OCD-ARTESIA

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

***SUBMIT IN TRIPLICATE*- Other instructions on reverse side.**

5. Lease Serial No.
NM-100555

6. If Indian, Allottee or Tribe Name
---

7. If Unit or CA/Agreement, Name and/or No.
---

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.
COOPER "31" FEDERAL # 3H (37127)

2. Name of Operator
OGX RESOURCES, LLC. (217955)

9. API Well No.
30-015-37749

3a. Address
P.O. BOX 2064
MIDLAND, TEXAS 79702

3b. Phone No. *(include area code)*
432-685-1287

10. Field and Pool, or Exploratory Area
BRUSHY DRAW DELAWARE-NORTH (8000)

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
SURFACE 1650' FNL & 990' FEL SEC. 31 T25S-R29E
BOTTOM HOLE 1650' FNL & 330' FWL SEC. 31 T25S-R29E

11. County or Parish, State
EDDY CO. NEW MEXICO

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
[X] Notice of Intent	[ ] Acidize	[ ] Deepen	[ ] Production (Start/Resume)	[ ] Water Shut-Off
[ ] Subsequent Report	[ ] Alter Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[ ] Final Abandonment Notice	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[ ] Other
	[X] Change Plans	[ ] Plug and Abandon	[ ] Temporarily Abandon	
	[ ] Convert to Injection	[ ] Plug Back	[ ] Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

1. OGX RESOURCES, LLC. requests the approval to drill a horizontal oil well rather than a verticalwell.

2. This will result in better drainage as a result prevent ~~waste by not drilling a~~ vertical well on each 40 acres.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVED
OCT 6 2010
Roger D. Hall
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

RECEIVED
OCT 12 2010
NMOCD ARTESIA

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
Joe T. Janica

Title Permit Eng.

Signature Joe T. Janica

Date 08/14/10

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice 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.	Office	

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)

11/8/10

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 15, 2009

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-	~~8085~~ 8080	BRUSHY DRAW DELAWARE-~~NORTH~~

Property Code	Property Name	Well Number
37127	COOPER "31" FEDERAL	3

OGRID No.	Operator Name	Elevation
217955	OGX RESOURCES, LLC	2975'

Surface Location

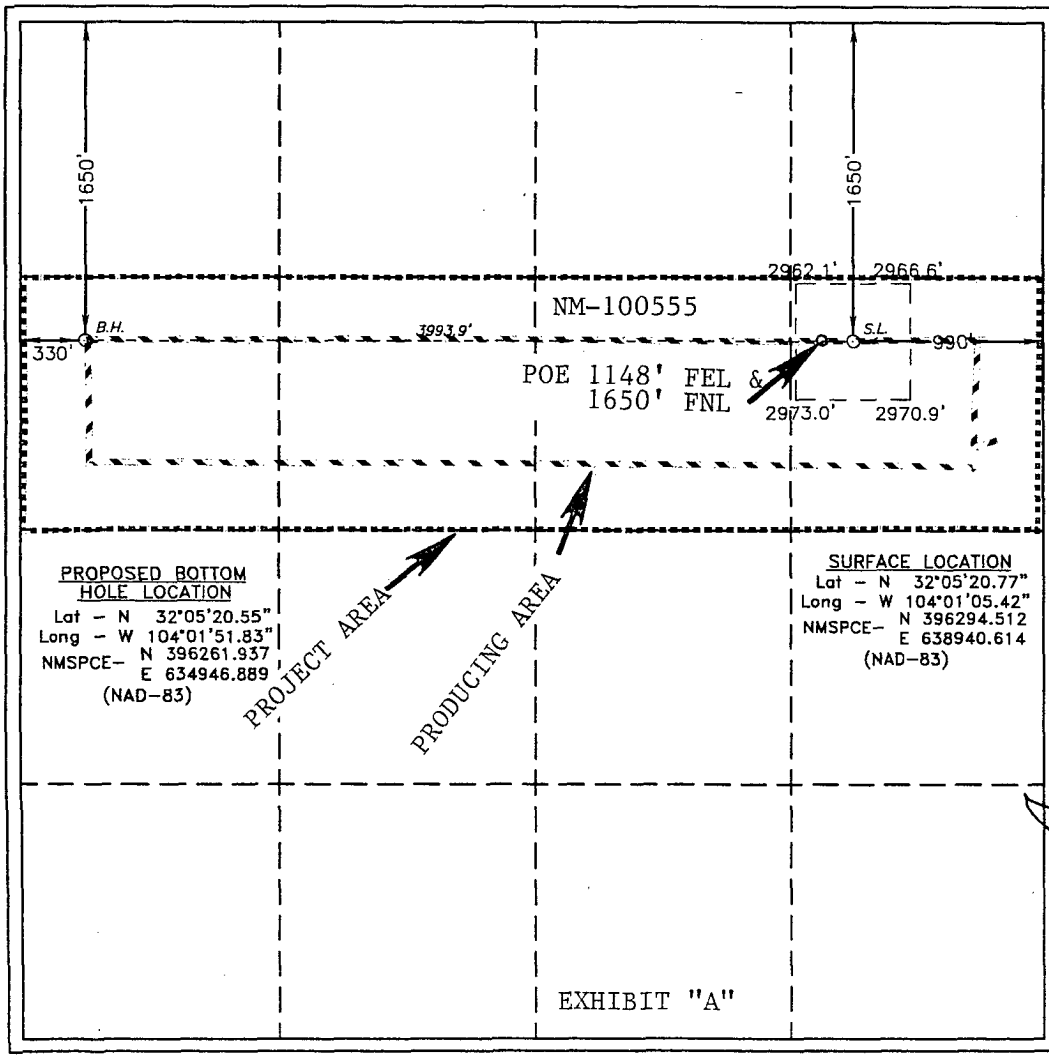
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	31	25 S	29 E		1650	NORTH	990	EAST	EDDY

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
E	31	25 S	29 E		1650	NORTH	330	WEST	EDDY

Dedicated Acres	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 contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Joe T. Janica 08/14/10
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 supervison, and that the same is true and correct to the best of my belief.

