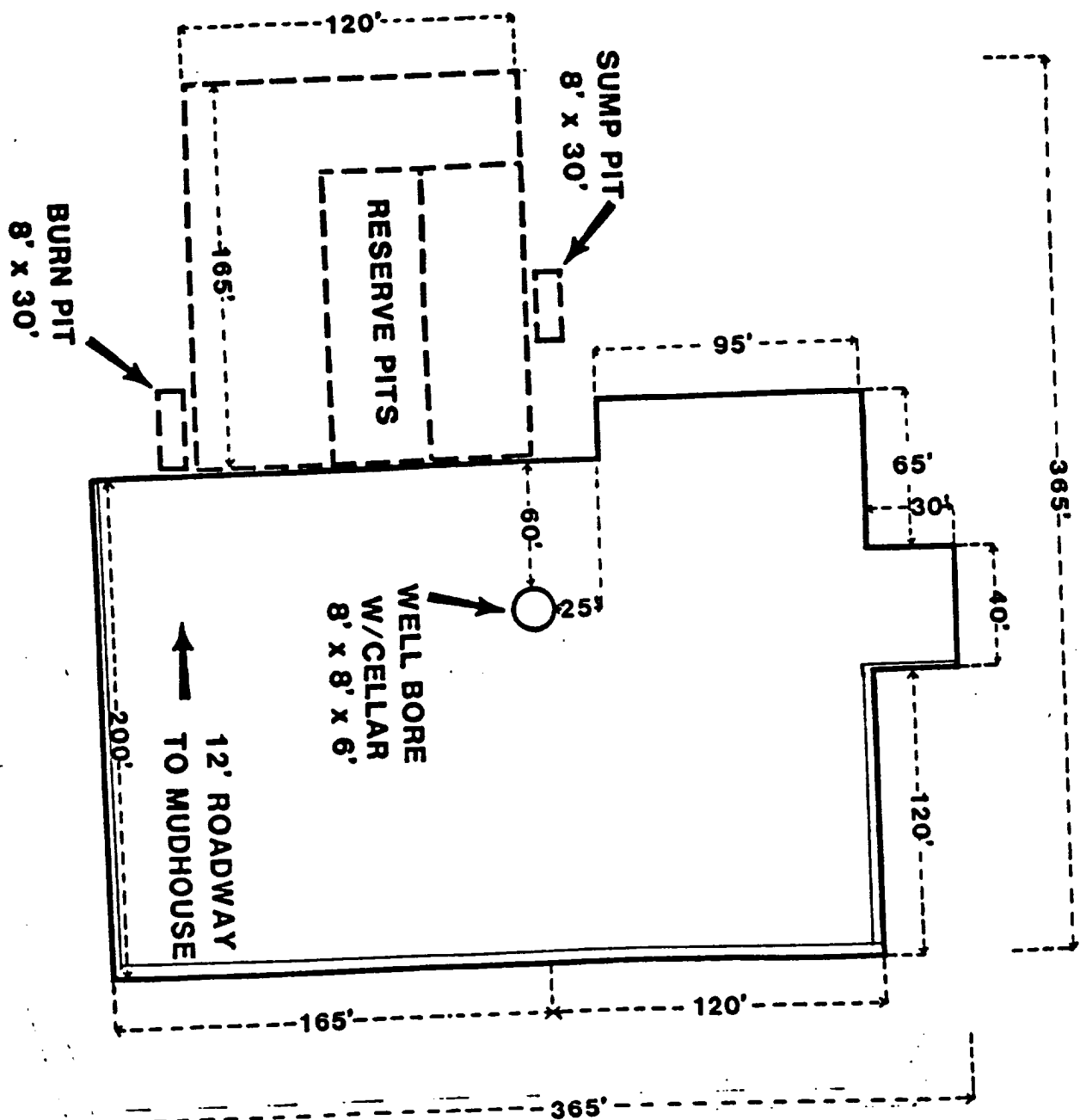
Steve Limke  
Steve Limke  
Drilling Supervisor

/jr











Archaeological Clearance Report  
for

ORYX ENERGY COMPANY

Diamond Wing Federal Well No. 1

Submitted

By

Dr. J. Loring Haskell

Prepared

By

Dr. J. Loring Haskell  
Principal Investigator  
New Mexico Archaeological Services, Inc.  
Carlsbad, New Mexico  
11 April 1990

Permit Number: NMAS-2920-90-J

Report Number: NMAS-1990-12-A

# ABSTRACT

New Mexico Archaeological Services, Inc., representing ORYX ENERGY COMPANY, undertook a Class III survey of Bureau of Land Management land scheduled to be impacted by the construction of a drill location. Field work was conducted under clear, sunny and calm conditions during late morning. The proposed location will measure 400 X 400 ft location (actual area surveyed 4.44 acres). It will be situated in Section 23, T17S, R29E, NMPM, Eddy County, New Mexico. No cultural resources were recorded during this survey; therefore, NMAS is suggesting clearance for this project.

