

DATE IN 7/7/09	SUSPENSE	ENGINEER Brooks	LOGGED IN 7/8/09	TYPE NSL	PTGW APP NO. 2918931558
----------------	----------	-----------------	------------------	----------	----------------------------

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



30-025-
 Lea Co
 Good Hands 15" slot #1H
 COG operating
 (229137)

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication
☒ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

- [D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☒ Does Not Apply

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
 [B] ☐ Offset Operators, Leaseholders or Surface Owner
 [C] ☐ Application is One Which Requires Published Legal Notice
 [D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
 [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
 [F] ☐ Waivers are Attached

RECEIVED OGD
 2009 JUL - 7 P 1:22

INTEREST ARE THE SAME

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

ROBYN M. ODOM
 Print or Type Name

[Signature]
 Signature

REGULATORY ANALYST
 Title

7/6/09
 Date

rodomb@conchoresources.com
 e-mail Address

Good Hands 15 State #1

Lea County, NM

COG proposes to drill a Horizontal, North ½, 160 acre spacing
Tulk; Abo, North oil well
TVD of approximately 8815', MD 13,450'

Location:

SHL: 1190' FNL & 430' FEL Sec 15, T14S, R32E, Unit A

BHL: 1190' FNL & 330' FWL Sec 15, T14S, R32E, Unit D

This well had to be drilled at a non-standard location due to sand dunes.

The plan for this well is to complete it in the Abo formation.

We won't know the exact perms until we drill & log it, but it will be very similar to the Reindeer 21 Federal #2 which was recently drilled in June 2008 and is located at:

SHL: 330' FNL & 330' FEL	Section 21, T16S, R28E, Unit A.
BHL: 330' FNL & 330' FWL	Section 21, T16S, R28E, Unit D

Reindeer 21 Federal #2 has perms from: 6946' – 8331' overall, but broken up into 4 separate intervals, with 4 separate fracs:

1st Perf: 6946',
acidized w/ 9300 gals,
frac'd w/ 91,000 gals gel, 60,500# 30/50 sand.

2nd Perf: 7479',
acidized w/ 9300 gals,
frac'd w/ 91,000 gals gel, 60,500# 30/50 sand.

3rd Perf: 7884',
acidized w/ 9300 gals,
frac'd w/ 91,000 gals gel, 60,500# 30/50 sand.

4th Perf: 8331',
acidized w/ 9300 gals,
frac'd w/ 91,000 gals gel, 60,500# 30/50 sand.

Attachment 1

Plat & Map

Attachment 2

Map & legend of offset wells.

Attachment 3

Updated land plat showing that COG Operating LLC owns all Section 15 & 16.
The acreage we are encroaching on is the SW/4 NW/4 of Sec. 15, SE/4 NE/4 of Sec. 15
and the SE/4 NE/4 of Sec. 16.

All interests are the same.

COG Operating LLC respectfully requests permission to have this NSL approved.

DISTRICT I
1825 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

Form C-102
Revised October 12, 2005

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

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-	Pool Code 60265	Pool Name <i>under</i> TULK; ABO, NORTH
Property Code	Property Name GOOD HANDS "15" STATE	Well Number 1H
OGRID No. 229137	Operator Name COG OPERATING LLC	Elevation 4294'

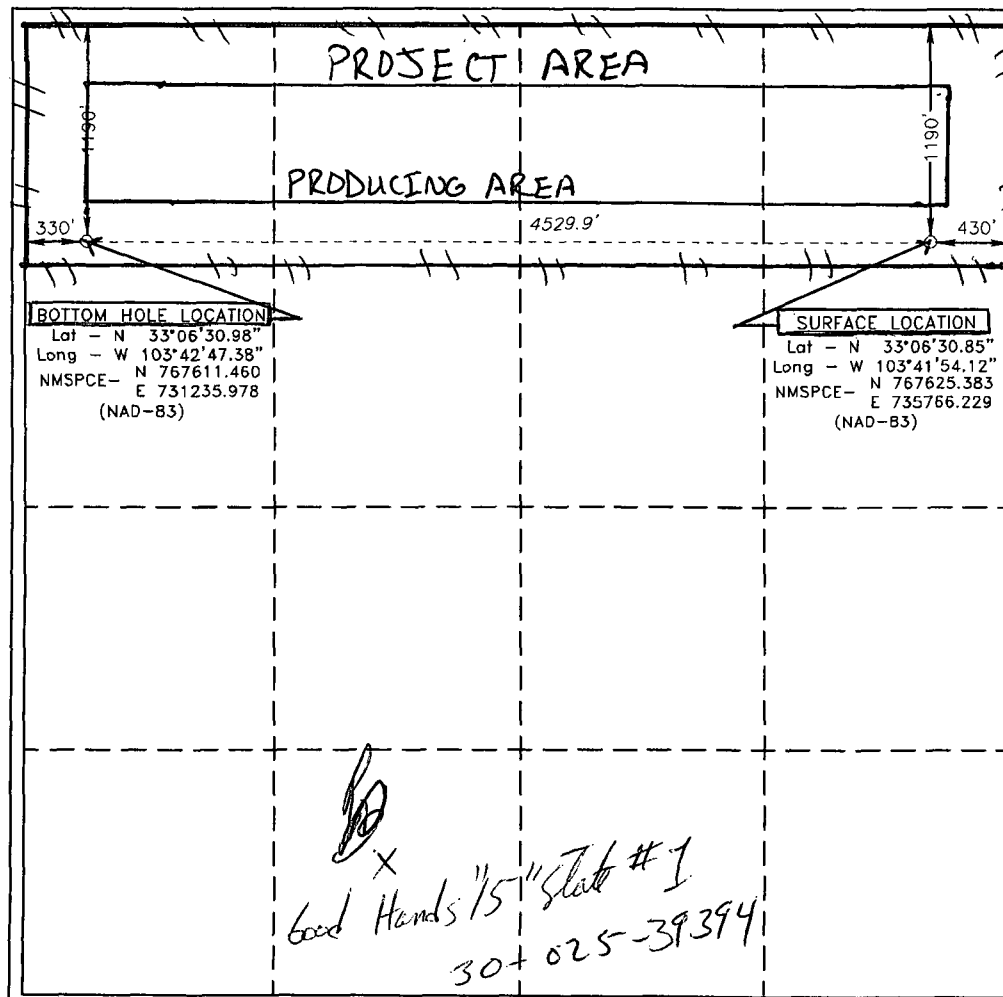
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	15	14 S	32 E		1190	NORTH	430	EAST	LEA