FEBRUARY 16, 2010
Date Surveyed

Signature & Seal of Professional Surveyor

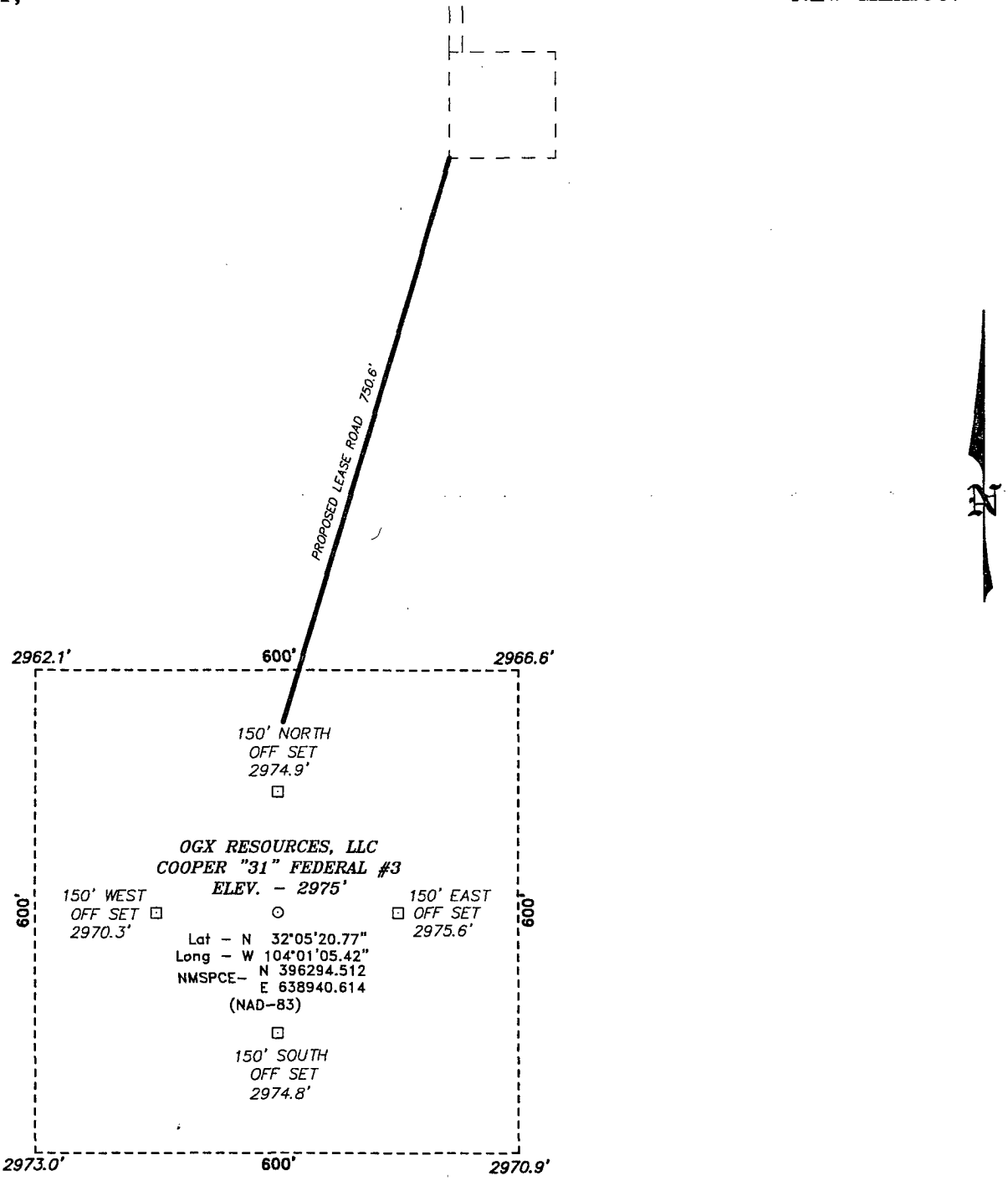
W.O. No. 22360

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 31, TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO.



200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM THE JUNCTION OF HWY 285 AND LONG HORN, GO NORTHEAST 4.0 MILES TO A "Y", GO LEFT AND GO 1.8 MILES TO LEASE ROAD, ON LEASE ROAD GO NORTH 0.2 MILES THENCE NORTHWEST 1.7 MILES TO LEASE ROAD, ON LEASE ROAD GO WET 0.6 MILES TO THE COOPER #1 LOCATION AND PROPOSED LEASE ROAD.

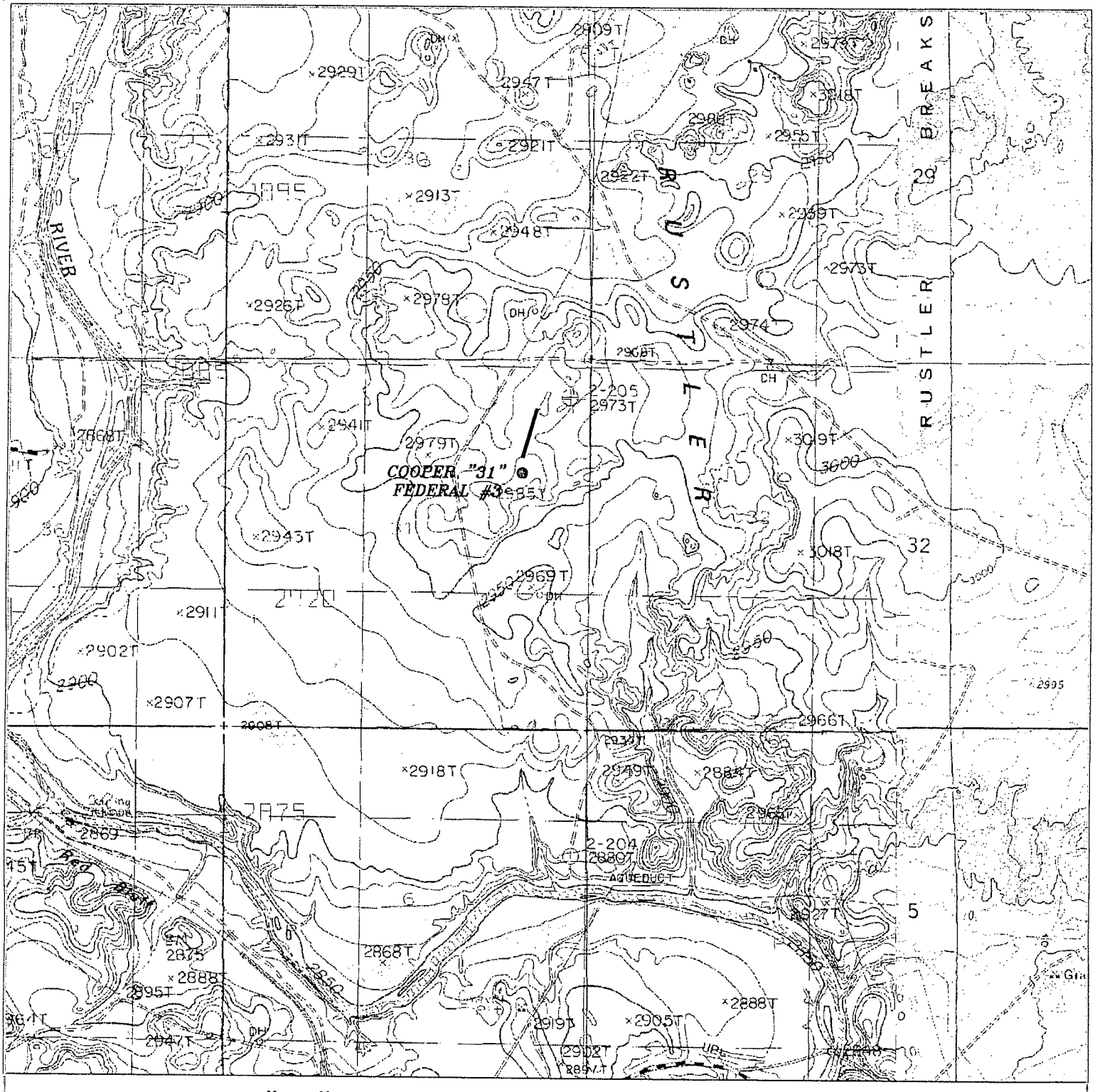
OGX RESOURCES, LLC

REF: COOPER "31" FEDERAL #3 / WELL PAD TOPO

THE COOPER "31" FEDERAL #3 LOCATED 1650' FROM THE NORTH LINE AND 990' FROM THE EAST LINE OF SECTION 31, TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 22360	Drawn By: J. SMALL		
Date: 02-17-2010	Disk: JMS 22360	Survey Date: 02-16-2010	Sheet 1 of 1 Sheets



COOPER "31" FEDERAL #3

Located 1650' FNL and 990' FEL
Section 31, Township 25 South, Range 29 East,
N.M.P.M., Eddy County, New Mexico.

