

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

NOS  
Received  
8-18-08

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No. -----
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. PATRON "23" FEDERAL # 1H
2. Name of Operator OGX RESOURCES, LLC. (JEFF BIRLELBACH) (432-685-1287)		9. API Well No.
3a. Address P. O. BOX 2064 MIDLAND, TEXAS 79701	3b. Phone No. (include area code) 432-685-1287	10. Field and Pool, or Exploratory CORRAL DRAW-BONE SPRING
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 990' FNL & 560' FWL SECTION 23 T25S-R29E EDDY CO. At proposed prod. zone 330' FSL & 660' FWL SEC. 23 T25S-R29E EDDY CO.		11. Sec., T. R. M. or Blk. and Survey or Area SECTION 23 T25S-R29E
14. Distance in miles and direction from nearest town or post office* Approximately 15 miles Southeast of Malaga New Mexico		12. County or Parish EDDY CO.
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 560'		13. State NM
16. No. of acres in lease 320	17. Spacing Unit dedicated to this well 160	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. NA	19. Proposed Depth TVD-8000 MD-11,788	20. BLM/BIA Bond No. on file NMB-000244
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3104' GL	22. Approximate date work will start* WHEN APPROVED	23. Estimated duration 30 days

Carlsbad Controlled Water Basin

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification  |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Joe T. Janica</i>	Name (Printed/Typed) Joe T. Janica	Date 10/09/08
Title Permit Eng.		
Approved by (Signature) <i>James A. Amos for</i>	Name (Printed/Typed) James A. Amos	Date 11-19-08
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, 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.

\*(Instructions on page 2)

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

Witness Surface &  
Intermediate Casing

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL 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 Rd., Aztec, NM 87410

DISTRICT IV  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised October 12, 2005  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

API Number	Pool Code 96238	Pool Name CORRAL DRAW-BONE SPRING
Property Code	Property Name PATRON "23" FEDERAL	Well Number 1H
OGRID No. 217955	Operator Name OGX RESOURCES	Elevation 3104'

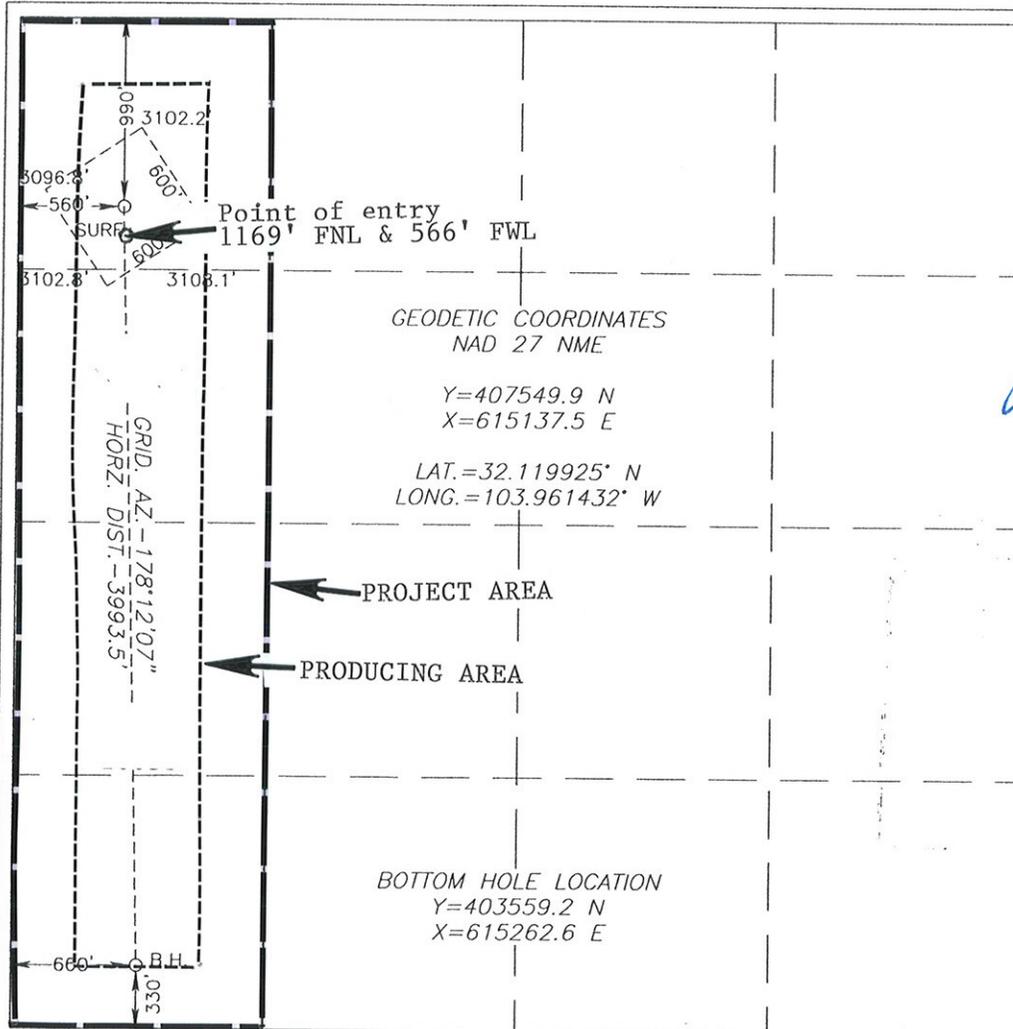
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	23	25-S	29-E		990	NORTH	560	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
M	23	25-S	29-E		330	SOUTH	660	WEST	EDDY
Dedicated Acres 160	Joint or Infill	Consolidation Code	Order 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



OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division.

*Joe T. Janica*  
Signature Date  
Joe T. Janica 10/09/08  
Printed Name

SURVEYOR CERTIFICATION

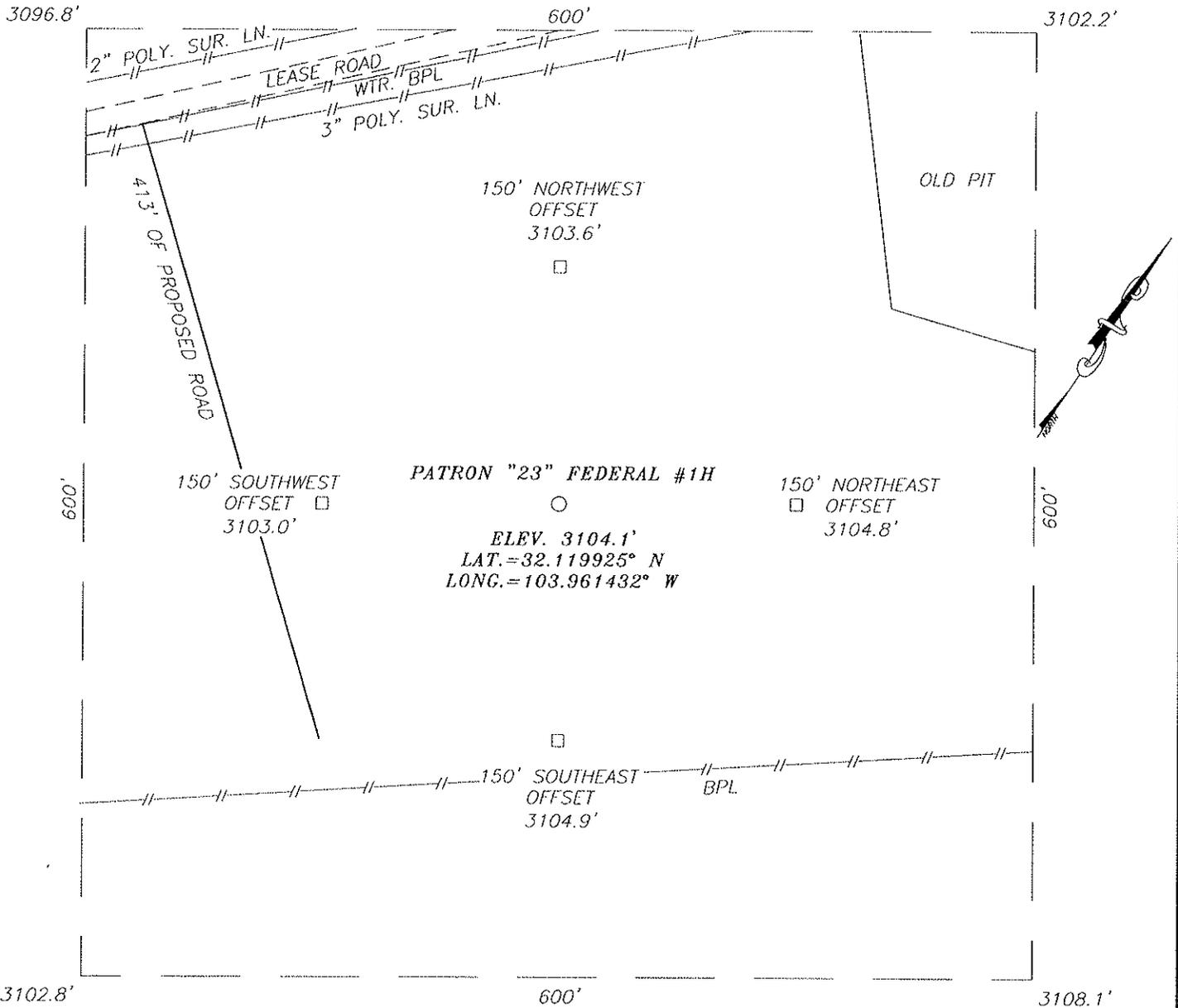
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Surveyed  
Signature & Seal of Professional Surveyor

*Ronald J. Eidson*  
Date Surveyed  
08-11-08

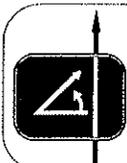
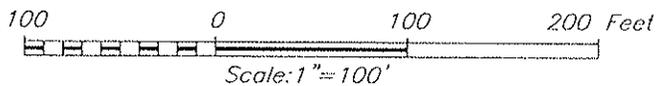
Certificate No. GARY EIDSON 12641  
RONALD J. EIDSON 3239

SECTION 23, TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,  
 EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

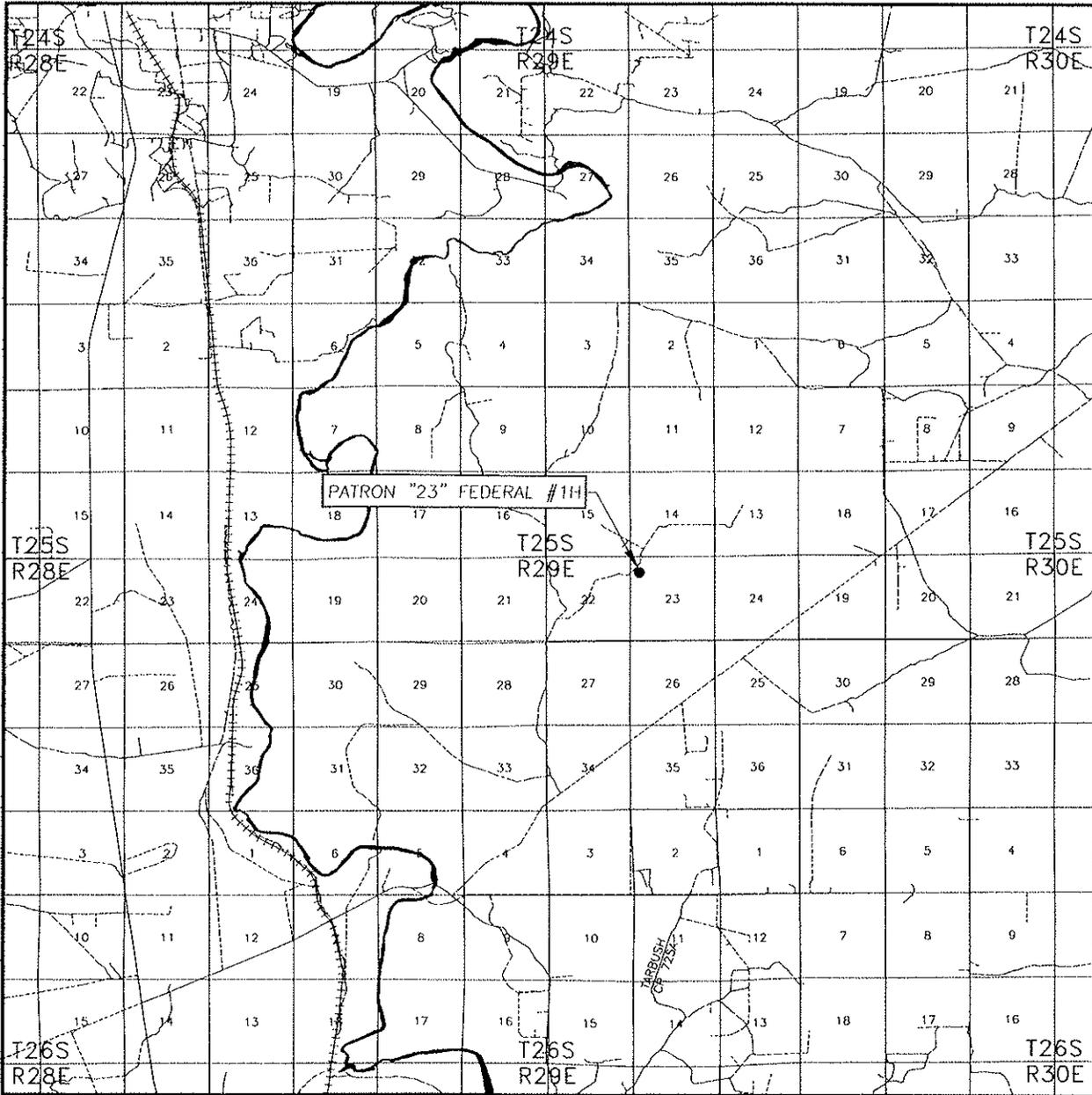
FROM THE INTERSECTION OF U.S. HWY. #285 AND CO. RD. #725 (WHITEHORN ROAD) GO NORTHEAST APPROX. 3.8 MILES. TURN LEFT APPROX. 500 FEET PAST LOW WATER CROSSING AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH APPROX. 2.1 MILES. TURN RIGHT AT Y AND GO NORTHEAST APPROX. 1.0 MILE. THIS LOCATION IS APPROX. 350 FEET SOUTHEAST.



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

<b>OGX RESOURCES</b>		
PATRON "23" FEDERAL #1H LOCATED 990 FEET FROM THE NORTH LINE AND 560 FEET FROM THE WEST LINE OF SECTION 23, TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.		
Survey Date: 08/28/08	Sheet 1 of 1 Sheets	
W.O. Number: 08.11.1379	Dr By: JC	Rev 1: N/A
Date: 08/29/08	08111379	Scale: 1"=100'

# VICINITY MAP



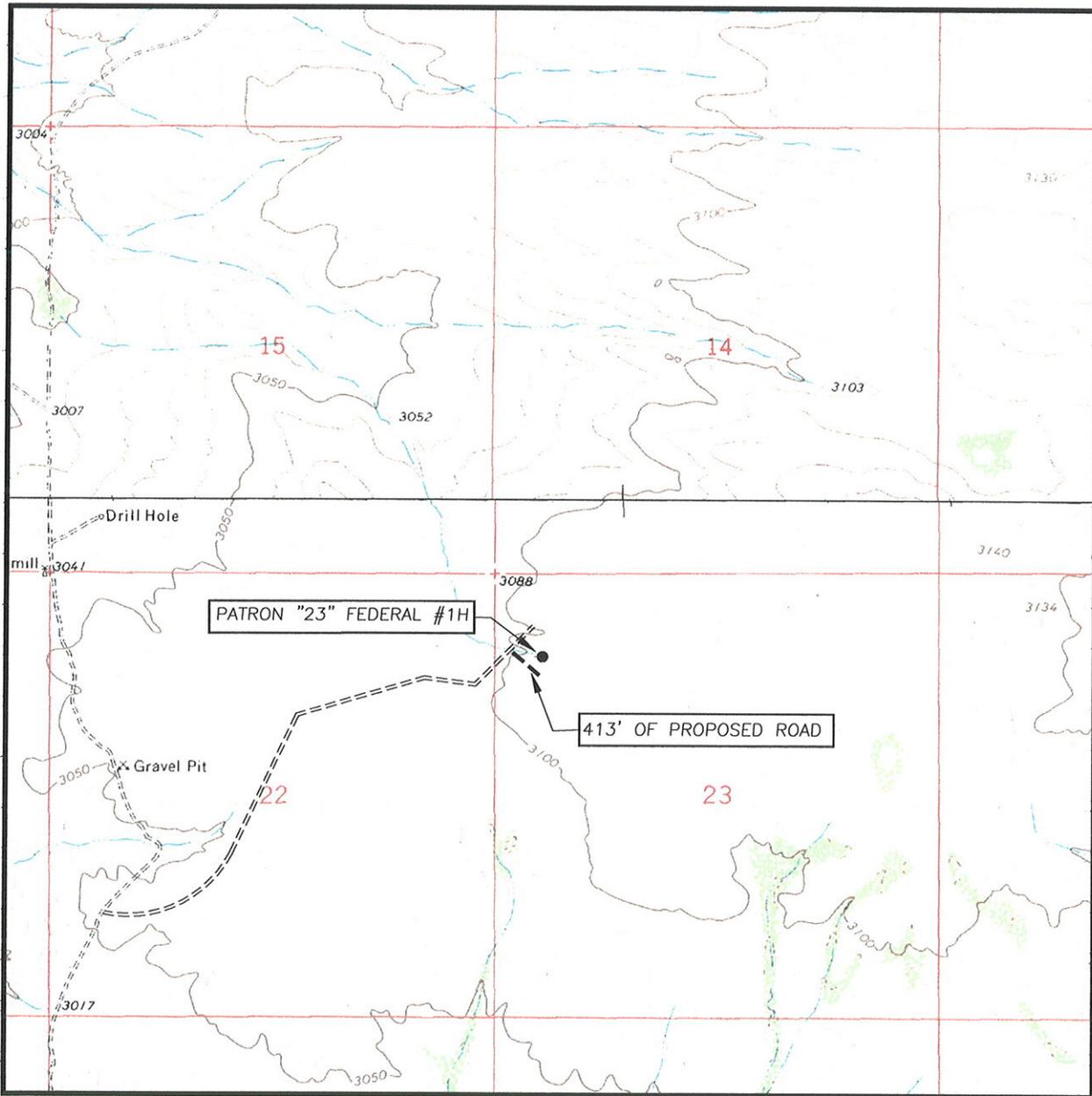
SCALE: 1" = 2 MILES

SEC. 23 TWP. 25-S RGE. 29-E  
 SURVEY \_\_\_\_\_ N.M.P.M. \_\_\_\_\_  
 COUNTY EDDY STATE NEW MEXICO  
 DESCRIPTION 990' FNL & 560' FWL  
 ELEVATION 3104'  
 OPERATOR OGX RESOURCES  
 LEASE PATRON "23" FEDERAL



PROVIDING SURVEYING SERVICES  
 SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
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# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
 ROSS RANCH, N.M. - 10'  
 PIERCE CANYON, N.M. - 10'

SEC. 23 TWP. 25-S RGE. 29-E

SURVEY \_\_\_\_\_ N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 990' FNL & 560' FWL

ELEVATION 3104'

OPERATOR OGX RESOURCES

LEASE PATRON "23" FEDERAL

U.S.G.S. TOPOGRAPHIC MAP  
 ROSS RANCH, N.M., PIERCE CANYON, N.M.



PROVIDING SURVEYING SERVICES  
 SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
 412 N. DAL PASO  
 HOBBS, N.M. 88240  
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DRILLING PROGRAMGeologic Name of Surface Formation:

Permian

FORMATION TOPS / ANTICIPATED FRESH WATER, OIL, or GAS / PRESSURES

<u>Formation</u>	<u>Depth</u>	<u>Frm Pres</u>	<u>Remarks</u>
Salado	550'	8.4 ppge	Water
Basal Anhydrite	3000'	10 ppge	Drlg fluid must be saturated salt water
Lamar	3240'	8.4 ppge	Base of Salt
Bell Canyon	3300'	8.4 ppge	Oil / Gas / Formation water /Poss.H <sub>2</sub> S
Cherry Canyon	4100'	8.4 ppge	Oil / Gas / Formation water
Brushy Canyon	5350'	8.4 ppge	Oil / Gas / Formation water
Bone Spring	7000'	8.4 ppge	Oil / Gas / Formation water
1 <sup>st</sup> Bone Spring	7950'	8.4 ppge	Oil / Gas / Formation water

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13 3/8" casing at 525' and circulating cement back to surface. Potash/fresh water sands will be protected by setting 9 5/8" casing at 3240' and circulating cement to the surface. The hydrocarbon producing intervals will be isolated by setting 5 1/2" casing to total depth and circulating cement above the base of the 9 5/8" casing.

CASING PROGRAM:

<u>HOLE SIZE</u>	<u>DEPTH</u>	<u>OD Csg</u>	<u>WEIGHT</u>	<u>COLLAR</u>	<u>GRADE</u>	<u>NEW/USED</u>
17 1/2"	0-525'	13 3/8"	48	STC	J55	New
12 1/4"	0-3240'	9 5/8"	36	STC	J55	New
8 3/4"	0-7100	5 1/2"	17	LTC	N80	New
	7100-11787	5 1/2"	17	BTC	N80	New

<u>DEPTH</u>	<u>OD Csg</u>	<u>WEIGHT</u>	<u>factors: Burst / Collapse / Tension</u>		
0-525'	13 3/8"	48	1.36	2.82	12.7
0-3240'	9 5/8"	36	1.16	1.43	4.6
0-11787' MD	5 1/2"	17	1.25	1.42	1.67

(5 1/2 Burst &amp; Collapse Calculated @ 8500' TVD)

APPLICATION TO DRILL

OGX RESOURCES, LLC.  
 PATRON "23" FEDERAL # 1H  
 UNIT "D" SECTION 23  
 T25S-R29E EDDY CO. NM

*replaced  
11/19/08*

In response to questions asked under Section II of Bulliten NTL-6, the following information on the above will be provided.

1. LOCATION: 990' FNL & 560' FWL SECTION 23 T25S-R29E EDDY CO. NM
2. ELEVATION ABOVE SEA LEVEL: 3104' GL
3. GEOLOGICAL NAME OF SURFACE FORMATION: Quaternery Aeolian Deposits.
4. DRILLING TOOLS AND ASSOCIATED EQUIPMENT: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.

5. PROPOSED DRILLING DEPTH: MD-11,788' TVD-8000'

6. ESTIMATED TOPS OF GEOLOGICAL FORMATIONS:

Salado	550'	Cherry Canyon	4100'
Basal Anhydrite	3000'	Brushy Canyon	5350'
Lamar Lime	3240'	Bone Spring	7000'
Bell Canyon	3300'	1st Bone Spring	7950'

7. POSSIBLE MINERAL BEARING FORMATIONS:

Bell Canyon	Oil	Brushy Canyon	Oil
Cherry Canyon	Oil	Bone Spring	Oil

8. CASING PROGRAM:

HOLE SIZE	INTERVAL	OD OF CASING	WEIGHT	THREAD	COLLAR	GRADE	CONDITION
26"	0-40'	20"	NA	NA	NA	Conductor	New
17½"	0-525'	13 3/8"	48#	8-R	ST&C	H-40	New
12¼"	0-2700' <i>see COA</i>	9 5/8"	36#	8-R	ST&C	J-55	New
8 3/4"	0-11,788'	5½"	17#	8-R	Butt. LT&C	N-80	New

Design Factors:

Collapse	1.125	Burst	1.0	Body Yield	1.5	Joint Strength	8-R	1.8
						Buttress		1.6

*7100 per operator  
4/19/08*

APPLICATION TO DRILL

OGX RESOURCES, LLC.  
PATRON "23" FEDERAL # 1H  
UNIT "D" SECTION 23  
T25S-R29E EDDY CO. NM

9. CASING CEMENTING & SETTING DEPTHS:

← see COA

- |         |              |   |
|---------|--------------|---|
| 20"     | Conductor    | Set 40' of 20" conductor pipe and cement to surface with Redi-mix.  |
| 13 3/8" | Surface      | Set 525' of 13 3/8" 48# H-40 ST&C casing. Cement with 210 Sx. of 35/65 Class "C" Premium Plus POZ cement + 6% Bentonite, + 5% Salt, + 5% MPA-5, + .7% Sodium Metasilicate, + 5# LCM, Yield 2.0, tail in with 200 Sx. of Premium Plus Class "C" cement + 2% CaCl, Yield 1.34, circulate cement.                      |
| 9 5/8"  | Intermediate | Set 2700' of 9 5/8" 36# J-55 ST&C casing. Cement with 500 Sx. of 35/65 Class "C" Premium Plus Class "C" POZ cement + 4% Bentonite, + 5% Salt, + 5% MPA-5, +.7% Sodium Metasilicate, + 5# LCM, Yield 2.02, tail in with 200 Sx. of Class "C" Premium Plus cement + 2% CaCl, Yield 1.34, circulate cement to surface. |
| 5 1/2"  | Production   | Set 11,788' of 5 1/2" 17# N-80 ST&C & Buttress thread. Cement with 810 Sx. of Premium Plus Class "H" cement + .7% FL-62, + .4% BA-10A, + .1% FL-62, Yield 2.44, tail in with 607 Sx. of 50/50 Class "C" POZ + 10% Bentonite, + 5% Salt, Yield 1.33. circulate cement to surface.                                    |

see COA →

10. PRESSURE CONTROL EQUIPMENT:

↑ see COA

Exhibit "E" shows a 900 Series 3000 PSI working pressure B. O. P. consisting of an annular bag type preventor, middle blind rams, and bottom pipe rams. The B.O.P. will be nipped up on the 13 3/8" casing and tested to API specifications. The B.O.P. will be operated at least once in each 24 hour period, and the blind rams will be operated when the drill pipe is out of the hole on trips. Full opening stabbing valve will be on the floor at all times and a kelly cock will be in the drill string at all times. Exhibit "E-1" shows a hydraulically operated closing unit and a 3" 5000 PSI working pressure choke manifold with dual adjustable chokes. No abnormal pressures or abnormal temperatures are expected while drilling this well.

