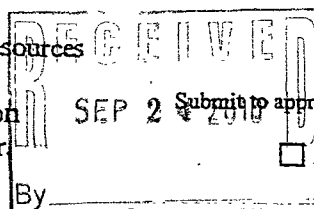


District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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 GRID Number 217955
		³ API Number 30 -
⁴ Property Code	⁵ Property Name COOPERHEAD FEE "A"	⁶ Well No. 1H
⁷ Proposed Pool 1 DELAWARE RIVER-BONE SPRING (16800)		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 DRILL	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.

Oil Conservation Division

Case No. 14661 / 14662

Exhibit No. E-2

ATTACHED SHEET FOR DETAIL

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature:

Joe T. Janica

Printed name: Joe T. Janica

Title: Permit Eng.

E-mail Address: joejanica@valornet.com

Date: 09/23/10

Phone: 575-391-8503

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

Expiration Date:

Conditions of Approval Attached ☐

Scanned

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.

State of New Mexico

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

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

Surface Location

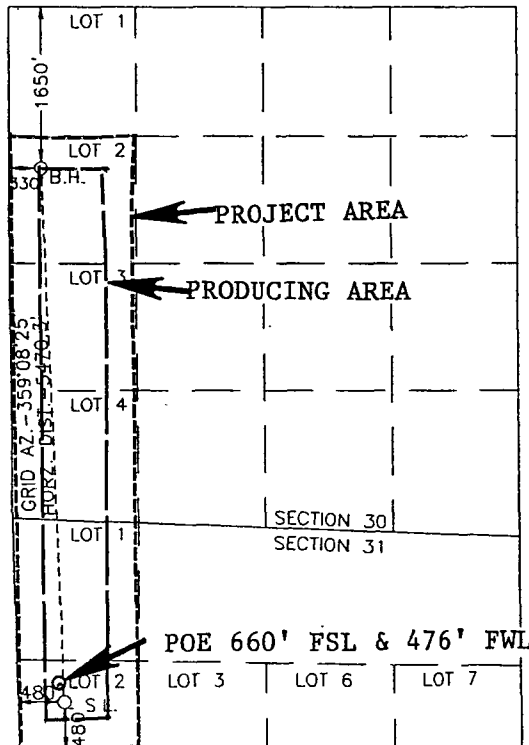
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	31	26-S	29-E		480	SOUTH	480	WEST	EDDY

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



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.

