

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

Form C-101
June 16, 2008

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

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address OGX RESOURCES, LLC. P. O. BOX 2064 MIDLAND, TEXAS 79702		² OGRID Number 217955 ³ API Number 30 - 3015 - 38227
⁴ Property Code 38348	⁵ Property Name COOPERHEAD FEE "A"	⁶ Well No. 1H
⁷ Proposed Pool 1 WILDCAT DELAWARE RIVER-BONE SPRING (16800) 96403		⁸ Proposed Pool 2

⁷ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 2	31	26S	29E		480'	SOUTH	480'	WEST	EDDY

⁸ Proposed 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
LOT 2	30	26S	29E		1650'	NORTH	330'	WEST	EDDY

Additional Well Information

¹¹ Work Type Code N	¹² Well Type Code O	¹³ Cable/Rotary ROTARY	¹⁴ Lease Type Code P	¹⁵ Ground Level Elevation 2928'
¹⁶ Multiple NO	¹⁷ Proposed Depth TVD 7075 MD12,339	¹⁸ Formation BONE SPRING	¹⁹ Contractor SILVER OAK DRILLING	²⁰ Spud Date WHEN APPROVED

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
26"	20"	Conductor	40'	Redi-mix	Surface
17 1/2"	13 3/8"	48#	450'	425 Sx.	Surface
11"	8 5/8"	32#	2625'	500 Sx.	Surface
7 7/8"	5 1/2"	17#	MD-12,339'	1300 Sx.	Surface

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

SEE ATTACHED SHEET FOR DETAIL

RECEIVED

SEP 24 2010

NMOC D ARTESIA

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.		OIL CONSERVATION DIVISION	
Signature: Joe T. Janica		Approved by: [Signature]	
Printed name: Joe T. Janica		Title: DISTRICT SUPERVISOR	
Title: Permit Eng.		Approval Date: OCT 15 2010	Expiration Date: 10/15/2011
E-mail Address: joejanica@valornet.com			
Date: 09/23/10	Phone: 575-391-8503	Conditions of Approval Attached ☐	

KZ

OGX RESOURCES, LLC.
COPPERHEAD FEE "A" #1H
LOT #2 SECTION 31
T25S-R29E EDDY CO. NM

1. Drill 26" hole to 40'. Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
2. Drill 17½" hole to 450'. Run and set 450' of 13 3/8" 48# H-40 ST&C casing. Cement with 225 Sx. of 35/65/6 Premium Plus Class "C" POZ cement, + 6% Bentonite, + 5% Salt, + 5% MPA-5, + 0.7% Sodium Metasilicate, + 5# LCM/Sx. (Yield 2.00). Tail in with 200 Sx of Class "C" cement + 2% CaCl (Yield 1.34) circulate cement to surface.
3. Drill 11" hole to 2650'. Run and set 2650' of 8 5/8" 32# J-55 ST&C casing. Cement with 3800 Sx of 35/65 Premium Plus Class "C" POZ cement + 4% Bentonite, + 5% Salt, + 5% MPA-5, + 0.7% Sodium Metasilicate, + 5# LCM/Sx. (Yield 2.02) Tail in with 200 Sx. of Class "C" cement + 2% CaCl, (Yield 1.34) circulate cement to surface.
4. Drill 7 7/8" hole to 12,339' MD. Run and set 12,339' of 5½" casing as follows: 5739' of 5½" 17# P-110 BT&C, 6600' of 5½" 17# P-110 LT&C. Casing. Cement with 400 Sx. of 35/65 Premium Plus Class "C" POZ cement + 4% Bentonite, + 5% Salt, + 5% MPA-5, + 0.7% Sodium Metasilicate, + 5# LCM/Sx. (Yield 2.02). Tail in with 900 Sx. of Class "C" cement + 2% CaCl, (Yield 1.34) circulate cement to surface.

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

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102

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

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

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

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-	Pool Code 16800	Pool Name WILDCAT; DELAWARE RIVER-BONE SPRING
Property Code 38348	Property Name COPPERHEAD FEE A	Well Number 1H
OGRID No. 217955	Operator Name OGX RESOURCES	Elevation 2928'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	31	26-S	29-E		480	SOUTH	480	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
2	30	26-S	29-E		1650	NORTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
183.9			

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

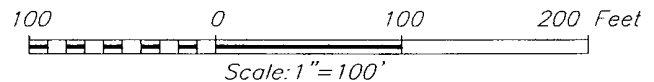
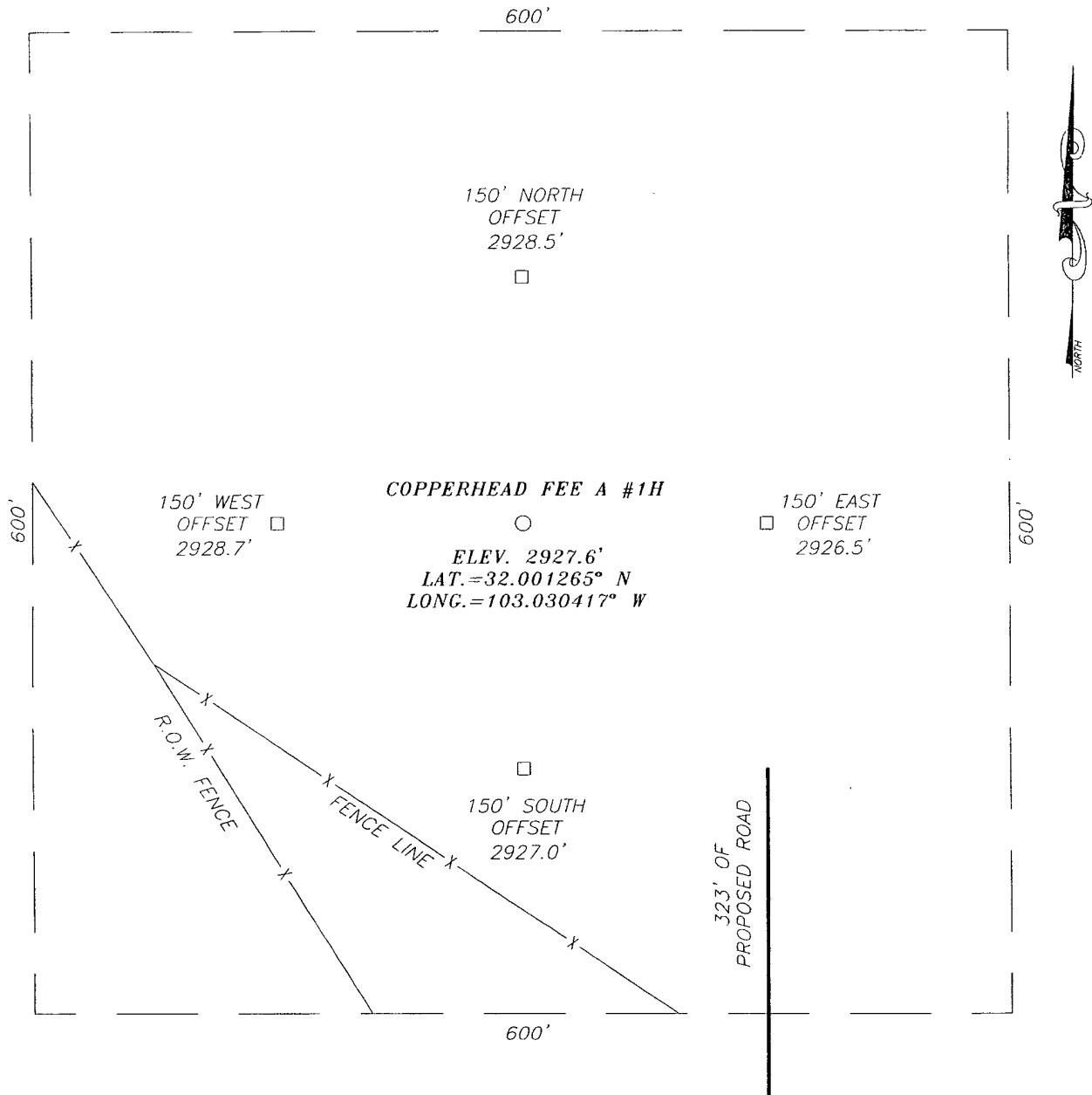
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 7
SECTION 30
SECTION 31
POE 660' FSL & 476' FWL
SCALE - 1" = 2000'