APPLICATION TO DRILL

OGX RESOURCES, LLC.  
 PATRON "23" FEDERAL # 1H  
 UNIT "D" SECTION 23  
 T25S-R29E EDDY CO. NM

11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
40-525'	8.5-8.8	30-38	NC	Fresh water spud mud add paper to control seepage.
<del>525-2700'</del> <i>see COA</i>	10.0-10.1	29-32	NC	Brine water use paper to control seepage and high viscosity sweeps to clean the hole.
<del>2700-8500'</del>	8.4-10.0	28-30	NC	Fresh water going to Brine use paper to control seepage, and high viscosity sweeps to clean hole.
8300-11,788'	8.4-10.0	34-38	12 cc or less	Same as above but to control water loss and maintain hole stability use Dynazan/Starch.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation and/or kicks. In order to run open hole logs the mud properties may have to be altered, as well as running casing and taking DST's or cores.

APPLICATION TO DRILL

OGX RESOURCES, LLC.  
PATRON "23" FEDERAL # 1H  
UNIT "D" SECTION 23  
T25S-R29E EDDY CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

- A. Open hole logs: Dual Laterolog, Neutron/Density, Gamma Ray, Caliper from TD (verticle hole) 8500±' back to 9 5/8" casing shoe.
- B. No DST's are planned at this time. Sidewall cores may be taken depths TBD. Mud logger will be rigged up after the surface casing is run.

13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of H<sup>2</sup>S in this area. If H<sup>2</sup>S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3770 PSI, and Estimated BHT 135°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take 30 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The Bone Spring formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialized as an oil well.

# **OGX Resources**

**Eddy County  
Sec 23 T25S R29E  
Patron '23' Fed #1H  
OH**

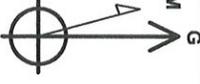
**Plan: Plan #1**

## **Pathfinder X & Y Survey Report**

**09 September, 2008**

**PATHFINDER**  
**ENERGY SERVICES**

# OGX Resources

**T/M**  
**G**  


Azimuths to Grid North  
 True North: -0.13°  
 Magnetic North: -0.13°  
 Magnetic Field  
 Strength: 0.05nT  
 Dip Angle: 0.00°  
 Date: 2008/08/19  
 Model: USER DEFINED

WELL DETAILS: Patron '23' Fed #1H

Ground Elevation: 0.80  
 @ 0.00ft (Original Well Elev)

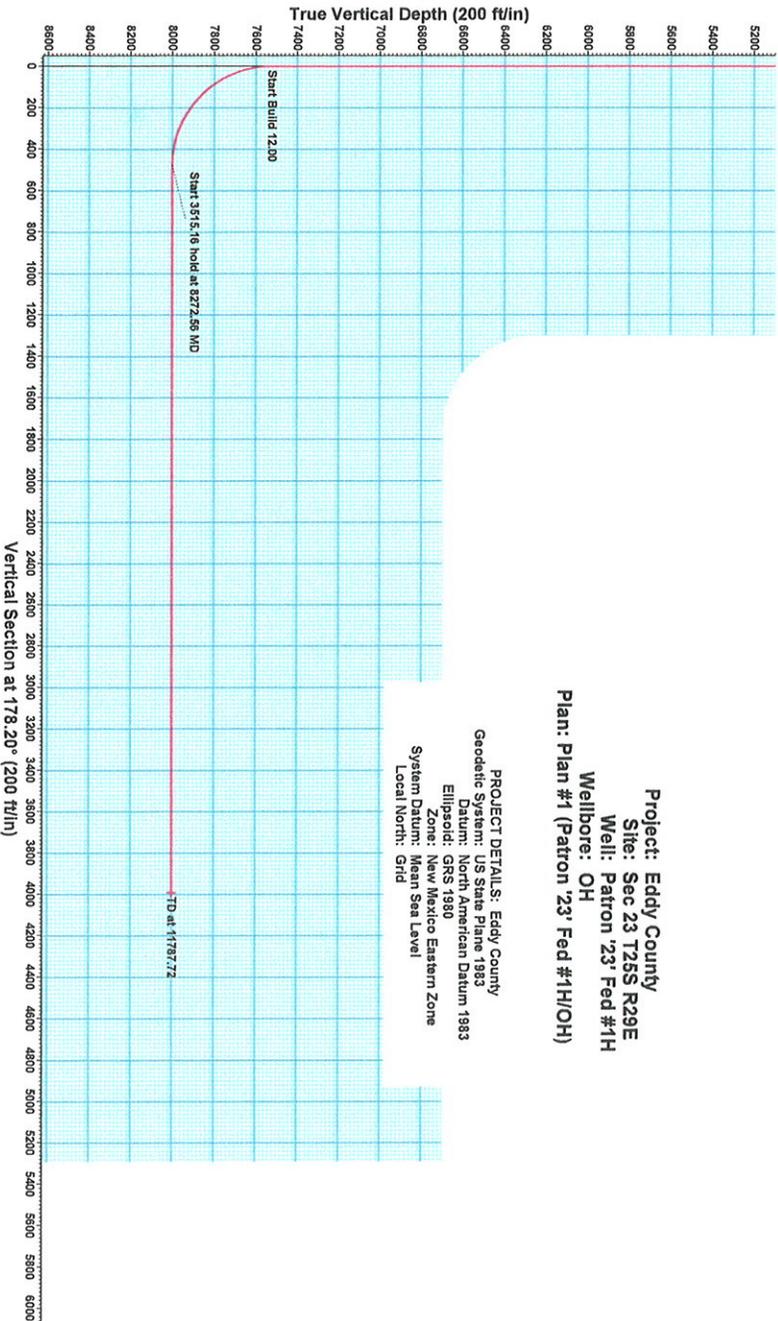
RIS  
 Rig Name: Original Well Elev

+N/S	+E/W	Northing	Easting	32° 7' 12.754 N	Latitude	Longitude	Slot
0.00	0.00	407548.900	615157.500		104° 5' 41.314 W		

Sec	MD	Inc	Azi	TVD	+N/S	+E/W	D Leg	Trace	VSec	Target
0	0.00	0.00	178.20	0.00	0.00	0.00	0.00	0.00	0.00	
2	7822.56	90.00	0.00	7522.56	0.00	0.00	0.00	0.00	0.00	
3	8272.56	90.00	178.20	8000.00	-477.28	15.00	12.00	178.20	477.50	
4	11787.72	90.00	178.20	8000.00	-3990.70	125.41	0.00	0.00	3992.67	PBHL OH P#1H

WELLSHORE TARGET DETAILS (MAP CO-ORDINATES)

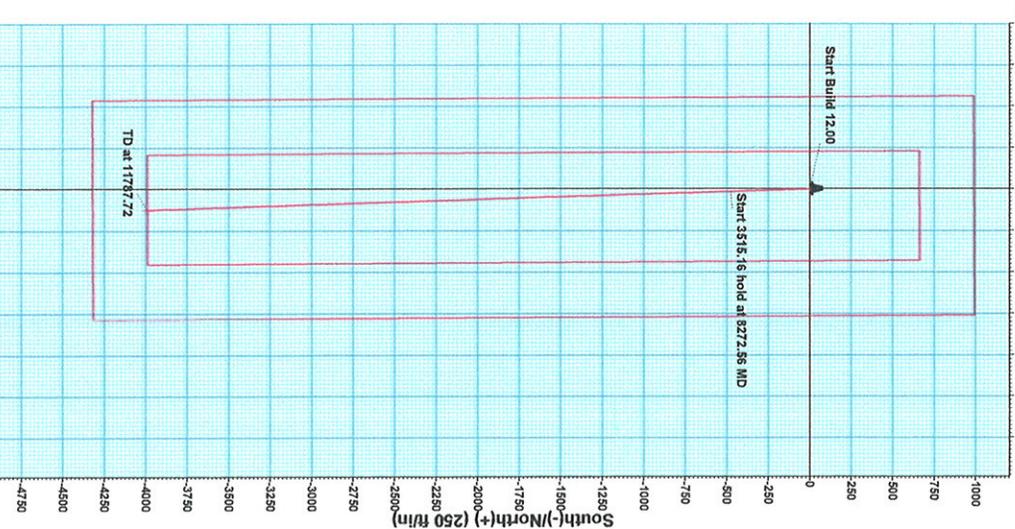
Name	TVD	+N/S	+E/W	Northing	Easting	Shape
PBHL OH#000.00	-3990.70	125.10	403559.200	615262.800		Point



Project: Eddy County  
 Site: Sec 23 T25S R29E  
 Well: Patron '23' Fed #1H  
 Wellbore: OH  
 Plan: Plan #1 (Patron '23' Fed #1H/OH)

PROJECT DETAILS: Eddy County  
 Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Eastern Zone  
 System Datum: Mean Sea Level  
 Local North: Grid

West(-)/East(+) (250 ft/in)



Plan: Plan #1 (Patron '23' Fed #1H/OH)  
 Created By: Nate Bingham Date: 15:24, September 08 2008  
 Checked: \_\_\_\_\_ Date: \_\_\_\_\_

<b>Company:</b> OGX Resources	<b>Local Co-ordinate Reference:</b> Well Patron 23' Fed #1H
<b>Project:</b> Eddy County	<b>TVD Reference:</b> WELL @ 0.00ft (Original Well Elev)
<b>Site:</b> Sec 23 T25S R29E	<b>MD Reference:</b> WELL @ 0.00ft (Original Well Elev)
<b>Well:</b> Patron 23' Fed #1H	<b>North Reference:</b> Grid
<b>Wellbore:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> Plan #1	<b>Database:</b> EDM 2003.16 Single User Db

<b>Project:</b> Eddy County, New Mexico	<b>System Datum:</b> Mean Sea Level
<b>Map System:</b> US State Plane 1983	
<b>Geo Datum:</b> North American Datum 1983	
<b>Map Zone:</b> New Mexico Eastern Zone	

**Site** Sec 23 T25S R29E

**Site Position:** Map

**From:** Map

**Position Uncertainty:** 0.00 ft

**Northing:** 407,549.900 ft

**Easting:** 615,137.500 ft

**Slot Radius:** "

**Latitude:** 32° 7' 12.754 N

**Longitude:** 104° 5' 41.814 W

**Grid Convergence:** 0.13°

**Well** Patron 23' Fed #1H

**Well Position** +N/-S 0.00 ft

+E/-W 0.00 ft

**Position Uncertainty** 0.00 ft

**Northing:** 407,549.900 ft

**Easting:** 615,137.500 ft

**Wellhead Elevation:** ft

**Latitude:** 32° 7' 12.754 N

**Longitude:** 104° 5' 41.814 W

**Ground Level:** 0.00 ft

**Wellbore** OH

**Magnetics** Model Name Sample Date Declination (°) Dip Angle (°) Field Strength (nT)

User Defined 2008/08/19 0.00 0.00 0

**Design** Plan #1

**Audit Notes:**

**Version:** Phase: PLAN Tie On Depth: 0.00

**Vertical Section:** Depth From (TVD) (ft) +N/-S (ft) +E/-W (ft) Direction (°)

0.00 0.00 0.00 178.20

Survey Tool Program	Date	2008/09/09	Tool Name	Description
From (ft)	To (ft)	Survey (Wellbore)	MWD	MWD - Standard
0.00	11,787.22	Plan #1 (OH)		

**Pathfinder Energy Services**  
Pathfinder X & Y Survey Report



**Company:** OGX Resources  
**Project:** Eddy County  
**Site:** Sec 23 T25S R29E  
**Well:** Patron '23' Fed #1H  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:**  
**TVD Reference:** WELL @ 0.00ft (Original Well Elev)  
**MD Reference:** WELL @ 0.00ft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Single User Db

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVSS (ft)	N/S (ft)	EW (ft)	V. Sec (ft)	Dleg (°/100ft)	Northing (ft)	Easting (ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
100.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
200.00	0.00	0.00	200.00	200.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
300.00	0.00	0.00	300.00	300.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
400.00	0.00	0.00	400.00	400.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
500.00	0.00	0.00	500.00	500.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
600.00	0.00	0.00	600.00	600.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
700.00	0.00	0.00	700.00	700.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
800.00	0.00	0.00	800.00	800.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
900.00	0.00	0.00	900.00	900.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
1,000.00	0.00	0.00	1,000.00	1,000.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
1,100.00	0.00	0.00	1,100.00	1,100.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
1,200.00	0.00	0.00	1,200.00	1,200.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
1,300.00	0.00	0.00	1,300.00	1,300.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
1,400.00	0.00	0.00	1,400.00	1,400.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
1,500.00	0.00	0.00	1,500.00	1,500.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
1,600.00	0.00	0.00	1,600.00	1,600.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
1,700.00	0.00	0.00	1,700.00	1,700.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
1,800.00	0.00	0.00	1,800.00	1,800.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
1,900.00	0.00	0.00	1,900.00	1,900.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
2,000.00	0.00	0.00	2,000.00	2,000.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
2,100.00	0.00	0.00	2,100.00	2,100.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
2,200.00	0.00	0.00	2,200.00	2,200.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
2,300.00	0.00	0.00	2,300.00	2,300.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
2,400.00	0.00	0.00	2,400.00	2,400.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
2,500.00	0.00	0.00	2,500.00	2,500.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
2,600.00	0.00	0.00	2,600.00	2,600.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50

**Pathfinder Energy Services**  
Pathfinder X & Y Survey Report



**Company:** OGX Resources  
**Project:** Eddy County  
**Site:** Sec 23 T25S R29E  
**Well:** Patron '23' Fed #1H  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:**  
**TVD Reference:** WELL @ 0.00ft (Original Well Elev)  
**MD Reference:** WELL @ 0.00ft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Single User Db

Planned Survey	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	EW (ft)	V. Sec (ft)	Dleg (°/100ft)	Northing (ft)	Easting (ft)
	2,700.00	0.00	0.00	2,700.00	2,700.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	2,800.00	0.00	0.00	2,800.00	2,800.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	2,900.00	0.00	0.00	2,900.00	2,900.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	3,000.00	0.00	0.00	3,000.00	3,000.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	3,100.00	0.00	0.00	3,100.00	3,100.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	3,200.00	0.00	0.00	3,200.00	3,200.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	3,300.00	0.00	0.00	3,300.00	3,300.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	3,400.00	0.00	0.00	3,400.00	3,400.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	3,500.00	0.00	0.00	3,500.00	3,500.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	3,600.00	0.00	0.00	3,600.00	3,600.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	3,700.00	0.00	0.00	3,700.00	3,700.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	3,800.00	0.00	0.00	3,800.00	3,800.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	3,900.00	0.00	0.00	3,900.00	3,900.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	4,000.00	0.00	0.00	4,000.00	4,000.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	4,100.00	0.00	0.00	4,100.00	4,100.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	4,200.00	0.00	0.00	4,200.00	4,200.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	4,300.00	0.00	0.00	4,300.00	4,300.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	4,400.00	0.00	0.00	4,400.00	4,400.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	4,500.00	0.00	0.00	4,500.00	4,500.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	4,600.00	0.00	0.00	4,600.00	4,600.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	4,700.00	0.00	0.00	4,700.00	4,700.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	4,800.00	0.00	0.00	4,800.00	4,800.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	4,900.00	0.00	0.00	4,900.00	4,900.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	5,000.00	0.00	0.00	5,000.00	5,000.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	5,100.00	0.00	0.00	5,100.00	5,100.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	5,200.00	0.00	0.00	5,200.00	5,200.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	5,300.00	0.00	0.00	5,300.00	5,300.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50

**Pathfinder Energy Services**  
Pathfinder X & Y Survey Report



**Company:** OGX Resources  
**Project:** Eddy County  
**Site:** Sec 23 T26S R29E  
**Well:** Patron 23' Fed #1H  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Patron 23' Fed #1H  
**TVD Reference:** WELL @ 0.00ft (Original Well Elev)  
**MD Reference:** WELL @ 0.00ft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Single User Db

Planned Survey	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	EW (ft)	V. Sec (ft)	Dleg (°/100ft)	Northing (ft)	Easting (ft)
	5,400.00	0.00	0.00	5,400.00	5,400.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	5,500.00	0.00	0.00	5,500.00	5,500.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	5,600.00	0.00	0.00	5,600.00	5,600.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	5,700.00	0.00	0.00	5,700.00	5,700.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	5,800.00	0.00	0.00	5,800.00	5,800.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	5,900.00	0.00	0.00	5,900.00	5,900.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	6,000.00	0.00	0.00	6,000.00	6,000.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	6,100.00	0.00	0.00	6,100.00	6,100.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	6,200.00	0.00	0.00	6,200.00	6,200.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	6,300.00	0.00	0.00	6,300.00	6,300.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	6,400.00	0.00	0.00	6,400.00	6,400.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	6,500.00	0.00	0.00	6,500.00	6,500.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	6,600.00	0.00	0.00	6,600.00	6,600.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	6,700.00	0.00	0.00	6,700.00	6,700.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	6,800.00	0.00	0.00	6,800.00	6,800.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	6,900.00	0.00	0.00	6,900.00	6,900.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	7,000.00	0.00	0.00	7,000.00	7,000.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	7,100.00	0.00	0.00	7,100.00	7,100.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	7,200.00	0.00	0.00	7,200.00	7,200.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	7,300.00	0.00	0.00	7,300.00	7,300.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	7,400.00	0.00	0.00	7,400.00	7,400.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	7,500.00	0.00	0.00	7,500.00	7,500.00	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	7,522.50	0.00	0.00	7,522.50	7,522.50	0.00	0.00	0.00	0.00	407,549.90	615,137.50
	7,525.00	0.30	178.20	7,525.00	7,525.00	-0.01	0.00	0.01	12.00	407,549.89	615,137.50
	7,550.00	3.30	178.20	7,549.98	7,549.98	-0.79	0.02	0.79	12.00	407,549.11	615,137.52
	7,575.00	6.30	178.20	7,574.89	7,574.89	-2.88	0.09	2.88	12.00	407,547.02	615,137.59
	7,600.00	9.30	178.20	7,599.66	7,599.66	-6.27	0.20	6.28	12.00	407,543.63	615,137.70

Company: OGX Resources  
Project: Eddy County  
Site: Sec 23 T25S R29E  
Well: Patron '23' Fed #1H  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference:  
TVD Reference: WELL @ 0.00ft (Original Well Elev)  
MD Reference: WELL @ 0.00ft (Original Well Elev)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: EDM 2003.16 Single User Db

Planned Survey	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVSS (ft)	N/S (ft)	EW (ft)	V. Sec (ft)	Dleg (°/100ft)	Northing (ft)	Easting (ft)
	7,625.00	12.30	178.20	7,624.21	7,624.21	-10.95	0.34	10.96	12.00	407,538.95	615,137.84
	7,650.00	15.30	178.20	7,648.49	7,648.49	-16.91	0.53	16.92	12.00	407,532.99	615,138.03
	7,675.00	18.30	178.20	7,672.42	7,672.42	-24.13	0.76	24.15	12.00	407,525.77	615,138.26
	7,700.00	21.30	178.20	7,695.94	7,695.94	-32.60	1.02	32.61	12.00	407,517.30	615,138.52
	7,725.00	24.30	178.20	7,718.98	7,718.98	-42.28	1.33	42.30	12.00	407,507.62	615,138.83
	7,750.00	27.30	178.20	7,741.49	7,741.49	-53.15	1.67	53.18	12.00	407,496.75	615,139.17
	7,775.00	30.30	178.20	7,763.40	7,763.40	-65.19	2.05	65.22	12.00	407,484.71	615,139.55
	7,800.00	33.30	178.20	7,784.64	7,784.64	-78.35	2.46	78.39	12.00	407,471.55	615,139.96
	7,825.00	36.30	178.20	7,805.17	7,805.17	-92.61	2.91	92.66	12.00	407,457.29	615,140.41
	7,850.00	39.30	178.20	7,824.92	7,824.92	-107.92	3.39	107.98	12.00	407,441.98	615,140.89
	7,875.00	42.30	178.20	7,843.84	7,843.84	-124.25	3.90	124.31	12.00	407,425.65	615,141.40
	7,900.00	45.30	178.20	7,861.89	7,861.89	-141.54	4.45	141.61	12.00	407,408.36	615,141.95
	7,925.00	48.30	178.20	7,879.00	7,879.00	-159.75	5.02	159.83	12.00	407,390.15	615,142.52
	7,950.00	51.30	178.20	7,895.14	7,895.14	-178.83	5.62	178.92	12.00	407,371.07	615,143.12
	7,975.00	54.30	178.20	7,910.25	7,910.25	-198.73	6.25	198.83	12.00	407,351.17	615,143.75
	8,000.00	57.30	178.20	7,924.30	7,924.30	-219.40	6.89	219.51	12.00	407,330.50	615,144.39
	8,025.00	60.30	178.20	7,937.25	7,937.25	-240.77	7.57	240.89	12.00	407,309.13	615,145.07
	8,050.00	63.30	178.20	7,949.07	7,949.07	-262.79	8.26	262.92	12.00	407,287.11	615,145.76
	8,075.00	66.30	178.20	7,959.71	7,959.71	-285.39	8.97	285.53	12.00	407,264.51	615,146.47
	8,100.00	69.29	178.20	7,969.16	7,969.16	-308.52	9.70	308.68	12.00	407,241.38	615,147.20
	8,125.00	72.29	178.20	7,977.38	7,977.38	-332.12	10.44	332.28	12.00	407,217.78	615,147.94
	8,150.00	75.29	178.20	7,984.36	7,984.36	-356.11	11.19	356.29	12.00	407,193.79	615,148.69
	8,175.00	78.29	178.20	7,990.07	7,990.07	-380.43	11.96	380.62	12.00	407,169.47	615,149.46
	8,200.00	81.29	178.20	7,994.50	7,994.50	-405.02	12.73	405.22	12.00	407,144.88	615,150.23
	8,225.00	84.29	178.20	7,997.63	7,997.63	-429.81	13.51	430.02	12.00	407,120.09	615,151.01
	8,250.00	87.29	178.20	7,999.47	7,999.47	-454.73	14.29	454.95	12.00	407,095.17	615,151.79
	8,272.56	90.00	178.20	8,000.00	8,000.00	-477.26	15.00	477.50	12.00	407,072.64	615,152.50