## Introduction

On 10 April 1990, New Mexico Archaeological Services, Inc., (NMAS), Carlsbad, (Permit Number: 14-2920-90-J), undertook for ORYX ENERGY COMPANY, an archaeological survey of federal land administered by the Bureau of Land Management in Eddy County, New Mexico. The reconnoitered area will be impacted by the construction of a drill location. This survey was undertaken by Dr. Haskell.

## Survey Technique

For this investigation, ORYX ENERGY COMPANY's proposed location was reconnoitered for evidence of man's past activities by walking it in a series of 8.0 m wide, close interval (15° or less), zigzag transect. In addition, an added zone extending 20 ft on each side of the staked 400 X 400 ft location, and lying outside the bounds of the proposed work area, was reconnoitered by a similar means. Methodologically, this procedure served to promote optimal conditions for the visual examination of the area to be impacted by construction-related activities. Field work was conducted under clear, sunny and calm conditions during late morning. Ground visibility ranges between 75 and 85%. Field time one hour.

Diamond Wing Federal Well No. 1

## Location

The proposed location will measure 400 X 400 ft location (actual area surveyed 4.44 acres) on federal land and will be situated 860 ft from the north line and 1980 ft from the west line.

Section 23, T17S, R29E, NMPM, Eddy County, NM

Thus it will be situated in the:

NE $\frac{1}{4}$ NW $\frac{1}{4}$ , Section 23, T17S, R29E, NMPM, Eddy County, NM

The proposed location will be situated next to a location and lease road.

Map Reference: USGS RED LAKE SE QUADRANGLE, 7.5 Minute Series, 1955.

#### Level of Previous Impact

The proposed location is bordered by an existing location and lease road on the north. Additionally, it is crossed on the northwest by a road, a pipeline right-of-way on the southeast and a water line.

#### Environmental Setting

ORYX ENERGY COMPANY's proposed location will be situated on a duned landform due east of Bear Grass Draw. Locally, the coeval surface, distinguished by marked subsidence, is overlain by a thick, stable, aeolian deposit. Coppice dunes and an inter-connecting web of interdunal areas mark the area as a whole. Areal microrelief ranges between 0.50 and 2.0 m in height. Soil individuals fall within the Typic Torripsamment subgroup. Presently, the coeval surface is subject to colluvial- and aeolian-processes. Lithic inclusions are limited, to broken screes of angular, caliche gravels. Drainage is of an interior nature owing to the karst landform. Nearest water, occurring in the form of seeps, is within the Bear Grass Draw catchment, one mile to the west. Elevation is 3594 ft. Slope is 0.35°. Aspect is multiple (360°).

The scrub, floral formation is made up of mesquite, four-wing saltbush, plains yucca, mountain pepper-plant, Russian thistle,

silver nightshade, plains brittlegrass, bush muhly and fluff grass.

### Cultural Resources

Prefield: 6 April 1990, Section 23 (9 archaeological sites), T17S, R29E, Arita K. Slate.

NMAS 5598 is situated within 550 ft of the proposed location.

NMAS 5599 is situated within 2300 ft of the proposed location.

NMAS 5789 is situated within 3400 ft of the proposed location.

NM-06-4568 is situated within 2600 ft of the proposed location.

NM-06-4568 is situated within 4200 ft of the proposed location.

AR-30-6-942 is situated within 1300 ft of the proposed location.

LA-17041 is situated within 2000 ft of the proposed location.

NM-06-942 is situated within 1200 ft of the proposed location.

LA 47174 is situated within 800 ft of the proposed location.

No cultural properties were recorded during this survey.

Their absence is due to the fact that the surveyed area is situated within a subsidence structure and is overlain by a thick, stabilized aeolian deposit. Areal land usage centered on hunting and gathering throughout prehistoric- and protohistoric-times. Temporally, most utilization occurred during Late Archaic- and Eastern Jornada Mogollon-times. Land usage was locally intense.

### Recommendations

NMAS recommends clearance for ORYX ENERGY COMPANY's proposed Diamon Wing Federal Well No. 1 and suggests that work-related activities proceed in accordance with company plans (Fig. 1). Clearance, of course, is granted by the Bureau of Land Management. If cultural resources are encountered during construction, the BLM and NMAS should be notified immediately. Duned settings are notified immediately for covering and uncovering cultural properties.