GEODETIC COORDINATES
NAD 27 NME
SURFACE LOCATION
Y=364319.1 N
X=593901.4 E
LAT.=32.001265° N
LONG.=104.030417° W
BOTTOM HOLE LOCATION
Y=369787.5 N
X=593819.4 E

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 09/23/10
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 supervision, and that the same is true and correct to the best of my belief.
RONALD J. EIDSON
Date Surveyed 9/16/2010
Signature and Seal of Professional Surveyor
Certificate No. 12641
RONALD J. EIDSON 3239

SECTION 31, TOWNSHIP 26 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. #726 (CATFISH) GO EAST ON CO. RD. #726
 APPROX. 300 FEET. THE LOCATION STAKE IS
 APPROX. 450 FEET NORTH.



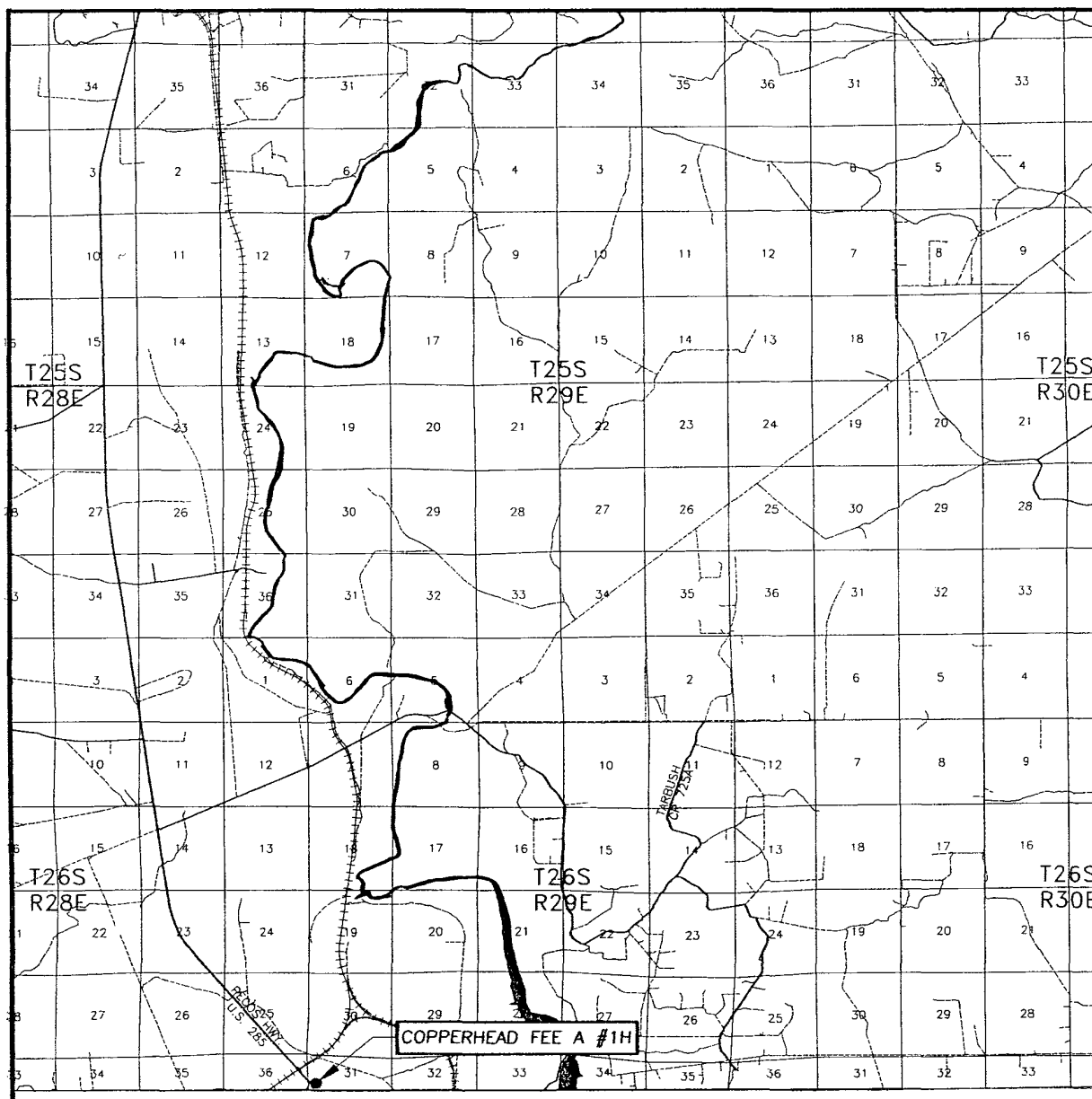
PROVIDING SURVEYING SERVICES
 SINCE 1946
JOHN WEST SURVEYING COMPANY
 412 N. DAL PASO
 HOBBS, N.M. 88240
 (575) 393-3117

OGX RESOURCES

COPPERHEAD FEE A #1H
 LOCATED 480 FEET FROM THE SOUTH LINE
 AND 480 FEET FROM THE WEST LINE OF SECTION 31,
 TOWNSHIP 26 SOUTH, RANGE 29 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO.