**Pathfinder Energy Services**  
Pathfinder X & Y Survey Report



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**Well:** Patron '23' Fed #1H  
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Planned Survey	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	EW (ft)	V. Sec (ft)	Dleg (°/100ft)	Northing (ft)	Easting (ft)
	8,300.00	90.00	178.20	8,000.00	8,000.00	-504.70	15.86	504.94	0.00	407,045.20	615,153.36
	8,400.00	90.00	178.20	8,000.00	8,000.00	-604.65	19.00	604.94	0.00	406,945.25	615,156.50
	8,500.00	90.00	178.20	8,000.00	8,000.00	-704.60	22.14	704.94	0.00	406,845.30	615,159.64
	8,600.00	90.00	178.20	8,000.00	8,000.00	-804.55	25.28	804.94	0.00	406,745.35	615,162.78
	8,700.00	90.00	178.20	8,000.00	8,000.00	-904.50	28.43	904.94	0.00	406,645.40	615,165.93
	8,800.00	90.00	178.20	8,000.00	8,000.00	-1,004.45	31.57	1,004.94	0.00	406,545.45	615,169.07
	8,900.00	90.00	178.20	8,000.00	8,000.00	-1,104.40	34.71	1,104.94	0.00	406,445.50	615,172.21
	9,000.00	90.00	178.20	8,000.00	8,000.00	-1,204.35	37.85	1,204.94	0.00	406,345.55	615,175.35
	9,100.00	90.00	178.20	8,000.00	8,000.00	-1,304.30	40.99	1,304.94	0.00	406,245.60	615,178.49
	9,200.00	90.00	178.20	8,000.00	8,000.00	-1,404.25	44.13	1,404.94	0.00	406,145.65	615,181.63
	9,300.00	90.00	178.20	8,000.00	8,000.00	-1,504.20	47.27	1,504.94	0.00	406,045.70	615,184.77
	9,400.00	90.00	178.20	8,000.00	8,000.00	-1,604.15	50.41	1,604.94	0.00	405,945.75	615,187.91
	9,500.00	90.00	178.20	8,000.00	8,000.00	-1,704.10	53.55	1,704.94	0.00	405,845.80	615,191.05
	9,600.00	90.00	178.20	8,000.00	8,000.00	-1,804.05	56.69	1,804.94	0.00	405,745.85	615,194.19
	9,700.00	90.00	178.20	8,000.00	8,000.00	-1,904.00	59.84	1,904.94	0.00	405,645.90	615,197.34
	9,800.00	90.00	178.20	8,000.00	8,000.00	-2,003.96	62.98	2,004.94	0.00	405,545.94	615,200.48
	9,900.00	90.00	178.20	8,000.00	8,000.00	-2,103.91	66.12	2,104.94	0.00	405,445.99	615,203.62
	10,000.00	90.00	178.20	8,000.00	8,000.00	-2,203.86	69.26	2,204.94	0.00	405,346.04	615,206.76
	10,100.00	90.00	178.20	8,000.00	8,000.00	-2,303.81	72.40	2,304.94	0.00	405,246.09	615,209.90
	10,200.00	90.00	178.20	8,000.00	8,000.00	-2,403.76	75.54	2,404.94	0.00	405,146.14	615,213.04
	10,300.00	90.00	178.20	8,000.00	8,000.00	-2,503.71	78.68	2,504.94	0.00	405,046.19	615,216.18
	10,400.00	90.00	178.20	8,000.00	8,000.00	-2,603.66	81.82	2,604.94	0.00	404,946.24	615,219.32
	10,500.00	90.00	178.20	8,000.00	8,000.00	-2,703.61	84.96	2,704.94	0.00	404,846.29	615,222.46
	10,600.00	90.00	178.20	8,000.00	8,000.00	-2,803.56	88.11	2,804.94	0.00	404,746.34	615,225.61
	10,700.00	90.00	178.20	8,000.00	8,000.00	-2,903.51	91.25	2,904.94	0.00	404,646.39	615,228.75
	10,800.00	90.00	178.20	8,000.00	8,000.00	-3,003.46	94.39	3,004.94	0.00	404,546.44	615,231.89
	10,900.00	90.00	178.20	8,000.00	8,000.00	-3,103.41	97.53	3,104.94	0.00	404,446.49	615,235.03

**Company:** OGX Resources  
**Project:** Eddy County  
**Site:** Sec 23 T25S R29E  
**Well:** Patron '23' Fed #1H  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Patron '23' Fed #1H  
**TVD Reference:** WELL @ 0.00ft (Original Well Elev)  
**MD Reference:** WELL @ 0.00ft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Single User Db

Planned Survey												
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	Dleg (°/100ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
11,000.00	90.00	178.20	8,000.00	8,000.00	-3,203.36	100.67	3,204.94	0.00	404,346.54	615,238.17	32° 6' 33.258 N	104° 5' 40.462 W
11,100.00	90.00	178.20	8,000.00	8,000.00	-3,303.31	103.81	3,304.94	0.00	404,246.59	615,241.31		
11,200.00	90.00	178.20	8,000.00	8,000.00	-3,403.26	106.95	3,404.94	0.00	404,146.64	615,244.45		
11,300.00	90.00	178.20	8,000.00	8,000.00	-3,503.22	110.09	3,504.94	0.00	404,046.68	615,247.59		
11,400.00	90.00	178.20	8,000.00	8,000.00	-3,603.17	113.23	3,604.94	0.00	403,946.73	615,250.73		
11,500.00	90.00	178.20	8,000.00	8,000.00	-3,703.12	116.38	3,704.94	0.00	403,846.78	615,253.88		
11,600.00	90.00	178.20	8,000.00	8,000.00	-3,803.07	119.52	3,804.94	0.00	403,746.83	615,257.02		
11,700.00	90.00	178.20	8,000.00	8,000.00	-3,903.02	122.66	3,904.94	0.00	403,646.88	615,260.16		
11,787.72	90.00	178.20	8,000.00	8,000.00	-3,990.69	125.41	3,992.66	0.00	403,559.21	615,262.91		

Targets												
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/S (ft)	+E/W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude			
- hit/miss target	0.00	0.00	8,000.00	-3,990.70	125.10	403,559.200	615,262.600	32° 6' 33.258 N	104° 5' 40.462 W			
- Shape												
PBHL OH P#1H												
- plan hits target												
- Point												

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

# Plat for Closed Loop Sys

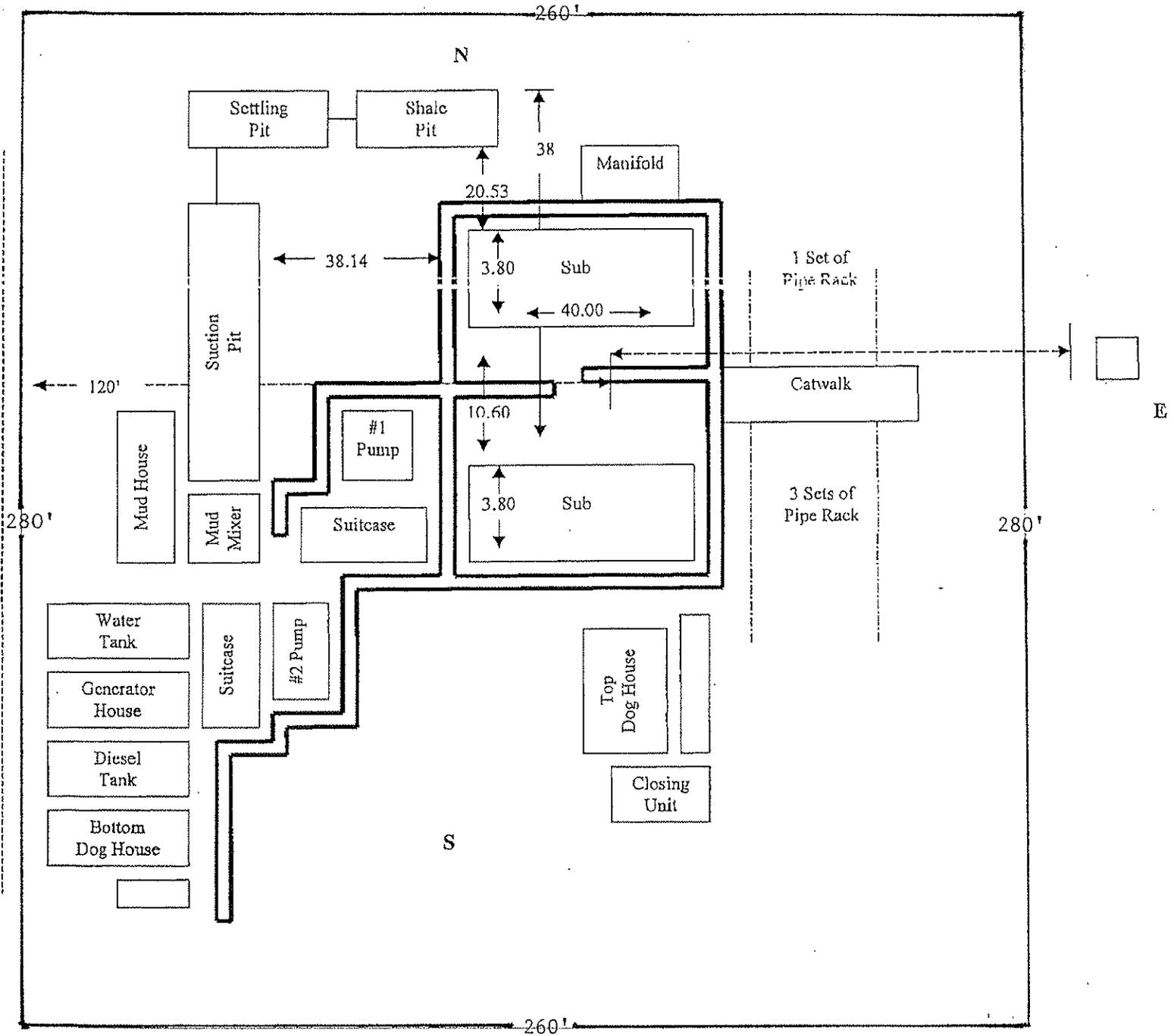
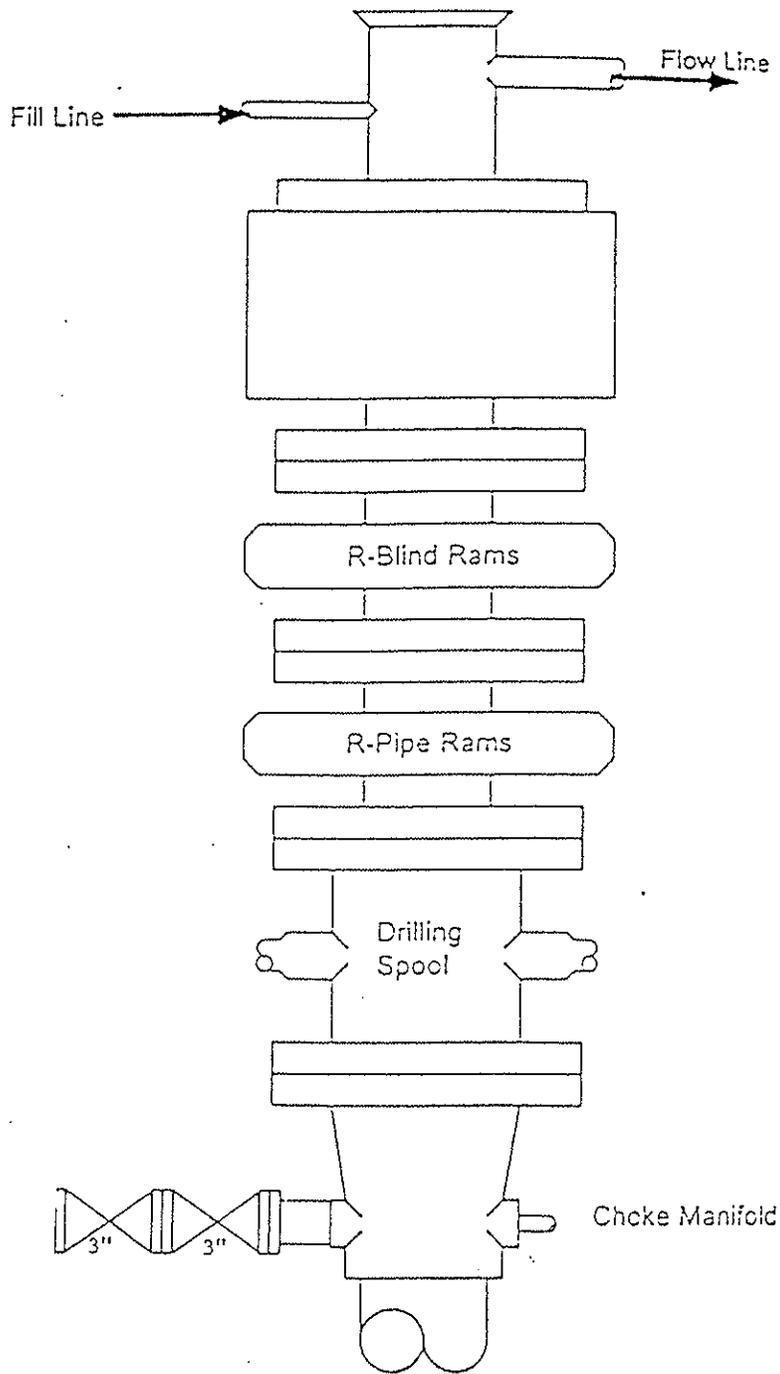


EXHIBIT "D"  
 RIG LAY OUT PLAT

OGX RESOURCES, LLC.  
 PATRON "23" FEDERAL # 1H  
 UNIT "D" SECTION 23  
 T25S-R29E EDDY CO. NM



Type 900 Series  
3000 psi WP

EXHIBIT "E"  
 SKETCH OF B.O.P. TO BE USED ON

OGX RESOURCES, LLC.  
 PATRON "23" FEDERAL # 1H  
 UNIT "D" SECTION 23  
 T25S-R29E EDDY CO. NM

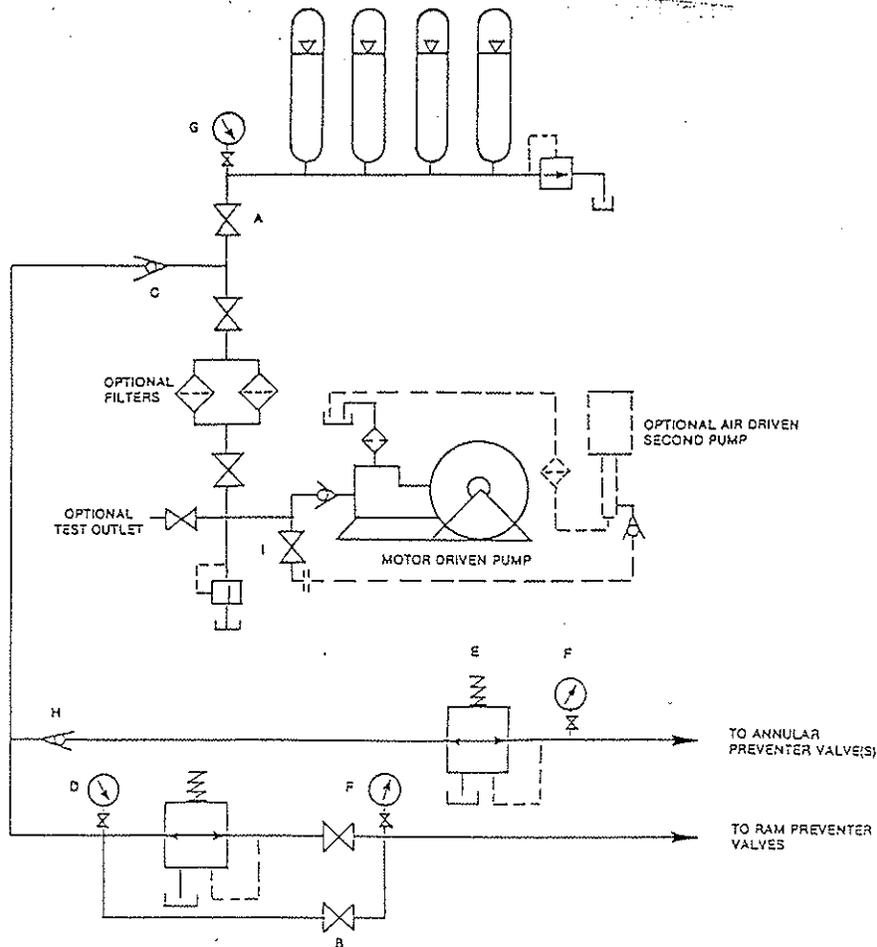


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

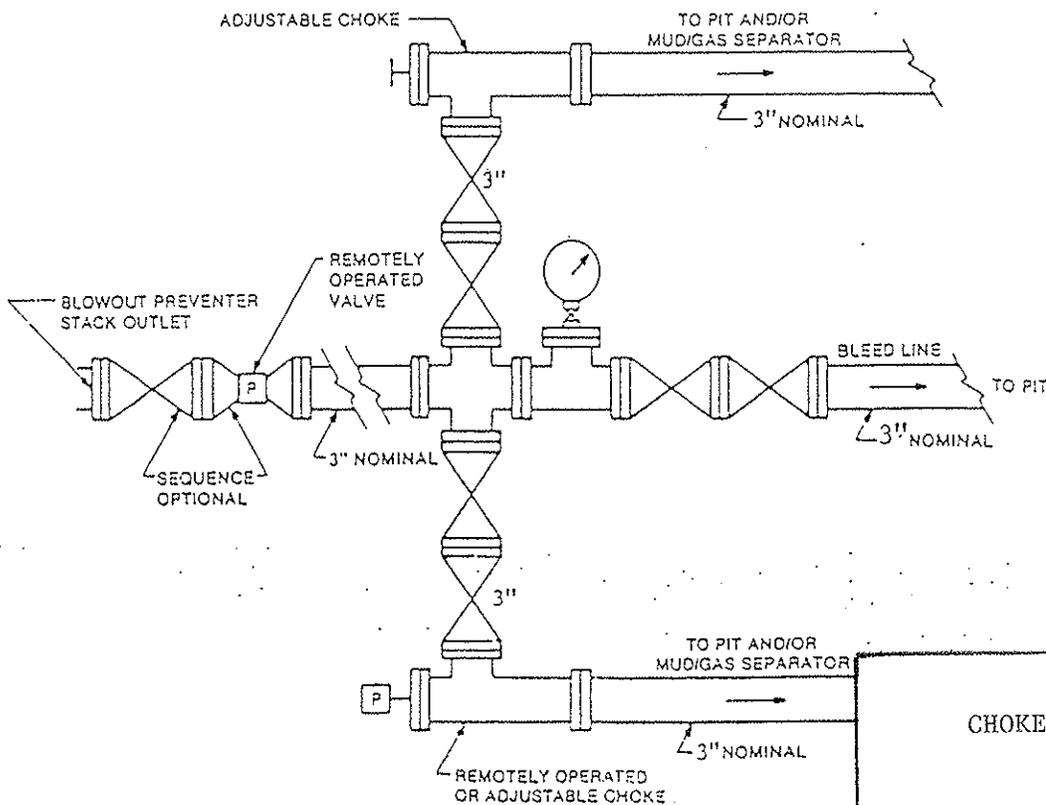


FIGURE K4-2. Typical choke manifold assembly for SM rated work pressure service — surface installation.

EXHIBIT "1-"  
CHOKE MANIFOLD & CLOSING UNIT

OGX RESOURCES, LLC.  
PATRON "23" FEDERAL # 1H  
UNIT "D" SECTION 23  
T25S-R29E EDDY CO. NM

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## HYDROGEN SULFIDE CONTINGENCY PLAN

### SCOPE

THIS CONTINGENCY PLAN ESTABLISHES GUIDELINES FOR THE PUBLIC, ALL COMPANY EMPLOYEES WHO'S WORK ACTIVITIES MAY INVOLVE EXPOSURE TO HYDROGEN SULFIDE GAS.

### OBJECTIVE

1. PREVENT ANY AND ALL ACCIDENTS, AND PREVENT THE UNCONTROLLED RELEASE OF HYDROGEN SULFIDED INTO THE ATMOSPHERE.
2. PROVIDE PROPER EVACUATION PROCEDURES TO COPE WITH EMERGENCIES.
3. PROVIDE IMMEDIATE AND ADEQUATE MEDICAL ATTENTION SHOULD AN INJURY OCCUR.

### DISCUSSION

## GEOLOGICAL PROGNOSIS

- IMPLEMENTATION:** THIS PLAN WITH ALL DETAILS IS TO BE FULLY IMPLEMENTED BEFORE DRILLING TO PRODUCTION CASING POINT.
- EMERGENCY RESPONSE:** THIS SECTION OUTLINES THE CONDITIONS AND DENOTES STEPS TO BE TAKEN IN THE EVENT OF AN EMERGENCY
- EMERGENCY EQUIPMENT:** THIS SECTION OUTLINES THE SAFETY AND EMERGENCY EQUIPMENT THAT WILL BE REQUIRED FOR THE DRILLING OF THIS WELL.
- TRAINING PROVISIONS:** THIS SECTION OUTLINES THE TRAINING PROVISIONS THAT MUST BE ADHERED TO PRIOR TO DRILLING TO PRODUCTION CASING POINT.
- EMERGENCY CALL LISTS:** INCLUDED ARE THE TELEPHONE NUMBERS OF ALL PERSONS TO BE CONTACTED SHOULD AN EMERGENCY EXISTS.
- BRIEFING:** THIS SECTON DEALS WITH THE BRIEFING OF ALL PEOPLE INVOLVED IN THE DRILLING OPERATION.
- PUBLIC SAFETY:** PUBLIC SAFETY PERSONNEL WILL BE MADE AWARE OF THE DRILLING OF THIS WELL.
- CHECK LISTS:** STATUS CHECK LISTS AND PROCEDURAL CHECK LISTS HAVE BEEN INCLUDED TO INSURE ADHERENCE TO THE PLAN.
- GENERAL INFORMATION:** A GENERAL INFORMATION SECTION HAS BEEN INCLUDED TO SUPPLY SUPPORT INFORMATION.

## EMERGENCY PROCEDURES

## WELLBLOWN WELL EMERGENCY PLAN

- A. IN THE EVENT OF ANY EVIDENCE OF H<sub>2</sub>S LEVEL ABOVE 10 PPM, TAKE THE FOLLOWING STEPS:
1. SECURE BREATHING EQUIPMENT.
  2. ORDER NON-ESSENTIAL PERSONNEL OUT OF DANGER ZONE.
  3. TAKE STEPS TO DETERMINE IF THE H<sub>2</sub>S LEVEL CAN BE CORRECTED OR SUPPRESSED AND, IF SO, PROCEED IN NORMAL OPERATION.
- B. IF UNCONTROLLABLE CONDITIONS OCCUR.
1. TAKE STEPS TO PROTECT AND/OR REMOVE ANY PUBLIC IN THE DOWN-WIND AREA FROM THE RIG – PARTIAL EVACUATION AND ISOLATION. NOTIFY NECESSARY PUBLIC SAFETY PERSONNEL AND THE BUREAU OF LAND MANAGEMENT OF THE SITUATION.
  2. REMOVE ALL PERSONNEL TO SAFE BREATHING AREA.
  3. NOTIFY PUBLIC SAFETY PERSONNEL TO SAFE BREATHING AREA.
  4. PROCEED WITH BEST PLAN TO REGAIN CONTROL OF THE WELL. MAINTAIN TIGHT SECURITY AND SAFETY PROCEDURES.
- C. RESPONSIBILITY:
1. DESIGNATED PERSONNEL.
    - a. SHALL BE RESPONSIBLE FOR THE TOTAL IMPLEMENTATION OF THIS PLAN.
    - b. SHALL BE IN COMPLETE COMMAND DURING ANY EMERGENCY.
    - c. SHALL DESIGNATE A BACK-UP.

EMERGENCY PROCEDURES

## OGX RESOURCES LLC – H<sub>2</sub>S CONTINGENCY PLAN

(Procedures are the same for both Drilling and Tripping)

### ALL PERSONNEL:

1. ON ALARM, DON ESCAPE UNIT AND REPORT IN UP WIND BREIFING AREA.
2. CHECK STATUS OF PERSONNEL (BUDDY SYSTEM).
3. SECURE BREATHING EQUIPMENT.
4. AWAIT ORDERS FROM SUPERVISOR.

### DRILLING FOREMAN:

1. REPORT TO UP WIND BREIFING AREA.
2. DON BREATHING EQUIPMENT AND RETURN TO POINT OF RELEASE WITH TOOL PUSHER OR DRILLER (BUDDY SYSTEM).
3. DETERMINE H<sub>2</sub>S CONCENTRATIONS.
4. ASSESS SITUATION AND TAKE CONTROL MEASURES.

### TOOL PUSHER:

1. REPORT TO UP WIND BREIFING AREA.
2. DON BREATHING EQUIPMENT AND RETURN TO POINT OF RELEASE WITH DRILLING FOREMAN OR DRILLER (BUDDY SYSTEM).
3. DETERMINE H<sub>2</sub>S CONCENTRATION.
4. ASSESS SITUATION AND TAKE CONTROL MEASURES.

### DRILLER:

1. DON ESCAPE UNIT.
2. CHECK MONITOR FOR POINT OF RELEASE.
3. REPORT TO BREIFING AREA.
4. CHECK STATUS OF PERSONNEL (FOR RESCUE, USE THE BUDDY SYSTEM).
5. ASSIGNS LEAST ESSENTIAL PERSON TO NOTIFY DRILLING FOREMAN AND TOOL PUSHER BY QUICKEST MEANS IN CASE OF THEIR ABSENCE.
6. ASSUMES THE RESPONSIBILITIES OF THE DRILLING FOREMAN AND TOOL PUSHER UNTIL THEY ARRIVE.

## EMERGENCY PROCEDURES

DERRICK MAN / FLOOR HANDS:

1. WILL REMAIN IN BRIEFING AREA UNTIL INSTRUCTED BY SUPERVISOR.

MUD ENGINEER:

1. REPORT TO BRIEFING AREA.
2. WHEN INSTRUCTED, BEGIN CHECK OF MUD FOR Ph AND H<sub>2</sub>S LEVEL (GARRETT GAS TRAIN).

SAFETY PERSONNEL:

1. MASK UP AND CHECK STATUS OF ALL PERSONNEL AND SECURE OPERATIONS AS INSTRUCTED BY DRILLING FOREMAN AND REPORT TO BRIEFING AREA.