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
D	15	14 S	32 E		1190	NORTH	330	WEST	LEA
Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information 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 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.

Robyn Odum 6/16/2009
Signature Date

Robyn Odum

Printed Name

SURVEYOR CERTIFICATION

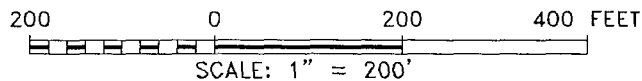
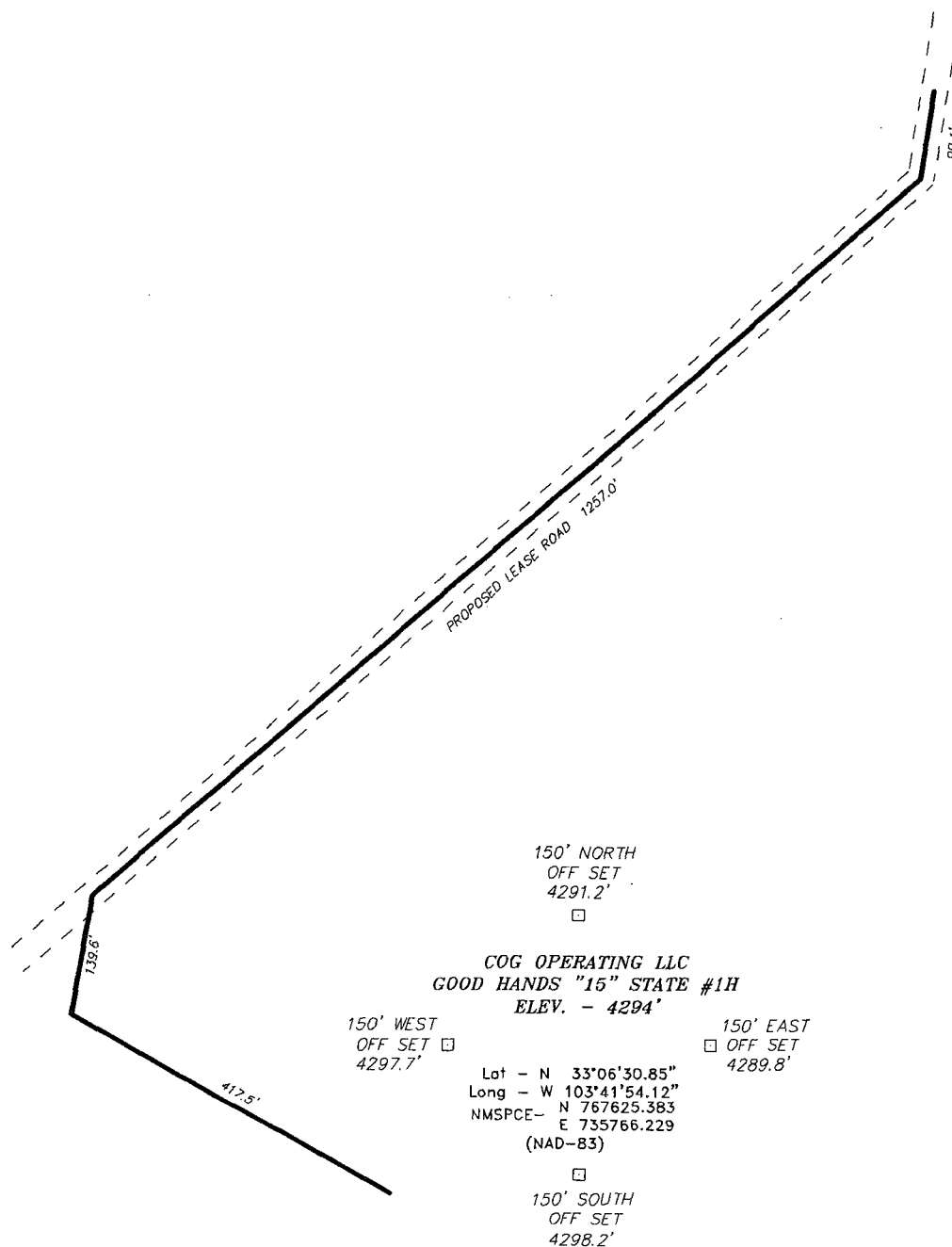
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief.