Survey Date: 8/24/10	Sheet 1 of 1 Sheets
W.O. Number: 10.11.1249	Dr By: LA
Date: 9/1/10	10111249
	Scale: 1"=100'

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 31 TWP. 26-S RGE. 29-E

SURVEY _____ N.M.P.M.

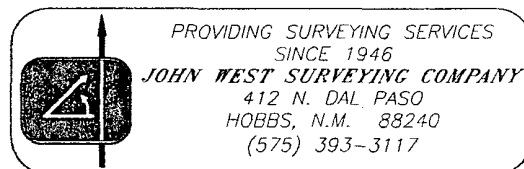
COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 480' FSL & 480' FWL

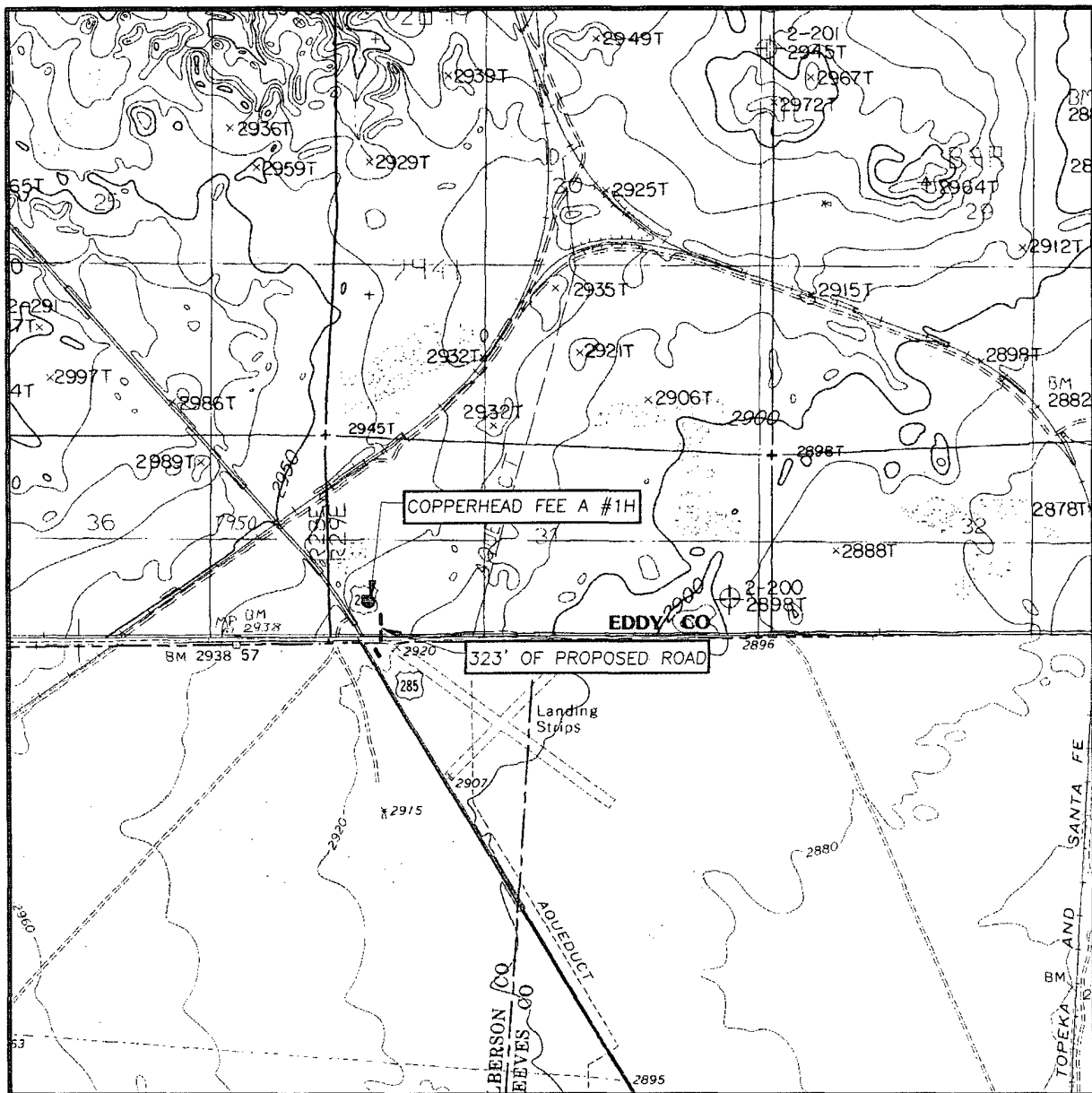
ELEVATION 2928'

OPERATOR OGX RESOURCES

LEASE COPPORHEAD FEE A



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
RED BLUFF, N.M. - 10'

SEC. 31 TWP. 26-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

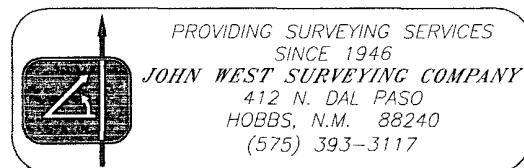
DESCRIPTION 480' FSL & 480' FWL

ELEVATION 2928'