### **TAKING A KICK**

WHEN TAKING A KICK DURING AN H<sub>2</sub>S EMERGENCY, ALL PERSONNEL WILL FOLLOW STANDARD BOP PROCEDURES AFTER REPORTING TO BRIEFING AREA AND MASKING UP.

### **OPEN-HOLE LOGGING**

ALL UNNECESSARY PERSONNEL OFF THE FLOOR. DRILLING FOREMAN AND SAFETY PERSONNEL SHOULD MONITOR CONDITION, ADVISE STATUS AND DETERMINE NEED FOR USE OF AID EQUIPMENT.

### **RUNNING CASING OR PLUGGING**

FOLLOWING THE SAME "TRIPPING" PROCEDURE AS ABOVE. DRILLING FOREMAN AND SAFETY PERSONNEL SHOULD DETERMINE IF ALL PERSONNEL HAVE ACCESS TO PROTECTIVE EQUIPMENT.

### **IGNITION PROCEDURES**

THE DECISION TO IGNITE THE WELL IS THE RESPONSIBILITY OF COMPANY FOREMAN. IN THE EVENT HE IS INCAPACITATED, IT BECOMES THE RESPONSIBILITY OF THE CONTRACT RIG TOOL PUSHER. THE DECISION SHOULD BE MADE ONLY AS A LAST RESORT AND IN A SITUATION WHERE IT IS CLEAR THAT:

1. HUMAN LIFE AND PROPERTY ARE ENDANGERED.
2. THERE IS NO HOPE OF CONTROLLING THE BLOWOUT UNDER THE PREVAILING CONDITIONS AT THE WELL.

NOTIFY THE DISTRICT OFFICE IT TIME PERMITS, BUT DO NOT DELAY IF HUMAN LIFE IS IN DANGER.

INITIATE FIRST PHASE OF EVACUATION PLAN.

IGNITION PROCEDURES

**INSTRUCTIONS FOR IGNITING THE WELL:**

1. TWO PEOPLE ARE REQUIRED FOR THE ACTUAL IGNITING OPERATION. THEY MUST WEAR SELF-CONTAINED BREATHING UNITS AND HAVE SAFETY ROPES ATTACHED. ONE MAN WILL CHECK THE ATMOSPHERE FOR EXPLOSIVE GASES WITH THE EXPLOSIMETER. THE OTHER MAN IS RESPONSIBLE FOR IGNITING THE WELL.
2. PRIMARY METHOD TO IGNITE: 25 MM FLARE GUN WITH RANGE OF 500 FT.
3. IGNITE UP WIND AND DO NOT APPROACH ANY CLOSER THAN IS WARRANTED.
4. SELECT THE IGNITION SITE BEST FOR PROTECTION, AND WHICH OFFERS AN EASY ESCAPE ROUTE.
5. BEFORE FIRING, CHECK PRESENCE OF COMBUSTABLE GAS.
6. AFTER LIGHTING, CONTINUE EMERGENCY ACTION AND PROCEDURE AS BEFORE.
7. ALL UNASSIGNED PERSONNEL WILL LIMIT THEIR ACTIONS TO THOSE DIRECTED BY THE DRILLING FOREMAN.

**REMEMBER:** AFTER WELL IS IGNITED, BURNING HYDROGEN SULFIDE WILL CONVERT TO SULFUR DIOXIDE, WHICH IS ALSO HIGHLY TOXIC. DO NOT ASSUME THE AREA IS SAFE AFTER THE WELL IS IGNITED.

**TRAINING REQUIREMENTS**

WHEN WORKING IN AN AREA WHERE H<sub>2</sub>S GAS MIGHT BE ENCOUNTERED, DEFINITE TRAINING REQUIREMENTS MUST BE CARRIED OUT. ALL COMPANIES WILL INSURE THAT ALL PERSONNEL AT THE WELL SITE WILL HAVE HAD ADEQUATE TRAINING IN THE FOLLOWING:

1. HAZARDS AND CHARACTERISTICS OF H<sub>2</sub>S
2. PHYSICAL EFFECTS OF HYDROGEN SULFIDE ON THE HUMAN BODY
3. TOXICITY OF HYDROGEN SULFIDE AND SULFUR DIOXIDE.
4. H<sub>2</sub>S DETECTION.
5. EMERGENCY RESCUE.
6. RESUSCITATORS.
7. FIRST AID AND ARTIFICIAL RESPIRATION.
8. EFFECTS OF H<sub>2</sub>S ON METALS.
9. LOCATION SAFETY.

SERVICE COMPANY AND VISITING PERSONNEL

- A. EACH SERVICE COMPANY THAT WILL BE ON THIS WELL WILL BE NOTIFIED IF THE ZONE CONTAINS H<sub>2</sub>S.
- B. EACH SERVICE COMPANY MUST PROVIDE FOR THE TRAINING AND EQUIPMENT OF THEIR EMPLOYEES BEFORE THEY ARRIVE AT THE WELLSITE.
- C. EACH SERVICE COMPANY WILL BE EXPECTED TO ATTEND A SITE BRIEFING.

EMERGENCY EQUIPMENT REQUIREMENTS

1. SIGNS

- A. ONE SIGN LOCATED AT LOCATION ENTRANCE WITH THE FOLLOWING:

**(LEASE NAME & WELL NO.)  
CAUTION – POTENTIAL POISON GAS  
HYDROGEN SULFIDE  
NO ADMITTANCE WITHOUT AUTHORIZATION**

2. WIND SOCK – WIND STREAMERS

- A. ONE 36" WIND SOCK LOCATED AT PROTECTION CENTER, AT A  
VISIBLE HEIGHT ABOVE THE RIG FLOOR.  
B. ONE 36" WIND SOCK LOCATED AT VISIBLE HEIGHT FROM PIT AREAS.

3. HYDROGEN SULFIDED DETECTOR AND ALARMS

- A. H<sub>2</sub>S MONITORS WITH ALARMS WILL BE LOCATED ON THE RIG FLOOR,  
AT THE BELL NIPPLE, AND AT THE FLOE LINE. THESE MONITORS WILL  
SET FOR VISUAL AT 10 PPM WITH RED LIGHT AND AUIBLE AT 15 PPM.  
B. HAND OPERATED DETECTORS WITH TUBES.  
C. H<sub>2</sub>S MONITOR TESTER.

4. CONDITION FLAGS

- A. ONE EACH OF GREEN, YELLOW, AND RED CONDITION FLAGS TO BE  
DISPLAYED TO DENOTE CONDITIONS.

**GREEN - NORMAL CONDITIONS**  
**YELLOW - POTENTIAL DANGER**  
**RED - DANGER, H<sub>2</sub>S PRESENT**

- B. CONDITION FLAG SHALL BE POSTED AT LOCATION SIGN ENTRANCE.

5. AUXILIARY EQUIPMENT

- A. STRETCHER  
B. 100' LENGTH OF NYLON ROPE

EMERGENCY EQUIPMENT REQUIREMENTS

6. MUD INSPECTION DEVICES

GARRETT GAS TRAN OR HACH TESTER FOR INSPECTION OF SULFIDE CONCENTRATION IN MUD SYSTEM.

7. FIRE EXTINGUISHER

8. BLOW OUT PREVENTION EQUIPMENT

THE WELL SHALL HAVE HYDRAULIC BOP EQUIPMENT FOR THE ANTICIPATED BHP OF 1500 PSI. EQUIPMENT IS TO BE TESTED ON INSTALLATION.

9. COMBUSTIBLE GAS DETECTOR

THERE SHALL BE ONE COMBUSTIBLE GAS DETECTOR ON LOCATION AT ALL TIMES.

10. BOP TESTING

BOP, CHOKE LINE, AND KILL LINE WILL BE TESTED.

11. AUDIO SYSTEM

RADIO COMMUNICATION EQUIPMENT

- A. RIG FLOOR OR TRAILER
- B. VEHICLE

12. SPECIAL CONTROL EQUIPMENT

- A. HYDRAULIC BOP EQUIPMENT WITH REMOTE CONTROL ON GROUND.
- B. ROTATING HEAD.

13. EVACUATION PLAN

EVACUATION ROUTES SHOULD BE ESTABLISHED PRIOR TO SPUDDING EACH WELL AND DISCUSSED WITH ALL RIG PERSONNEL.

14. DESIGNATED AREA

- A. PARKING AND VISITOR AREA: ALL VEHICLES ARE TO BE PARKED AT A PREDETERMINED SAFE DISTANCE FROM THE WELLHEAD. THIS WILL BE DESIGNATED AS SMOKING AREA.
- B. TWO BRIEFING AREAS ON EITHER SIDE OF THE LOCATION AT THE MAXIMUM ALLOWABLE DISTANCE FROM THE WELLBORE SO THEY OFFSET PREVAILING WINDS PERPENDICULARY, OR AT A 45 DEGREE ANGLE IF WIND DIRECTION TENDS TO SHIFT IN THE AREA.
- C. PROTECTION CENTERS OR IF A MOVABLE TRAILER IS USED, IT SHOULD BE KEPT UPWIND. WHEN WIND IS FROM THE PREVAILING DIRECTION, BOTH PROTECTION CENTERS SHOULD BE ACCESSIBLE.

STATUS CHECK LIST

**NOTE: ALL TEMS ON THIS LIST MUST BE COMPLETED BEFORE DRILLING TO PRODUCTION CASING POINT.**

1. SIGN AT LOCATION ENTRANCE
2. TWO WIND SOCKS LOCATED AS REQUIRED
3. TWO 30-MINUTE PRESSURE DEMAND AIR PACKS ON LOCATION FOR ALL RIG PERSONNEL AND MUD LOGGERS.
4. AIR PACK INSPECTED FOR READY USE.
5. CASCADE SYSTEM AND HOSE LINE HOOK-UP.
6. CASCADE SYSTEM FOR REFILLING AIR BOTTLES.
7. SAFE BREATHING AREAS SET UP.
8. CONDITION FLAG LOCATION AND READY FOR USE.
9. H<sub>2</sub>S ALARM SYSTEM HOOKED UP AND READY.
10. H<sub>2</sub>S DETECTION SYSTEM HOOKED UP.
11. OXYGEN RESUSCITATOR ON LOCATION AND TESTED FOR USE.
12. STRETCHER ON LOCATION AT SAFETY TRAILER.
13. 100' LENTH OF NYLON ROPE ON LOCATION.
14. ALL RIG CREW AND SUPERVISORS TRAINED AS REQUIRED.
15. ALL OUTSIDE CONTRACTORS ADVISED OF POTENTIAL H<sub>2</sub>S HAZARD ON WELL.
16. NO SMOKING SIGN POSTED.
17. HAND OPERATED H<sub>2</sub>S DETECTOR WITH TUBES ON LOCATION.

PROCEDURAL CHECK LIST

**PERFORM EACH TOUR:**

1. CHECK FIRE EXTINGUISHERS FOR PROPER CHARGE.
2. CHECK BREATHING EQUIPMENT
3. CHECK OPERATION OF H<sub>2</sub>S DETECTION SYSTEM.

**PERFORM EACH WEEK:**

1. CHECK EACH PIECE OF BREATHING EQUIPMENT FOR DEMAND REGULATOR FUNCTION. THIS REQUIRES THAT THE BOTTLE BE OPENED AND THE MASK ASSY BE PUT ON TIGHT ENOUGH SO THAT WHEN YOU INHALE, YOU RECEIVE AIR.
2. BLOW OUT PREVENTOR SKILLS
3. CHECK SUPPLY PRESSURE ON BOP ACCUMULATOR STAND BY SOURCE.
4. CHECK ALL SKA-PAC UNITS FOR OPERATION: DEMAND REGULATOR, ESCAPE BOTTLE AIR VOLUMES, SUPPLY BOTTLE AIR VOLUMES.
5. CHECK BREATHING EQUIPMENT MASK ASSY TO SEE THAT STRAPS ARE LOOSENED AND TURNED BACK, READY FOR DON.
6. CHECK PRESSURE ON BREATHING EQUIPMENT AIR BOTTLES FOR FULL CHARGE.
7. CONFIRM PRESSURE ON ALL SUPPLY AIR BOTTLES.
8. PERFORM BREATHING EQUIPMENT DRILLS WITH ON-SITE PERSONNEL.
9. CHECK THE FOLLOWING SUPPLIES FOR AVAILABILITY:
  - A. EMERGENCY TELEPHONE LIST
  - B. HAND OPERATED H<sub>2</sub>S DETECTORS AND TUBES.

GENERAL EVACUATION PLAN

**THE DIRECT LINES OF ACTION PREPARED TO PROTECT THE PUBLIC FROM HAZARDOUS GAS SITUATIONS ARE AS FOLLOWS:**

1. WHEN THE COMPANY APPROVED SUPERVISOR (DRILLING FOREMAN, CONSULTANT, RIG PUSHER, OR DRILLIER) DETERMINES THE H<sub>2</sub>S GAS CANNOT BE LIMITED TO THE WELL LOCATION AND THE PUBLIC WILL BE INVOLVED, HE WILL ACTIVATE THE EVACUATION PLAN. ESCAPE ROUTES ARE NOTED ON AREA MAP.
2. "COMPANY MAN" OR DESIGNEE WILL NOTIFY LOCAL GOVERNMENT AGENCY THAT A HAZARDOUS CONDITION EXISTS AND EVACUATION NEEDS TO BE IMPLEMENTED.
3. COMPANY SAFETY PERSONNEL THAT HAVE BEEN TRAINED IN THE USE OF H<sub>2</sub>S DETECTION EQUIPMENT AND SELF-CONTAINED BREATHING EQUIPMENT WILL MONITOR H<sub>2</sub>S CONCENTRATIONS, WIND DIRECTION, AND AREA OF EXPOSURE. THEY WILL DELINEATE THE OUTER PERIMETER OR THE HAZARDOUS GAS AREA. EXTENSION TO THE EVACUATION AREA WILL BE DETERMINED FROM INFORMATION GATHERED.
4. LAW ENFORCEMENT PERSONNEL (STATE POLICE, POLICE DEPT, FIRE DEPT, AND SHERIFF'S DEPT) WILL BE CALLED TO AID IN SETTING UP AND MAINTAINING ROAD BLOCKS. ALSO, THEY WILL AID IN EVACUATION OF THE PUBLIC IF NECESSARY.

**LAW ENFORCEMENT PERSONNEL WILL NOT BE ASKED TO COME INTO A CONTAMINATED AREA. THEIR ASSISTANCE WILL BE LIMITED TO UNCONTAMINATED AREAS. CONSTANT RADIO CONTACT WILL BE MAINTAINED WITH THEM.**

5. AFTER THE DISCHARGE OF GAS HAS BEEN CONTROLLED, COMPANY SAFETY PERSONNEL WILL DETERMINE WHEN THE AREA IS SAFE FOR RE-ENTRY.

**EMERGENCY ACTIONS**

WELL BLOWOUT – IF EMERGENCY

1. EVACUATE ALL PERSONNEL IF POSSIBLE.
2. IF SOUR GAS – EVACUATE RIG PERSONNEL.
3. IF SOUR GAS – EVACUATE PUBLIC WITHIN 3000 FT RADIUS OF EXPOSURE.
4. DON SCBA AND RESCUE.
5. CALL 911 EMERGENCY HELP (FIRE AND AMBULANCE) AND NOTIFY SR. DRILLING FOREMAN AND DISTRICT FOREMAN.
6. GIVE FIRST AID.

PERSON DOWN LOCATION/FACILITY

1. IF IMMEDIATELY POSSIBLE, CONTACT 911. GIVE LOCATION AND WAIT FOR CONFIRMATION.
2. DON SCBA AND RESCUE.

EMERGENCY PHONE LIST

GOVERNMENT AGENCIES

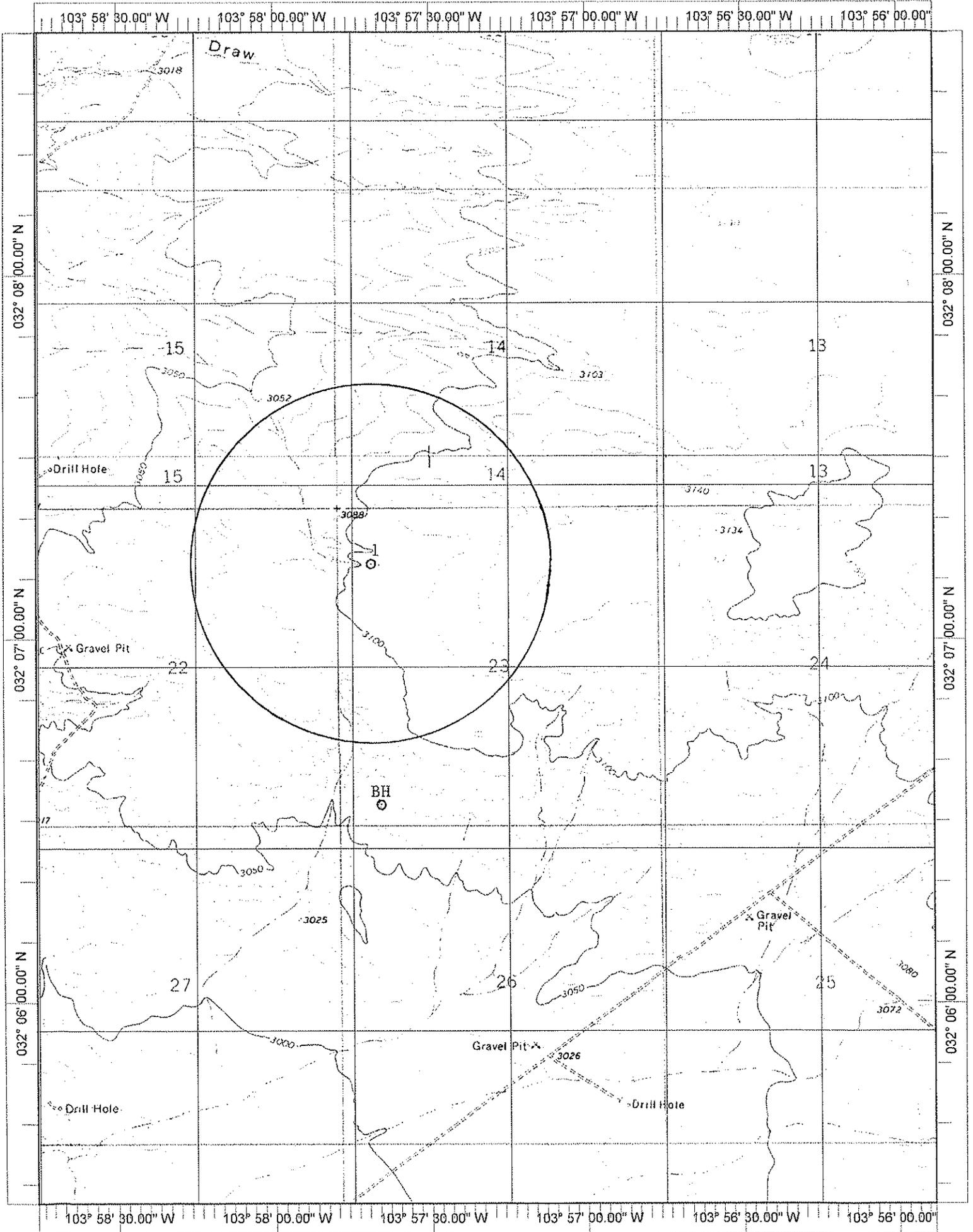
<u>EDDY COUNTY SHERIFF'S OFFICE</u>	911
NON- EMERGENCY .....	575 -746-9888
<u>FIRE DEPARTMENT</u>	911
CARLSBAD – NON EMERGENCY.....	575 -885-2111
<u>BLM</u>	
CARLSBAD .....	575-361-2822
<u>STATE POLICE DEPARTMENT</u>	911
NON-EMERGENCY .....	575437-1313
<u>CITY OF CARLSBAD</u>	
.....	575-885-2111
<u>AMBULANCE</u>	
CARLSBAD – NON EMERGENCY .....	575-885-2111
<u>HOSPITALS</u>	
CARLSBAD .....	575-887-4100
<u>AREOCARE</u> .....	806-747-8923
<u>CHEMTREC</u> .....	800-424-9300
<u>OSHA</u>	
LUBBOCK, TX.....	800-692-4204

EMERGENCY CONTACT LIST

OGX RESOURCES LLC – H<sub>2</sub>S CONTINGENCY PLAN

OGX RESOURCES	OFFICES	432-685-1287
DONNY LEEK	CONSULTANT	432-634-4862
JEFF BIRKELBACH	OGX OPERATIONS	432-553-0391 cell
STEVE DOUGLAS	OGX OPERATIONS	432-934-6800 cell
KIP AGAR	OGX PRESIDENT	432-631-1736 cell