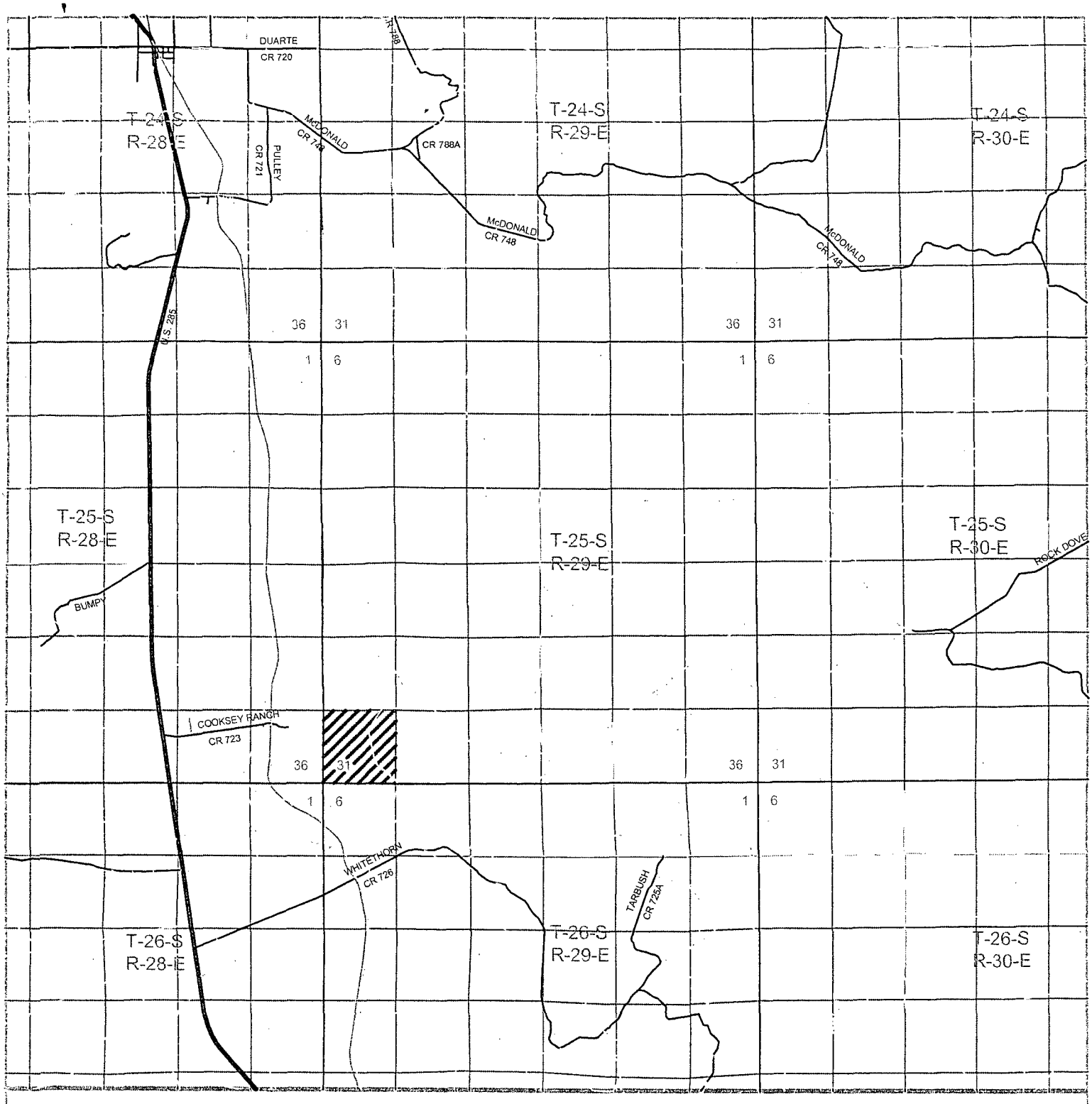
Basin Surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 – Office
(575) 392-2206 – Fax
basinsurveys.com

W.O. Number:	JMS 22360
Survey Date:	02-16-2010
Scale:	1" = 2000'
Date:	02-17-2010

N

OGX RESOURCES, LLC



COOPER "31" FEDERAL #3

Located 1650' FNL and 990' FEL
Section 31, Township 25 South, Range 29 East,
N.M.P.M., Eddy County, New Mexico.

Basin Surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: JMS 22360
Survey Date: 02-16-2010
Scale: 1" = 2 Miles
Date: 02-17-2010

OGX RESOURCES, LLC

APPLICATION TO DRILL

OGX RESOURCES, LLC.
COOPER "31" FEDERAL # 3H
UNIT "H" SECTION 31
T25S-R29E EDDY CO. NM

In responce to questions asked under Section II of Bulletin NTL-6, the following information on the above well will be provider.

1. LOCATION: SURFACE: 1650' FNL & 990' FEL SEC. 31 T25S-R29E EDDY CO. NM
BOTTOM HOLE: 1650' FNL & 330' FWL SEC. 31 T25S-R29E EDDY CO. NM

2. ELEVATION ABOVE SEA LEVEL: 2975' 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 the removal of solids from hole.

5. PROPOSED DRILLING DEPTH: TVD 7090'
MD 10955'

6. ESTIMATED TOPS OF GEOLOGICAL FORMATIONS:

Rustler Anhydrite	950'	Cherry Canyon	3615'
Basal Anhydrite	2610'	Brushy Canyon	4770'
Lamar Lime	2750'	Bone Spring	7090'
Bell Canyon	2795'	TVD	7165'

7. POSSIBLE MINERAL BEARING FORMATIONS:

Bell Canyou	OIL/GAS
Cherry Canyon	OIL/GAS
Brushy Canyon	OIL/GAS

8. CASING PROGRAM:

HOLE SIZE	INTERVAL	CASING OD	WEIGHT	THREAD	COLLAR	GRADE	CONDITION
26"	0-40'	20"	NA	NA	NA	Conductor	New
17½"	0-340'	13 3/8"	48#	8-R	ST&C	H-40	New
11"	0-2750'	8 5/8"	32#	8-R	ST&C	J-55	New
7 7/8"	0-6600'	5½"	17#	8-R	LT&C	P-110	New
	6600-10,955	5½"	17#	Buttress	BT&C	P-110	New

Design Factors:

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

APPLICATION TO DRILL

OGX RESOURCES, LLC.
COOPER "31" FEDERAL # 3H
UNIT "H" SECTION 31
T25S-R29E EDDY CO. NM

9. CASING SETTING DEPTH & CEMENTING:

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
13 3/8"	Surface	Run and set 340' of 13 3/8" 48# H-40 ST&C casing. Cement with 310 Sx. of 35/65/6 Class "C" premium PLus POZ, + 6% Bentonite, + 5% Salt, + 5% MPA-5, + 0.7% Sodium Silicate, + 5# LCM/Sx, Yield 2.0, Tail in with 200 Sx. of Class "C" Premium Plus Cement + 2% CaCl, Yield 1.34, circulate cement to surface.
8 5/8"	Intermediate	Run and set 2750' of 8 5/8" 32# J-55 ST&C casing. Cement with 700 Sx. of 35/65 Class "C" Premuium Plus POZ Cement. + 4% Bentonite, + 5% Salt, + 5% MPA-5, + 0.7% Sodium Metasilicate, + 5# LCM/Sx Yield 2.0, tail in with 200 Sx. of Class "C" Premium Plus Cement + 2% CaCl, Yield 1.34, circulate cement to surface.
5½"	Production	Run and set 10,995' of 5½" casing as follows: 4355' of 5½" 17# P-110 BT&C, 6600' of 5½" 17# P-11- LT&C casing. Cement with 500 Sx. of 35/65 Class "C" Premium Plus Cement, + 4% Bentonite, + 5% Salt, + 5% MPA-5, + 0.7% Sodium Metasilicate, + 5# LCM/Sx., Yield 2.02, tail in with 260 Sx. of Class "C" Premium Plus Cement, + 2% CaCl, Yield 1.34, estimate top of cement 2220' from surface.