OPERATOR OGX RESOURCES

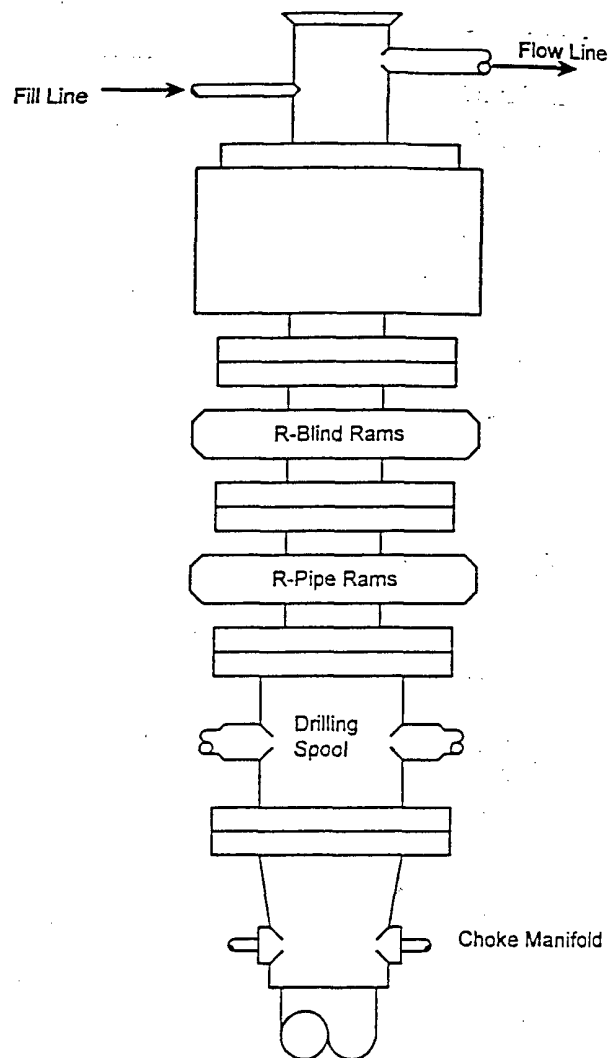
LEASE COPPERHEAD FEE A

U.S.G.S. TOPOGRAPHIC MAP
RED BLUFF, N.M.



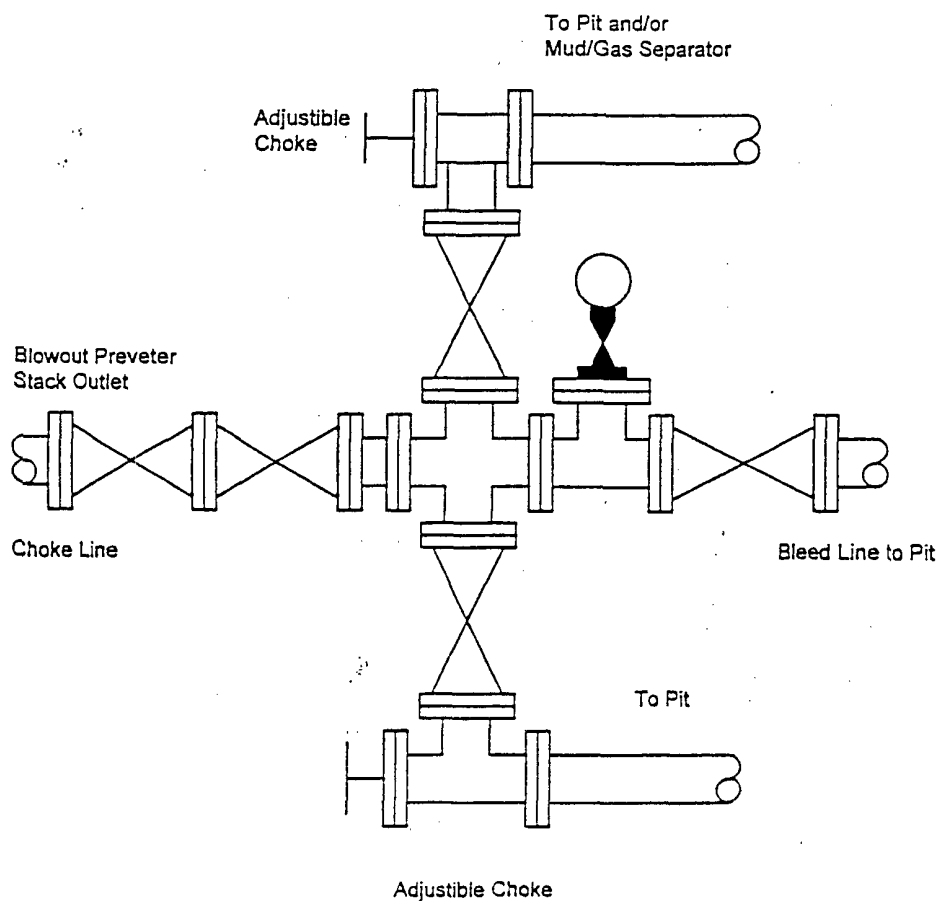
BLOWOUT PREVENTER SYSTEM

3000 PSI



Type 900 SERIES
3000 PSI WP

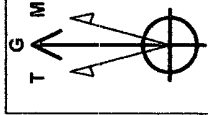
Choke Manifold Assembly for 5M WP System





Project: Eddy County (NAD27)
Site: Copperhead Fee A
Well: #1H
Wellbore: OH
Plan: Plan #1 (#1H/OH)

PROJECT DETAILS: Eddy County (NAD27)
Geodetic System: US State Plane 1927 (Exact Solution)
Datum: NAD 1983 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid

