

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
NM OIL CONSERVATION
ARTESIA DISTRICT
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

JUL 07 2015

☐ AMENDED REPORT

RECEIVED

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015- 43204	Pool Code 3250	Pool Name Atoka; Glorieta Yeso
Property Code 38907	Property Name LEE 3 FEE	Well Number 2H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3344'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	3	19-S	26-E		150	SOUTH	1650	WEST	EDDY

Bottom Hole Location If Different From Surface

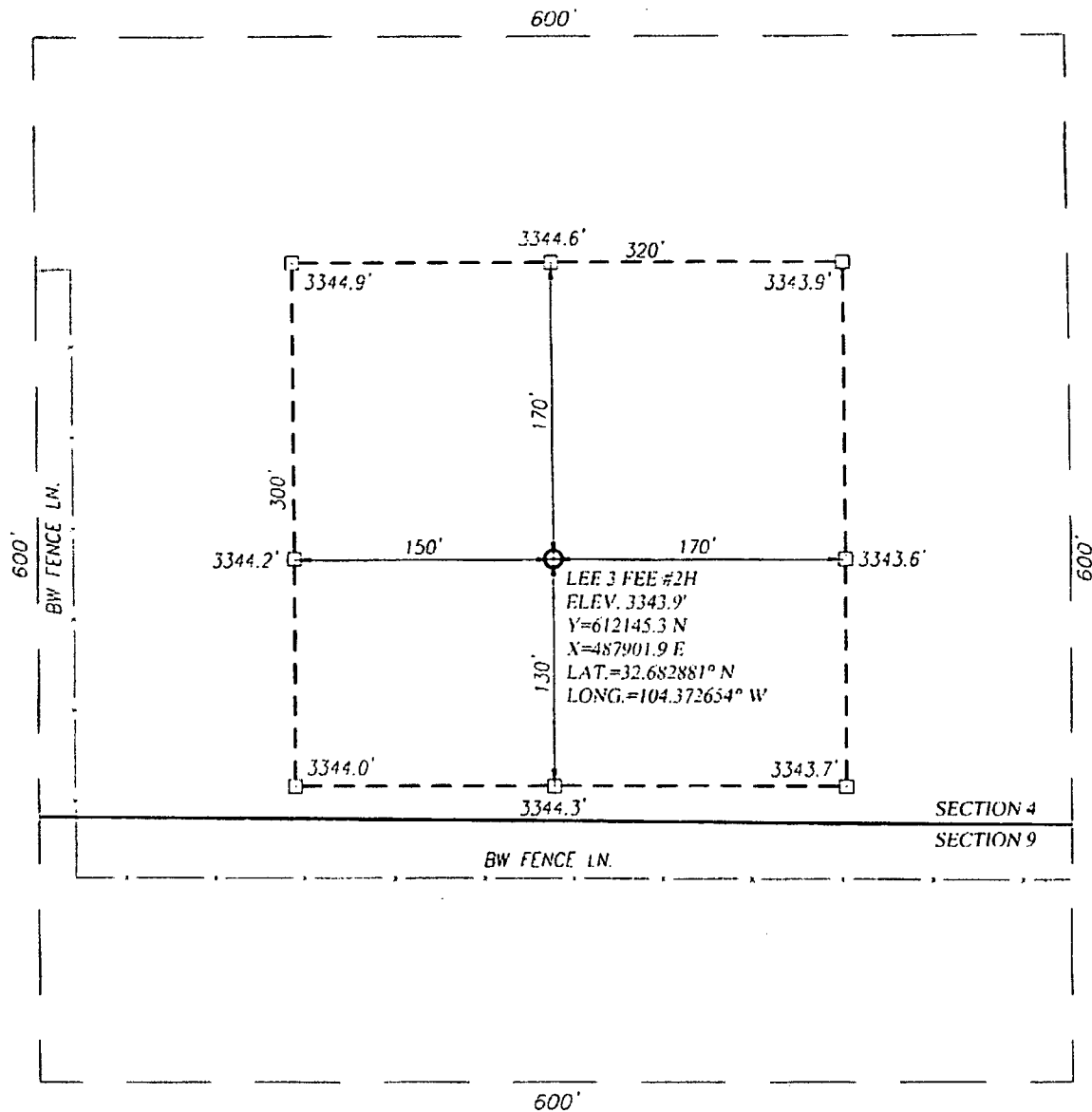
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	3	19-S	26-E		330	NORTH	1657	WEST	EDDY