GARY L. JONES
June 13, 2009
Date Surveyed
Signature & Seal of Professional Surveyor 7977
W.C. Jones

Certificate No. Gary L. Jones 7977

Basin Surveys

SECTION 15, TOWNSHIP 14 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



Directions to Location:

FROM MILE MARKER 15 OF HWY 457; GO NORTH 0.4 MILES TO CO. RD. PRISCILLA, GO WEST ON PRISCILLA FOR 5.0 MILES TO LEASE ROAD, ON LEASE ROAD GO SOUTHERLY 2.2 MILES TO 2-TRACK AND PROPOSED LEASE ROAD.

COG OPERATING LLC

REF: GOOD HANDS "15" STATE #1H / WELL PAD TOPO

THE GOOD HANDS "15" STATE #1H LOCATED 1190'
FROM THE NORTH LINE AND 430' FROM THE EAST LINE OF
SECTION 15, TOWNSHIP 14 SOUTH, RANGE 32 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.

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

W.O. Number: 21430

Drawn By: J. SMALL

Date: 06-04-2009

Disk: JMS 21430

Survey Date: 06-03-2009

Sheet 1 of 1 Sheets

COG Operating LLC

Lea County(NAD83)
Good Hands "15" State
#1H
OH

Plan: Plan #1

Pathfinder X & Y Planning Report

02 July, 2009

PATHFINDER

Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: COG Operating LLC	Local Co-ordinate Reference: Well #1H
Project: Lea County(NAD83)	TVD Reference: WELL @ 4312.00ft (Original Well Elev)
Site: Good Hands "15" State	MD Reference: WELL @ 4312.00ft (Original Well Elev)
Well: #1H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: Plan #1	Database: Midland Database

Project Lea County(NAD83)	System Datum: Mean Sea Level
Map System: US State Plane 1983	
Geo Datum: North American Datum 1983	
Map Zone: New Mexico Eastern Zone	

Site Good Hands "15" State	Northings: 767,625.383 ft	Latitude: 33° 6' 30.847 N
	Easting: 735,766.229 ft	Longitude: 103° 41' 54.120 W
	Slot Radius: "	Grid Convergence: 0.35 °

Well #1H	Well Position +N/-S 0.00 ft	Northings: 767,625.383 ft	Latitude: 33° 6' 30.847 N
	+E/-W 0.00 ft	Easting: 735,766.229 ft	Longitude: 103° 41' 54.120 W
Position Uncertainty	0.00 ft	Wellhead Elevation: ft	Ground Level: 4,294.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	07/02/2009	7.93	61.05	49,353

Design Plan #1				
Audit Notes:				
Version:				
Vertical Section:	Phase: PLAN	Tie On Depth: 0.00		
	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	269.83

Survey Tool Program	Date 07/02/2009
From (ft)	To (ft)
0.00	13,212.23 Plan #1 (OH)
Survey (Wellbore)	Tool Name
	Description

Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: COG Operating LLC
 Project: Lea County(NAD83)
 Site: Good Hands "15" State
 Well: #1H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Database:

Well #1H
 WELL @ 4312.00ft (Original Well Elev)
 WELL @ 4312.00ft (Original Well Elev)
 Grid
 Minimum Curvature
 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	-4,312.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
100.00	0.00	0.00	100.00	-4,212.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
200.00	0.00	0.00	200.00	-4,112.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
300.00	0.00	0.00	300.00	-4,012.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
400.00	0.00	0.00	400.00	-3,912.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
500.00	0.00	0.00	500.00	-3,812.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
600.00	0.00	0.00	600.00	-3,712.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
700.00	0.00	0.00	700.00	-3,612.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
800.00	0.00	0.00	800.00	-3,512.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
900.00	0.00	0.00	900.00	-3,412.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
1,000.00	0.00	0.00	1,000.00	-3,312.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
1,100.00	0.00	0.00	1,100.00	-3,212.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
1,200.00	0.00	0.00	1,200.00	-3,112.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
1,300.00	0.00	0.00	1,300.00	-3,012.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
1,400.00	0.00	0.00	1,400.00	-2,912.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
1,500.00	0.00	0.00	1,500.00	-2,812.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
1,600.00	0.00	0.00	1,600.00	-2,712.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
1,700.00	0.00	0.00	1,700.00	-2,612.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
1,800.00	0.00	0.00	1,800.00	-2,512.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
1,900.00	0.00	0.00	1,900.00	-2,412.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
2,000.00	0.00	0.00	2,000.00	-2,312.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
2,100.00	0.00	0.00	2,100.00	-2,212.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
2,200.00	0.00	0.00	2,200.00	-2,112.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
2,300.00	0.00	0.00	2,300.00	-2,012.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
2,400.00	0.00	0.00	2,400.00	-1,912.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
2,500.00	0.00	0.00	2,500.00	-1,812.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
2,600.00	0.00	0.00	2,600.00	-1,712.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23

Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: COG Operating LLC
 Project: Lea County(NAD83)
 Site: Good Hands "15" State
 Well: #1H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Database:

Well #1H
 WELL @ 4312.00ft (Original Well Elev)
 WELL @ 4312.00ft (Original Well Elev)
 Grid
 Minimum Curvature
 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	-1,612.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
2,800.00	0.00	0.00	2,800.00	-1,512.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
2,900.00	0.00	0.00	2,900.00	-1,412.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
3,000.00	0.00	0.00	3,000.00	-1,312.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
3,100.00	0.00	0.00	3,100.00	-1,212.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
3,200.00	0.00	0.00	3,200.00	-1,112.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
3,300.00	0.00	0.00	3,300.00	-1,012.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
3,400.00	0.00	0.00	3,400.00	-912.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
3,500.00	0.00	0.00	3,500.00	-812.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
3,600.00	0.00	0.00	3,600.00	-712.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
3,700.00	0.00	0.00	3,700.00	-612.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
3,800.00	0.00	0.00	3,800.00	-512.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
3,900.00	0.00	0.00	3,900.00	-412.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
4,000.00	0.00	0.00	4,000.00	-312.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
4,100.00	0.00	0.00	4,100.00	-212.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
4,200.00	0.00	0.00	4,200.00	-112.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
4,300.00	0.00	0.00	4,300.00	-12.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
4,400.00	0.00	0.00	4,400.00	88.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
4,500.00	0.00	0.00	4,500.00	188.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
4,600.00	0.00	0.00	4,600.00	288.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
4,700.00	0.00	0.00	4,700.00	388.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
4,800.00	0.00	0.00	4,800.00	488.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
4,900.00	0.00	0.00	4,900.00	588.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
5,000.00	0.00	0.00	5,000.00	688.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
5,100.00	0.00	0.00	5,100.00	788.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
5,200.00	0.00	0.00	5,200.00	888.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
5,300.00	0.00	0.00	5,300.00	988.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23

Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: COG Operating LLC
 Project: Lea County(NAD83)
 Site: Good Hands "15" State
 Well: #1H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Database:

Well #1H
 WELL @ 4312.00ft (Original Well Elev)
 WELL @ 4312.00ft (Original Well Elev)
 Grid
 Minimum Curvature
 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	1,088.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
5,500.00	0.00	0.00	5,500.00	1,188.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
5,600.00	0.00	0.00	5,600.00	1,288.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
5,700.00	0.00	0.00	5,700.00	1,388.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
5,800.00	0.00	0.00	5,800.00	1,488.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
5,900.00	0.00	0.00	5,900.00	1,588.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
6,000.00	0.00	0.00	6,000.00	1,688.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
6,100.00	0.00	0.00	6,100.00	1,788.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
6,200.00	0.00	0.00	6,200.00	1,888.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
6,300.00	0.00	0.00	6,300.00	1,988.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
6,400.00	0.00	0.00	6,400.00	2,088.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
6,500.00	0.00	0.00	6,500.00	2,188.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
6,600.00	0.00	0.00	6,600.00	2,288.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
6,700.00	0.00	0.00	6,700.00	2,388.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
6,800.00	0.00	0.00	6,800.00	2,488.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
6,900.00	0.00	0.00	6,900.00	2,588.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
7,000.00	0.00	0.00	7,000.00	2,688.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
7,100.00	0.00	0.00	7,100.00	2,788.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
7,200.00	0.00	0.00	7,200.00	2,888.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
7,300.00	0.00	0.00	7,300.00	2,988.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
7,400.00	0.00	0.00	7,400.00	3,088.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
7,500.00	0.00	0.00	7,500.00	3,188.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
7,600.00	0.00	0.00	7,600.00	3,288.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
7,700.00	0.00	0.00	7,700.00	3,388.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
7,800.00	0.00	0.00	7,800.00	3,488.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
7,900.00	0.00	0.00	7,900.00	3,588.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
8,000.00	0.00	0.00	8,000.00	3,688.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23

Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: COG Operating LLC
 Project: Lea County(NAD83)
 Site: Good Hands "15" State
 Well: #1H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Database:

Well #1H
 WELL @ 4312.00ft (Original Well Elev)
 WELL @ 4312.00ft (Original Well Elev)
 Grid
 Minimum Curvature
 Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	EW (ft)	V. Sec (ft)	D Leg (°/100ft)	Northing (ft)	Easting (ft)
8,100.00	0.00	0.00	8,100.00	3,788.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
8,200.00	0.00	0.00	8,200.00	3,888.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
8,300.00	0.00	0.00	8,300.00	3,988.00	0.00	0.00	0.00	0.00	767,625.38	735,766.23
8,407.50	0.00	0.00	8,407.50	4,095.50	0.00	0.00	0.00	0.00	767,625.38	735,766.23
KOP-8407.50 MD, 0.00° INC, 0.00° AZI, 8407.50° TVD										
8,425.00	2.10	269.83	8,425.00	4,113.00	0.00	-0.32	0.32	12.00	767,625.38	735,765.91
8,450.00	5.10	269.83	8,449.94	4,137.94	-0.01	-1.89	1.89	12.00	767,625.38	735,764.34
8,475.00	8.10	269.83	8,474.78	4,162.78	-0.01	-4.76	4.76	12.00	767,625.37	735,761.47
8,500.00	11.10	269.83	8,499.42	4,187.42	-0.03	-8.93	8.93	12.00	767,625.36	735,757.30
8,525.00	14.10	269.83	8,523.82	4,211.82	-0.04	-14.38	14.38	12.00	767,625.34	735,751.85
8,550.00	17.10	269.83	8,547.89	4,235.89	-0.06	-21.10	21.10	12.00	767,625.32	735,745.13
8,575.00	20.10	269.83	8,571.59	4,259.59	-0.09	-29.07	29.07	12.00	767,625.30	735,737.16
8,600.00	23.09	269.83	8,594.83	4,282.83	-0.11	-38.27	38.27	12.00	767,625.27	735,727.96
8,625.00	26.09	269.83	8,617.56	4,305.56	-0.14	-48.68	48.68	12.00	767,625.24	735,717.55
8,650.00	29.09	269.83	8,639.71	4,327.71	-0.18	-60.26	60.26	12.00	767,625.20	735,705.97
8,675.00	32.09	269.83	8,661.23	4,349.23	-0.22	-72.98	72.98	12.00	767,625.17	735,693.25
8,700.00	35.09	269.83	8,682.05	4,370.05	-0.26	-86.81	86.81	12.00	767,625.13	735,679.42
8,725.00	38.09	269.83	8,702.12	4,390.12	-0.30	-101.71	101.71	12.00	767,625.08	735,664.52
8,750.00	41.09	269.83	8,721.39	4,409.39	-0.35	-117.64	117.64	12.00	767,625.03	735,648.59
8,775.00	44.09	269.83	8,739.79	4,427.79	-0.40	-134.56	134.56	12.00	767,624.98	735,631.67
8,800.00	47.09	269.83	8,757.28	4,445.28	-0.45	-152.41	152.41	12.00	767,624.93	735,613.82
8,825.00	50.09	269.83	8,773.82	4,461.82	-0.51	-171.16	171.16	12.00	767,624.88	735,595.07
8,850.00	53.09	269.83	8,789.35	4,477.35	-0.57	-190.75	190.75	12.00	767,624.82	735,575.48
8,875.00	56.09	269.83	8,803.83	4,491.83	-0.63	-211.12	211.12	12.00	767,624.76	735,555.11
8,900.00	59.09	269.83	8,817.23	4,505.23	-0.69	-232.22	232.22	12.00	767,624.69	735,534.01
8,925.00	62.09	269.83	8,829.51	4,517.51	-0.75	-254.00	254.00	12.00	767,624.63	735,512.23
8,950.00	65.09	269.83	8,840.63	4,528.63	-0.82	-276.39	276.39	12.00	767,624.56	735,489.84

Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: COG Operating LLC
 Project: Lea County(NAD83)
 Site: Good Hands "15" State
 Well: #1H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Database:

Well #1H
 WELL @ 4312.00ft (Original Well Elev)
 WELL @ 4312.00ft (Original Well Elev)
 Grid
 Minimum Curvature
 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)
8,975.00	68.08	269.83	8,850.56	4,538.56	-0.89	-299.32	299.33	12.00	767,624.49	735,466.90
9,000.00	71.08	269.83	8,859.28	4,547.28	-0.96	-322.75	322.75	12.00	767,624.43	735,443.48
9,025.00	74.08	269.83	8,866.76	4,554.76	-1.03	-346.60	346.60	12.00	767,624.35	735,419.63
9,050.00	77.08	269.83	8,872.99	4,560.99	-1.10	-370.81	370.81	12.00	767,624.28	735,395.42
9,075.00	80.08	269.83	8,877.93	4,565.93	-1.17	-395.31	395.32	12.00	767,624.21	735,370.91
9,100.00	83.08	269.83	8,881.59	4,569.59	-1.25	-420.04	420.04	12.00	767,624.14	735,346.19
9,125.00	86.08	269.83	8,883.95	4,571.95	-1.32	-444.93	444.93	12.00	767,624.06	735,321.30
9,150.00	89.08	269.83	8,885.01	4,573.01	-1.39	-469.90	469.90	12.00	767,623.99	735,296.33
9,165.92	90.99	269.83	8,885.00	4,573.00	-1.44	-485.82	485.82	12.00	767,623.94	735,280.41
EOC-9165.92°MD,90.99°INC,272.36°AZI,8885.00°TVD,12.00°DLS, 485.82°VS, 20.01°N, -485.41°E										
9,165.95	90.99	269.83	8,885.00	4,573.00	-1.44	-485.85	485.86	0.00	767,623.94	735,280.37
9,200.00	90.99	269.83	8,884.41	4,572.41	-1.54	-519.90	519.90	0.00	767,623.84	735,246.33
9,300.00	90.99	269.83	8,882.68	4,570.68	-1.84	-619.88	619.88	0.00	767,623.54	735,146.35
9,400.00	90.99	269.83	8,880.96	4,568.96	-2.14	-719.87	719.87	0.00	767,623.25	735,046.36
9,500.00	90.99	269.83	8,879.23	4,567.23	-2.43	-819.85	819.85	0.00	767,622.95	734,946.38
9,600.00	90.99	269.83	8,877.50	4,565.50	-2.73	-919.83	919.84	0.00	767,622.65	734,846.39
9,700.00	90.99	269.83	8,875.77	4,563.77	-3.03	-1,019.82	1,019.82	0.00	767,622.36	734,746.41
9,800.00	90.99	269.83	8,874.04	4,562.04	-3.32	-1,119.80	1,119.81	0.00	767,622.06	734,646.42
9,900.00	90.99	269.83	8,872.32	4,560.32	-3.62	-1,219.79	1,219.79	0.00	767,621.76	734,546.44
10,000.00	90.99	269.83	8,870.59	4,558.59	-3.92	-1,319.77	1,319.78	0.00	767,621.47	734,446.46
10,100.00	90.99	269.83	8,868.86	4,556.86	-4.21	-1,419.76	1,419.76	0.00	767,621.17	734,346.47
10,200.00	90.99	269.83	8,867.13	4,555.13	-4.51	-1,519.74	1,519.75	0.00	767,620.87	734,246.49
10,300.00	90.99	269.83	8,865.41	4,553.41	-4.81	-1,619.73	1,619.73	0.00	767,620.58	734,146.50
10,400.00	90.99	269.83	8,863.68	4,551.68	-5.10	-1,719.71	1,719.72	0.00	767,620.28	734,046.52
10,500.00	90.99	269.83	8,861.95	4,549.95	-5.40	-1,819.70	1,819.70	0.00	767,619.98	733,946.53
10,600.00	90.99	269.83	8,860.22	4,548.22	-5.70	-1,919.68	1,919.69	0.00	767,619.69	733,846.55
10,700.00	90.99	269.83	8,858.49	4,546.49	-5.99	-2,019.67	2,019.67	0.00	767,619.39	733,746.56

Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: COG Operating LLC
 Project: Lea County(NAD83)
 Site: Good Hands "15" State
 Well: #1H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Database:

Well #1H
 WELL @ 4312.00ft (Original Well Elev)
 WELL @ 4312.00ft (Original Well Elev)
 Grid
 Minimum Curvature
 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)
10,800.00	90.99	269.83	8,856.77	4,544.77	-6.29	-2,119.65	2,119.66	0.00	767,619.09	733,846.58
10,900.00	90.99	269.83	8,855.04	4,543.04	-6.59	-2,219.64	2,219.64	0.00	767,618.80	733,546.59
11,000.00	90.99	269.83	8,853.31	4,541.31	-6.88	-2,319.62	2,319.63	0.00	767,618.50	733,446.61
11,100.00	90.99	269.83	8,851.58	4,539.58	-7.18	-2,419.60	2,419.61	0.00	767,618.20	733,346.62
11,200.00	90.99	269.83	8,849.86	4,537.86	-7.48	-2,519.59	2,519.60	0.00	767,617.91	733,246.64
11,300.00	90.99	269.83	8,848.13	4,536.13	-7.77	-2,619.57	2,619.59	0.00	767,617.61	733,146.66
11,400.00	90.99	269.83	8,846.40	4,534.40	-8.07	-2,719.56	2,719.57	0.00	767,617.31	733,046.67
11,500.00	90.99	269.83	8,844.67	4,532.67	-8.37	-2,819.54	2,819.56	0.00	767,617.02	732,946.69
11,600.00	90.99	269.83	8,842.94	4,530.94	-8.66	-2,919.53	2,919.54	0.00	767,616.72	732,846.70
11,700.00	90.99	269.83	8,841.22	4,529.22	-8.96	-3,019.51	3,019.53	0.00	767,616.42	732,746.72
11,800.00	90.99	269.83	8,839.49	4,527.49	-9.26	-3,119.50	3,119.51	0.00	767,616.13	732,646.73
11,900.00	90.99	269.83	8,837.76	4,525.76	-9.55	-3,219.48	3,219.50	0.00	767,615.83	732,546.75
12,000.00	90.99	269.83	8,836.03	4,524.03	-9.85	-3,319.47	3,319.48	0.00	767,615.53	732,446.76
12,100.00	90.99	269.83	8,834.31	4,522.31	-10.15	-3,419.45	3,419.47	0.00	767,615.24	732,346.78
12,200.00	90.99	269.83	8,832.58	4,520.58	-10.44	-3,519.44	3,519.45	0.00	767,614.94	732,246.79
12,300.00	90.99	269.83	8,830.85	4,518.85	-10.74	-3,619.42	3,619.44	0.00	767,614.64	732,146.81
12,400.00	90.99	269.83	8,829.12	4,517.12	-11.04	-3,719.40	3,719.42	0.00	767,614.35	732,046.82
12,500.00	90.99	269.83	8,827.39	4,515.39	-11.33	-3,819.39	3,819.41	0.00	767,614.05	731,946.84
12,600.00	90.99	269.83	8,825.67	4,513.67	-11.63	-3,919.37	3,919.39	0.00	767,613.75	731,846.86
12,700.00	90.99	269.83	8,823.94	4,511.94	-11.93	-4,019.36	4,019.38	0.00	767,613.46	731,746.87
12,800.00	90.99	269.83	8,822.21	4,510.21	-12.22	-4,119.34	4,119.36	0.00	767,613.16	731,646.89
12,900.00	90.99	269.83	8,820.48	4,508.48	-12.52	-4,219.33	4,219.35	0.00	767,612.86	731,546.90
13,000.00	90.99	269.83	8,818.76	4,506.76	-12.82	-4,319.31	4,319.33	0.00	767,612.57	731,446.92
13,100.00	90.99	269.83	8,817.03	4,505.03	-13.11	-4,419.30	4,419.32	0.00	767,612.27	731,346.93
13,200.00	90.99	269.83	8,815.30	4,503.30	-13.41	-4,519.28	4,519.30	0.00	767,611.97	731,246.95
13,212.20	90.99	269.83	8,815.09	4,503.09	-13.45	-4,531.48	4,531.50	0.00	767,611.94	731,234.75

BHL-13212.20°MD,90.99°INC,269.83°AZI, 8815.09°TVD, 4531.50°VS, -13.45°N, -4531.48°E

Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: COG Operating LLC
 Project: Lea County(NAD83)
 Site: Good Hands "15" State
 Well: #1H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Database:

Well #1H
 WELL @ 4312.00ft (Original Well Elev)
 WELL @ 4312.00ft (Original Well Elev)
 Grid
 Minimum Curvature
 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)
13,212.23	90.99	269.83	8,815.00	4,503.00	-13.67	-4,531.51	4,531.53	0.00	767,611.71	731,234.72

PBHL(#1HGH)

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(#1HGH)

- plan hits target

- Point

0.00 0.00 8,815.00 -13.67 -4,531.51 767,611.712 731,234.717 33° 6' 30.980 N 103° 42' 47.395 W

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
8,407.50	8,407.50	0.00	0.00	KOP-8407.50MD,0.00°INC,0.00°AZI,8407.50°TVD
9,165.92	8,885.00	-1.44	-485.82	EOC-9165.92°MD,90.99°INC,272.36°AZI,8885.00°TVD,12.00°DLS, 485
13,212.20	8,815.09	-13.45	-4,531.48	BHL-13212.20MD,90.99°INC,269.83°AZI, 8815.09°TVD, 4531.50VS, -

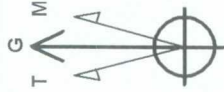
Checked By: _____

Approved By: _____

Date: _____

COG Operating, L.L.C.

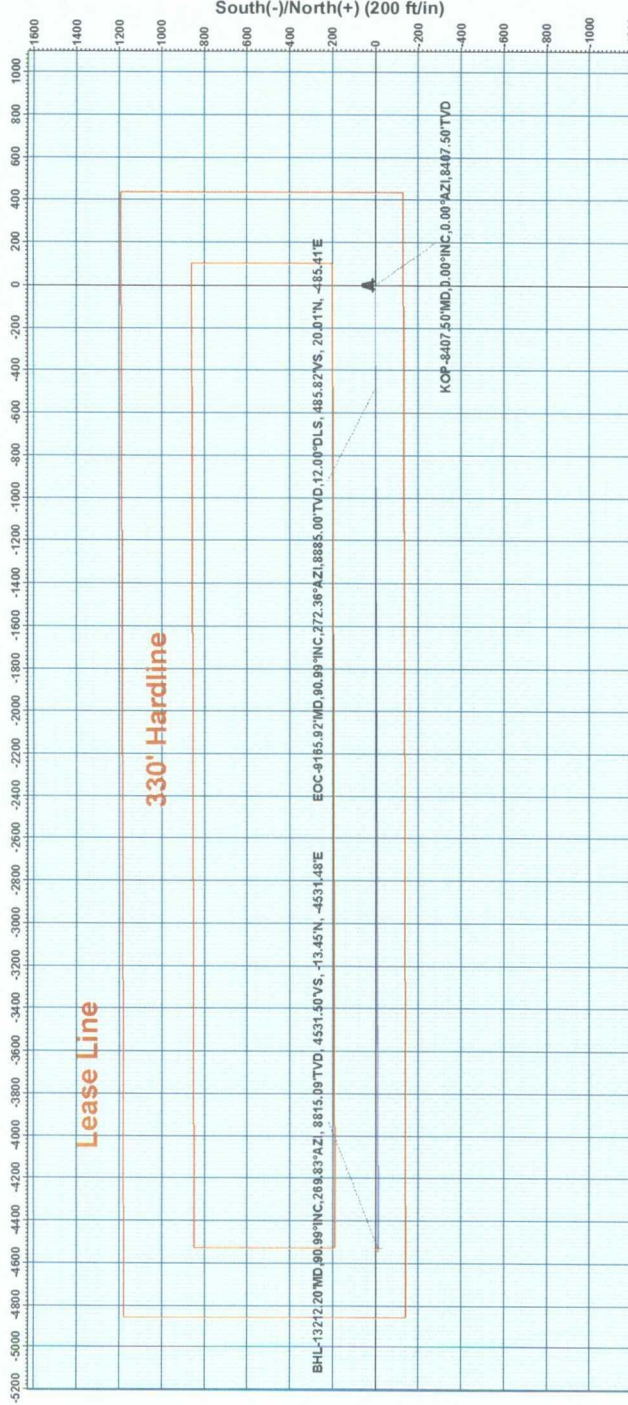
PROJECT DETAILS: Lea County(NAD83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid



Azimuths to Grid North
True North: -0.35°
Magnetic North: 7.59°
Magnetic Field
Strength: 49353.0snT
Dip Angle: 61.05°
Date: 07/02/2009
Model: IGRF200510

PATHFINDER

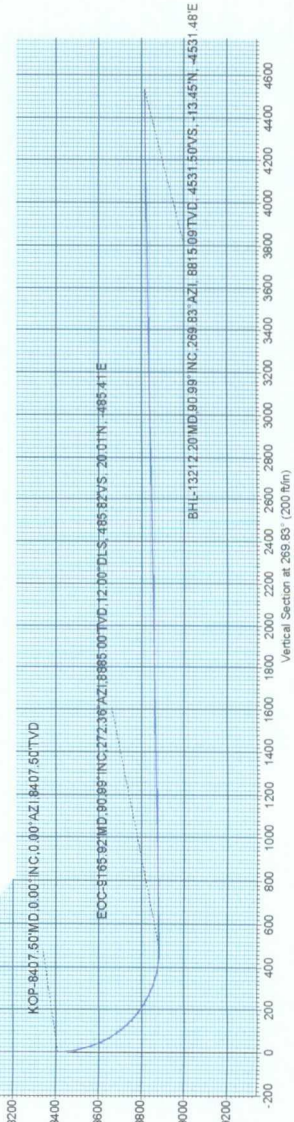
West(-)/East(+) (200 ft/in)