See COA

11. PRESSURE CONTROL EQUIPMENT:

Exhibit "E" shows a 1500 series 5000 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 nippled 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 and upper kelly cock will be available at all times on the derrick floor. Exhibit "E-1" shows a hydraulically operated closing unitand a 5000 PSI working pressure choke manifold with dual adjustiable chokes. No abnormal pressures or temperatures are expected while drilling this well.

APPLICATION TO DRILL

OGX RESOURCES, LLC.
COOPER "31" FEDERAL # 3H
UNIT "H" SECTION 31
T25S-R29E EDDY CO. NM

11. PROPOSED MUD CIRCULATING SYSTRM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
40-340'	8.6-8.8	36-38	NC	Fresh water Spud mud add paper as needed to combat seepage, and use high viscosity sweeps to clean hole.
340-2750'	10.0-10.1	29-30	NC	Brine water use paper to control seepage, and use high viscosity sweeps to clean hole.
2750-6700'	8.4-9.1	29-29	NC	Fresh water use high viscosity sweeps to clean hole.
6700-10,955'	8.4-9.1	34-36	12-15 cc or less	Same as above add Dynazan/ starch , HB-411 to control water loss and maintain hole stability.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's, open hole logs, cut cores and casing, the viscosity,water loss and other properties may have to be altered to meet these requirements.

THIS WELL WILL BE DRILLED USING A CLOSED MUD SYSTEM.

APPLICATION TO DRILL

OGX RESOURCES, LLC.
COOPER "31" FEDERAL # 3H
UNIT "H" SECTION 31
T25S-R29E EDDY CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

See COA

A. Open hole logs: Dual Laterolog, Neutron Density, Gamma Ray, Caliper from Caliper from TD back to 8 5/8" casing shoe.

B. Run Gamma Ray, Neutron from 8 5/8" casing shor back to surface.

C. Rig up mud logger on hole after 13 3/8" casing is cemented and keep on hole to TD.

D. No DST's or cores are planned at this time.

13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of H^2S in this area. If H^2S 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 3120 PSI, and Estimated BHT 130°.

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 15 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 DELAWARE formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialed as an Oil well.

SURFACE USE PLAN

OGX RESOURCES, LLC.
COOPER "31" FEDERAL # 3H
UNIT "H" SECTION 31
T25S-R29E EDDY CO. NM

1. EXISTING AND PROPOSED ROADS:

A. Exhibit "B" is a reporduction of a County General Hi-way map showing existing roads. Exhibit "C" is a reproduction of a USGS topographic map showing existing roads and 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 CR-725 (White horn road), turn Left (East) go 3.8 miles cross river, continue .2 miles, bear Left (Northeast) go 1.8 miles. turn Left (North) go .25 miles, bear Left follow lease road 1.7 miles, bear Left (West) go .6 Mi. turn Left go to well # 1, Follow new road 750' south to location.

D. Exhibit "C" shows existing roads and proposed roads.

2. PLANNED ACCESS ROADS: Approximately 750' 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 - None known

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"

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 quatersw 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 c transported to a State approve 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 treat 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.

9. WELL SITE LAYOUT:

A. Exhibit "D" shows a generic well site for a well drilled using a closed mud system.

10. PLANS FOR RESTORATION OF SURFACE:

Rehabilition of the surface will start after the well has been completed, if the well is completed as a producer production facilities will be consturcted on the location. What area is not required for the operation of this project will be reclaimed and restored as near as possible to the original grade and vegetation.

If in case this well is unsuccessful and is a dry hole the drilling pad and the access roads will be reclaimed according to specifications provided by The Bureau of Land Management. Caliche or other road material will be removed for the possible use in another location or deposited in an approved reclaimation site.

Drill cuttings and mud used to drill this well will be removed and disposed of at an approved disposal site. All trash and any other debree will be collected disposed of as the above.

11. ADDITIONAL INFORMATION:

A. Topography consists of ridge-hill tops, and side slopes, with open exposure and varied drainage patterns draining into the Pecos River.

B. Vegetation consists of typical desert shrub, such as snakeweed,prickley pear, cat claw, Cholla, creosote and native grasses.

C. The surface and minerals are owned by The U. S. Department of Interior, and is administered by The Bureau of Land Management. The surface is used for the production of oil and gas and livestock grazing.

D. An Archaeological survey has been conducted and is on file with the Bureau of Land Management in the Carlsbad Field Office. There are no dwellings within 2 miles of this location.

Cooper "31"Fed No.3H
Rock Spur (Bone Spring) Field
Eddy County, New Mexico
Drilling Procedure - Amended
Aug 2010

General Information

Lease:	Cooper 31 Fed	AFE BCP:	$
Well No.:	3	AFE ACP:	
Field:	Brushy Draw North	AFE Total:	
County:	Eddy	AFE NO:	
State:	New Mexico	API No.:	30-015-37749
Section:	18	Permit Date:	03/30/10
Township:	25S	Permit TVD:	7,165'
Range:	29E	Proposed MD:	10,954'
Surface Section Ties:	1650' FNL & 990' FEL	Drilling Days:	28
Ground Level:	2975'	KB:	2992'
Latitude:	32°05'20.77" N	Longitude	104°01'05.42"W

Well Objectives

The primary objective of this well is to drill a horizontal lateral in the Bone Spring Shale (Avalon). A pilot hole will not be necessary.

Directions To Well

Go North on 285, 3.5 miles past state line, turn right or east on Longhorn Road 725, go 3.9 miles turn left or North, go 1.7 miles and turn left or West, go .2 miles turn left, go 1.8 miles stay left for .6 miles, dead end on location.

Special Drilling Considerations

1. No hunting for game is permitted. No fire arms are to be taken to the location. Keep trash picked up on location and road.
2. Do not run hard-banded or hard-faced drill pipe in casing without consulting OGX.
3. Cement must be circulated on surface and intermediate. If cement does not circulate, run a temperature survey and contact the BLM and Operations Engineer for remedial instructions.
4. BOP equipment will be NU on the 13-3/8" surface casing. All safety and well control equipment should be rigged up and operational prior to drilling out the 13-3/8" casing shoe.

DRILLING PROGRAM

Geologic Name of Surface Formation:

Permian

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

Formation	Depth	Frm Pres	Remarks
Rustler	950'	8.4 ppge	Water
Basal Anhydrite	2610'	10 ppge	Drlg fluid must be saturated salt water
Lamar	2750'	8.4 ppge	Base of Salt
Bell Canyon	2795'	8.4 ppge	Oil / Gas / Formation water /Poss.H_2S
Cherry Canyon	3615'	8.4 ppge	Oil / Gas / Formation water
Brushy Canyon	4770'	8.7 ppge	Oil / Gas / Formation water
TVD BS Shale	7165'	9.0 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 2820' / circulating cement on the 9 5/8" string. The hydrocarbon producing intervals will be isolated by setting a 7" production string and circulating cement 500' above the 9 5/8" csg. shoe (2320').