Dedicated Acres 159.15	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

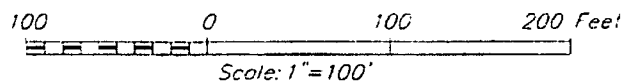
Estimated Completed Interval: 330 FSL 1674 FWL	OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom 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. <i>[Signature]</i> 7-6-15 Signature Date Kelly J. Holly Printed Name kholly@concho.com E-mail Address
	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. OCTOBER 14, 2013 Date of Survey <i>[Signature]</i> RONALD J. EIDSON Signature & Seal of Professional Surveyor: NEW MEXICO 3239 REGISTERED RONALD J. EIDSON Certificate Number 12641 RONALD J. EIDSON 3239 BKL JWSC W.O.: 13.11.1162
	CORNER COORDINATES TABLE A - Y=617262.1 N, X=487576.5 E B - Y=617258.5 N, X=488900.2 E C - Y=611986.9 N, X=488941.2 E D - Y=611997.8 N, X=487597.1 E
	GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=612145.3 N X=487901.9 E LAT.=32.682881° N LONG.=104.372654° W BOTTOM HOLE LOCATION Y=616931.3 N X=487907.7 E

7/23/2015



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF US. HWY 285 AND CO. RD. 38 (KINCAID RANCH) TURN LEFT AND GO EAST APPROX 1.0 MILES; TURN LEFT ON CO. RD. 34 (LAKE) GO SOUTH APPROX. 1.9 MILES; TURN LEFT AND GO EAST APPROX. 0.3 MILES; THIS LOCATION STAKE IS 382 FEET SOUTH.