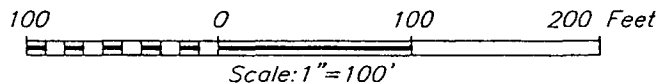
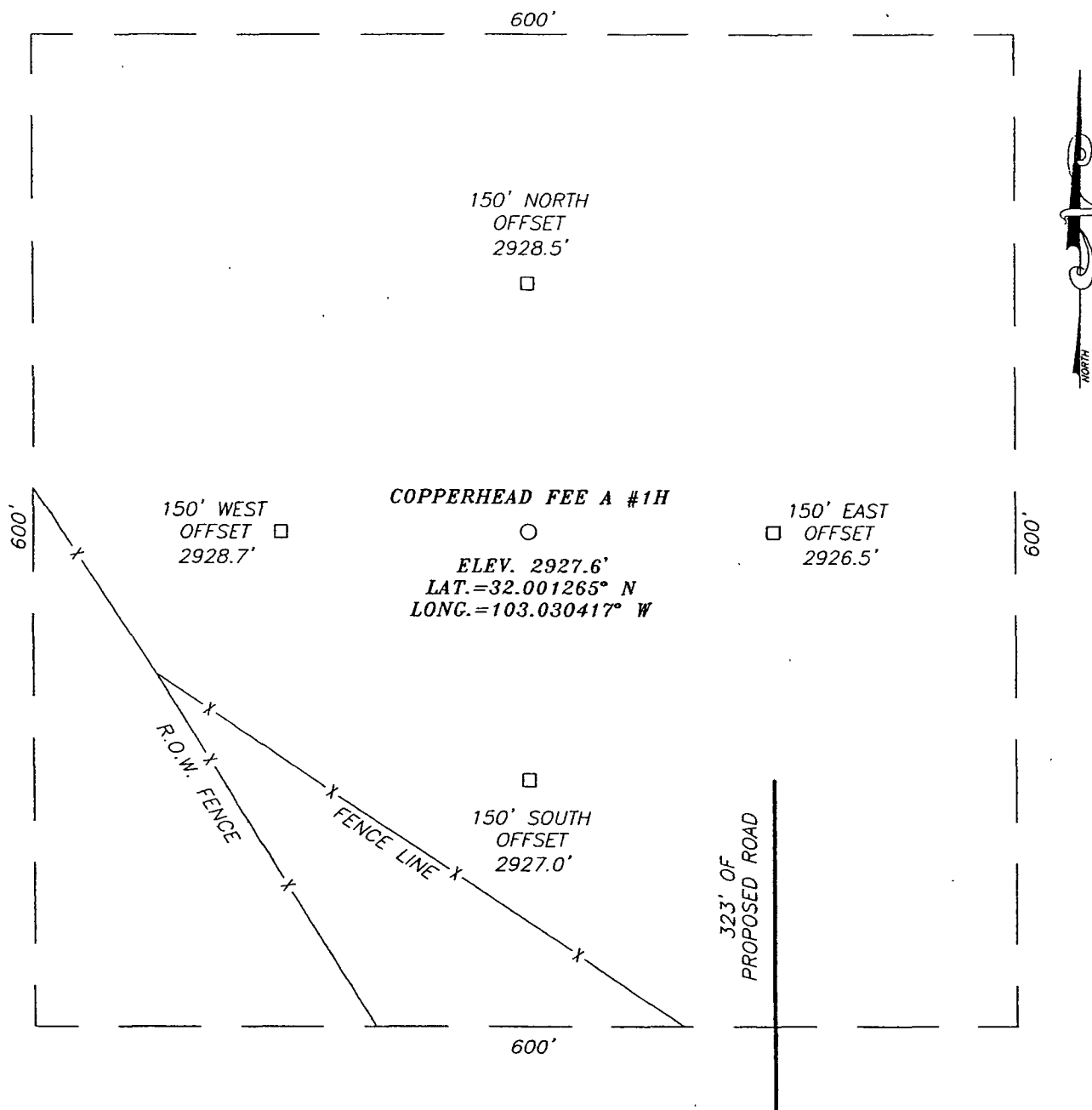
Signature: Joe T. Janica
Date: 09/23/10
Printed Name: Joe T. Janica

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.

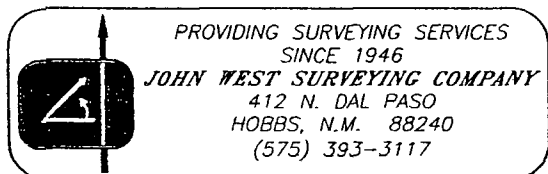
Date Surveyed: 09/23/2010
Signature & Seal of Professional Surveyor: Ronald J. Eidson
Certificate No.: 12641
Name: RONALD J. EIDSON
Number: 3239

SECTION 31, TOWNSHIP 26 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF US. HWY. #285 AND
CO. RD. #726 (CATFISH) GO EAST ON CO. RD. #726
APPROX. 300 FEET. THE LOCATION STAKE IS
APPROX. 450 FEET NORTH.