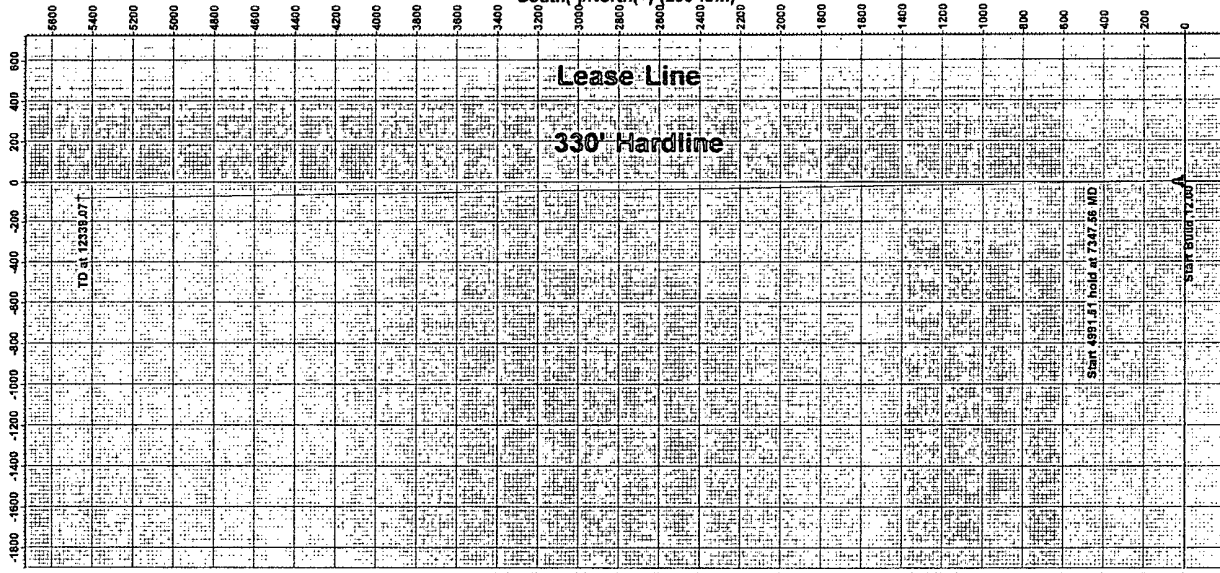


Azimuths to Grid North
True North: -0.16°
Magnetic North: 7.70°
Magnetic Field
Strength: 46544.8nT
Dip Angle: 59.94°
Date: 09/03/2010
Model: IGRF200510



A Schlumberger Company

West(-)/East(+) (200 ft/in)



WELL DETAILS: #1H

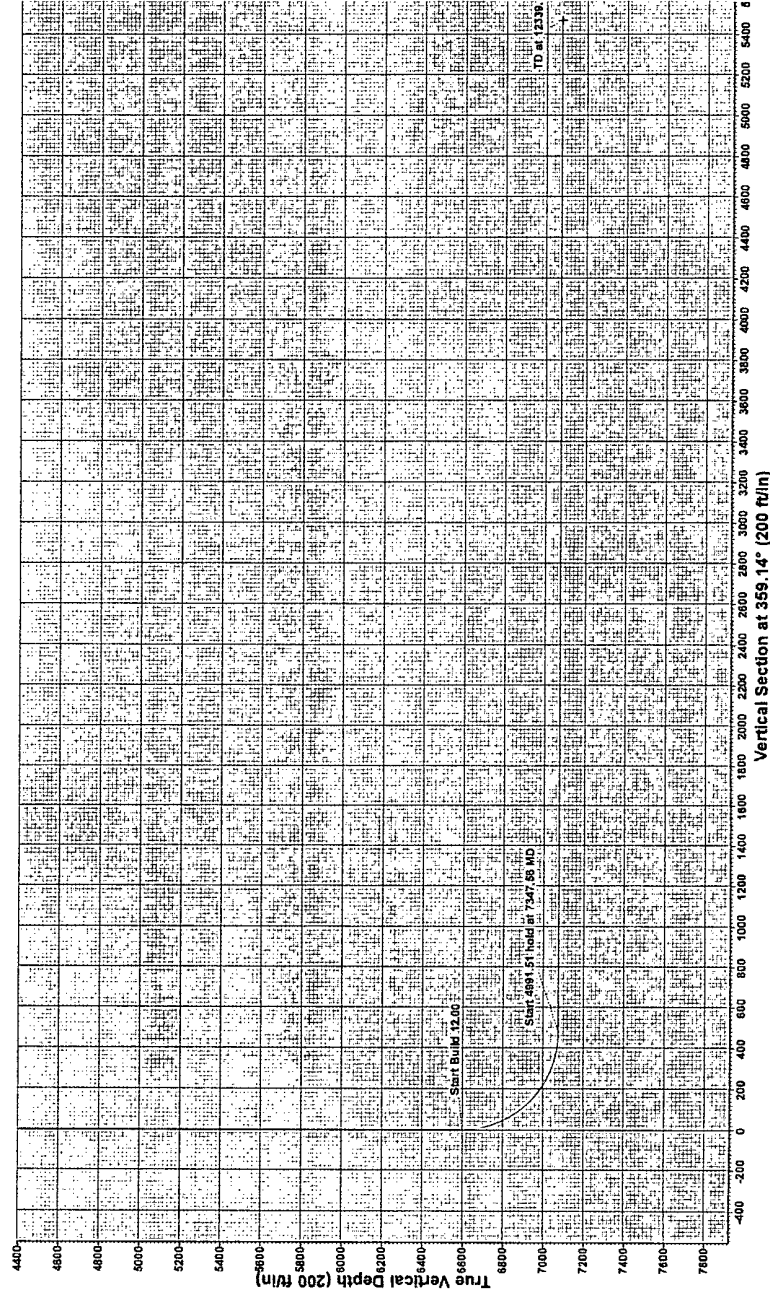
Ground Elevation: 2923.00
RKB Elevation: WELL @ 2947.00ft (Original Well Elev)
Rig Name: Original Well Elev

	*N-S	*E-W	North	East	Latitude	Longitude	Slot
	0.00	0.00	364316.00	593901.400	32° 0' 4.554" N	104° 1' 49.501" W	

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	6937.50	0.00	0.00	6937.50	0.00	0.00	0.00	0.00	0.00
3	7347.56	90.00	359.14	7075.00	477.45	-7.17	12.00	359.14	477.50
4	12339.07	90.00	359.14	7075.00	5465.40	-92.09	0.00	0.00	5465.01 PBL(CH#1H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	*N-S	*E-W	North	East	Shape
PBL(CH#1H)	7075.00	5465.40	-92.00	369787.500	593915.400	Point



Vertical Section at 359.14° (200 ft/in)

Plan: Plan #1 (#1H/OH)

Created By: John Bligham Date: 8-48 September 03 28 10



Pathfinder
Pathfinder X & Y Planning Report



Company:	OGX Resources	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County (NAD27)	TVD Reference:	WELL @ 2947.00ft (Original Well Elev)
Site:	Copperhead Fee A	MD Reference:	WELL @ 2947.00ft (Original Well Elev)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Project	Eddy County (NAD27), New Mexico	System Datum:	Mean Sea Level
Map System:	US State Plane 1927 (Exact solution)		
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Copperhead Fee A		
Site Position:		Northing:	364,319.100 ft
From:	Map	Easting:	593,901.400 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	32° 0' 4.554 N
		Longitude:	104° 1' 49.501 W
		Grid Convergence:	0.16 °