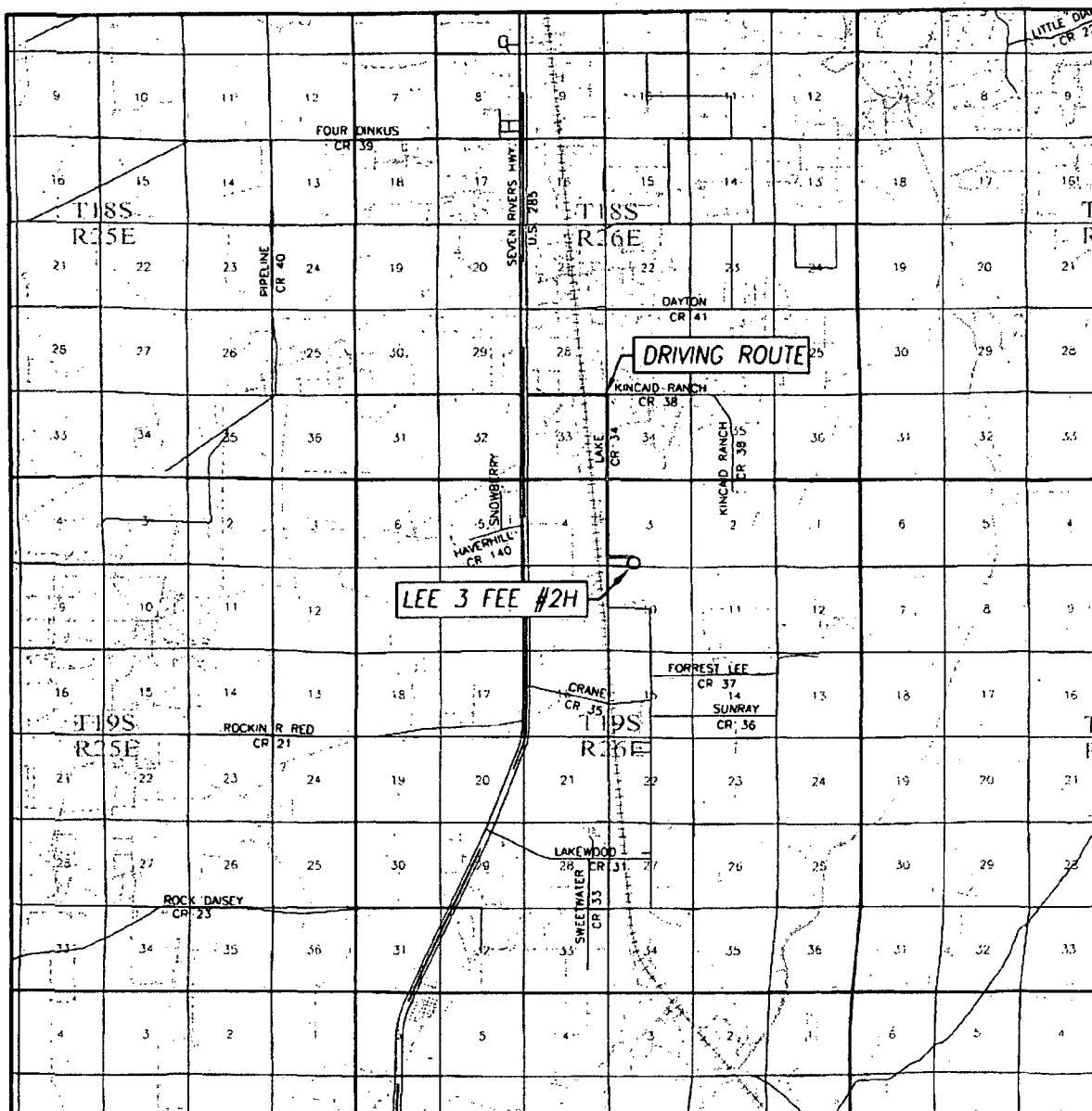
COG OPERATING, LLC

LEE 3 FEE #2H WELL
LOCATED 150 FEET FROM THE SOUTH LINE
AND 1650 FEET FROM THE WEST LINE OF SECTION 3,
TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

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

Survey Date: 10/14/13	CAD Date: 10/28/13	Drawn By: pkl
W.O. No.: 13111162	Rev: .	Rel. W.O.: Sheet 1 of 1

VICINITY MAP



SCALE: 1" = 2 MILES

DRIVING ROUTE: SEE LOCATION MAP

SEC. 3 TWP. 19-S RGE. 26-E

SURVEY N.M.P.M.

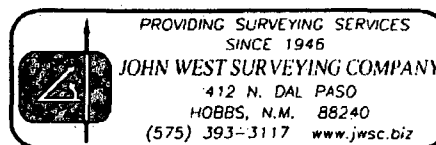
COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 150' FSL & 1650' FWL