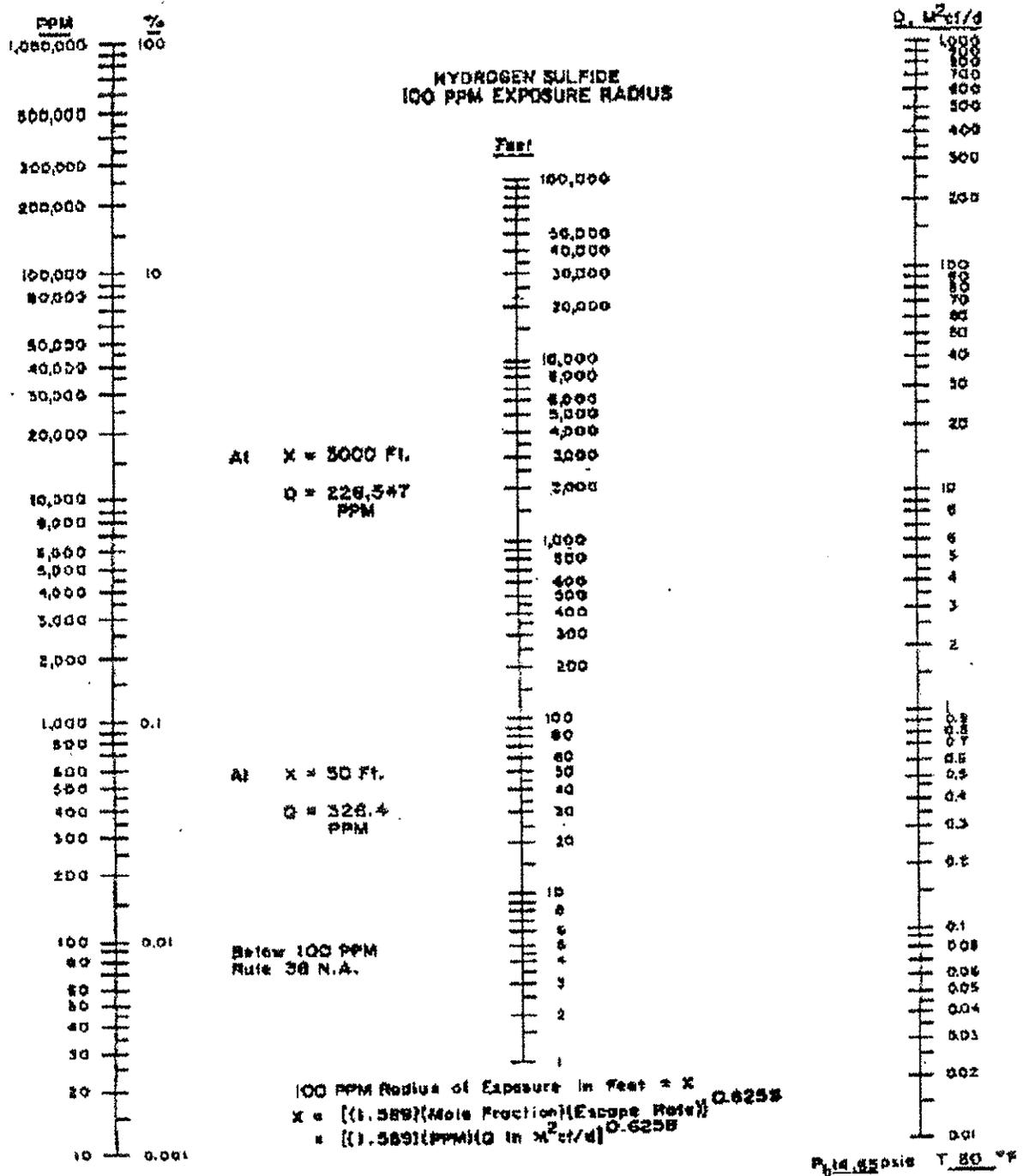
OGX RESOURCES, LLC

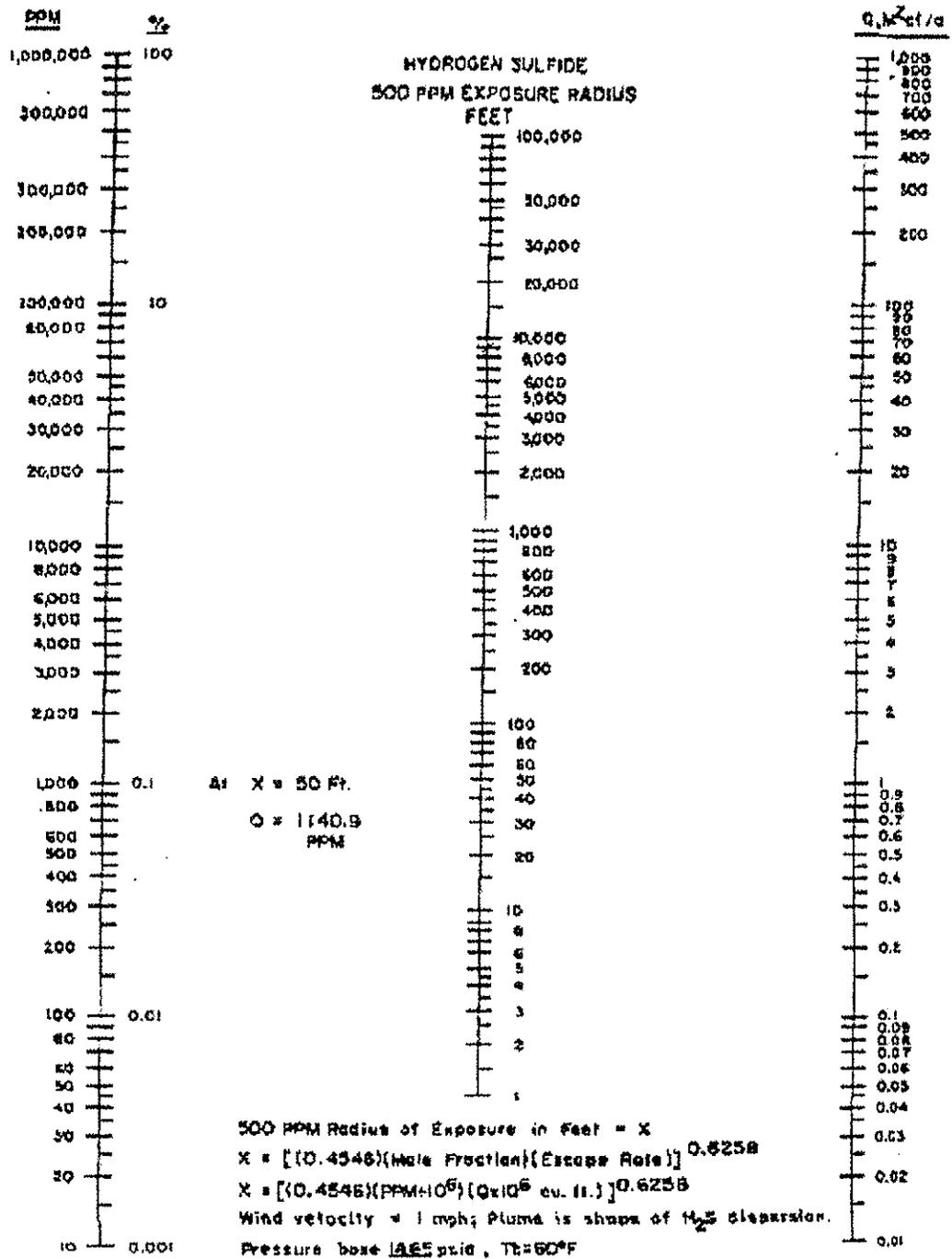


OGX RESOURCES LLC – H<sub>2</sub>S CONTINGENCY PLAN

3,000 FT RADIUS FROM WELL







**TOXIC EFFECTS OF HYDROGEN SULFIDE**

HYDROGEN SULFIDE IS EXTREMELY TOXIC. THE ACCEPTABLE CEILING CONCENTRATION FOR EIGHT-HOUR EXPOSURE IS 10 PPM, WHICH IS .001% BY VOLUME. HYDROGEN SULFIDE IS HEAVIER THAN AIR (SPECIFIC GRAVITY – 1.192) AND COLORLESS. IT FORMS AN EXPLOSIVE MIXTURE WITH AIR BETWEEN 4.3 & 46% BY VOLUME. HYDROGEN SULFIDE IS ALMOST AS TOXIC AS HYDROGEN CYANIDE AND IS BETWEEN FIVE & SIX TIMES MORE TOXIC AS CARBON MONOXIDE. TOXICITY DATA FOR HYDROGEN SULFIDE AND VARIOUS OTHER GASES ARE COMPARED IN TABLE I. PHYSICAL EFFECTS AT VARIOUS HYDROGEN SULFIDE EXPOSURE LEVELS ARE SHOWN IN TABLE II.

TABLE I.

**TOXICITY OF VARIOUS GASES**

Common Name	Chem Sym	SpGr	Threshold Lm	Hazardous Lm	Lethal Lm
Hydrogen Cyanide	HCN	0.94	10 PPM	150 PPM/Hr	300 PPM
Hydrogen Sulfide	H <sub>2</sub> S	1.18	10 PPM	250 PPM/Hr	600 PPM
Sulfur Dioxide	SO <sub>2</sub>	2.21	5 PPM		1000 PPM
Chlorine	CL <sub>2</sub>	2.45	1 PPM	4 PPM/Hr	1000 PPM
Carbon Monoxide	CO	0.97	50 PPM	400 PPM/Hr	1000 PPM
Carbon Dioxide	CO	1.52	5000 PPM	5%	10%
Methane	CH <sub>4</sub>	0.55	90,000 PPM	Combustible Above 5% in Air	

1. THRESHOLD LIMIT – CONCENTRATION AT WHICH IT IS BELIEVED THAT ALL WORKERS MAY BE REPEATEDLY EXPOSED DAY AFTER DAY WITHOUT ADVERSE EFFECTS.
2. HAZARDOUS LIMIT – CONCENTRATION THAT WILL CAUSE DEATH WITH SHORT TERM EXPOSURE.
3. LETHAL CONCENTRATION – CONCENTRATION THAT WILL CAUSE DEATH WITH SHORT – TERM EXPOSURE.

TOXIC EFFECTS OF HYDROGEN SULFIDE

TABLE II

PHYSICAL EFFECTS OF HYDROGEN SULFIDE

<u>PERCENT</u>	<u>PPM</u>	<u>Concentration Grains</u>	<u>Physical Effects</u>
0.001	<10	0.65	Obvious and unpleasant odor
0.002	10	1.30	Safe for 8 hours of exposure
0.010	100	6.48	Kills sense of smell in 3-15 minutes. May sting eyes & throat.
0.020	200	12.96	Kills sense of smell; stings eyes & throat
0.050	500	32.96	Dizziness, Breathing ceases in a few minutes, Needs prompt artificial respiration.
0.070	700	45.36	Unconscious quickly, Death will result if not rescued promptly
0.100	1000	64.3	Unconscious at once, followed by death within minutes

USE OF SELF-CONTAINED BREATHING EQUIPMENT

1. WRITTEN PROCEDURES SHALL BE PREPARED COVERING SAFE USE OF SCBA'S IN DANGEROUS ATMOSPHERE, WHICH MIGHT BE ENCOUNTERED IN NORMAL OPERATIONS OR IN EMERGENCIES. PERSONNEL SHALL BE FAMILIAR WITH THESE PROCEDURES AND THE AVAILABLE SCBA.
2. SCBA'S SHALL BE INSPECTED FREQUENTLY AT RAMDON TO INSURE THAT THEY ARE PROPERLY USED, CLEANED, AND MAINTAINED.
3. ANYONE WHO MAY USE THE SCBA'S SHALL BE TRAINED IN HOW TO INSURE PROPER FACE-PIECE TO FACE SEAL. THEY SHALL WEAR SCBA'S IN NORMAL AIR AND THEN WEAR THEM IN A TEST ATMOSPHERE. BEARD AND/OR SIDEBURNS AND EYGLASSES WILL NOT ALLOE A PROPER SEAL. ANYONE THAT MAY BE REASONABLY EXPECTED TO WEAR SCBA'S SHOULD HAVE THESE ITEMS REMOVED BEFORE ENTERING A TOXIC ATMOSPHERE. A SPECIAL MASK MUST BE OBTAINED FOR ANYONE WHO MUST WAER EYGLASSES OR CONTACT LENSES.
4. MAINTENANCE AND CARE OF SCBA'S:
  - A. A PROGRAM FOR MAINTENANCE AND CARE OF SCBA'S SHALL INCLUDE THE FOLLOWING:
    1. INSPECTIO FOR DEFECTS, INCLUDING LEAK CHECKS
    2. CLEANING AND DISINFECTING
    3. REPAIR
    4. STORAGE
  - B. INSPECTION; SELF-CONTAINED BREATHING APPARATUS FOR EMERGENCY USE SHALL BE INSPECTED MONTHLY AND THE FOLLOWING PERMANENT RECORDS KEPT OF THESE INSPECTIONS.
    1. FULLY CHARGED CYLINDERS
    2. REGULATOR AND WARNING DEVICE OPERATION.
    3. CONDITION OF FACE PIECE AND CONNECTIONS.
    4. ELASTOMER OR RUBBER PARTS SHALL BE STRETCHED OR MASSAGED TO KEEP THEM PLIABLE AND PREVENT DETERIORATION.
  - C. ROUTINELY USED SCBA'S SHALL BE COLLECTED, CLEANED AND DISINFECTED AS FREQUENTLY AS NECESSARY TO INSURE PROPER PROTECTION IS PROVIDED.

OGX RESOURCES LLC – H<sub>2</sub>S CONTINGENCY PLAN

5. PERSONS ASSIGNED TASKS THAT REQUIRES USE OF SELF- CONTAINED BREATHING EQUIPMENT SHALL BE CERTIFIED PHYSICALLY FIT FOR BREATHING EQUIPMENT USAGE BY THE LOCAL COMPANY PHYSICIAN AT LEAST ANNUALLY.
  
6. SCABA'S SHOULD BE WORN WHEN:
  - A. ANY EMPLOYEE WORKS NEAR THE TOP OR ON TOP OF ANY TANK UNLESS TEST REVEALS LESS THAN 10 PPM OF H<sub>2</sub>S.
  - B. WHEN BREAKING OUT ANY LINE WHERE H<sub>2</sub>S CAN REASONABLY BE EXPECTED.
  - C. WHEN SAMPLING AIR IN AREAS TO DETERMINE IF TOXIC CONCENTRATIONS OF H<sub>2</sub>S EXISTS.
  - D. WHEN WORKING IN AREAS WHERE OVER 10 PPM H<sub>2</sub>S HAS BEEN DETECTED.
  - E. AT ANY TIME THERE IS A DOUBT AS TO THE H<sub>2</sub>S LEVEL IN THE AREA TO BE ENTERED.

RESCUE

FIRST AID FOR H<sub>2</sub>S POISONING

DO NOT PANIC!

REMAIN CALM – THINK

1. HOLD YOUR BREATH (DO NOT INHALE FIRST)
2. PUT ON BREATHING APPARATUS.
3. REMOVE VICTIMS TO FRESH AIR AS QUICKLY AS POSSIBLE. GO UP WIND.
4. BRIEFLY APPLY CHEST PRESSURE – ARM LIFT METHOD OF ARTIFICIAL RESPIRATION TO CLEAN THE VICTIM'S LUNGS AND TO AVOID INHALING ANY TOXIC GAS DIRECTLY FROM THE VICTIM'S LUNGS.
5. PROVIDE FOR PROMPT TRANSPORTATION TO THE HOSPITAL, AND CONTINUE GIVING ARTIFICIAL RESPIRATION IF NEEDED.
6. HOSPITALS OR MEDICAL FACILITIES NEED TO BE INFORMED BEFORE-HAND OF THE POSSIBILITY OF H<sub>2</sub>S GAS POISONING – NO MATTER HOW REMOTE THE POSSIBILITY.
7. NOTIFY EMERGENCY ROOM PERSONNEL THAT THE VICTIMS HAVE BEEN EXPOSED TO H<sub>2</sub>S GAS.

BESIDES BASIC FIRST AID, EVERYONE ON LOCATION SHOULD HAVE A GOOD WORKING KNOWLEDGE OF ARTIFICIAL RESPIRATION, AS WELL AS FIRST AID FOR EYES AND SKIN CONTACT WITH LIQUID H<sub>2</sub>S. EVERYONE NEEDS TO MASTER THESE NECESSARY SKILLS.

SURFACE USE PLAN

OGX RESOURCES, LLC.  
PATRON "23" FEDERAL # 1H  
UNIT "D" SECTION 23  
T25S-R29E EDDY CO. NM

1. EXISTING AND PROPOSED ROADS:

- A. Exhibit "B" is a reproduction of a County General Hi-way map showing existing roads. 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. All new roads will be constructed to BLM specifications.
- B. Exhibit "A" shows the proposed well site as staked.
- C. Directions to location: From Malaga New Mexico take U. S. Hi-way 285 South 12.5 miles to the junction with CR-725, turn Left (East) go 3.8 miles cross river continue .2 miles bear left (Northeast) go 1.8 miles bear Left (North) go 2.2 miles bear Right (Northeast) follow lease road for 1.2 miles and location is on the Right Side of road.
- D. Exhibit "C" is a topographic map showing existing roads and any proposed roads.

2. PLANNED ACCESS ROADS: Approximately 450' of new road will be constructed.

- A. The access roads will be crowned and sitched to a 14' wide travel surface, within a 30' R-O-W.
- B. Gradient of all roads will be less than 5%.
- C. Turn-outs will be constructed where necessary.
- D. If require new access roads will be surface with a minimum of 4-6" of caliche. this material will be obtained from a local source.
- E. Center line for new roads will be flagged, road construction will be done as field conditions require.
- F. Culverts will be placed in the access road as drainage conditions require. Roads will be constructed to use low water crossings for drainage as required by the topographic conditions.

3. LOCATION OF EXISTING WELLS WITHIN A ONE MILE RADIUS: EXHIBIT "A-1"

- A. Water wells - One approximately 1.5 miles Northwest.
- B. Disposal wells - None known
- C. Drilling wells - None known
- D. Producing wells -As shown on exhibit "A-1"
- E. Abandoned wells - As shown on Exhibit "A-1"

SURFACE USE PLAN

OGX RESOURCES, LLC.  
PATRON "23" FEDERAL # 1H  
UNIT "D" SECTION 23  
T25S-R29E EDDY CO. NM

4. If on completion this well is a producer the operator will lay pipelines and construct powerlines along existing road R-O-W's or other existing R-O-W's. Exhibit "C" shows proposed roads , flowlines and powerlines.

5. LOCATION & TYPE OF WATER SUPPLY:

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

6. SOURCE OF CONSTRUCTION MATERIAL:

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

7. METHODS OF HANDLING WASTE:

A. All trash, junk and other waste material will be contained in trash cages or trash bins in order to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary land fill.

B. Sewage from living quarters will be drained into holding tanks and will be cleaned out periodically. 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 well.

C. Where a closed loop mud system is used to drill a well the drilling fluid that remains after the drilling and casing is run or the well is Plugged and abandoned will be removed from the location and in some cases may be used on another well or transported to a State approved disposal site. The drilling cuttings that result from drilling the well will likewise be transported to a State approved disposal site.

D. All water produced while completing this well and completion fluids will be treated in the same procedure as the drilling fluids.

E. Any remaining salts or mud additive that was not used will be removed by the supplier, this includes all broken sacks and containers.

8. ANCILLARY FACILITIES:

A. No camps or air strips will be constructed on this location.

SURFACE USE PLAN

OGX RESOURCES, LLC.  
PATRON "23" FEDERAL # 1H  
UNIT "D" SECTION 23  
T25S-R29E EDDY CO. NM

9. WELL SITE LAYOUT:

- A. Exhibit "D" shows the proposed well site layout.
- B. This Exhibit shows the location of reserve pit, sump pits, and living facilities.
- C. Mud pits in the active circulating system will be steel pits and the reserve pits will be unlined unless subsurface conditions encountered during pit construction indicate that a plastic liner is required to contain lateral migration.
- D. If needed the reserve pits will be lined with polyethelene. The pit liner will be no less than 21 mils thick and the liner will be extended at least 3 feet over the top of the dikes and secured in place to keep edge of liner in place.
- E. The reserve pit will be fenced on three sides and fenced with four strands of barbed wire during drilling and completion phases. The 4th side will be fenced after drilling operations are complete and the drilling rig has moved out. If the well is a producer the mud pits will remain fenced in until the mud has dried up enough to break out the pits and reclaimed according to BLM requirements.

10. PLANS FOR RESTORATION OF SURFACE:

Rehabilitation of the location and reserve pits will be allowed to dry properly, fluids may be moved and disposed of in accordance with article 7-E 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 future erosion. In case of the well completed as a producer the drilling pad will be necessary to construct production facilities. After the area has been shaped and contoured top soil from the spoil pile will be placed over the disturbed area to the extent possible so that revegetation procedures can be accomplished to comply with the BLM specifications.

If the well is a dry hole the pad and road area will be contoured to match the existing terrain. Top soil will be spread to the extent possible and revegetation will be carried out according to the BLM specifications.

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

SURFACE USE PLAN

OGX RESOURCES, LLC.  
PATRON "23" FEDERAL # 1H  
UNIT "D" SECTION 23  
T25S-R29E EDDY CO. NM

11. ADDITIONAL INFORMATION:

- A. This project is located East of the Pecos River and South of of Cedar Canyon, drainage is West Southwest into the Pecos River. Topography consists of low relief gentle sloping grass land. The vegetation consists of Broom snakeweed, Yucca, Christmas tree cactus, catclaw, and various native range grasses.
- B. The surface and the minerals are owned by The U. S. Department of Interior and is administered by The Bureau of Land Management. The surface is used mainly for the grazing of livestock. A small portion of the surface is used by Oil Companies for the production of oil & gas.
- C. An archaeological survey will be performed on the location and roads used by this oil well and the report will be filed in the Breau of Land Management in the Carlsbad Field Office .
- D. There are no dwellings located within 2 miles of this location.

CERTIFICATION

I HEREBY CERTIFY THAT I OR PERSONS UNDER MY DIRECT SUPERVISION HAVE INSPECTED THE PROPOSED DRILL SITE AND THE ACCESS ROAD ROUTES, THAT I AM FAMILIAR WITH THE CONDITIONS THAT CURRENTLY EXIST, THAT THE STATEMENTS MADE IN THIS PLAN ARE TO THE BEST OF MY KNOWLEDGE ARE TRUE AND CORRECT, AND THAT THE WORK ASSOCIATED WITH THE OPERATIONS PROPOSED HEREIN WILL BE PERFORMED BY OGX RESOURCES, LLC. ITS CONTRACTORS AND/OR ITS SUB-CONTRACTORS AND IS IN CONFORMANCE WITH THIS PLANS AND TERMS AND THE CONDITIONS UNDER WHICH IT IS APPROVED. THIS STATEMENT IS SUBJECT TO THE PROVISIONS OF U.S.C. FOR FILING A FALSE REPORT.

OPERATOR'S REPRESENTATIVES:

BEFORE CONSTRUCTION

TIERRA EXPLORATION, INC  
P. O. BOX 2188  
HOBBS, NEW MEXICO 88241  
JOE JANICA 575-391-8503  
CELL 575-390-1598

DURING & AFTER CONSTRUCTION

OGX RESOURCES, LLC.  
P. O. BOX 2064  
MIDLAND, TEXAS 79701  
JEFF BIRKELBACH 432-685-1287  
CELL 432-553-0391

NAME

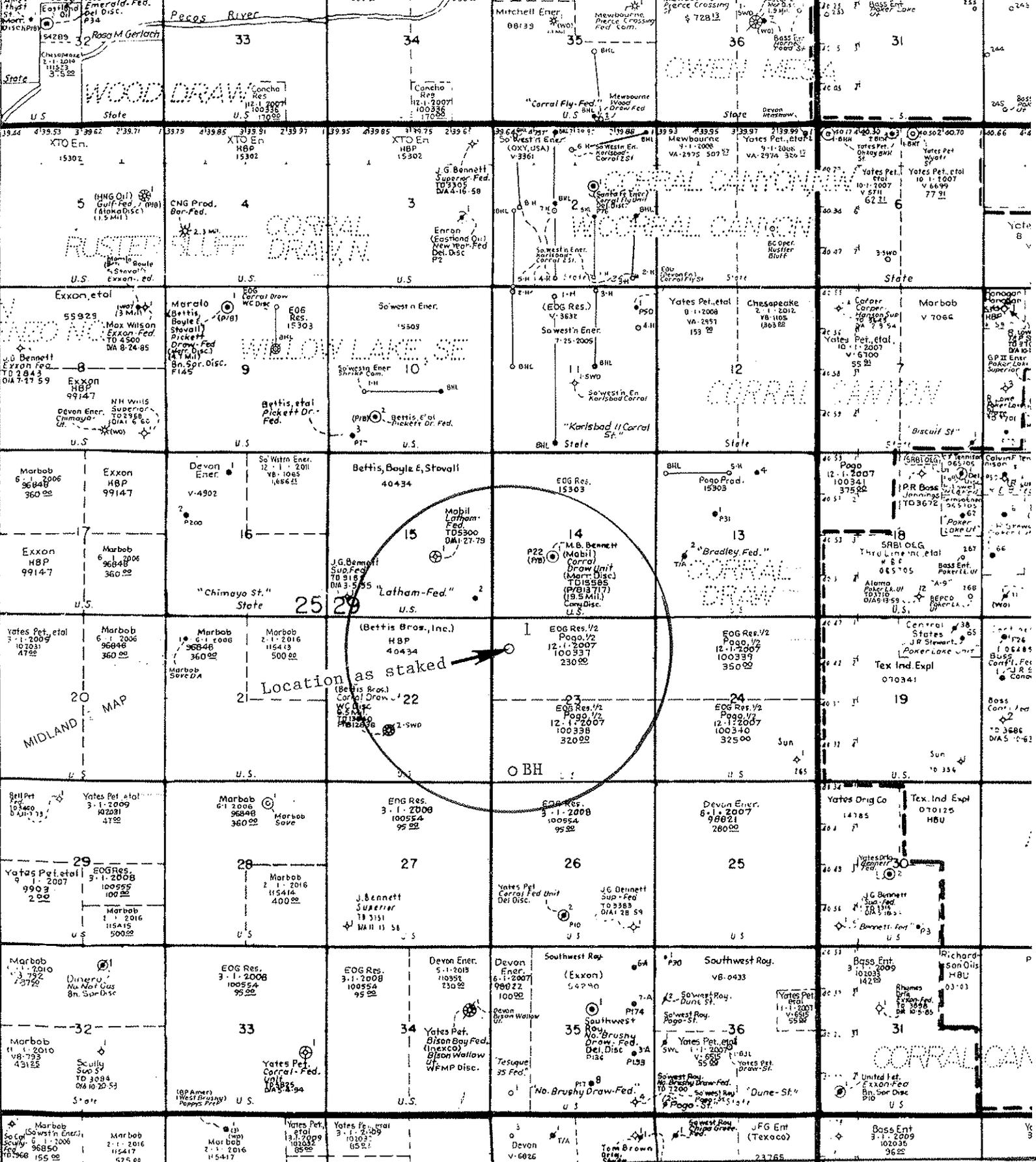
Joe T Janica

TITLE

Permit Eng.