Well	#1H		
Well Position	+N/-S	Northing:	364,319.100 ft
	+E/-W	Easting:	593,901.400 ft
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	32° 0' 4.554 N
		Longitude:	104° 1' 49.501 W
		Ground Level:	2,928.00 ft

Wellbore	OH		
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Magnetics	Model Name	Sample Date	Dip Angle	Field Strength
	IGRF200510	09/03/2010	7.86	59.94
				48,545

Design	Plan #1		
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Audit Notes:			
Version:			

Vertical Section:	Depth From (TVD)	Phase:	PLAN	Tie On Depth:	0.00
	0.00				
	+N/-S				
	(ft)				
	0.00				
	+E/-W				
	(ft)				
	0.00				
	Direction				
	(°)				
	359.14				

Survey Tool Program	Date	09/03/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	12,339.07	Plan #1 (OH)	MWD	MWD - Standard



Pathfinder
Pathfinder X & Y Planning Report



A Schlumberger Company

Company:	OGX Resources	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County (NAD27)	TVD Reference:	WELL @ 2947.00ft (Original Well Elev)
Site:	Copperhead Fee A	MD Reference:	WELL @ 2947.00ft (Original Well Elev)
Well:	#1H	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	-2,947.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
100.00	0.00	0.00	100.00	-2,847.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
200.00	0.00	0.00	200.00	-2,747.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
300.00	0.00	0.00	300.00	-2,647.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
400.00	0.00	0.00	400.00	-2,547.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
500.00	0.00	0.00	500.00	-2,447.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
600.00	0.00	0.00	600.00	-2,347.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
700.00	0.00	0.00	700.00	-2,247.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
800.00	0.00	0.00	800.00	-2,147.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
900.00	0.00	0.00	900.00	-2,047.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
1,000.00	0.00	0.00	1,000.00	-1,947.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
1,100.00	0.00	0.00	1,100.00	-1,847.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
1,200.00	0.00	0.00	1,200.00	-1,747.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
1,300.00	0.00	0.00	1,300.00	-1,647.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
1,400.00	0.00	0.00	1,400.00	-1,547.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
1,500.00	0.00	0.00	1,500.00	-1,447.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
1,600.00	0.00	0.00	1,600.00	-1,347.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
1,700.00	0.00	0.00	1,700.00	-1,247.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
1,800.00	0.00	0.00	1,800.00	-1,147.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
1,900.00	0.00	0.00	1,900.00	-1,047.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
2,000.00	0.00	0.00	2,000.00	-947.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
2,100.00	0.00	0.00	2,100.00	-847.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
2,200.00	0.00	0.00	2,200.00	-747.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
2,300.00	0.00	0.00	2,300.00	-647.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
2,400.00	0.00	0.00	2,400.00	-547.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
2,500.00	0.00	0.00	2,500.00	-447.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
2,600.00	0.00	0.00	2,600.00	-347.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40



Pathfinder
Pathfinder X & Y Planning Report



A Schlumberger Company

Company:	OGX Resources	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County (NAD27)	TVD Reference:	WELL @ 2947.00ft (Original Well Elev)
Site:	Copperhead Fee A	MD Reference:	WELL @ 2947.00ft (Original Well Elev)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDS (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	-247.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
2,800.00	0.00	0.00	2,800.00	-147.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
2,900.00	0.00	0.00	2,900.00	-47.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
3,000.00	0.00	0.00	3,000.00	53.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
3,100.00	0.00	0.00	3,100.00	153.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
3,200.00	0.00	0.00	3,200.00	253.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
3,300.00	0.00	0.00	3,300.00	353.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
3,400.00	0.00	0.00	3,400.00	453.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
3,500.00	0.00	0.00	3,500.00	553.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
3,600.00	0.00	0.00	3,600.00	653.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
3,700.00	0.00	0.00	3,700.00	753.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
3,800.00	0.00	0.00	3,800.00	853.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
3,900.00	0.00	0.00	3,900.00	953.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
4,000.00	0.00	0.00	4,000.00	1,053.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
4,100.00	0.00	0.00	4,100.00	1,153.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
4,200.00	0.00	0.00	4,200.00	1,253.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
4,300.00	0.00	0.00	4,300.00	1,353.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
4,400.00	0.00	0.00	4,400.00	1,453.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
4,500.00	0.00	0.00	4,500.00	1,553.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
4,600.00	0.00	0.00	4,600.00	1,653.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
4,700.00	0.00	0.00	4,700.00	1,753.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
4,800.00	0.00	0.00	4,800.00	1,853.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
4,900.00	0.00	0.00	4,900.00	1,953.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
5,000.00	0.00	0.00	5,000.00	2,053.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
5,100.00	0.00	0.00	5,100.00	2,153.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
5,200.00	0.00	0.00	5,200.00	2,253.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
5,300.00	0.00	0.00	5,300.00	2,353.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40



Pathfinder
Pathfinder X & Y Planning Report



Company: OGX Resources
Project: Eddy County (NAD27)
Site: Copperhead Fee A
Well: #1H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 2947.00ft (Original Well Elev)
MD Reference: WELL @ 2947.00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