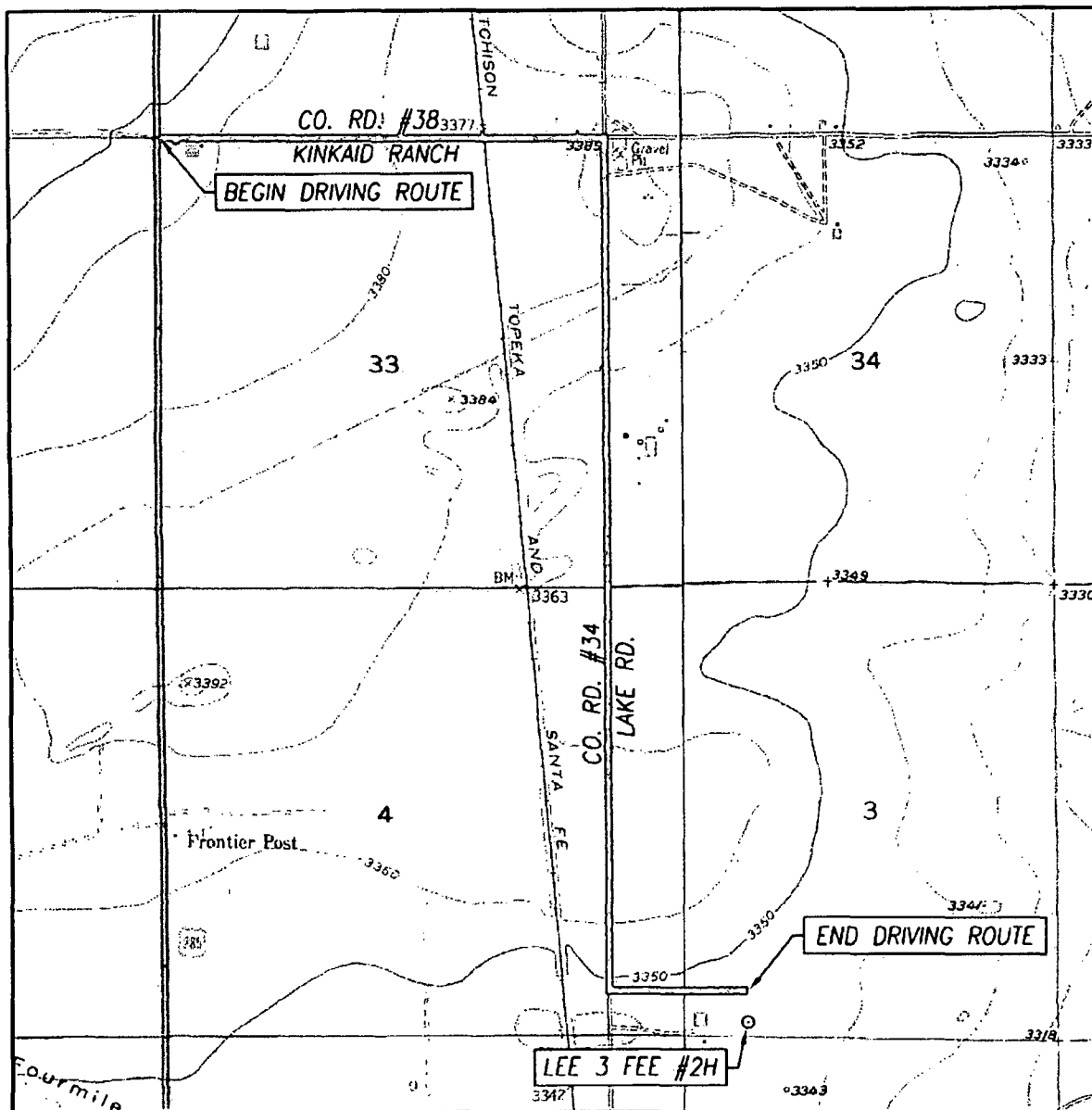
ELEVATION 3344'

OPERATOR COG OPERATING, LLC

LEASE LEE 3 FEE



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
LAKE McMILLIAN NORTH, N.M. - 10'

SEC. 3 TWP. 19-S RGE. 26-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 150' FSL & 1650' FWL

ELEVATION 3344'

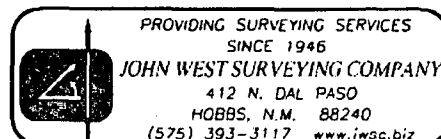
OPERATOR COG OPERATING, LLC

LEASE LEE 3 FEE

U.S.G.S. TOPOGRAPHIC MAP
LAKE McMILLIAN NORTH, N.M.

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF U.S. HWY 285 AND CO. RD. 38 (KINKAID RANCH) TURN LEFT AND GO EAST APPROX 1.0 MILES; TURN LEFT ON CO. RD. 34 (LAKE) GO SOUTH APPROX. 1.9 MILES; TURN LEFT AND GO EAST APPROX. 0.3 MILES; THIS LOCATION STAKE IS 382 FEET SOUTH.





COG Operating LLC

Eddy County, NM (NAD27 NME)

Lee 3 Fee

#2H

OH

Plan: Plan #1 06-08-15

Surface: 150' FSL, 1650' FWL, Sec 3, T19S, R26E, Unit N

PP: 330' FSL, 1674' FWL, Sec 3, T19S, R26E, Unit N

BHL: 330' FNL, 1657' FWL, Sec 3, T19S, R26E, Lot #3

Standard Planning Report

08 June, 2015



Database:	Compass 5000 GCR	Local Co-ordinate Reference:	Well #2H
Company:	COG Operating LLC	TVD Reference:	KB @ 3362.00usft (Silver Oak 3)
Project:	Eddy County NM (NAD27 NME)	MD Reference:	KB @ 3362.00usft (Silver Oak 3)
Site:	Lee 3 Fee	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan # 106-08-15		