DATE

10/09/08



**EXHIBIT "A-1"**  
**ONE MILE RADIUS MAP**  
  
**OGX RESOURCES, LLC**  
**PATRON "23" FEDERAL # 1H**  
**UNIT "D" SECTION 23**  
**T25S-R29E EDDY CO. NM**

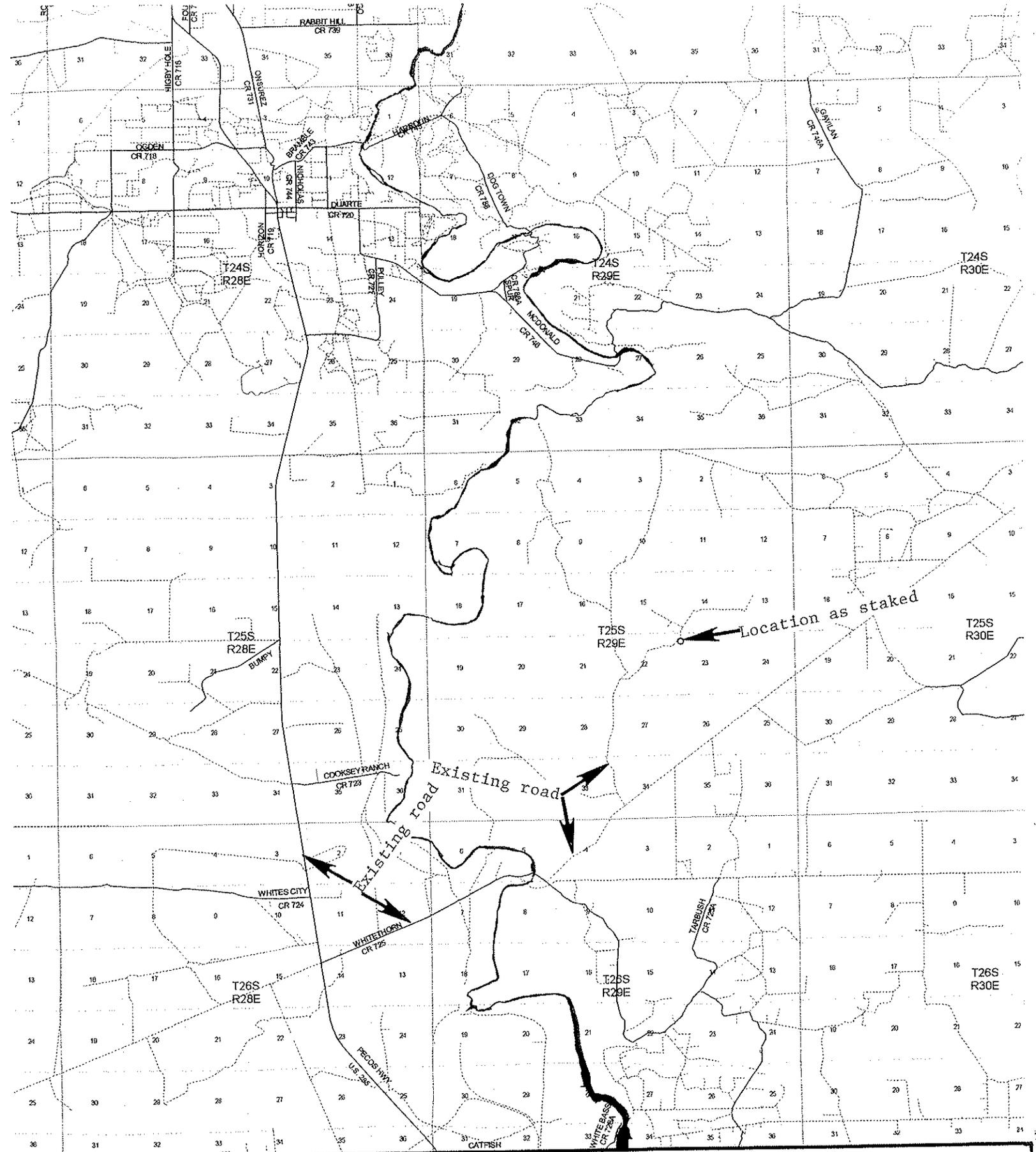
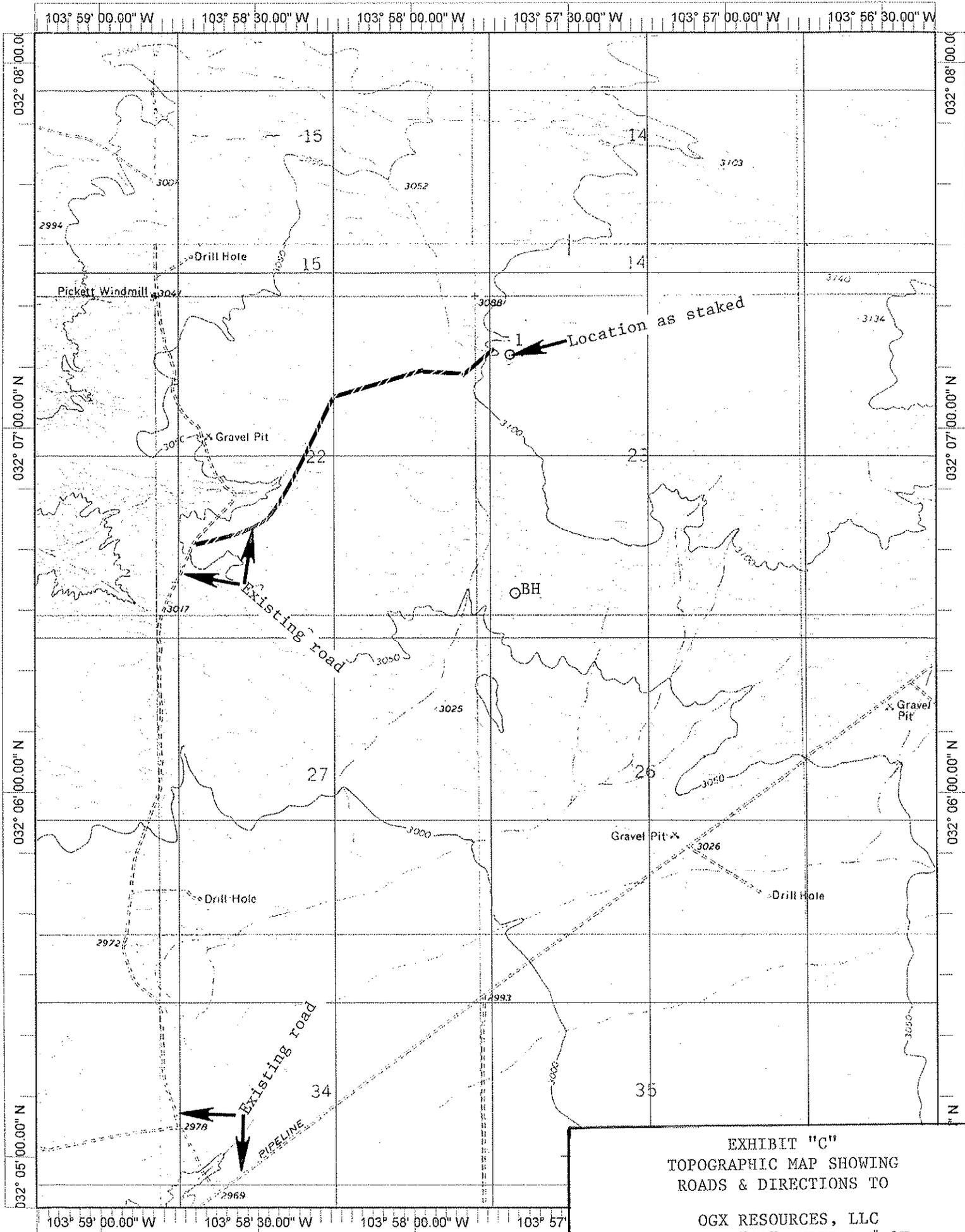


EXHIBIT "B"  
 LOCATION & ACCESS ROAD MAP

OGX RESOURCES, LLC.  
 PATRON "23" FEDERAL # 1H  
 UNIT "D" SECTION 23  
 T25S-R29E EDDY CO. NM



Datum: NAD27

Copyright (C) 1999, Maptech, Inc

**EXHIBIT "C"**  
**TOPOGRAPHIC MAP SHOWING**  
**ROADS & DIRECTIONS TO**  
  
**OGX RESOURCES, LLC**  
**PATRON "23" FEDERAL # 1H**  
**UNIT "D" SECTION 23**  
**T25S-R29E EDDY CO. NM**

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

Form C-144 CLEZ  
July 21, 2008

For closed-loop systems that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, submit to the appropriate NMOCD District Office.

**Closed-Loop System Permit or Closure Plan Application**

*(that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)*

Type of action:  Permit  Closure

**Instructions:** Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.  
Operator: \_\_\_\_\_ OGX Resources LLC \_\_\_\_\_ OGRID #: \_\_\_\_\_ 217955 \_\_\_\_\_  
Address: \_\_\_\_\_ P.O. Box 2064, Midland TX 79702 \_\_\_\_\_  
Facility or well name: \_\_\_\_\_ Patron 23 Fed #1H \_\_\_\_\_  
API Number: \_\_\_\_\_ OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr \_\_\_\_\_ D \_\_\_\_\_ Section \_\_\_\_\_ 23 \_\_\_\_\_ Township \_\_\_\_\_ 25S \_\_\_\_\_ Range \_\_\_\_\_ 29E \_\_\_\_\_ County: \_\_\_\_\_ Eddy NM \_\_\_\_\_  
Center of Proposed Design: Latitude \_\_\_\_\_ 32.119925° N \_\_\_\_\_ Longitude \_\_\_\_\_ 103.961432° W \_\_\_\_\_ NAD:  1927  1983  
Surface Owner:  Federal  State  Private  Tribal Trust or Indian Allotment

2.  
 **Closed-loop System:** Subsection H of 19.15.17.11 NMAC  
Operation:  Drilling a new well  Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)  P&A  
 Above Ground Steel Tanks or  Haul-off Bins

3.  
**Signs:** Subsection C of 19.15.17.11 NMAC  
 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers  
 Signed in compliance with 19.15.3.103 NMAC

4.  
**Closed-loop Systems Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC  
**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.  
 Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
 Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
 Closure Plan (Please complete Box 5) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC  
 Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_  
 Previously Approved Operating and Maintenance Plan API Number: \_\_\_\_\_

5.  
**Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)  
**Instructions:** Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.  
Disposal Facility Name: \_\_\_\_\_ CRI \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_ R1966 \_\_\_\_\_  
Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_  
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future service and operations?  
 Yes (If yes, please provide the information below)  No  
**Required for impacted areas which will not be used for future service and operations:**  
 Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
 Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  
 Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

6.  
**Operator Application Certification:**  
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.  
Name (Print): \_\_\_\_\_ Jeff Birkelbach \_\_\_\_\_ Title: \_\_\_\_\_ Engineering Manager \_\_\_\_\_  
Signature: \_\_\_\_\_  \_\_\_\_\_ Date: \_\_\_\_\_ 9 Oct. 2008 \_\_\_\_\_  
e-mail address: \_\_\_\_\_ jeff@ogxresources.com \_\_\_\_\_ Telephone: \_\_\_\_\_ 432-685-1287 \_\_\_\_\_

7.

**OCD Approval:**  Permit Application (including closure plan)  Closure Plan (only)

**OCD Representative Signature:** \_\_\_\_\_ **Approval Date:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **OCD Permit Number:** \_\_\_\_\_

8.

**Closure Report (required within 60 days of closure completion):** Subsection K of 19.15.17.13 NMAC

*Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.*

**Closure Completion Date:** \_\_\_\_\_

9.

**Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**

*Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.*

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

Yes (If yes, please demonstrate compliance to the items below)  No

*Required for impacted areas which will not be used for future service and operations:*

Site Reclamation (Photo Documentation)

Soil Backfilling and Cover Installation

Re-vegetation Application Rates and Seeding Technique

10.

**Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

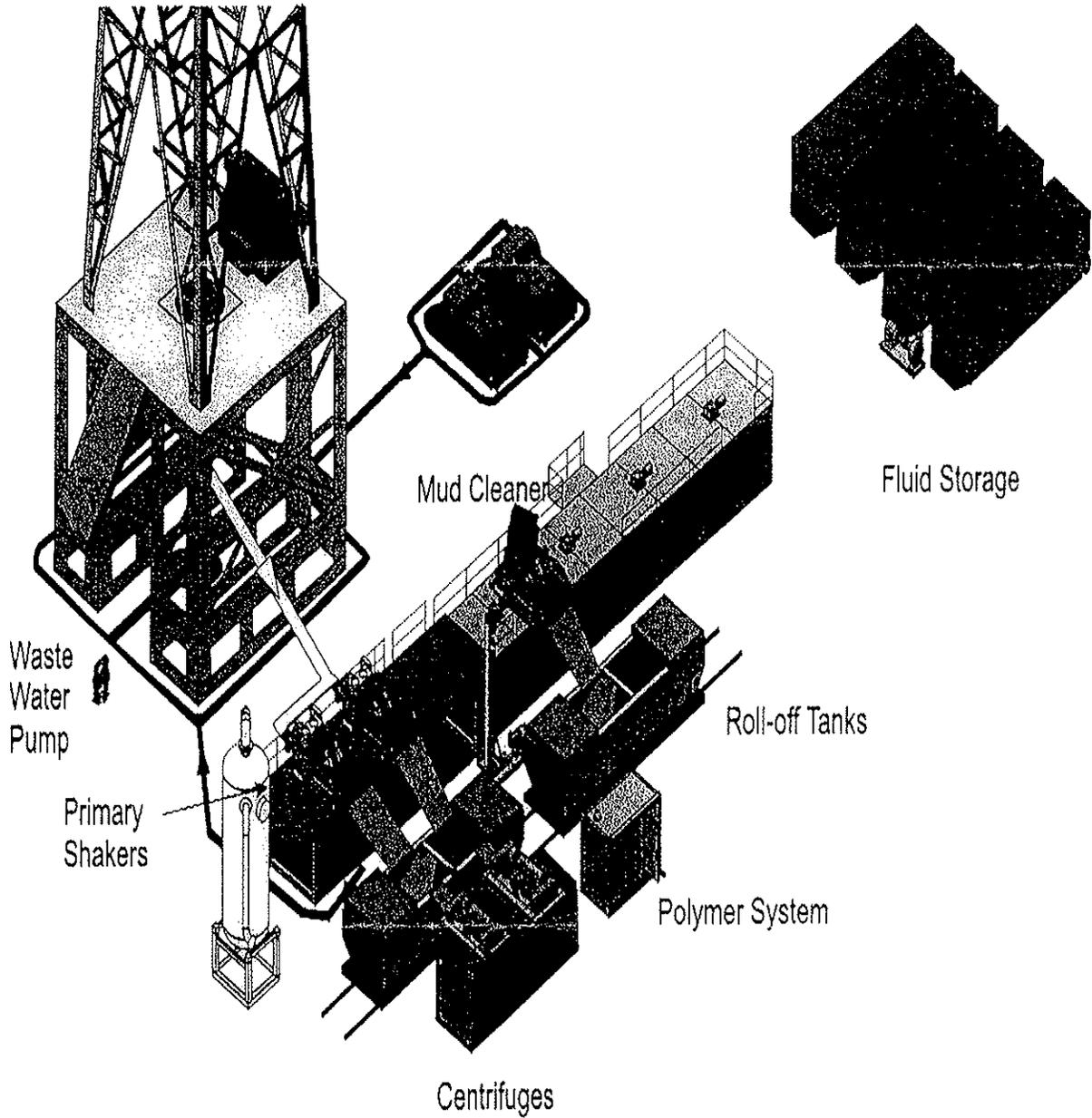
Name (Print): \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

OGX Energy, Inc

Closed Loop System with Roll-off Tanks



8522 Andrews Hwy  
Odessa, Texas 79765  
(432) 550-2944

## OPERATING AND MAINTENANCE PLAN

Closed Loop equipment will be inspected and monitored closely on a daily basis by each tour and any necessary maintenance performed. Any leak in the system will be repaired and/or contained immediately. Within 48 hours should a spill, release or leak occur, the NMOCD District II office in Artesia (575-748-1283) will be notified. Please note that notifications may be made earlier to the district office should a greater release occur. This is in accordance with the reporting requirements specified in NMOCD's Rule 116.

## CLOSURE PLAN

During and after drilling operations, liquids (which apply), all drill cuttings and drilling fluids will be hauled and disposed of at CRI (Controlled Recovery Incorporated - Permit R-9166).

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	OGX Resources
LEASE NO.:	NMNM120895
WELL NAME & NO.:	Patron 23 Federal No 1H
SURFACE HOLE FOOTAGE:	990' FNL & 560' FWL
BOTTOM HOLE FOOTAGE:	330' FSL & 660' FWL
LOCATION:	Section 23, T. 25 S., R 29 E., NMPM
COUNTY:	Eddy County, New Mexico

## TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- General Provisions**
- Permit Expiration**
- Archaeology, Paleontology, and Historical Sites**
- Noxious Weeds**
- Special Requirements**
- Construction**
  - V-Door & Pad restriction**
  - Notification
  - Topsoil
  - Reserve Pit
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- Road Section Diagram**
- Drilling**
- Production (Post Drilling)**
  - Well Structures & Facilities
- Interim Reclamation**
- Final Abandonment/Reclamation**

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator 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 shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## **V. CONSTRUCTION**

### **V-DOOR SOUTHEAST. AVOID GAS PIPELINE TO THE SOUTHEAST.**

#### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (505) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

#### **B. TOPSOIL**

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 8 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

#### **C. RESERVE PITS**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

#### **D. FEDERAL MINERAL MATERIALS PIT**

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (505) 234-5972.

#### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

## **F. ON LEASE ACCESS ROADS**

### **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

### **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

### **Crowning**

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

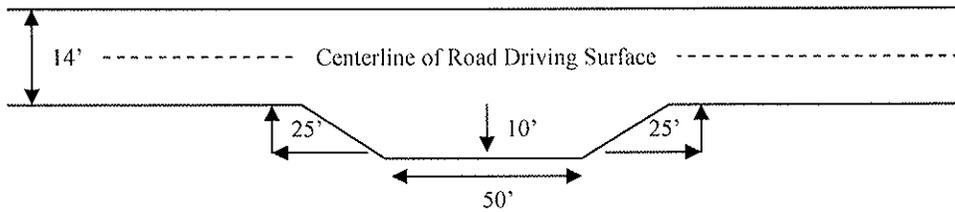
### **Ditching**

Ditching shall be required on both sides of the road.

### **Turnouts**

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

**Standard Turnout – Plan View**

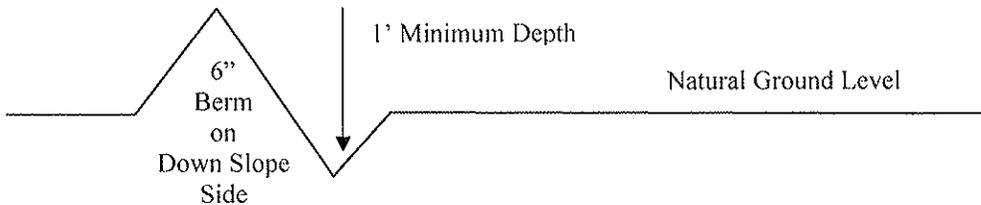


**Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

**Cross Section of a Typical Lead-off Ditch**



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

**Formula for Spacing Interval of Lead-off Ditches**

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

**Culvert Installations**

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

**Cattleguards**

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

**Fence Requirement**

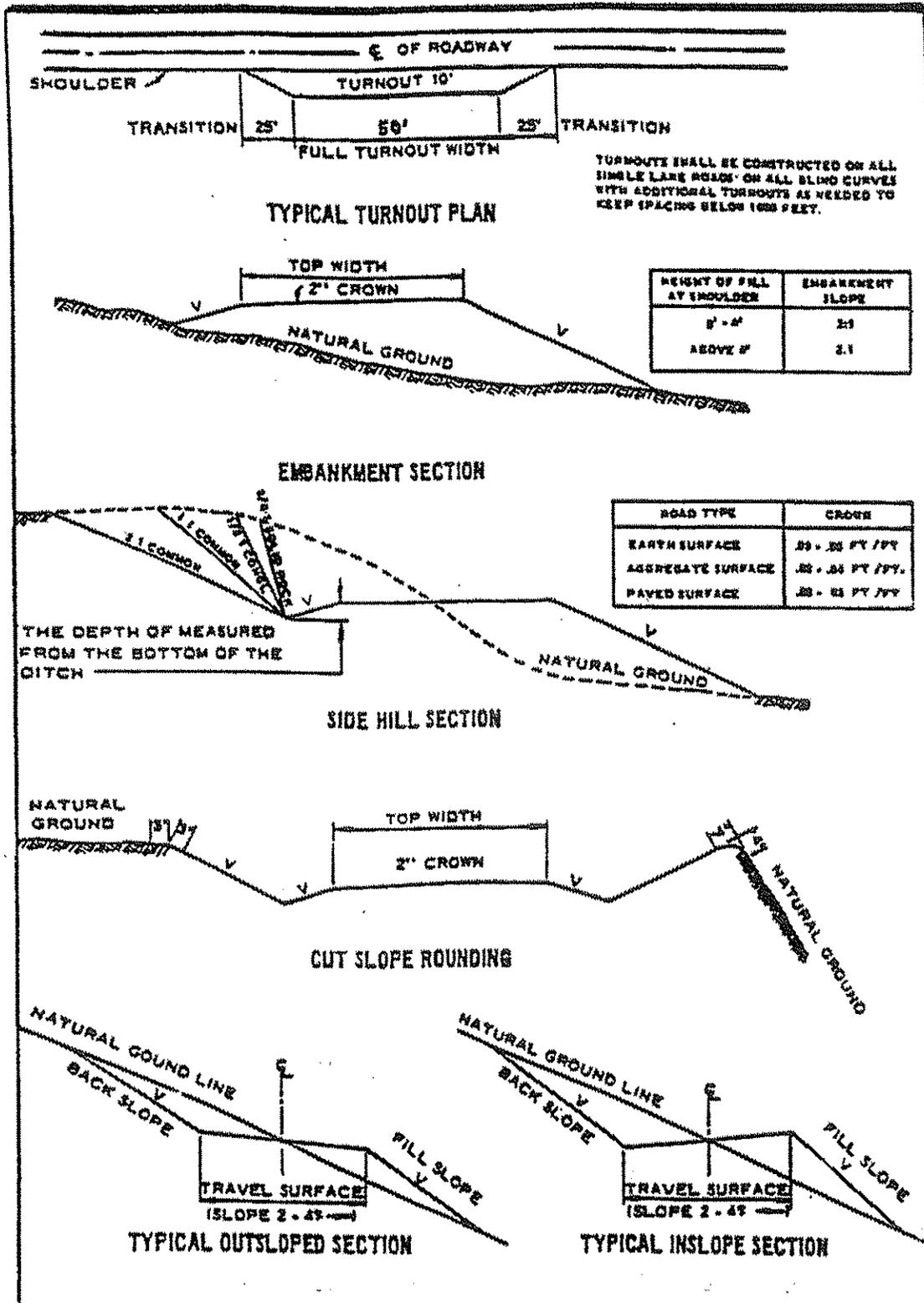
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

**Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



## VI. DRILLING

### A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

**Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**
2. 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.
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

### B. CASING

**Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.**

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

**Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.**

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.**

**Medium cave/karst.**

**Possible water flows in the Salado Group and Delaware Mountain Group.**

**Possible lost circulation in the Delaware Mountain Group.**

1. The 13-3/8 inch surface casing shall be set **at approximately 525 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Rustler Anhydrite could be encountered shallower.**
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
  - b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Casing to be set in the Lamar Limestone or Fletcher Anhydrite. Brine water mud to be used to setting depth. With added depth, excess cement calculates to less than 25%. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst concerns.**
3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Additional cement will be required as excess cement calculated to a negative 8%.**

**Centralizers required on horizontal leg, must be type for horizontal service and minimum of one every other joint.**

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

### **C. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.
3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. The tests shall be done by an independent service company.
  - b. The results of the test shall be reported to the appropriate BLM office.
  - c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
  - d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

### **D. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

**WWI 111908**

## **VII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color Shale Green, Munsell Soil Color Chart # 5Y 4/2

## **VIII. INTERIM RECLAMATION & RESERVE PIT CLOSURE**

### **A. INTERIM RECLAMATION**

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

The operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

Seed Mixture 2, for Sandy 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 no 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 of planting where drilling is possible. The see mixture will be evenly and uniformly planted over the disturbed area (smaller/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>
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed  
(Insert Seed Mixture Here)

## **X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS**

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.



United States Department of the Interior  
Bureau of Land Management  
Carlsbad Field Office

Refer To: 3160-3

October 27, 2008

To: AFM, Lands and Minerals, CFO

From: Geologist, CFO

Subject: Geologic Review of Application for Permit to Drill

Operator: OGX Resources, LLC.

Well Name and Number: Patron "23" Federal No. 1H

Location: 990' FNL & 560' FWL (SHL)  
330' FSL & 660' FWL (BHL)

Section: 23, T. 25 S., R. 29 E., NMPM

County: Eddy

State: NM

Lease No.: NM-120895

Date APD Rec'd: 10/24/08

1. Surface Elevation **3,104'**

Surface Geology **Quaternary Aeolian**

2. Geologic Marker Tops (from reports on surrounding wells):

<u>Geologic Marker</u>	<u>Depth</u>
Top of Salt	900'
Base of Salt	2760'
Base Basal Anhydrite	2920'
Bell Canyon	2953'

Marker tops taken from the log of the Chimayo No. 1-16 well located in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ , sec. 16, T. 25 S., R. 29 E., NMPM

<u>Geologic Marker</u>	<u>Depth</u>
Bell Canyon Ss	3212'
Cherry Canyon Ss	4060'
Brushy Canyon Ss	5240'

Marker tops taken from the log of the Dunes A 36 State No. 2 well located in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ , sec. 36, T. 25 S., R. 29 E., NMPM

<u>Geologic Marker</u>	<u>Depth</u>
Top of Salt	1165'
Base of Salt	2954'
Bell Canyon	3153'
Cherry Canyon	4095'
Brushy Canyon	5813'
Bone Springs	6949'

Marker tops taken from the log of the Corral Fed Unit No. 2 well located in the SE¼SW¼, sec. 26, T. 25 S., R. 29 E., NMPM.

<u>Geologic Marker</u>	<u>Depth</u>
Lamar Limestone	3127'
Bell Canyon	3154'
Cherry Canyon	4231'
Brushy Canyon	5632'
Bone Spring	6892'
3 <sup>rd</sup> Bone Spring Sand	9650'
Upper Wolfcamp	10,692'
Lower Wolfcamp	11,336'
Strawn	12,534'
Atoka	12,790'
Morrow	13,308'

Marker tops taken from the log of the Corral Draw Unit No. 2 well located in the NE¼SW¼, sec. 22, T. 25 S., R. 29 E., NMPM.