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	2,453.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
5,500.00	0.00	0.00	5,500.00	2,553.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
5,600.00	0.00	0.00	5,600.00	2,653.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
5,700.00	0.00	0.00	5,700.00	2,753.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
5,800.00	0.00	0.00	5,800.00	2,853.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
5,900.00	0.00	0.00	5,900.00	2,953.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
6,000.00	0.00	0.00	6,000.00	3,053.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
6,100.00	0.00	0.00	6,100.00	3,153.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
6,200.00	0.00	0.00	6,200.00	3,253.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
6,300.00	0.00	0.00	6,300.00	3,353.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
6,400.00	0.00	0.00	6,400.00	3,453.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
6,500.00	0.00	0.00	6,500.00	3,553.00	0.00	0.00	0.00	0.00	364,319.10	593,901.40
6,597.50	0.00	0.00	6,597.50	3,650.50	0.00	0.00	0.00	0.00	364,319.10	593,901.40
6,600.00	0.30	359.14	6,600.00	3,653.00	0.01	0.00	0.01	12.00	364,319.11	593,901.40
6,625.00	3.30	359.14	6,624.98	3,677.98	0.79	-0.01	0.79	12.00	364,319.89	593,901.39
6,650.00	6.30	359.14	6,649.89	3,702.89	2.88	-0.04	2.88	12.00	364,321.98	593,901.36
6,675.00	9.30	359.14	6,674.66	3,727.66	6.27	-0.09	6.28	12.00	364,325.37	593,901.31
6,700.00	12.30	359.14	6,699.21	3,752.21	10.96	-0.16	10.96	12.00	364,330.06	593,901.24
6,725.00	15.30	359.14	6,723.49	3,776.49	16.92	-0.25	16.92	12.00	364,336.02	593,901.15
6,750.00	18.30	359.14	6,747.42	3,800.42	24.14	-0.36	24.15	12.00	364,343.24	593,901.04
6,775.00	21.30	359.14	6,770.94	3,823.94	32.61	-0.49	32.61	12.00	364,351.71	593,900.91
6,800.00	24.30	359.14	6,793.98	3,846.98	42.29	-0.63	42.30	12.00	364,361.39	593,900.77
6,825.00	27.30	359.14	6,816.49	3,869.49	53.17	-0.80	53.18	12.00	364,372.27	593,900.60
6,850.00	30.30	359.14	6,838.40	3,891.40	65.21	-0.98	65.22	12.00	364,384.31	593,900.42
6,875.00	33.30	359.14	6,859.64	3,912.64	78.38	-1.18	78.39	12.00	364,397.48	593,900.22
6,900.00	36.30	359.14	6,880.17	3,933.17	92.65	-1.39	92.66	12.00	364,411.75	593,900.01
6,925.00	39.30	359.14	6,899.92	3,952.92	107.96	-1.62	107.98	12.00	364,427.06	593,899.78



Pathfinder Pathfinder X & Y Planning Report



A Schlumberger Company

Company:	OGX Resources	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County (NAD27)	TVD Reference:	WELL @ 2947.00ft (Original Well Elev)
Site:	Copperhead Fee A	MD Reference:	WELL @ 2947.00ft (Original Well Elev)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

MD (ft)	Inc. (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
6,950.00	42.30	359.14	6,918.84	3,971.84	124.29	-1.87	124.31	12.00	364,443.39	593,899.53
6,975.00	45.30	359.14	6,936.89	3,989.89	141.59	-2.13	141.61	12.00	364,460.69	593,899.27
7,000.00	48.30	359.14	6,954.00	4,007.00	159.81	-2.40	159.83	12.00	364,478.91	593,898.00
7,025.00	51.30	359.14	6,970.14	4,023.14	178.90	-2.69	178.92	12.00	364,498.00	593,898.71
7,050.00	54.30	359.14	6,985.25	4,038.25	198.81	-2.98	198.83	12.00	364,517.91	593,898.42
7,075.00	57.30	359.14	6,999.30	4,062.30	219.48	-3.29	219.51	12.00	364,538.58	593,898.11
7,100.00	60.30	359.14	7,012.25	4,085.25	240.86	-3.62	240.89	12.00	364,559.96	593,897.78
7,125.00	63.30	359.14	7,024.07	4,077.07	262.88	-3.95	262.92	12.00	364,581.99	593,897.45
7,150.00	66.30	359.14	7,034.71	4,087.71	285.50	-4.29	285.53	12.00	364,604.60	593,897.11
7,175.00	69.29	359.14	7,044.16	4,097.16	308.64	-4.63	308.68	12.00	364,627.74	593,896.77
7,200.00	72.29	359.14	7,052.38	4,105.38	332.24	-4.99	332.28	12.00	364,651.34	593,896.41
7,225.00	75.29	359.14	7,059.36	4,112.36	356.25	-5.35	356.29	12.00	364,675.35	593,896.05
7,250.00	78.29	359.14	7,065.07	4,118.07	380.58	-5.71	380.62	12.00	364,699.68	593,895.69
7,275.00	81.29	359.14	7,069.50	4,122.50	405.18	-6.08	405.22	12.00	364,724.28	593,895.32
7,300.00	84.29	359.14	7,072.63	4,125.63	429.97	-6.45	430.02	12.00	364,749.07	593,894.95
7,325.00	87.29	359.14	7,074.47	4,127.47	454.90	-6.83	454.95	12.00	364,774.00	593,894.57
7,347.56	90.00	359.14	7,075.00	4,128.00	477.45	-7.17	477.50	12.00	364,796.55	593,894.23
7,400.00	90.00	359.14	7,075.00	4,128.00	529.89	-7.95	529.94	0.00	364,848.99	593,893.45
7,500.00	90.00	359.14	7,075.00	4,128.00	629.87	-9.46	629.94	0.00	364,948.97	593,891.94
7,600.00	90.00	359.14	7,075.00	4,128.00	729.86	-10.96	729.94	0.00	365,048.96	593,890.44
7,700.00	90.00	359.14	7,075.00	4,128.00	829.85	-12.46	829.94	0.00	365,148.95	593,888.94
7,800.00	90.00	359.14	7,075.00	4,128.00	929.84	-13.96	929.94	0.00	365,248.94	593,887.44
7,900.00	90.00	359.14	7,075.00	4,128.00	1,029.83	-15.46	1,029.94	0.00	365,348.93	593,885.94
8,000.00	90.00	359.14	7,075.00	4,128.00	1,129.82	-16.96	1,129.94	0.00	365,448.92	593,884.44
8,100.00	90.00	359.14	7,075.00	4,128.00	1,229.81	-18.46	1,229.94	0.00	365,548.91	593,882.94
8,200.00	90.00	359.14	7,075.00	4,128.00	1,329.79	-19.96	1,329.94	0.00	365,648.89	593,881.44
8,300.00	90.00	359.14	7,075.00	4,128.00	1,429.78	-21.46	1,429.94	0.00	365,748.88	593,879.94