CASING PROGRAM:

HOLE SIZE	DEPTH	OD Csg	WEIGHT	COLLAR	GRADE	NEW/USED
17 1/2"	0-340'	13 3/8"	48	STC	H40	New
11"	0-2750'	8 5/8"	32	STC	J55	New
7 7/8"	0-6600'	5 1/2"	17	LTC	P110	New
7 7/8"	6600-10954'	5 1/2"	17	BTC	P110	New

Casing weight and grades are minimum – higher weights & better grades may be substituted

DEPTH	OD Csg	WEIGHT	factors: Burst	/ Collapse	/ Tension
0-340'	13 3/8"	48	1.65	1.52	12+
0-2750'	8 5/8"	32	1.23	1.50	3.58
0-10954'	5 ½"	17	1.82	1.73	2.24

** The Intermediate hole will never be evacuated**

(51/2 Burst & Collapse Calculated @ 7150' TVD)

CEMENT PROGRAM:

13 3/8" Surface

Spacer .....50 bbls of fresh water
Slurry .....Lead: 35:65:6 – Poz: Prem Plus C + 6% Bentonite + 5% salt + 5% MPA-5 + .7% Sodium Metasilicate + 5 lbs LCM + 97.9 fresh water
Tail: Premium Plus C + 2% $CaCl_2$ + 56.4% Fresh Water

Cement Properties	**Lead**	**Tail**
Est Volume (sacks)	310	200
Density (ppg)	12.80	14.80
Yield (ft3/sx)	2.00	1.34
Mix Water, gps	10.21	6.36
Thickening Time, hrs:min		~3:30
Free Water, %		0
Fluid Loss, cc's		~850
Top of Cement	surface	

8 5/8" Intermediate

Spacer .....30 bbls of fresh water
Lead ..... 35:65 – Poz: Prem Plus C + 4% Bentonite + 5% salt + 5% MPA-5 + .7% Sodium Metasilicate + 5 lbs LCM + 99.6% fresh water
Tail .....C + 2% $CaCl_2$ + 56.4% fresh water

Cement Properties

	Lead	Tail
Est Volume (sacks)	700	200
Density (ppg)	12.7	14.8
Yield (ft3/sx)	2.02	1.34
Mix Water, gps	10.39	6.36
Thickening Time, hrs:min	4:07	3:32
Free Water, %	2.0	0
Fluid Loss, cc's	~750	~600
Top of Cement	surface	

Run a fluid caliper 100' before TD to determine hole volume and adjust cement volumes accordingly

5 1/2" Production

Spacer .....30 bbls of fresh water
Lead ..... 35:65 – Poz: Prem Plus C + 4% Bentonite + 5% salt + 5% MPA-5 + .7% Sodium Metasilicate + 5 lbs LCM + 99.6% fresh water
Tail .....C + 2% $CaCl_2$ + 56.4% fresh water

Cement Properties

	Lead	Tail
Est Volume (sacks)	500	260
Density (ppg)	12.7	14.8
Yield (ft3/sx)	2.02	1.34
Mix Water, gps	10.39	6.36
Thickening Time, hrs:min	4:07	3:32
Free Water, %	2.0	0
Fluid Loss, cc's	~750	~600
Top of Cement	2220	

The above cement volumes will be revised pending fluid and open hole caliper measurements.

MUD PROPERTIES SUMMARY:

Depth (feet)	Weight (ppg)	Viscosity (sec/1000cc)	Fluid Loss (cc/30min)	PV (cps)	YP (lb/100ft^2)	Mud Type
0' – 340' **Set 13-3/8" Casing**	8.6 – 8.8	36 – 38	N/C	6 – 10	6 – 20	**Spud Mud**
340' – 2,750' **Set 8-5/8" Casing**	10.0 – 10.1	29 – 30	N/C	0 – 1	0 – 1	**Brine**
2750' – 6,700'	8.4 – 9.1	28 – 29	N/C	0 – 1	0 – 1	**Fresh Water**
6,700' – 10954,' MD **Set 7"**	8.4 – 9.10	34 – 36	12 – 15	4 – 8	4 – 8	**Dynazan / Starch** **HB 411**

Auxiliary Well Control & Monitoring Equipment:

A Kelly cock will be in the drill string at all times.

A full opening drill pipe stabbing valve having the appropriate connections will be on the floor at all times.

H_2S detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 5 1/2" csg is cemented.

LOGGING, CORING, AND TESTING

No logs at surface.

Mud loggers on below 13 3/8" casing shoe – no electric logs at intermediate depth

The Vertical (Production) hole will be logged: Gyro (Thru DP) & GR / Dual Laterolog / Neutron-Density / Caliper

No DST's or pressure testing is anticipated.

Potential Hazards:

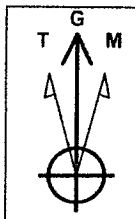
No abnormal pressures or temperatures are expected. There is no known presence of H_2S in this area. If H_2S Is encountered the operator will comply with the provisions of Onshore Oil & Gas Order No.6. No loss circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP is 3120 psi. & BHT is 130° F.

Anticipated Starting Date & Duration:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be ASAP subsequent to APD approval. Move in and drilling operations will take 30 days with an additional 15 days to complete the well and construct production facilities. The frac pond in Sec.31 will be utilized during completion procedures.

OGX

Project: Eddy County (NAD 83)
Site: Cooper "31" Federal
Well: #3H
Wellbore: OH
Plan: Plan #1 (#3H/OH)



Azimuths to Grid North
True North: -0.17°
Magnetic North: 7.66°

Magnetic Field
Strength: 48574.5snT
Dip Angle: 60.02°
Date: 12/10/2010
Model: IGRF200510