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

Site	Lee 3 Fee		
Site Position:	Map	Northing:	612,139.80 usft
From:		Easting:	488,590.40 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 40' 58.31847 N
		Longitude:	104° 22' 13.49969 W
		Grid Convergence:	-0.02 °

Well	#2H		
Well Position	+N/-S	5.50 usft	Northing:
	+E/-W	-688.50 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level:
			3,344.00 usft

Wellbore	OH		
----------	----	--	--

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/8/2015	7.60	60.57	48,399

Design	Plan # 106-08-15		
--------	------------------	--	--

Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	7.05

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,790.18	0.00	0.00	2,790.18	0.00	0.00	0.00	0.00	0.00	0.00	
3,612.91	90.50	7.50	3,311.03	520.92	68.58	11.00	11.00	0.00	7.50	
3,900.70	90.50	358.87	3,308.52	807.98	84.54	3.00	0.00	-3.00	-89.97	
7,879.64	90.50	358.87	3,273.85	4,786.00	5.80	0.00	0.00	0.00	0.00	PBHL (Lee Fee #2H)



Database:	Compass 5000 GCR	Local Co-ordinate Reference:	Well #2H
Company:	COG Operating LLC	TVD Reference:	KB @ 3362.00usft (Silver Oak 3)
Project:	Eddy County NM (NAD27-NME)	MD Reference:	KB @ 3362.00usft (Silver Oak 3)
Site:	Lee 3 Fee	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 06-08-15		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	N/S (usft)	E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,790.18	0.00	0.00	2,790.18	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 11°/100' Build									
2,800.00	1.08	7.50	2,800.00	0.09	0.01	0.09	11.00	11.00	0.00
2,900.00	12.08	7.50	2,899.19	11.44	1.51	11.53	11.00	11.00	0.00
3,000.00	23.08	7.50	2,994.37	41.34	5.44	41.69	11.00	11.00	0.00
3,100.00	34.08	7.50	3,082.05	88.69	11.68	89.45	11.00	11.00	0.00
3,200.00	45.08	7.50	3,159.01	151.77	19.98	153.07	11.00	11.00	0.00
3,238.80	49.35	7.50	3,185.35	179.99	23.70	181.54	11.00	11.00	0.00
PP (Lee Fee #2H)									
3,300.00	56.08	7.50	3,222.41	228.24	30.05	230.20	11.00	11.00	0.00
3,400.00	67.08	7.50	3,269.93	315.30	41.51	318.01	11.00	11.00	0.00
3,500.00	78.08	7.50	3,299.82	409.75	53.95	413.28	11.00	11.00	0.00
3,588.34	87.80	7.50	3,310.67	496.57	65.37	500.84	11.00	11.00	0.00
TL 3315' TVD @ 0 VZ, 90.5° Inc									
3,600.00	89.08	7.50	3,310.98	508.12	66.90	512.49	11.00	11.00	0.00
3,612.91	90.50	7.50	3,311.03	520.92	68.58	525.40	11.00	11.00	0.00
LP Begin 3°/100' Turn									
3,700.00	90.50	4.89	3,310.27	607.49	77.98	612.47	3.00	0.00	-3.00
3,800.00	90.50	1.89	3,309.40	707.30	83.88	712.25	3.00	0.00	-3.00
3,900.00	90.50	358.89	3,308.52	807.29	84.56	811.56	3.00	0.00	-3.00
3,900.70	90.50	358.87	3,308.52	807.99	84.54	812.26	2.99	0.00	-2.99
Hold 90.5° Inc, 358.87° Azm									
4,000.00	90.50	358.87	3,307.65	907.26	82.58	910.54	0.00	0.00	0.00
4,100.00	90.50	358.87	3,306.78	1,007.24	80.60	1,009.52	0.00	0.00	0.00
4,200.00	90.50	358.87	3,305.91	1,107.22	78.62	1,108.50	0.00	0.00	0.00
4,300.00	90.50	358.87	3,305.04	1,207.19	76.64	1,207.47	0.00	0.00	0.00