3. Fresh Water Information: useable water including domestic, stock and irrigation water are obtained from the Quaternary Alluvium, Triassic Dockum Group and the Rustler Formation. The State Engineer's water level list shows useable water at an approximate depth of 475 ft. This data indicates the potential for the occurrence of useable water from the Rustler Formation in the Township. Additionally, this area is within the western edge of one of the two north-south trending salt solution troughs which occur in the Delaware Basin. The troughs are filled with sedimentary rocks ranging in age from Triassic to Holocene, that in many instances, form excellent ground water reservoirs (Resource Map No. 7, 1976). This geologic setting is very complex and has made it difficult to pick the top of the Rustler in the adjacent townships to the south and east. In this case the top of the Rustler occurs at an approximate depth of 250 feet.

Deepest Expected Fresh Water: above 475 ft.

Does Surface Casing cover all anticipated usable fresh water zones? Yes

If no, set surface casing to 525 feet unless salt is shallower. In this case operator should set surface casing 25 feet into the Rustler Anhydrite. The geology along this solution trough is very complex and the depth to the Rustler Anhydrite may vary widely over a very short distance.

Controlled Water Basin: Yes

Capitan            Carlsbad             Roswell            Lea            No basin

Remarks: Witness setting surface casing at 525 feet within the Rustler Anhydrite unless the Rustler is encountered much shallower just outside of the salt solution trough. At this depth, the useable water would be protected and still be above the Salado Formation. Recommend changing intermediate string setting depth to 3,150 within the Lamar Limestone or Fletcher Anhydrite. At the proposed setting depth, the operator would still be within the salt section.

4. Geologic Hazards? Yes

H<sub>2</sub>S                      Karst                      Abnormal Pressures                      Other

Remarks: Although no H<sub>2</sub>S has been reported in the area, it is always a potential hazard. Possible lost circulation in the Delaware Mountain Group. Possible water flows in the Salado and Delaware Mountain Groups. There is a medium potential for Karst type structures due to shallow occurrences of carbonates, Halite, and/or Gypsum in the Pecos District. Expected bottom hole pressure should be approximately 4,200psi with pressures at the surface being approximately 2,500psi.

5. Other Mineral Deposits: Possible Halite and other associated salts in the Rustler Formation, and the Salado and Castile Groups.

6. Potash:

Secretary's  
Oil-Potash Area                      R-III-P Area                      Not Applicable

7. References:

New Mexico State Engineer's Water Well Listings:

Eddy County H<sub>2</sub>S List:

Hendrickson, G. E., and Jones, R. S., 1952, Geology and Ground-Water Resources of Eddy County, New Mexico; Ground Water Report No. 3, New Mexico Bureau of Mines and Mineral Resources, Campus Station, Socorro, New Mexico, p.169:

Nicholson, A., JR., and Clebsch, A., Jr., 1961, Geology and Ground-Water conditions of Southern Lea County, New Mexico, Ground Water Report No. 6, New Mexico Bureau of Mines and Mineral, Campus Station, Socorro, New Mexico, 123 p.

Resource Map No. 7, 1976 New Mexico Bureau of Mines and Minerals Resources, Socorro, New Mexico.

8. No active mining claims are located in this vicinity.

Geologist Signature: Jerry B. Fant

Date: 10/27/08

# Carlsbad Field Office NEPA Checklist

Thursday, November 13, 2008

EA NEPA #:	NM-520-2009-103	Project Type:	OIL WELL AND ROAD	Recd Date:	10/24/2008
Reference Number:	NMNM120895	Project Name:	1H-PATRON 23 FEDERAL	Routing Started:	10/28/2008
Project Lead:	HUNT, BARRY	Applicant:	OGX RESOURCES LLC	Review Due:	11/18/2008
Status:	COMPLETE	<input type="checkbox"/> NEPA Coordinator Initial Review	<input type="checkbox"/> NEPA Coordinator Final Review	Decision Date:	

Resource/Activity	Not Present	Not Impacted	**May be Impacted	Reviewer	COA's/Stips Req	Sign Off Date
Wastes, Hazardous or Solid*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hunt, Barry	<input type="checkbox"/>	10/28/2008
Public Health and Safety	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
Environmental Justice*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
General Topography/Surface Geology	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hunt, Barry	<input type="checkbox"/>	10/28/2008
Prime or Unique Farmlands*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Lands/Realty, ROW	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hunt, Barry	<input type="checkbox"/>	10/28/2008
Access/Transportation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
Vegetation/Forestry	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Livestock Grazing	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Hunt, Barry	<input type="checkbox"/>	10/28/2008
Invasive, Non-Native Species*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Soils	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Hunt, Barry	<input type="checkbox"/>	10/28/2008
Air Quality*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Floodplains*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Water Quality Surface/Ground*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hunt, Barry	<input type="checkbox"/>	10/28/2008
Watershed	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
Mineral Materials	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hunt, Barry	<input type="checkbox"/>	10/28/2008
Potash	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hunt, Barry	<input type="checkbox"/>	10/28/2008
Federally Proposed, Threatened or Endangered Species*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
USFWS Concurrence				Chopp, John	<input type="checkbox"/>	11/12/2008
Wetlands/Riparian Zones*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Special Status Species	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Wildlife Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Cave/Karst Resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hunt, Barry	<input type="checkbox"/>	10/28/2008
ACEC's*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hunt, Barry	<input type="checkbox"/>	10/28/2008
Wild/Scenic Rivers*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Wilderness*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hunt, Barry	<input type="checkbox"/>	10/28/2008
Outdoor Recreation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
Visual Resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
Native American Religious Concerns*	Unk	Unk	Unk	Stein, Martin	<input type="checkbox"/>	10/30/2008
Cultural Resources*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	09-23		
Paleontology	Unk	Unk	Unk			

\* "Critical Element" --- must be addressed in all NEPA documents

\*\* "Affected Element" --- must be addressed in the attached EA

\*1 May affect T&E, Not likely to be Adversely Affected

\*2 May affect T&E, likely to be Adversely Affected

Reason for Delay:

**ENVIRONMENTAL ASSESSMENT**  
**BLM Office: Carlsbad Field Office**

DOI-BLM-NM-0520-2009-0103-EA

Lease #: NM-120895

**OGX Resources, LLC**

**Patron 23 Fed. #1H**

**1. Purpose and Need for Action**

- 1.1 The OGX Resources Company has applied for a permit to drill a horizontal oil well and construct an access road. The location for the proposed well is:

**Surface Hole: 990 FNL & 560 FWL, Section 23, T. 25 S. R. 29 E**

**Bottom Hole: 330 FSL & 660 FWL, Section 23, T. 25 S. R. 29 E**

- 1.2 The need for this proposed action is for further development of a federal oil and gas lease.
- 1.3 The Carlsbad Resource Management Plan and 1997 Amendment has been reviewed, and it has been determined that the proposed action conforms with the land use plan terms and conditions as required by 43 CFR 1610.5.
- 1.4 The Carlsbad Field Office utilizes a resource conflict map that was prepared by an interdisciplinary team showing areas of concern. These areas of concern include Special Management Areas (SMA's), Threatened and Endangered (T&E) Habitat, known locations of Threatened and Endangered (T&E) species, areas with other Special Status species, Wildlife Habitat projects, Riparian/Wetland habitat, 100-year floodplains, etc. The conflict map is reviewed, and the author of the EA signs off the projects shown to be outside of the areas of concern. The projects, which occur in the areas of concern depicted on the map, are reviewed and signed off only by the resource specialist with the expertise for that area.

The critical elements subject to requirements specified in statute, regulation, or executive order listed below are either not present or not affected by the proposed action or alternative.

Areas of Critical Environmental Concern (ACEC's)

Floodplains

Hazardous/Solid Wastes

Native American Religious Concerns

Prime/Unique Farmlands

Special Status Species

Water Quality

Wild & Scenic Rivers

Wilderness

Wetlands/Riparian

- 1.5 **Legal requirements or considerations**  
All State and Federal requirements have been met.

## **2. Alternatives Including the Proposed Action**

### **2.1 Description of Proposed Action**

The OGX Resources Company proposes to construct an oil well location with a 280 x 260 ft. caliche pad. There will be no reserve pits due to the well being drilled utilizing a closed loop system. There will be a 413 x 30 ft. caliche access road required.

**NOTE! The location was moved during the on-site examination 660 ft. to the south and 100 ft. west due to gas pipelines, rancher water pipelines, rancher water tub and an old caliche pit.**

If the well is productive there will be a need for gas pipelines, tank batteries, electric lines and salt water disposal pipelines, and there will be an increase in applications to drill in the adjacent 160 acre tracts.

**Mitigation Measures:** The mitigation measures include the Pecos District Conditions of Approval. V-Door Southeast.

### **2.2 Description of Alternatives**

**Alternative A:** No Action (Reject Application)

**Mitigation Measures:** None

## **3. Affected Environment**

This section is a discussion, by relevant resources, of the current condition of the affected environment.

**Location:** The proposed project is located approximately 8 miles southeast of Malaga, NM and about 7 miles north of the Texas State line and about 3 miles east of the Pecos River. The regional industries are ranching, and oil and gas development. The land ownership of the proposed project is all federal surface and federal minerals.

### **3.1 Air Quality**

The area of the proposed action is within the Pecos River airshed and is classified as a Class II Air Quality Area. Air quality is generally considered excellent. During the spring, strong winds occasionally cause dust storms, which are the primary cause of air pollution in the project area. Particulates from nearby oil and gas production, agriculture burning and ambient dust effect air quality. More information about the area climate may be found in the *Soil Survey: Eddy Area, New Mexico*.

### 3.2 **Range**

The proposed action is within the Rustler Breaks Allotment. The allotment is:  
Wayland Perry  
P.O. Box 24  
Cherokee, Tx. 76832

### 3.3 **Soil**

The location is in a fairly flat spot in a Sandy Loam type area.

### 3.4 **Vegetation**

The existing vegetation consists of Mesquite/ Grasses type.

### 3.5 **Visual Resource Management (VRM)**

The public lands contained within and adjacent to the proposed APD are designated VRM Class IV. The objective of this class is to provide for management activities that require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. The change to the landscape is dominant, but mitigated.

### 3.6 **Wildlife Habitat**

The wildlife habitat in the area supports populations of ungulates (primarily mule deer), carnivores, water birds, upland birds and raptors. Population composition and numbers vary with suitability of habitat.

#### Migratory Birds

Executive order #13186 titled "Responsibilities of Federal Agencies to Protect Migratory Birds" signed 1/10/01 requires that the BLM evaluate the effects of federal actions on migratory birds. A migratory bird inventory has not been completed for this area. Common migratory birds which may use the area as habitat include various species of song birds, owls, ravens, hawks, finches, doves, thrashers, and meadow larks.

### 3.7 **Cultural**

The project falls within the Southeastern New Mexico Archaeological Region. This region contains the following cultural/temporal periods: Paleoindian (ca. 12,000-8,000 B.C.), Archaic (ca. 8000 B.C. –A.D. 950), Ceramic (ca. A.D. 600-1540) Protohistoric and Spanish Colonial (ca. A.D. 1400-1821), and Mexican and American Historical (ca. A.D. 1822 to early 20th century). Sites representing any or all of these periods are known to occur within the region. A more complete discussion can be found in *Living on the Land: 11,000 Years of Human Adaptation in Southeastern New Mexico An Overview of Cultural Resources in the Roswell District*, Bureau of Land Management published in 1989 by the U.S. Department of the Interior, Bureau of Land Management. A cultural resource inventory shall be conducted of the area of effect for the proposed project prior to any ground disturbing activities.

#### **4. Environmental Impacts or Consequences**

This section is a discussion, by relevant resources, of the potential impacts of each alternative. The discussion includes direct, indirect, cumulative and residual impacts after mitigation actions have been applied.

##### **4.1 Air Quality**

**Proposed Action:** Air quality will be affected by increased dust during construction and from vehicles traveling to and from the location. In addition, various odors will be produced. These could include diesel fumes, hydrogen sulfide gas and chemical odors in association with drilling. Although these impacts will fall within limits set by the National Ambient Air Quality Standards, the affects will be felt on and around the location.

**Alternative A:** Alternative A would have no impact.

##### **4.2 Range**

**Proposed Action:** The resulting loss of vegetation will not affect the Animal Unit Months (AUMs) authorized for livestock use in this area. There are occasional livestock injuries or deaths due to accidents such as collisions with vehicles, falling into mud pits or other excavations and ingesting plastic or other materials present at the work site. If further development occurs, the resulting loss of vegetation could reduce the AUMs authorized for livestock use in this area.

**Alternatives A:** Alternative A would have no effect.

##### **4.3 Soil**

**Proposed Action:** There is a potential for soil erosion due to the highly erosive nature of a shallow soil area that is exposed. There is always the potential for soil contamination around production facilities due to spills of salt water and/or hydrocarbons. If further development occurs this could result in increased soil erosion and soil contamination from surface spills.

**Alternative A:** Alternative A would have no effect.

##### **4.4 Vegetation**

**Proposed Action:** Vegetation will be removed when the well pad and access road are constructed. This impact will be permanent as long as the well is productive. When the well is plugged and abandoned, the area will potentially re-vegetate in 4-5 years, depending on timely rainfall. If further development occurs this could result in increased vegetation depletion.

**Alternative A:** Alternative A would have no effect.

##### **4.5 Visual Resource Management (VRM)**

**Proposed Action:** If further development occurs this could result in increased visual impacts due to pads, roads, power poles, ROW cuts and production facilities.

**Alternative A:** Alternative A would have no effect.

#### 4.6 **Wildlife**

**Proposed Action:** The severity of impacts depends on the sensitivity of the species affected, the nature of the environmental disruption, habitat characteristics, and the availability and condition of alternative habitat. The species present in this area tend to vacate traditional habitats under continued and increasing pressure from petroleum activities. This is probably due to the intensive nature of petroleum production occurring. Under the proposed action, these species may vacate the area for several years and may never reoccupy this habitat again. This will depend on the long-term development in the area and whether suitable habitat exists elsewhere that can support additional animals. If suitable habitat is not available, species populations will likely sustain a decrease, especially if secondary habitat is also under pressure and/or degradation.

**Alternative A:** Alternative A would have no effect.

#### 4.7 **Cultural**

A cultural resource inventory was conducted for the area of effect (09-NM-523-23), no Historic Properties were identified.

**Alternative A:** Alternative A would have no effect.

### **5. Consultations and Coordination**

Prepared by: Barry W. Hunt, Surface Protection Specialist BLM-CFO  
Date: 10/28/08

The following individuals have been consulted regarding the proposed action:

Martin Stein, Archaeologist, BLM-CFO  
John Chopp, Wildlife Biologist, BLM-CFO

**DECISION RECORD (DR)**  
**AND**  
**FINDING OF NO SIGNIFICANT IMPACT (FONSI)**  
**BLM Office: Carlsbad Field Office**

DOI-BLM-NM-0520-2009-0103-EA  
Lease #: NM-120895  
**OGX Resources, LLC**  
**Patron 23 Fed. #1H**

**Purpose and Need for Action:**

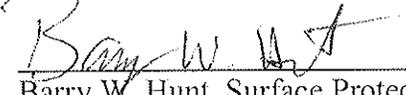
The OGX Resources Company has applied for a permit to drill a horizontal oil well and construct an access road. The location for the proposed well is:

**Surface Hole: 990 FNL & 560 FWL, Section 23, T. 25 S. R. 29 E**  
**Bottom Hole: 330 FSL & 660 FWL, Section 23, T. 25 S. R. 29 E**

**Recommendation and Rationale:**

Our analysis has shown with proper mitigation, as described under section 2.1, the proposed action would have minimal environmental impacts. The proposed action is consistent with the Carlsbad Resource Area Management Plan and Amendment. Therefore, it is recommended that this application be approved.

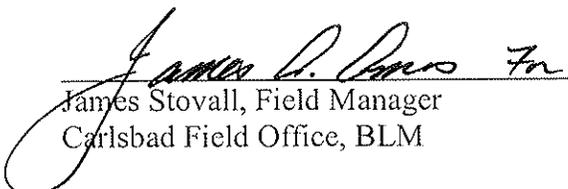
Prepared by:

  
\_\_\_\_\_  
Barry W. Hunt, Surface Protection Specialist

11/13/08  
Date

**Finding of No Significant Impact/Decision Record:**

I have reviewed this environmental assessment including the explanation and resolution of any potentially significant environmental impacts. I have determined that the proposed action, with the mitigation measures described under section 2.1, will not have any significant impacts on the human environment, no significant impacts to minority or low-income populations or communities have been identified for the proposed action and that an EIS is not required. I have determined that the proposed project is in conformance with the approved land use plan. It is my decision to implement the project with the mitigation measures attached.

  
\_\_\_\_\_  
James Stovall, Field Manager  
Carlsbad Field Office, BLM

11-19-08  
Date



# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Carlsbad Field Office  
620 E. Greene St.  
Carlsbad, NM 88220-6292



**In reply refer to**  
3162.4  
NMNM120895

10/27/2008

OGX Resources LLC  
Attn: Joe Janica  
P O Box 2188  
Hobbs, NM 88241

RE: 1H-PATRON 23 FEDERAL, LEASE NMNM120895  
990FNL 560FWL, SEC.23, 25, 29, EDDY, NM

Your Application for Permit to Drill (APD), for the referenced well, was received on 10/24/2008.  
The APD has been reviewed pursuant to part III.B.2 of Oil and Gas Onshore Order No.1 and is found to be:

- Complete
- Incomplete in the following area(s)
  - Form 3160-3
  - Survey Plat
  - Drilling Plan (BOPE, Casing Program, etc.)
  - Surface Use Plan
  - Bonding
  - Operator Certification Statement
  - Onsite Not Performed
  - Original Signature
  - Other

Comments:

Please submit original and (3) copies of each of the above noted deficiencies. If you would like to know whether the Archaeological Survey Report has been filed with the BLM, call the cultural staff at (575) 234-5972. You will be notified if additional information is needed during the processing of your APD.

If you have any questions, please contact Debbie McKinney at (575) 234-5931.

Sincerely,

*Debbie McKinney*  
 For Don Peterson  
 Assistant Field Manager, Minerals

**BUREAU OF LAND MANAGEMENT  
CASE RECORDATION  
(LIVE) SERIAL REGISTER PAGE**

Run Date/Time: 11/19/08 12:37 PM

Page 1 of 1

**01 12-22-1987;101STAT1330;30USC181 ET SEQ**  
**Case Type 312021: O&G LSE COMP PD -1987**  
**Commodity 459: OIL & GAS L**  
**Case Disposition: AUTHORIZED**

**Total Acres**  
**1,280.000**

**Serial Number**  
**NMNM-- - 120895**

Serial Number: NMNM-- - 120895

Name & Address			Int Rel	%Interest
OGX RESOURCES LLC	400 N MARIENFELD #200	MIDLAND TX 79701	LESSEE	100.00000000

Serial Number: NMNM-- - 120895

Mer Twp Rng	Sec	SType	Nr Suff	Subdivision	District/Resource Area	County	Mgmt Agency	
23	0250S	0290E	023	ALL	Entire Section	CARLSBAD FO	EDDY	BUREAU OF LAND MGMT
23	0250S	0290E	024	ALL	Entire Section	CARLSBAD FO	EDDY	BUREAU OF LAND MGMT

Serial Number: NMNM-- - 120895

Act Date	Code	Action	Action Remarks	Pending Office
05/30/2008	387	CASE ESTABLISHED	200807013;	
06/30/2008	299	PROTEST FILED	SUSAN H BELL;	
07/01/2008	299	PROTEST FILED	WESTERN ENVR LAW CTR;	
07/01/2008	299	PROTEST FILED	WILD EARTH GUARDIANS;	
07/16/2008	191	SALE HELD		
07/16/2008	267	BID RECEIVED	\$5248000.00;	
09/08/2008	298	PROTEST DISMISSED	SUSAN H BELL;	
10/24/2008	298	PROTEST DISMISSED	WILD EARTH GUARDIANS;	
10/31/2008	237	LEASE ISSUED		
10/31/2008	298	PROTEST DISMISSED	WESTERN ENVR LAW CTR;	
10/31/2008	974	AUTOMATED RECORD VERIF	BTM	
11/01/2008	496	FUND CODE	05;145003	
11/01/2008	530	RLTY RATE - 12 1/2%		
11/01/2008	868	EFFECTIVE DATE		
11/17/2008	042	CASE SENT TO	RROMERO;	
10/31/2018	763	EXPIRES		

Line Nr	Remarks	Serial Number: NMNM-- - 120895
02	STIPULATIONS ATTACHED TO LEASE:	
03	NM-11-LN SPECIAL CULTURAL RESOURCE	
04	SENM-LN-1 CAVE -- KARST OCCURRENCE AREA	
05	SENM-S-19 PLAYAS AND ALKALI LAKES	

15

14

13

NM 15303  
OG Lse

X

22

23

24

14778  
Lse

7/16/2008  
OG Compt

27

26

25

NM 98821  
OG Lse

35

36

NM110352  
OG Lse

NM  
119756  
OG Lse

NM 54290  
OG Lse

1202931  
D/C

Bureau of L  
RE

JUN

Carlsba  
Car

CAVEAT STATEMENT

This plat is the Bureau's Record of Title, and should be used only as a graphic display of the township survey data.

## UNITED STATES DEPT OF INTERIOR

## BUREAU OF LAND MANAGEMENT

## BOND ABSTRACT

BOND NO: NMB000244

DOCUMENT ID: 8141

CASE TYPE: 310434 O&amp;G BOND ALL LANDS

DISPOSITION: ACCEPTED

## NAME AND ADDRESS OF BOND PARTIES

B20040371 BONDED PRINCIPAL  
 OGX RESOURCES LLC  
 PO BOX 2064  
 MIDLAND TX 79702

## NAME AND ADDRESS OF SURETY PARTIES

## SERIAL NUMBER(s):

BOND AREA: STATEWIDE STATES COVERED: NM  
 TYPE OF LAND: FEDERAL-ALL RIGHTS BOND AMOUNT:\$25,000  
 BOND TYPE: LETTER OF CREDIT

## BONDED ACTIVITY/PURPOSE

## COMMODITY(IES)

GENERAL LSE/DRILLING

OIL &amp; GAS L

ACTION CODE	ACTION DATE	ACTION TAKEN	ACTION REMARKS	PENDING
468	10/25/2004	BOND FILED		NM92100
469	10/28/2004	BOND ACCEPTED	EFF 04/25/2004+	
974	10/28/2004	AUTOMATED RECORD VERIF	GAG	

## GENERAL REMARKS

## LINE # REMARK

001 LOC FROM WEST TEXAS NATIONAL BANK, 6 DESTA DRIVE, SUITE 2400,  
 002 MIDLAND, TX 79705.

**United States Department of the Interior  
Bureau of Land Management**

Receipt

CARLSBAD FIELD OFFICE  
620 E. GREENE  
CARLSBAD, NM 88220 -6292  
Phone: (575) 234-5972

No: 1806504

<b>Transaction #:</b> 1864969	
<b>Date of Transaction:</b> 10/24/2008	
<b>CUSTOMER:</b>	OGX RESOURCES LLC PO BOX 2064 MIDLAND, TX 79702-2064 US

LINE #	QTY	DESCRIPTION	REMARKS	UNIT PRICE	TOTAL
1	1.00	OIL & GAS / APPLICATION FOR PERMIT TO DRILL (APD) / APD FEE	PATRON 23 FED 1	4000.00	4000.00
<b>TOTAL:</b>				<b>\$4,000.00</b>	

PAYMENT INFORMATION					
1	AMOUNT:	4000.00	POSTMARKED:	N/A	
	TYPE:	CHECK	RECEIVED:	10/24/2008	
	CHECK NO:	15912			
	NAME:	OGX RESOURCES LLC PO BOX 11148 MIDLAND TX 79702 US			

REMARKS

This receipt was generated by the automated BLM Collections and Billing System and is a paper representation of a portion of the official electronic record contained therein.