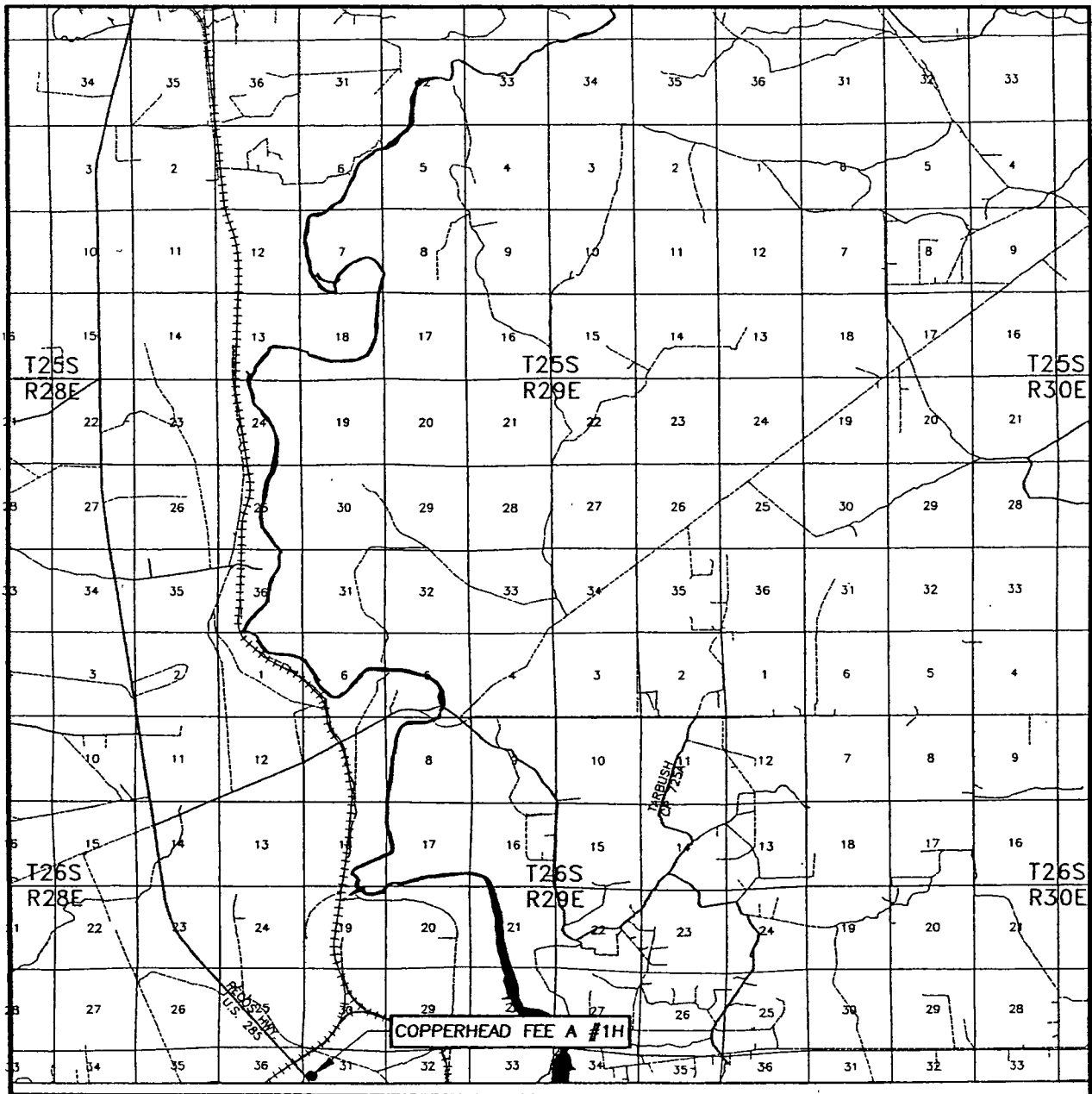


OGX RESOURCES

COPPORHEAD 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.