4,400.00	90.50	358.87	3,304.17	1,307.17	74.66	1,306.45	0.00	0.00	0.00
4,500.00	90.50	358.87	3,303.30	1,407.15	72.68	1,405.43	0.00	0.00	0.00
4,600.00	90.50	358.87	3,302.42	1,507.12	70.70	1,504.41	0.00	0.00	0.00
4,700.00	90.50	358.87	3,301.55	1,607.10	68.73	1,603.39	0.00	0.00	0.00
4,800.00	90.50	358.87	3,300.68	1,707.08	66.75	1,702.36	0.00	0.00	0.00
4,900.00	90.50	358.87	3,299.81	1,807.05	64.77	1,801.34	0.00	0.00	0.00
5,000.00	90.50	358.87	3,298.94	1,907.03	62.79	1,900.32	0.00	0.00	0.00
5,100.00	90.50	358.87	3,298.07	2,007.01	60.81	1,999.30	0.00	0.00	0.00
5,200.00	90.50	358.87	3,297.20	2,106.98	58.83	2,098.28	0.00	0.00	0.00
5,300.00	90.50	358.87	3,296.33	2,206.96	56.85	2,197.25	0.00	0.00	0.00
5,400.00	90.50	358.87	3,295.45	2,306.94	54.87	2,296.23	0.00	0.00	0.00
5,500.00	90.50	358.87	3,294.58	2,406.91	52.89	2,395.21	0.00	0.00	0.00
5,600.00	90.50	358.87	3,293.71	2,506.89	50.91	2,494.19	0.00	0.00	0.00
5,700.00	90.50	358.87	3,292.84	2,606.87	48.94	2,593.17	0.00	0.00	0.00
5,800.00	90.50	358.87	3,291.97	2,706.84	46.96	2,692.14	0.00	0.00	0.00
5,900.00	90.50	358.87	3,291.10	2,806.82	44.98	2,791.12	0.00	0.00	0.00
6,000.00	90.50	358.87	3,290.23	2,906.80	43.00	2,890.10	0.00	0.00	0.00
6,100.00	90.50	358.87	3,289.36	3,006.77	41.02	2,989.08	0.00	0.00	0.00
6,200.00	90.50	358.87	3,288.48	3,106.75	39.04	3,088.06	0.00	0.00	0.00
6,300.00	90.50	358.87	3,287.61	3,206.73	37.06	3,187.03	0.00	0.00	0.00
6,400.00	90.50	358.87	3,286.74	3,306.70	35.08	3,286.01	0.00	0.00	0.00
6,500.00	90.50	358.87	3,285.87	3,406.68	33.10	3,384.99	0.00	0.00	0.00
6,600.00	90.50	358.87	3,285.00	3,506.66	31.12	3,483.97	0.00	0.00	0.00
6,700.00	90.50	358.87	3,284.13	3,606.63	29.15	3,582.95	0.00	0.00	0.00
6,800.00	90.50	358.87	3,283.26	3,706.61	27.17	3,681.92	0.00	0.00	0.00
6,900.00	90.50	358.87	3,282.39	3,806.59	25.19	3,780.90	0.00	0.00	0.00
7,000.00	90.50	358.87	3,281.51	3,906.56	23.21	3,879.88	0.00	0.00	0.00

Database:	Compass 5000.GCR	Local Co-ordinate Reference:	Well #2H
Company:	COG Operating LLC	TVD Reference:	KB @ 3362.00usft (Silver Oak 3)
Project:	Eddy County NM (NAD27-NME)	MD Reference:	KB @ 3362.00usft (Silver Oak 3)
Site:	Lee 3 Fee	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #106-08-15		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,100.00	90.50	358.87	3,280.64	4,006.54	21.23	3,978.86	0.00	0.00	0.00
7,200.00	90.50	358.87	3,279.77	4,106.52	19.25	4,077.84	0.00	0.00	0.00
7,300.00	90.50	358.87	3,278.90	4,206.49	17.27	4,176.81	0.00	0.00	0.00
7,400.00	90.50	358.87	3,278.03	4,306.47	15.29	4,275.79	0.00	0.00	0.00
7,500.00	90.50	358.87	3,277.16	4,406.45	13.31	4,374.77	0.00	0.00	0.00
7,600.00	90.50	358.87	3,276.29	4,506.42	11.33	4,473.75	0.00	0.00	0.00
7,700.00	90.50	358.87	3,275.42	4,606.40	9.36	4,572.73	0.00	0.00	0.00
7,800.00	90.50	358.87	3,274.54	4,706.38	7.38	4,671.70	0.00	0.00	0.00
7,879.64	90.50	358.87	3,273.85	4,786.00	5.80	4,750.53	0.00	0.00	0.00
TD at 7879.64' MD - PBHL (Lee Fee #2H)									