# Engineer Worksheet

## Carlsbad Field Office

620 E. Greene St.  
Carlsbad, NM 88220-6292

Tracking Number: ATS-08-985 County: Eddy  
Company: OGX Resources LLC Well Name and Number: 1H-PATRON 23 FEDERAL  
Surface Hole Location: 990FNL 560FWL, SEC.23, 25, 29 Bottom Hole Location: 330FSL 660FWL, SEC.23, 25, 29

Lease Number: NMNM120895 Prod Status: NON-PROD Effective: 05/30/2008  
Bond: STATEWIDE Bond #: NM000244 Potash: NO  
NOS Received: 08/18/2008 APD Received: 10/24/2008 10-Day LTR Sent: 10/27/2008  
Acreage: 160 Orthodox: Yes COM Agr Required: NO

### Deficiencies Noted:

Form 3160-3  Survey Plat  Drilling Plan  Surface Use Plan  Bonding  Original Signature  Operator Cert Statement  
 Other Deficiencies: \_\_\_\_\_

### Adjudication Comments:

GEO Report Completed

### Technical Checklist

Plat: Ok Elevation: 3104' GL  
Proposed Depth: TVD: 8000 MD: 11788 Targeted Formation: Bone Spring  
Anticipated Water-Oil Gas, Etc: Water above 475'; Oil - Bell Canyon, Cherry Canyon, Brushy Canyon, Bone Spring  
Casing/Cement Program: Ok/see COA  
Bottom Hole Mud Weight: 10.0 BHP: 4160 MASP: 2400  Horizontal  Directional  Re-entry  
Well Control Prog (BOP, ETC): 3M system Mud Program: See COA  
Test-Log-Core Programs: No DST's, possible sidewall cores; Logs: DLL, N/D, GR, CAL; mud logger from surface csg - TD  
H2S or Other Hazards: No H2S, medium cave/karst, lost circulation, water flows  
Water Basin: Carlsbad Water Basin  
Casings to Witness:  Surface  Intermediate  Production  CIT Required  Other Witness

Comments: <div>Well is orthodox for Bone Spring formation, entry into producing zone is unorthodox.</div>

ENTERED  
IN AIRM

WESLEY INGRAM

11/19/2008



Engineer Name

Date

Signature

Adjudication Date

Adjudicator Initials

# Summary of Engineer's Wellbore Evaluation

## Case 1

13 3/8 inches O.D. of Surface Casing		<u>Design Factors</u>							
Segment	Grade	#/ft	Coupling	Joint	Collapse	Burst	Length	Weight	
"A"	H 40	48.00	ST & C	12.78	3.21	1.02	525	25,200	
"B"							0	0	
							Totals:	525	25,200
<u>Compare Cement Volumes, Proposed to Minimum</u>									
Hole Size	Annular Volume	Proposed Sx Cmt	CuFt Cmt Proposed	Min Cu Ft	Excess % Cmt	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
17 1/2	0.6946	410	688	416	65	8.80	987	2M	1.56
<b>Comments for</b> 13 3/8 " Csg									

9 5/8 << Casing inside the 13 3/8		<u>Design Factors</u>							
Segment	Grade	#/ft	Coupling	Joint	Collapse	Burst	Length	Weight	
"A"	J 55	36.00	ST & C	3.38	1.19	0.85	3,240	116,640	
"B"							0	0	
"C"							0	0	
"D"							0	0	
							Totals:	3,240	116,640
<u>Compare Cement Vol(s), Proposed to Min, with 525 ft overlap above 1st csg shoe.</u>									
Hole Size	Annular Volume	Proposed Sx Cmt	CuFt Cmt Proposed	Min Cu Ft	Excess % Cmt	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
12 1/4	0.3132	700	1278	1067	20	10.10	2396	3M	0.81
<b>Comments for</b> 9 5/8 " Csg Frac gradient is 1.09 - safety factor okay for burst.									

5 1/2 inside the 9 5/8		<u>Design Factors</u>							
Segment	Grade	#/ft	Coupling	Joint	Collapse	Burst	Length	Weight	
"A"	N 80	17.00	LT&C	1.74	1.71	1.86	7,100	120,700	
"B"	N 80	17.00	Buttress	2.97	1.33	1.86	4,688	79,696	
"C"							0	0	
"D"							0	0	
8,000.00 is the Max Vertical Depth of the Horz Portion of Wellbore.							Totals:	11,788	200,396
B Segment Design Factors would be: 5.60 1.51 if it were a vertical wellbore.									
<u>Compare Cement Vol(s), Proposed to Min, with 3150 ft overlap above 2nd csg shoe.</u>									
Hole Size	Annular Volume	Proposed Sx Cmt	CuFt Cmt Proposed	Min Cu Ft	Excess % Cmt	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
8 3/4	0.2526	1417	2784	3013	-8	10.00	0		1.35
<b>Comments for</b> 5 1/2 " Csg Joint factor for casing okay since calculated dry. Additional cement will be required.									

# Drilling Plan APD Deficiency Review Checklist

Operator: DFX  
 Well Name/Number: Patron 23 #1H  
 Location: Sec 23 T25S R29E  
 Lease Number: NM 120895  
 Agreement Name (If Applicable): \_\_\_\_\_

	<u>YES</u>		<u>NO</u>
Estimated Tops of Important Markers .....	/		—
Estimated Depths of Anticipated Water, Oil, Gas, or Other Important Minerals .....	/		—
If Identified Above, Plan for Protection .....	/		—
Minimum Specifications for Pressure Control .....	/		—
BOPE Schematic Diagram.....	/		—
BOPE Testing Procedures and Frequency.....	/		—
Proposed Casing Program; Including Size, Grade, Weight, Type, Setting Depth, & New vs. Used..... <u>NO</u> <u>SE</u>	/		—
Amount & Type of Cement, Including Additives .....	/		—
Type & Amount of Logging, Coring, Testing .....	/		—
Type & Characteristics of Mud System; Quantities, Weighting Material, & Monitoring Equipment .....	/		—
Expected BHP .....	/		—
Abnormal Pressures Or Hazards .....	/		—
Other Facts/Supplementary Information.....	/		—

REMARKS/NEEDED INFORMATION: \_\_\_\_\_

SIGNATURE: Jerry B. Faust

DATE: 10/27/08



United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Carlsbad Field Office  
620 E. Greene St.  
Carlsbad, NM 88220-6292



In reply refer to:

Allotment: Rustler Breaks, 77037

10/28/2008

Tran R. King  
64 N. 5050 E  
Ririe, ID 83443

Dear Permittee:

The Bureau of Land Management is in the process of granting an Application for Permit to Drill (APD) for a gas and/or oil well within your grazing allotment. Construction activity associated with the development of this APD may disturb livestock operations in the immediate area. The location of the APD is shown on the enclosed map.

Also, subsequent to the development of the oil/gas well(s), several rights-of-way may be issued for pipelines, roads, and distribution lines in the near future within your grazing allotment. Activity associated with the construction of facilities associated with these rights-of-way may also disturb livestock operations within your grazing allotment.

Construction of the facilities authorized by the APD and associated ROW for pipelines, roads, and distribution lines may begin in the near future. If you have any questions or concerns regarding these actions, please contact Barry Hunt (575-234-5965) concerning APD's or Owen Lofton (575-234-5923) for rights-of-way.

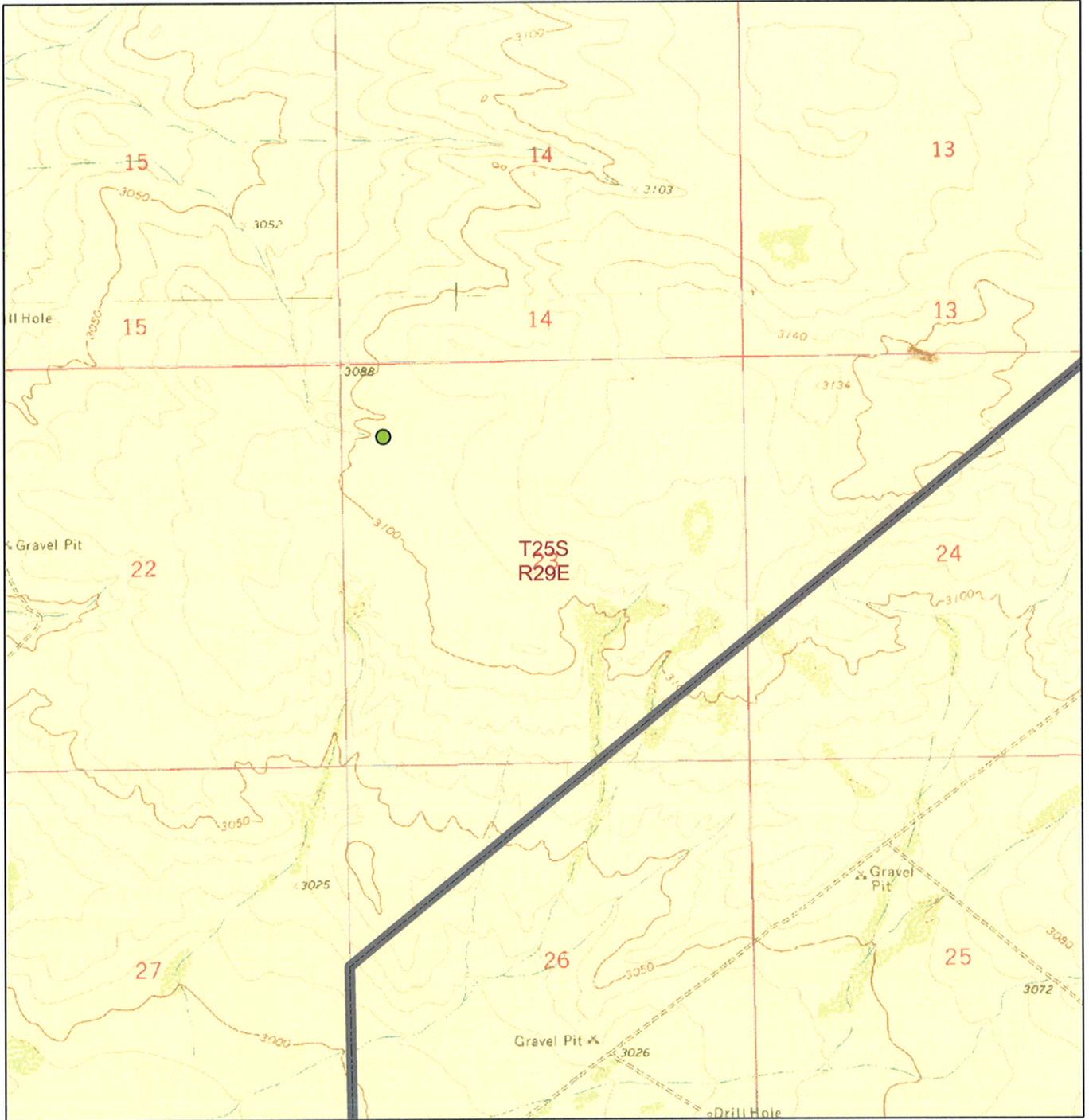
Sincerely,

Don Peterson  
Assistant Field Manager, Minerals

1 Enclosure (Map)

Allotment # 77037 T25S, R29E, Section 23  
 OGX RESOURCES

New Mexico



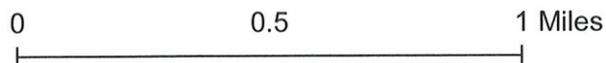
Produced by the Bureau of Land Management  
 Map printed on May 22, 2008



1:24,000

- RECEIVED APD
- RANGE ALLOTMENTS
- BUREAU OF LAND MANAGEMENT
- BUREAU OF RECLAMATION
- DEPT. OF ENERGY
- FOREST SERVICE
- NATIONAL PARK SERVICE
- PRIVATE
- STATE
- STATE GAME & FISH

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by BLM. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.



ADJUDICATION CHECKLIST FOR APPLICATION FOR PERMIT TO DRILL (APD)

3162.4  
SEC. 23-25-29 NMNM120895  
1H-PATRON 23 FEDERAL OGX RESOURCES LLC  
SHL: 990FNL 560FWL  
BHL: 330FSL 660FWL

APD Log Tracking Number ATS-08- 985

Verify Dates

- Notice of Staking Received Date: 8-18-08 30 Day NOS posting ends: 9-17-08
- NOS entered in ATS  NOS entered in AFMSS.
- \$4000 APD application fee received  Front Page Faxed & Posted in Reception Book
- Distribution stamps on front page of all APDs
- APD Date stamped on back of APD (form 3160.3)
- APD received date: 9-24-08 (Circle one) HC or EC 30 Day APD posting ends:
- EC Stamped on front of APD if received EC?  Distribution Stamps on front of all copies?

Verify Location on Wall Maps:

- Well Location (7 1/2 Minute Map) - Find 1/4-1/4
- SHL Aliq. NW1/4 Lot #: D
- BHL Aliq. SW1/4 Lot #: M

CFO District Map: Use to determine surface owner (or surface management entity)

- BLM
- Fee  Private Surface Owner Agreement received  Yes  No
- State  Split Estate stamped on front of CFO copy, I & E copy, and OCD copy
- Bureau of Reclamation (Contact is Rik Arndt at (505) 462-3604)
- BOR letter sent via e-mail to Rik Arndt rarndt@uc.usbr.gov APD copy mailed date: \_\_\_\_\_
- Noted as deficiency in 10 day letter
- Stipulations received. Received date: \_\_\_\_\_ Enter as a remark in AFMSS

Potash Map

- Not Potash (or) Potash Type  R111  Secretary's
- APD distribution pages stamped with potash type
- In WIPP area?  WIPP letter sent date: \_\_\_\_\_ (Export to APD-FY Folder. Enter remark in AFMSS).
- Letter sent via e-mail to: Susan.McCauslin@wipp.ws (Contact is Susan McCauslin at WIPP).
- Noted as deficiency in 10 day letter. (505-234-7349, P. O. Box 3090, Carlsbad, NM 88220)

Cave Karst Map

- High  Medium  Low

Plan of Development -Wildlife

- POD Form not needed.
- POD Form needed. Zone:  (Not a deficiency, but mention it in 10 day letter).

Abstract:

- Search in LR2000, verify, and print 2 copies of Lease Abstract. Attach one copy to CFO copy, one to I & E copy.
- Is operator a lessee or have operating rights?  Yes  No
- Production Status:  Held by Production Effective Date: \_\_\_\_\_
- Check MTPs, Panel maps to verify lease numbers. Print map and highlight lease area. Keep with CFO copy.
- Surface Hole Location (SHL) Lease #: 120895
- Bottom Hole Location (BHL): Lease #: NM120895 (If BHL Lease # different, copy MTP for file).
- First Production Point Location (if Directional well Lease #: \_\_\_\_\_)

Adjudication:

- Bond Number NMB000244 (See bond list). Bond Type:  Individual  Statewide  Nationwide
- Acreage dedicated to well shown on APD front page & on Plat page
- APD is:  New,  Re-submittal,  Re-entry. (Pull old file folder from file room, route to Permitting S
- APD (Form 3160-3) front page filled out completely.  Signed by Operator (or representative).
- Lease Responsibility Statement  Private Surface Owner Agreement if applicable

WELL-SITE EVALUATION FIELD FORM

Company Name OGX Well Name Patron 23# 1H

Location: Section 23, T. 25 S., R. 29 E., Footage 990 FNL @ 560 FWL

Examined by B. Hunt Date 8/27/08

Description and Topography: (cuts, fills, etc.) Flat

Soils (reseeding strips, etc.) Sandy loam

Hydrogeology: (wells, springs, streams, plant indicators, windmills, etc.)  
Rancher water tub 300 ft northwest

Wildlife: (habitat, etc.) Mesquite/Grasses

Cultural Location: ?

Cave area: N/A

Other: (VRM, plant habitat, WSA, archaeology, livestock conflicts, etc.)  
Gas Pipeline 173 ft. Southeast

Evaluation: OK - V-Door Southeast

# NOTICE OF STAKING

(NOT TO BE USED IN PLACE OF  
Application of Permit to Drill Form 3160-3)

6. Lease Number  
NM-120895

1. Oil Well  Gas Well  Other (Specify)

7. If Indian, Alottee or Tribe Name  
-----

2. Name of Operator  
OGX RESOURCES, LLC.  
P.O. BOX 2064  
MIDLAND, TEXAS 79702

8. Unit Agreement Name  
-----

3. Name of Specific Contact Person:  
TIERRA EXPLORATION, INC. JOE T. JANICA  
P.O. BOX 2188  
HOBBS, NEW MEXICO 88241  
OFFICE PH. 505-391-8503 CELL. 505-390-1598

9. Farm or Lease Name  
PATRON "23" FEDERAL

4. Address & Phone No. of Operator or Agent  
OGX RESOURCES, LLC  
P. O. BOX 2064  
MIDLAND, TEXAS 79702  
JEFF BIRKELBACH OFFICE PH. 432-685-1007  
MOBIL PH. 432-553-0000

10. Well No.  
1H

5. Surface Location of Well  
Surface: 660' FNL & 660' FWL SECTION  
Bottom Hole 660' FWL & 330' FSL SEC.

*moved to 990 FNL & 560 FWL*  
QL - ONSITE DATE:  
SCHEDULED \_\_\_\_\_  
PERFORMED 8/27/08  
*BWH* INITIAL & RETURN TO LIE

15. Formation Objective (s)  
BONE SPRING

17. Estimated Well  
TVD 7500±'  
MD 11,350±'

NEW MEXICO

17. Additional Information (as appropriate; shall include surface owner's name, address and, if known, telephone number)  
  
The surface and the minerals are owned by The U. S. Department of Interior and is administered by The Bureau of Land Management.

18. Signed Joe T Janica Title

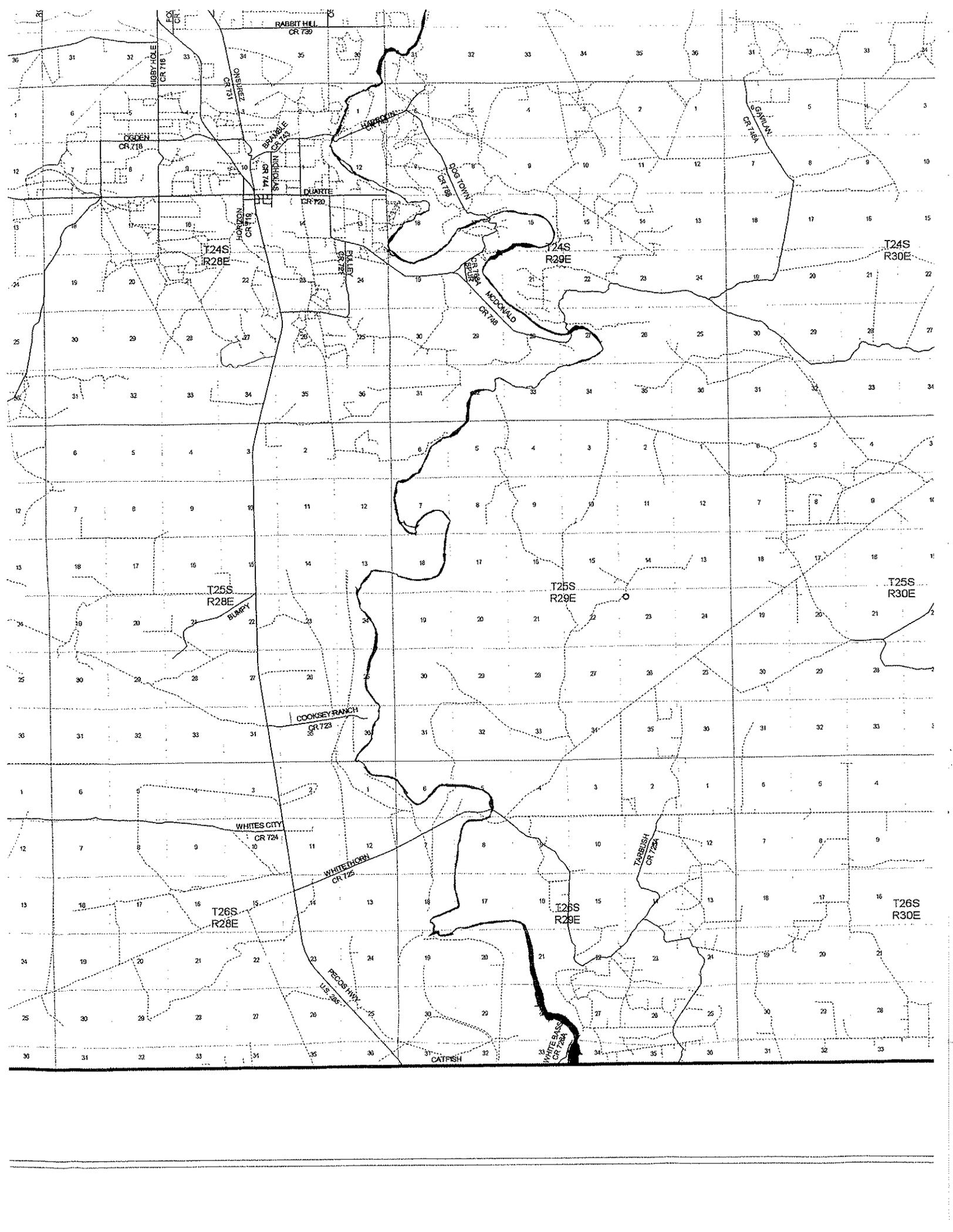
Permit Eng. NWNW-D  
SWSW-M  
08  
BLM  
NPA  
M-CK  
NPOD

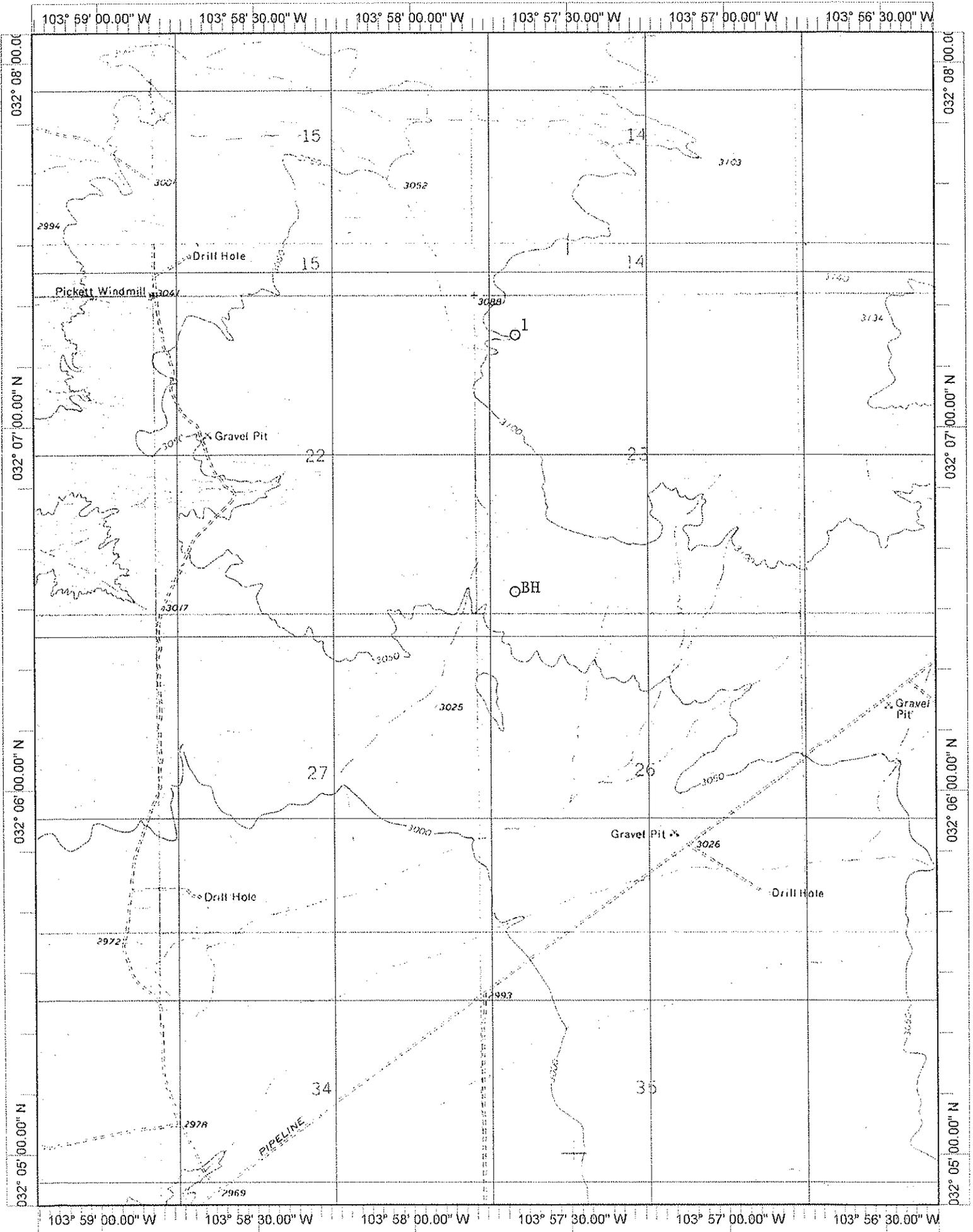
Note: Upon receipt of this Notice, the Bureau of Land Management (BLM) the date of the onsite predrill inspection and notify you accordingly location must be staked and access road must be flagged prior to

- Operators must consider the following prior to the onsite
- 1) H<sub>2</sub>S Potential
- 2) Cultural Resources (Archeology)
- 3) Federal Right of Way or Special Use Permit

BUREAU OF LAND MGMT  
CARLSBAD FIELD OFFICE  
08







Datum: NAD27

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