PATHFINDER

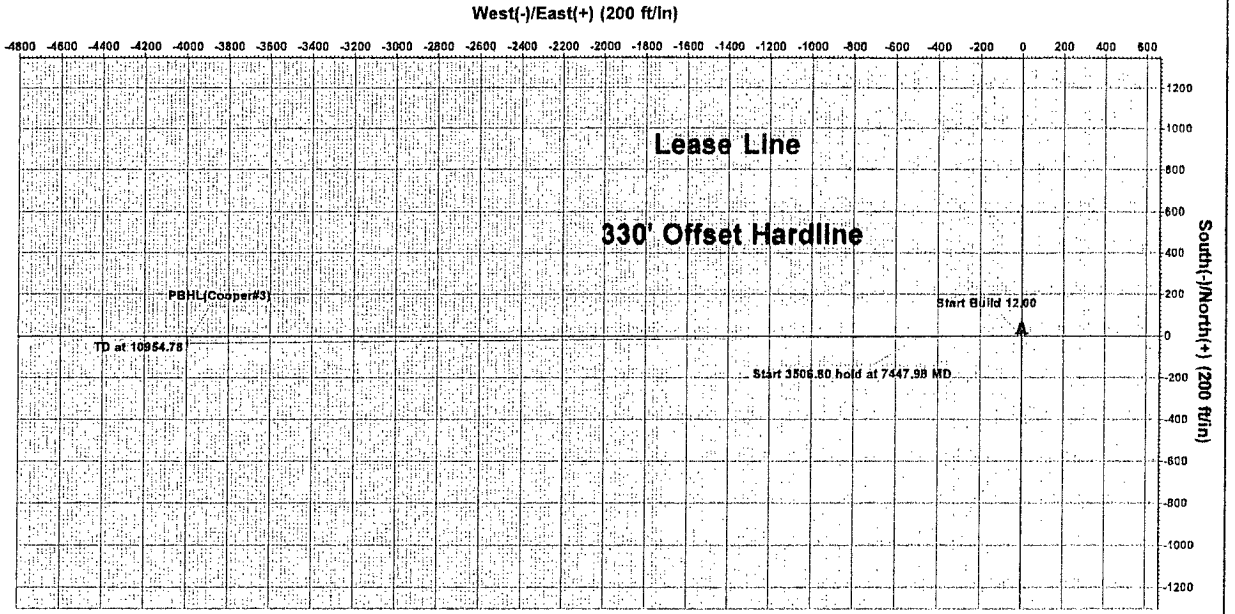
WELL DETAILS: #3H

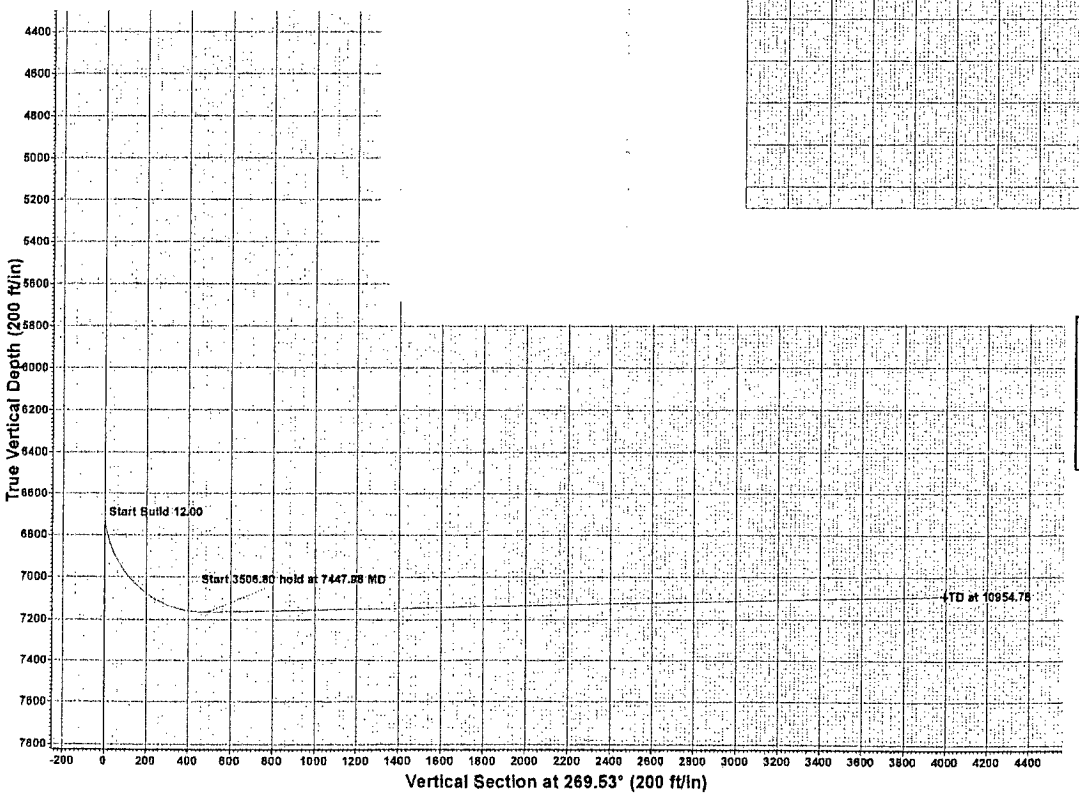
Ground Elevation:: 2975.00
RKB Elevation: WELL @ 2993.00ft (18' KB Correction)
Rig Name: 18' KB Correction

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	396294.512	638940.614	32° 5' 20.764 N	104° 1' 5.405 W	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL(Cooper#3)	7090.00	-32.57	-3993.72	396261.937	634948.889	Point





SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	6687.50	0.00	0.00	6687.50	0.00	0.00	0.00	0.00	0.00	
3	7447.98	91.23	269.53	7165.00	-4.00	-487.85	12.00	269.53	487.86	
4	10954.78	91.23	269.53	7089.72	-32.76	-3993.72	0.00	0.00	3993.86	PBHL(Cooper#3)

PROJECT DETAILS: Eddy County (NAD 83)
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

Plan: Plan #1 (#3H/OH)
Created By: Nate Bingham Date: 11:33, August 10 2010
Checked: _____ Date: _____

OGX

OGX Resources

Eddy County (NAD 83)
Cooper "31" Federal
#3H
OH

Plan: Plan #1

Pathfinder X & Y Planning Report

10 August, 2010

PATHFINDER

Company:	OGX Resources	**Local Co-ordinate Reference:**	Well #3H
Project:	Eddy County (NAD 83)	**TVD Reference:**	WELL @ 2993.00ft (18' KB Correction)
Site:	Cooper "31" Federal	**MD Reference:**	WELL @ 2993.00ft (18' KB Correction)
Well:	#3H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Project Eddy County (NAD 83)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Cooper "31" Federal

Site Position:		**Northing:**	393,260.224 ft	**Latitude:**	32° 4' 50.727 N
From:	Map	**Easting:**	639,261.756 ft	**Longitude:**	104° 1' 1.775 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	"	**Grid Convergence:**	0.17 °

Well #3H

Well Position	**+N/-S**	0.00 ft	**Northing:**	396,294.512 ft	**Latitude:**	32° 5' 20.764 N
	+E/-W	0.00 ft	**Easting:**	638,940.614 ft	**Longitude:**	104° 1' 5.405 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	2,975.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/10/2010	7.83	60.02	48,575

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	269.53

Survey Tool Program **Date** 08/10/2010

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	10,954.78	Plan #1 (OH)	MWD	MWD - Standard

Company:	OGX Resources	**Local Co-ordinate Reference:**	Well #3H
Project:	Eddy County (NAD 83)	**TVD Reference:**	WELL @ 2993.00ft (18' KB Correction)
Site:	Cooper "31" Federal	**MD Reference:**	WELL @ 2993.00ft (18' KB Correction)
Well:	#3H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

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)
0.00	0.00	0.00	0.00	-2,993.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
100.00	0.00	0.00	100.00	-2,893.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
200.00	0.00	0.00	200.00	-2,793.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
300.00	0.00	0.00	300.00	-2,693.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
400.00	0.00	0.00	400.00	-2,593.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
500.00	0.00	0.00	500.00	-2,493.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
600.00	0.00	0.00	600.00	-2,393.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
700.00	0.00	0.00	700.00	-2,293.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
800.00	0.00	0.00	800.00	-2,193.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
900.00	0.00	0.00	900.00	-2,093.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
1,000.00	0.00	0.00	1,000.00	-1,993.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
1,100.00	0.00	0.00	1,100.00	-1,893.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
1,200.00	0.00	0.00	1,200.00	-1,793.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
1,300.00	0.00	0.00	1,300.00	-1,693.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
1,400.00	0.00	0.00	1,400.00	-1,593.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
1,500.00	0.00	0.00	1,500.00	-1,493.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
1,600.00	0.00	0.00	1,600.00	-1,393.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
1,700.00	0.00	0.00	1,700.00	-1,293.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
1,800.00	0.00	0.00	1,800.00	-1,193.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
1,900.00	0.00	0.00	1,900.00	-1,093.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
2,000.00	0.00	0.00	2,000.00	-993.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
2,100.00	0.00	0.00	2,100.00	-893.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
2,200.00	0.00	0.00	2,200.00	-793.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
2,300.00	0.00	0.00	2,300.00	-693.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
2,400.00	0.00	0.00	2,400.00	-593.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
2,500.00	0.00	0.00	2,500.00	-493.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
2,600.00	0.00	0.00	2,600.00	-393.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61

Company:	OGX Resources	**Local Co-ordinate Reference:**	Well #3H
Project:	Eddy County (NAD 83)	**TVD Reference:**	WELL @ 2993.00ft (18' KB Correction)
Site:	Cooper "31" Federal	**MD Reference:**	WELL @ 2993.00ft (18' KB Correction)
Well:	#3H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