Design Targets									
Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude Longitude
PP (Lee Fee #2H)	- plan hits target center	0.00	360.00	3,185.36	180.00	23.70	612,325.30	487,925.60	32° 41' 0.15175 N 104° 22' 21.27911 W
	- Point								
PBHL (Lee Fee #2H)	- plan hits target center	-90.40	0.07	3,273.85	4,786.00	5.80	616,931.30	487,907.70	32° 41' 45.73100 N 104° 22' 21.50849 W
	- Point								

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,588.34	3,310.67	TL, 3315' TVD @ 0 VZ, 90.5° Inc		-0.50	0.07	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment	
2,790.18	2,790.18	0.00	0.00	KOP, Begin 11°/100' Build	
3,612.91	3,311.03	520.92	68.58	LP, Begin 3°/100' Turn	
3,900.70	3,308.52	807.99	84.54	Hold 90.5° Inc, 358.87° Azm	
7,879.64	3,273.85	4,786.00	5.80	TD at 7879.64' MD	



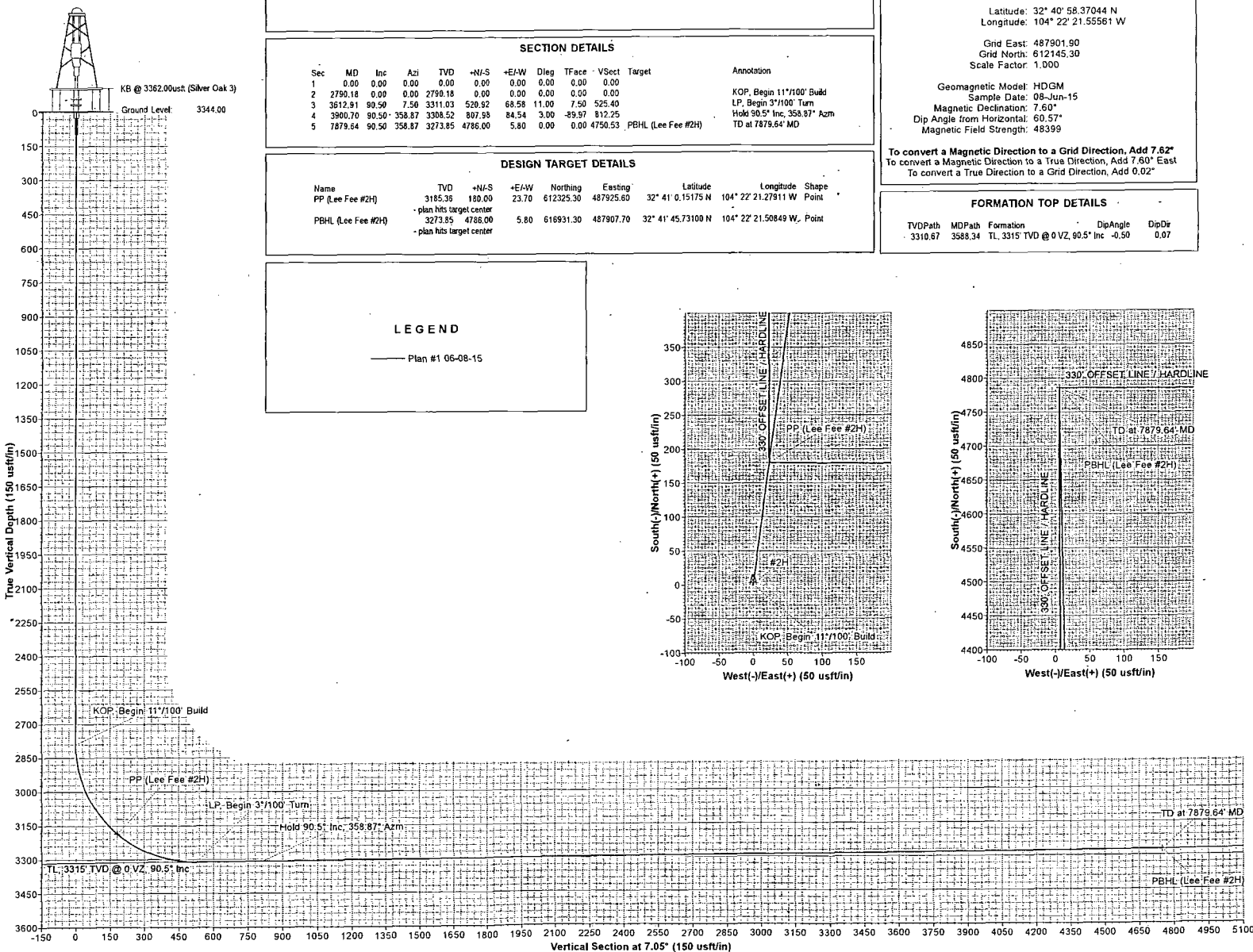
Project: Eddy County, NM (NAD27 NME)
Site: Lee 3 Fee
Well: #2H
Wellbore: OH
Design: Plan #1 06-08-15.
Rig: Silver Oak 3