Pathfinder

Pathfinder X & Y Planning Report



Company:	OGX Resources	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County (NAD27)	TVD Reference:	WELL @ 2947.00ft (Original Well Elev)
Site:	Copperhead Fee A	MD Reference:	WELL @ 2947.00ft (Original Well Elev)
Well:	#1H	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)	EW (ft)	V.Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
8,400.00	90.00	359.14	7,075.00	4,128.00	1,529.77	-22.96	1,529.94	0.00	365,848.87	593,878.44
8,500.00	90.00	359.14	7,075.00	4,128.00	1,629.76	-24.46	1,629.94	0.00	365,948.86	593,876.94
8,600.00	90.00	359.14	7,075.00	4,128.00	1,729.75	-25.97	1,729.94	0.00	366,048.85	593,875.43
8,700.00	90.00	359.14	7,075.00	4,128.00	1,829.74	-27.47	1,829.94	0.00	366,148.84	593,873.93
8,800.00	90.00	359.14	7,075.00	4,128.00	1,929.73	-28.97	1,929.94	0.00	366,248.83	593,872.43
8,900.00	90.00	359.14	7,075.00	4,128.00	2,029.72	-30.47	2,029.94	0.00	366,348.82	593,870.93
9,000.00	90.00	359.14	7,075.00	4,128.00	2,129.70	-31.97	2,129.94	0.00	366,448.80	593,869.43
9,100.00	90.00	359.14	7,075.00	4,128.00	2,229.69	-33.47	2,229.94	0.00	366,548.79	593,867.93
9,200.00	90.00	359.14	7,075.00	4,128.00	2,329.68	-34.97	2,329.94	0.00	366,648.78	593,866.43
9,300.00	90.00	359.14	7,075.00	4,128.00	2,429.67	-36.47	2,429.94	0.00	366,748.77	593,864.93
9,400.00	90.00	359.14	7,075.00	4,128.00	2,529.66	-37.97	2,529.94	0.00	366,848.76	593,863.43
9,500.00	90.00	359.14	7,075.00	4,128.00	2,629.65	-39.47	2,629.94	0.00	366,948.75	593,861.93
9,600.00	90.00	359.14	7,075.00	4,128.00	2,729.64	-40.97	2,729.94	0.00	367,048.74	593,860.43
9,700.00	90.00	359.14	7,075.00	4,128.00	2,829.63	-42.48	2,829.94	0.00	367,148.73	593,858.92
9,800.00	90.00	359.14	7,075.00	4,128.00	2,929.61	-43.98	2,929.94	0.00	367,248.71	593,857.42
9,900.00	90.00	359.14	7,075.00	4,128.00	3,029.60	-45.48	3,029.94	0.00	367,348.70	593,855.92
10,000.00	90.00	359.14	7,075.00	4,128.00	3,129.59	-46.98	3,129.94	0.00	367,448.69	593,854.42
10,100.00	90.00	359.14	7,075.00	4,128.00	3,229.58	-48.48	3,229.94	0.00	367,548.68	593,852.92
10,200.00	90.00	359.14	7,075.00	4,128.00	3,329.57	-49.98	3,329.94	0.00	367,648.67	593,851.42
10,300.00	90.00	359.14	7,075.00	4,128.00	3,429.56	-51.48	3,429.94	0.00	367,748.66	593,849.92
10,400.00	90.00	359.14	7,075.00	4,128.00	3,529.55	-52.98	3,529.94	0.00	367,848.65	593,848.42
10,500.00	90.00	359.14	7,075.00	4,128.00	3,629.54	-54.48	3,629.94	0.00	367,948.64	593,846.92
10,600.00	90.00	359.14	7,075.00	4,128.00	3,729.52	-55.98	3,729.94	0.00	368,048.62	593,845.42
10,700.00	90.00	359.14	7,075.00	4,128.00	3,829.51	-57.48	3,829.94	0.00	368,148.61	593,843.92
10,800.00	90.00	359.14	7,075.00	4,128.00	3,929.50	-58.99	3,929.94	0.00	368,248.60	593,842.41
10,900.00	90.00	359.14	7,075.00	4,128.00	4,029.49	-60.49	4,029.94	0.00	368,348.59	593,840.91
11,000.00	90.00	359.14	7,075.00	4,128.00	4,129.48	-61.99	4,129.94	0.00	368,448.58	593,839.41



Pathfinder Pathfinder X & Y Planning Report



Company:	OGX Resources	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County (NAD27)	TVD Reference:	WELL @ 2947.00ft (Original Well Elev)
Site:	Copperhead Fee A	MD Reference:	WELL @ 2947.00ft (Original Well Elev)
Well:	#1H	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)	D Leg (°/100ft)	Northing (ft)	Easting (ft)
11,100.00	90.00	359.14	7,075.00	4,128.00	4,229.47	-63.49	4,229.94	0.00	368,548.57	593,837.91
11,200.00	90.00	359.14	7,075.00	4,128.00	4,329.46	-64.99	4,329.94	0.00	368,648.56	593,836.41
11,300.00	90.00	359.14	7,075.00	4,128.00	4,429.45	-66.49	4,429.94	0.00	368,748.55	593,834.91
11,400.00	90.00	359.14	7,075.00	4,128.00	4,529.43	-67.99	4,529.94	0.00	368,848.53	593,833.41
11,500.00	90.00	359.14	7,075.00	4,128.00	4,629.42	-69.49	4,629.94	0.00	368,948.52	593,831.91
11,600.00	90.00	359.14	7,075.00	4,128.00	4,729.41	-70.99	4,729.94	0.00	369,048.51	593,830.41
11,700.00	90.00	359.14	7,075.00	4,128.00	4,829.40	-72.49	4,829.94	0.00	369,148.50	593,828.91
11,800.00	90.00	359.14	7,075.00	4,128.00	4,929.39	-73.99	4,929.94	0.00	369,248.49	593,827.41
11,900.00	90.00	359.14	7,075.00	4,128.00	5,029.38	-75.50	5,029.94	0.00	369,348.48	593,825.90
12,000.00	90.00	359.14	7,075.00	4,128.00	5,129.37	-77.00	5,129.94	0.00	369,448.47	593,824.40
12,100.00	90.00	359.14	7,075.00	4,128.00	5,229.36	-78.50	5,229.94	0.00	369,548.46	593,822.90
12,200.00	90.00	359.14	7,075.00	4,128.00	5,329.34	-80.00	5,329.94	0.00	369,648.44	593,821.40
12,300.00	90.00	359.14	7,075.00	4,128.00	5,429.33	-81.50	5,429.94	0.00	369,748.43	593,819.90
12,339.07	90.00	359.14	7,075.00	4,128.00	5,468.40	-82.09	5,469.01	0.00	369,787.50	593,819.31

PBHL(CH#1H)

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/S (ft)	+E/W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL(CH#1H)	0.00	0.00	7,075.00	5,468.40	-82.00	369,787.500	593,819.400	32° 0' 58.675 N	104° 1' 50.275 W
- hit/miss target									
- Shape									
- plan hits target center									
- Point									

Checked By: _____

Approved By: _____

Date: _____