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)
2,700.00	0.00	0.00	2,700.00	-293.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
2,800.00	0.00	0.00	2,800.00	-193.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
2,900.00	0.00	0.00	2,900.00	-93.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
3,000.00	0.00	0.00	3,000.00	7.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
3,100.00	0.00	0.00	3,100.00	107.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
3,200.00	0.00	0.00	3,200.00	207.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
3,300.00	0.00	0.00	3,300.00	307.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
3,400.00	0.00	0.00	3,400.00	407.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
3,500.00	0.00	0.00	3,500.00	507.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
3,600.00	0.00	0.00	3,600.00	607.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
3,700.00	0.00	0.00	3,700.00	707.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
3,800.00	0.00	0.00	3,800.00	807.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
3,900.00	0.00	0.00	3,900.00	907.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
4,000.00	0.00	0.00	4,000.00	1,007.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
4,100.00	0.00	0.00	4,100.00	1,107.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
4,200.00	0.00	0.00	4,200.00	1,207.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
4,300.00	0.00	0.00	4,300.00	1,307.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
4,400.00	0.00	0.00	4,400.00	1,407.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
4,500.00	0.00	0.00	4,500.00	1,507.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
4,600.00	0.00	0.00	4,600.00	1,607.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
4,700.00	0.00	0.00	4,700.00	1,707.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
4,800.00	0.00	0.00	4,800.00	1,807.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
4,900.00	0.00	0.00	4,900.00	1,907.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
5,000.00	0.00	0.00	5,000.00	2,007.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
5,100.00	0.00	0.00	5,100.00	2,107.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
5,200.00	0.00	0.00	5,200.00	2,207.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
5,300.00	0.00	0.00	5,300.00	2,307.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61

Company:	OGX Resources	**Local Co-ordinate Reference:**	Well #3H
Project:	Eddy County (NAD 83)	**TVD Reference:**	WELL @ 2993.00ft (18' KB Correction)
Site:	Cooper "31" Federal	**MD Reference:**	WELL @ 2993.00ft (18' KB Correction)
Well:	#3H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

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)
5,400.00	0.00	0.00	5,400.00	2,407.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
5,500.00	0.00	0.00	5,500.00	2,507.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
5,600.00	0.00	0.00	5,600.00	2,607.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
5,700.00	0.00	0.00	5,700.00	2,707.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
5,800.00	0.00	0.00	5,800.00	2,807.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
5,900.00	0.00	0.00	5,900.00	2,907.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
6,000.00	0.00	0.00	6,000.00	3,007.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
6,100.00	0.00	0.00	6,100.00	3,107.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
6,200.00	0.00	0.00	6,200.00	3,207.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
6,300.00	0.00	0.00	6,300.00	3,307.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
6,400.00	0.00	0.00	6,400.00	3,407.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
6,500.00	0.00	0.00	6,500.00	3,507.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
6,600.00	0.00	0.00	6,600.00	3,607.00	0.00	0.00	0.00	0.00	396,294.51	638,940.61
6,687.50	0.00	0.00	6,687.50	3,694.50	0.00	0.00	0.00	0.00	396,294.51	638,940.61
6,700.00	1.50	269.53	6,700.00	3,707.00	0.00	-0.16	0.16	12.00	396,294.51	638,940.45
6,725.00	4.50	269.53	6,724.96	3,731.96	-0.01	-1.47	1.47	12.00	396,294.50	638,939.14
6,750.00	7.50	269.53	6,749.82	3,756.82	-0.03	-4.08	4.08	12.00	396,294.48	638,936.53
6,775.00	10.50	269.53	6,774.51	3,781.51	-0.07	-7.99	7.99	12.00	396,294.45	638,932.62
6,800.00	13.50	269.53	6,798.96	3,805.96	-0.11	-13.19	13.19	12.00	396,294.40	638,927.43
6,825.00	16.49	269.53	6,823.11	3,830.11	-0.16	-19.66	19.66	12.00	396,294.35	638,920.96
6,850.00	19.49	269.53	6,846.88	3,853.88	-0.22	-27.38	27.38	12.00	396,294.29	638,913.24
6,875.00	22.49	269.53	6,870.22	3,877.22	-0.30	-36.33	36.33	12.00	396,294.21	638,904.28
6,900.00	25.49	269.53	6,893.06	3,900.06	-0.38	-46.50	46.50	12.00	396,294.13	638,894.12
6,925.00	28.49	269.53	6,915.33	3,922.33	-0.47	-57.84	57.84	12.00	396,294.04	638,882.77
6,950.00	31.49	269.53	6,936.98	3,943.98	-0.58	-70.34	70.34	12.00	396,293.94	638,870.28
6,975.00	34.49	269.53	6,957.95	3,964.95	-0.69	-83.95	83.95	12.00	396,293.82	638,856.67
7,000.00	37.49	269.53	6,978.18	3,985.18	-0.81	-98.64	98.64	12.00	396,293.70	638,841.98

Company:	OGX Resources	**Local Co-ordinate Reference:**	Well #3H
Project:	Eddy County (NAD 83)	**TVD Reference:**	WELL @ 2993.00ft (18' KB Correction)
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Well:	#3H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

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)
7,025.00	40.49	269.53	6,997.60	4,004.60	-0.94	-114.36	114.37	12.00	396,293.57	638,826.25
7,050.00	43.49	269.53	7,016.19	4,023.19	-1.08	-131.08	131.09	12.00	396,293.44	638,809.53
7,075.00	46.49	269.53	7,033.86	4,040.86	-1.22	-148.75	148.76	12.00	396,293.29	638,791.86
7,100.00	49.48	269.53	7,050.60	4,057.60	-1.37	-167.33	167.33	12.00	396,293.14	638,773.29
7,125.00	52.48	269.53	7,066.33	4,073.33	-1.53	-186.75	186.75	12.00	396,292.98	638,753.87
7,150.00	55.48	269.53	7,081.03	4,088.03	-1.70	-206.97	206.97	12.00	396,292.81	638,733.65
7,175.00	58.48	269.53	7,094.65	4,101.65	-1.87	-227.93	227.93	12.00	396,292.64	638,712.69
7,200.00	61.48	269.53	7,107.16	4,114.16	-2.05	-249.57	249.58	12.00	396,292.46	638,691.05
7,225.00	64.48	269.53	7,118.51	4,125.51	-2.23	-271.84	271.85	12.00	396,292.28	638,668.78
7,250.00	67.48	269.53	7,128.69	4,135.69	-2.42	-294.67	294.68	12.00	396,292.09	638,645.95
7,275.00	70.48	269.53	7,137.66	4,144.66	-2.61	-318.00	318.01	12.00	396,291.90	638,622.61
7,300.00	73.48	269.53	7,145.39	4,152.39	-2.80	-341.77	341.78	12.00	396,291.71	638,598.84
7,325.00	76.48	269.53	7,151.87	4,158.87	-3.00	-365.91	365.93	12.00	396,291.51	638,574.70
7,350.00	79.48	269.53	7,157.08	4,164.08	-3.20	-390.36	390.37	12.00	396,291.31	638,550.25
7,375.00	82.47	269.53	7,161.00	4,168.00	-3.40	-415.05	415.06	12.00	396,291.11	638,525.57
7,400.00	85.47	269.53	7,163.62	4,170.62	-3.61	-439.91	439.92	12.00	396,290.90	638,500.71
7,425.00	88.47	269.53	7,164.94	4,171.94	-3.81	-464.87	464.88	12.00	396,290.70	638,475.75
7,447.98	91.23	269.53	7,165.00	4,172.00	-4.00	-487.85	487.86	12.00	396,290.51	638,452.77
7,500.00	91.23	269.53	7,163.88	4,170.88	-4.43	-539.85	539.87	0.00	396,290.08	638,400.76
7,600.00	91.23	269.53	7,161.74	4,168.74	-5.25	-639.82	639.85	0.00	396,289.26	638,300.79
7,700.00	91.23	269.53	7,159.59	4,166.59	-6.07	-739.80	739.82	0.00	396,288.44	638,200.82
7,800.00	91.23	269.53	7,157.44	4,164.44	-6.89	-839.77	839.80	0.00	396,287.62	638,100.84
7,900.00	91.23	269.53	7,155.30	4,162.30	-7.71	-939.75	939.78	0.00	396,286.80	638,000.87
8,000.00	91.23	269.53	7,153.15	4,160.15	-8.53	-1,039.72	1,039.75	0.00	396,285.98	637,900.90
8,100.00	91.23	269.53	7,151.00	4,158.00	-9.35	-1,139.69	1,139.73	0.00	396,285.16	637,800.92
8,200.00	91.23	269.53	7,148.86	4,155.86	-10.17	-1,239.67	1,239.71	0.00	396,284.34	637,700.95
8,300.00	91.23	269.53	7,146.71	4,153.71	-10.99	-1,339.64	1,339.68	0.00	396,283.52	637,600.97