PHOENIX
TECHNOLOGY SERVICES



Azimuths to Grid North
True North: 0.02°
Magnetic North: 7.62°
Magnetic Field
Strength: 48399.26 nT
Dip Angle: 60.57°
Date: 6/8/2015
Model: HDGM



WELL DETAILS											
		Ground Level		3344.00							
		Easting		Latitude		Longitude					
+N-S		+E-W		Northing		32° 40' 58.37044 N		104° 22' 21.55561 W			
0.00		0.00		612145.30		487901.90					

SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	V Sect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2790.18	0.00	0.00	2790.18	0.00	0.00	0.00	0.00	0.00	0.00	KOP, Begin 11°/100' Build
3	3612.91	90.50	7.50	3311.03	520.92	68.58	11.00	7.50	525.40		LP, Begin 3°/100' Turn
4	3900.70	90.50	358.87	3308.52	807.98	84.54	3.00	-89.97	812.25		Hold 90.5° Inc. 358.87° Azm
5	7879.64	90.50	358.87	3273.85	4786.00	5.80	0.00	0.00	4750.53	PBHL (Lee Fee #2H)	TD at 7879.64' MD

DESIGN TARGET DETAILS																	
Name		TVD		+N-S		+E-W		Northing		Easting		Latitude		Longitude		Shape	
PP (Lee Fee #2H)		3165.36		100.00		23.70		612325.30		487925.60		32° 41' 0.15175 N		104° 22' 21.27911 W		Point	
PBHL (Lee Fee #2H)		3273.85		4786.00		5.80		616931.30		487907.70		32° 41' 45.73100 N		104° 22' 21.50849 W		Point	
		- plan hits target center															
		- plan hits target center															

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001
Local Origin: Well #2H, Grid North
Latitude: 32° 40' 58.37044 N
Longitude: 104° 22' 21.55561 W
Grid East: 487901.90
Grid North: 612145.30
Scale Factor: 1.000
Geomagnetic Model: HDGM
Sample Date: 08-Jun-15
Magnetic Declination: 7.60°
Dip Angle from Horizontal: 60.57°
Magnetic Field Strength: 48399
To convert a Magnetic Direction to a Grid Direction, Add 7.62°
To convert a Magnetic Direction to a True Direction, Add 7.60° East
To convert a True Direction to a Grid Direction, Add 0.02°

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
3310.67	3588.34	TL, 3315' TVD @ 0° VZ, 90.5° Inc	-0.50	0.07