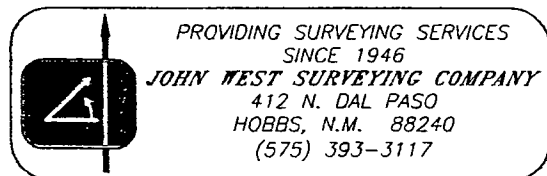
Survey Date: 8/24/10	Sheet 1 of 1 Sheets
W.O. Number: 10.11.1249	Dr By: LA
Date: 9/1/10	10111249
	Scale: 1"=100'

VICINITY MAP



SCALE: 1" = 2 MILES

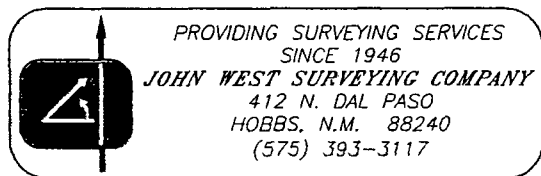
SEC. 31 TWP. 26-S RGE. 29-E
 SURVEY _____ N.M.P.M.
 COUNTY EDDY STATE NEW MEXICO
 DESCRIPTION 480' FSL & 480' FWL
 ELEVATION 2928'
 OPERATOR OGX RESOURCES
 LEASE COPPORHEAD FEE A





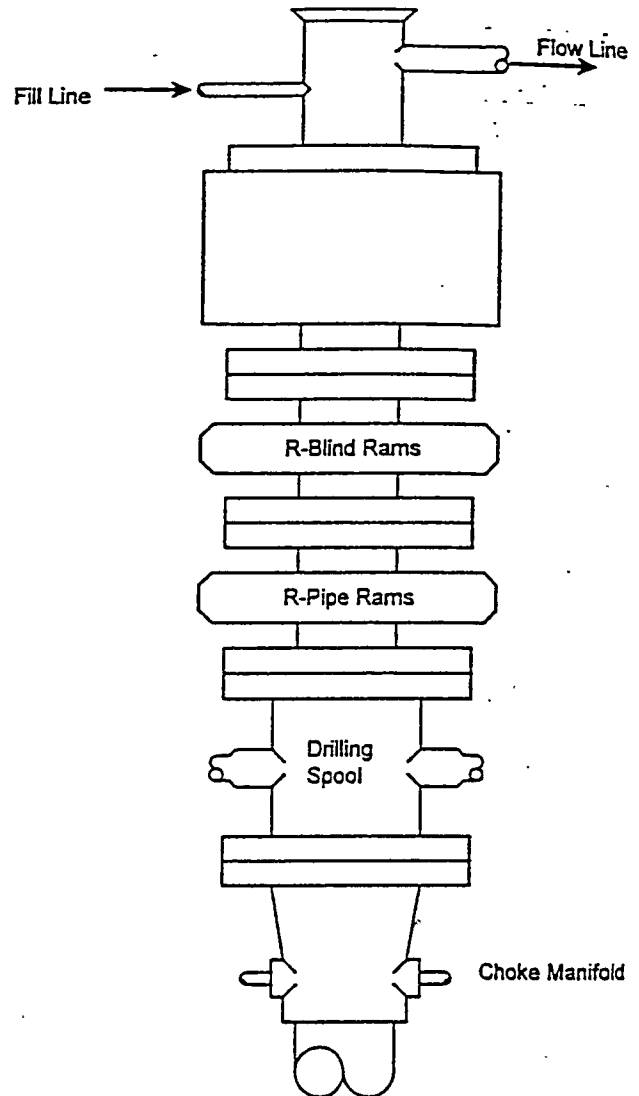
CONTOUR INTERVAL:
RED BLUFF, N.M. - 10'