Company:	OGX Resources	**Local Co-ordinate Reference:**	Well #3H
Project:	Eddy County (NAD 83)	**TVD Reference:**	WELL @ 2993.00ft (18' KB Correction)
Site:	Cooper "31" Federal	**MD Reference:**	WELL @ 2993.00ft (18' KB Correction)
Well:	#3H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

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)
8,400.00	91.23	269.53	7,144.56	4,151.56	-11.81	-1,439.61	1,439.66	0.00	396,282.70	637,501.00
8,500.00	91.23	269.53	7,142.42	4,149.42	-12.63	-1,539.59	1,539.64	0.00	396,281.88	637,401.03
8,600.00	91.23	269.53	7,140.27	4,147.27	-13.45	-1,639.56	1,639.62	0.00	396,281.06	637,301.05
8,700.00	91.23	269.53	7,138.12	4,145.12	-14.27	-1,739.53	1,739.59	0.00	396,280.24	637,201.08
8,800.00	91.23	269.53	7,135.98	4,142.98	-15.09	-1,839.51	1,839.57	0.00	396,279.42	637,101.11
8,900.00	91.23	269.53	7,133.83	4,140.83	-15.91	-1,939.48	1,939.55	0.00	396,278.60	637,001.13
9,000.00	91.23	269.53	7,131.68	4,138.68	-16.73	-2,039.45	2,039.52	0.00	396,277.78	636,901.16
9,100.00	91.23	269.53	7,129.54	4,136.54	-17.55	-2,139.43	2,139.50	0.00	396,276.96	636,801.19
9,200.00	91.23	269.53	7,127.39	4,134.39	-18.37	-2,239.40	2,239.48	0.00	396,276.14	636,701.21
9,300.00	91.23	269.53	7,125.24	4,132.24	-19.19	-2,339.38	2,339.45	0.00	396,275.32	636,601.24
9,400.00	91.23	269.53	7,123.10	4,130.10	-20.01	-2,439.35	2,439.43	0.00	396,274.50	636,501.26
9,500.00	91.23	269.53	7,120.95	4,127.95	-20.83	-2,539.32	2,539.41	0.00	396,273.68	636,401.29
9,600.00	91.23	269.53	7,118.80	4,125.80	-21.65	-2,639.30	2,639.39	0.00	396,272.86	636,301.32
9,700.00	91.23	269.53	7,116.66	4,123.66	-22.47	-2,739.27	2,739.36	0.00	396,272.04	636,201.34
9,800.00	91.23	269.53	7,114.51	4,121.51	-23.29	-2,839.24	2,839.34	0.00	396,271.22	636,101.37
9,900.00	91.23	269.53	7,112.37	4,119.37	-24.11	-2,939.22	2,939.32	0.00	396,270.40	636,001.40
10,000.00	91.23	269.53	7,110.22	4,117.22	-24.93	-3,039.19	3,039.29	0.00	396,269.58	635,901.42
10,100.00	91.23	269.53	7,108.07	4,115.07	-25.75	-3,139.16	3,139.27	0.00	396,268.76	635,801.45
10,200.00	91.23	269.53	7,105.93	4,112.93	-26.57	-3,239.14	3,239.25	0.00	396,267.94	635,701.48
10,300.00	91.23	269.53	7,103.78	4,110.78	-27.39	-3,339.11	3,339.22	0.00	396,267.12	635,601.50
10,400.00	91.23	269.53	7,101.63	4,108.63	-28.21	-3,439.09	3,439.20	0.00	396,266.30	635,501.53
10,500.00	91.23	269.53	7,099.49	4,106.49	-29.03	-3,539.06	3,539.18	0.00	396,265.48	635,401.56
10,600.00	91.23	269.53	7,097.34	4,104.34	-29.85	-3,639.03	3,639.15	0.00	396,264.66	635,301.58
10,700.00	91.23	269.53	7,095.19	4,102.19	-30.67	-3,739.01	3,739.13	0.00	396,263.84	635,201.61
10,800.00	91.23	269.53	7,093.05	4,100.05	-31.49	-3,838.98	3,839.11	0.00	396,263.02	635,101.63
10,900.00	91.23	269.53	7,090.90	4,097.90	-32.31	-3,938.95	3,939.09	0.00	396,262.20	635,001.66

Company:	OGX Resources	**Local Co-ordinate Reference:**	Well #3H
Project:	Eddy County (NAD 83)	**TVD Reference:**	WELL @ 2993.00ft (18' KB Correction)
Site:	Cooper "31" Federal	**MD Reference:**	WELL @ 2993.00ft (18' KB Correction)
Well:	#3H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

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)
10,954.78	91.23	269.53	7,089.72	4,096.72	-32.76	-3,993.72	3,993.85	0.00	396,261.75	634,946.90
PBHL(Cooper#3)										
10,954.78	91.23	269.53	7,089.72	4,096.72	-32.76	-3,993.72	3,993.86	0.01	396,261.75	634,946.89

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL(Cooper#3) - plan hits target center - Point	0.00	0.00	7,090.00	-32.57	-3,993.72	396,261.937	634,946.889	32° 5' 20.555 N	104° 1' 51.831 W

Checked By: _____ Approved By: _____ Date: _____

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**OGX Resources**
LEASE NO.:	**NMNM100555**
WELL NAME & NO.:	**Cooper 31 Federal #3H**
SURFACE HOLE FOOTAGE:	**1650' FNL & 990' FEL**
BOTTOM HOLE FOOTAGE	**1650' FNL & 330' FWL**
LOCATION:	**Section 31, T. 25 S., R 29 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

I. 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

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 is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

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. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. 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 brine/water flows in the Salado, Delaware Mountain Group, and the Bone Spring.
Possible lost circulation in the Delaware Mountain Group and Bone Spring.

1. The **13-3/8** inch surface casing shall be set at **approximately 340 feet** and cemented to the surface. **If salt is penetrated, set casing 25 feet above the salt.**

    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 surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    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.

Formation below the 13-3/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

2. The minimum required fill of cement behind the **8-5/8** inch intermediate casing is:

   ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

Formation below the 8-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

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

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   ☒ Cement should tie-back at least **500** feet into previous casing string. Operator shall provide method of verification. **Additional cement may be required. Excess cement calculates to less than zero%.**

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 **5000 (5M)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips or where the float does not hold, the minimum wait time before cut-off is eight hours after bumping the plug or when the cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. BOP/BOPE testing can begin after the above conditions are satisfied.

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) prior to initiating the test.

    c. The results of the test shall be reported to the appropriate BLM office.

    d. 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.**

    e. 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.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

RGH 092210