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	0.00
2	8407.50	0.00	0.00	8407.50	0.00	0.00	0.00	0.00	0.00	0.00
3	9153.95	90.99	268.83	8885.00	-1.44	-485.86	0.00	268.83	485.86	485.86
4	9153.95	90.99	268.83	8885.00	-1.44	-485.86	0.00	268.83	485.86	485.86
5	13212.23	90.99	268.83	8815.00	-13.67	-4531.53	0.00	0.00	4531.53	PBHL#1HGH

WELL DETAILS: #1H												
Ground Elevation: 4294.00												
RKB Elevation: WELL @ 4312.00ft (Original Well Elev)												
Rig Name: Original Well Elev												
+N-S	0.00	+E-W	0.00	Northing	767623.383	Easting	735766.229	Latitude	33° 6' 30.847" N	Longitude	103° 41' 54.120" W	Slot



Project: Lea County(NAD83)
Site: Good Hands "15" State
Well: #1H
Wellbore: OH
Plan: Plan #1 (#1H/OH)

Plan: Plan #1 (#1H/OH)
Created By: Nate Bingham Date: 15-26, July 02 2009
Checked: _____ Date: _____

Offset Wells to Good Hands 15 State #1

API#	Operator	Lease	Well#	County	Legal	First Prod.	Last Prod.	Field Name	Reservoir Name	Total Depth	Well Type	Well Status
30-025-30186	RUBICON OIL AND GAS, LLC	STATE 15	001	LEA	S:15, T:14S, R:32E			DRY & ABANDONED		13,160	PO	Unknown
30-025-39394	COG OPERATING LLC	GOOD HANDS 15 STATE COM	001	LEA	S:15, T:14S, R:32E			TULK	ABO, NORTH	13,450	PO	Active Permit

Offset Wells to Good Hands 15 State #1



© 2006 Drilling Info, Inc. All rights reserved. All data and information is provided "As Is" and subject to the subscription agreement.

[illegible]

District I

1625 N. French Dr., Hobbs, NM 88240
 Phone:(505) 393-6161 Fax:(505) 393-0720

District II

1301 W. Grand Ave., Artesia, NM 88210
 Phone:(505) 748-1283 Fax:(505) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico

Form C-102
 Permit 92628

Energy, Minerals and Natural Resources**Oil Conservation Division****1220 S. St Francis Dr.****Santa Fe, NM 87505****WELL LOCATION AND ACREAGE DEDICATION PLAT**

1. API Number 30-025-39394	2. Pool Code 60265	3. Pool Name TULKABO, NORTH
4. Property Code 37667	5. Property Name GOOD HANDS 15 STATE COM	6. Well No. 001
7. OGRID No. 229137	8. Operator Name COG OPERATING LLC	9. Elevation 4308

10. Surface Location

UL - Lot B	Section 15	Township 14S	Range 32E	Lot Idn	Feet From 430	N/S Line N	Feet From 1650	E/W Line E	County LEA
---------------	---------------	-----------------	--------------	---------	------------------	---------------	-------------------	---------------	---------------

11. Bottom Hole Location If Different From Surface

UL - Lot O	Section 15	Township 14S	Range 32E	Lot Idn O	Feet From 330	N/S Line S	Feet From 1650	E/W Line E	County LEA
12. Dedicated Acres 160.00		13. Joint or Infill		14. Consolidation Code			15. 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>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(s) 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.</i> E-Signed By: Diane Kuykendall Title: Regulatory Analyst Date: 4/17/2009
	SURVEYOR CERTIFICATION <i>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.</i> Surveyed By: Ronald Eidson Date of Survey: 4/14/2009 Certificate Number: 3239

Brooks, David K., EMNRD

From: Brooks, David K., EMNRD
Sent: Wednesday, July 08, 2009 3:24 PM
To: 'Robyn Odom'
Subject: Good Hands 15 State #1H; NSL Application

Dear Ms. Odom

Your application states that COG owns all of Sections 15 and 16 of 14S-32E.

However, it appears that the proposed horizontal location also encroaches on the diagonal toward the SW/4 NW/4 of Section 14

Is the working interest ownership in the SW/4 NW/4 of Section 14 also identical to that in Sections 15 and 16?

Sincerely

David K. Brooks
Legal Examiner
505-476-3450

Brooks, David K., EMNRD

From: Robyn Odom [rodom@conchoresources.com]
Sent: Wednesday, July 08, 2009 3:28 PM
To: Brooks, David K., EMNRD
Cc: Phyllis Edwards
Subject: RE: Good Hands 15 State #1H; NSL Application

Dear Mr. Brooks,

COG does own all of the N/2 of Sec.14. Please let me know if there is any more information you need in the approval of this application.

Thank you,

Robyn Odom
X14385

From: Brooks, David K., EMNRD [mailto:david.brooks@state.nm.us]
Sent: Wednesday, July 08, 2009 4:24 PM
To: Robyn Odom
Subject: Good Hands 15 State #1H; NSL Application

Dear Ms. Odom

Your application states that COG owns all of Sections 15 and 16 of 14S-32E.

However, it appears that the proposed horizontal location also encroaches on the diagonal toward the SW/4 NW/4 of Section 14

Is the working interest ownership in the SW/4 NW/4 of Section 14 also identical to that in Sections 15 and 16?

Sincerely

David K. Brooks
Legal Examiner
505-476-3450

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not