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



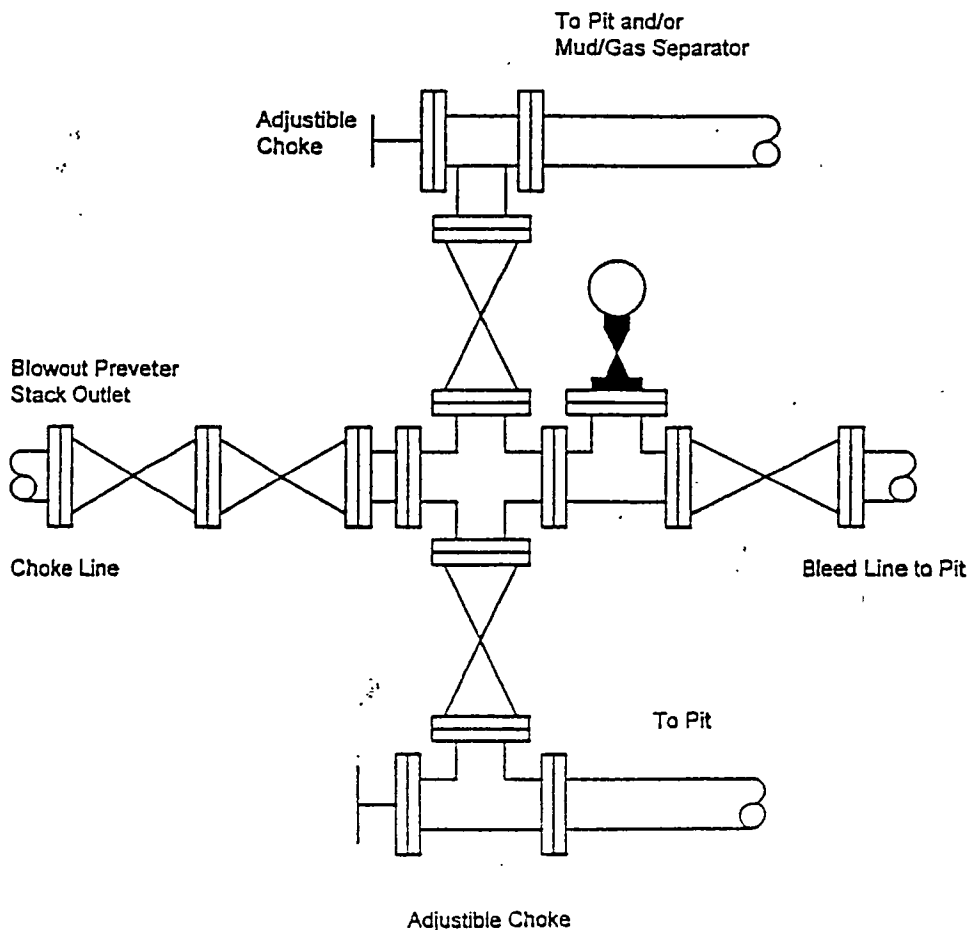
BLOWOUT PREVENTER SYSTEM

3000 PSI



Type 900 SERIES
3000 PSI WP

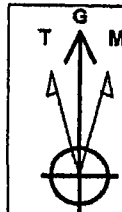
Choke Manifold Assembly for 5M WP System





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

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



Azimuths to Grid North
True North: -0.18°
Magnetic North: 7.70°

Magnetic Field
Strength: 48544.8 nT
Dip Angle: 58.84°
Date: 08/03/2010
Model: IGRF200810

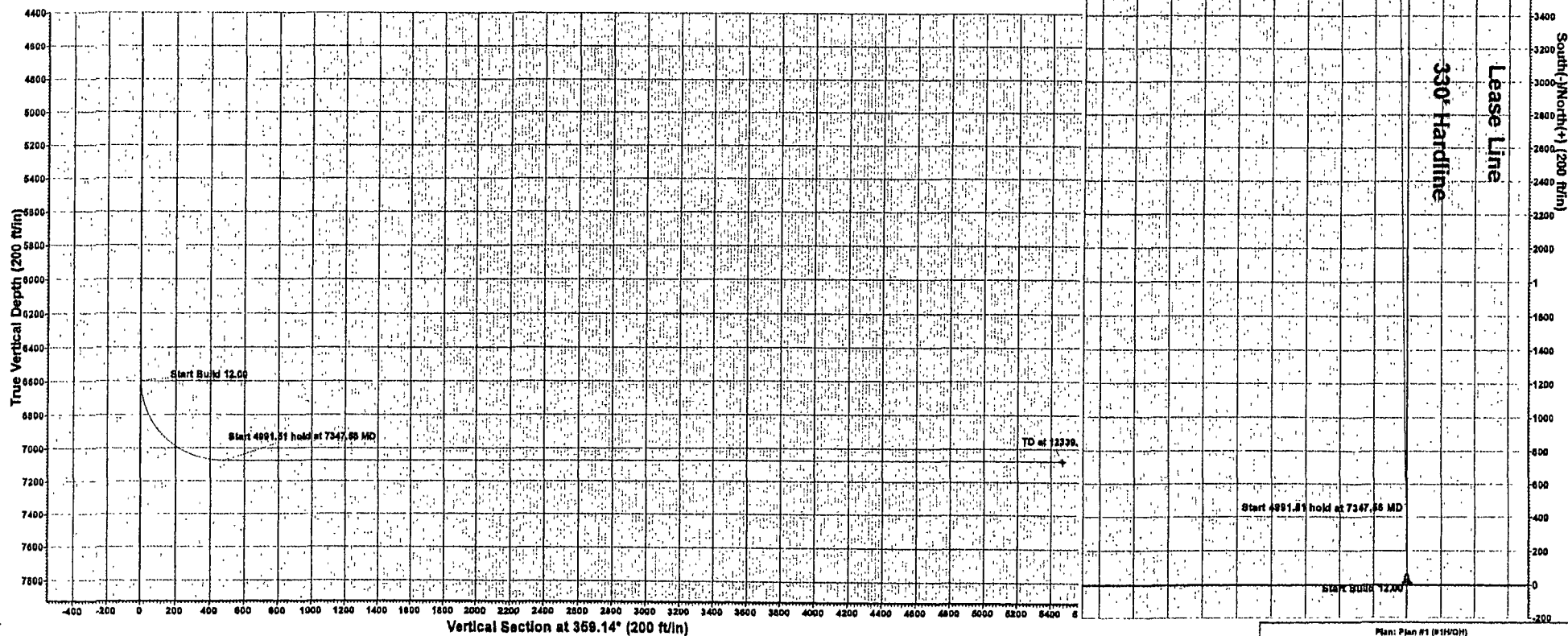
PATHFINDER
A Schlumberger Company

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

WELL DETAILS: #1H						
Ground Elevation: 2928.00						
RKB Elevation: WELL @ 2947.00ft (Original Well Elev)						
Rig Name: Original Well Elev						
+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	364319.100	893901.400	32° 0' 4.554 N	104° 1' 49.501 W	

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFac	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	5597.50	0.00	0.00	5597.50	0.50	0.00	0.00	0.00	0.00	
3	7347.58	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	5468.40	-82.09	0.00	0.00	5468.01	PBHL(CH#1H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TVD	+N-S	+E-W	Northing	Easting	Shape
PBHL(CH#1H)	7075.00	5468.40	-82.00	369787.500	893619.400	Point



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

Created By: Nels Blomham Date: 8:48, September 03 2010

OGX

OGX Resources

Eddy County (NAD27)

Copperhead Fee A

#1H

OH

Plan: Plan #1

Pathfinder X & Y Planning Report

03 September, 2010

PATHFINDER®

A Schlumberger Company



Pathfinder
Pathfinder X & Y Planning Report

PATHFINDER
A Schlumberger Company

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

Project Eddy County (NAD27), New Mexico

Map System: US State Plane 1927 (Exact solution)
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: New Mexico East 3001

System Datum: Mean Sea Level

Site Copperhead Fee A

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

Well #1H

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

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	09/03/2010	7.86	59.94	48,545

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	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
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)	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

PATHFINDER
A Schlumberger Company

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)	E/W (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

PATHFINDER
A Schlumberger Company

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

Local Co-ordinate Reference: Well #1H
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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

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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	6,674.86	3,727.86	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
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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)
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	593,899.00
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	4,052.30	219.48	-3.29	219.51	12.00	364,538.58	593,898.11
7,100.00	60.30	359.14	7,012.25	4,065.25	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	262.89	-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	7,072.83	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
7,347.58	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



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Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLog (°/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	-24.48	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



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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 - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL(CH#1H) - plan hits target center - Point	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

Checked By: _____ Approved By: _____ Date: _____