

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
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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-41463	Pool Code 19560	Pool Name Dayton; Grayburg
Property Code	Property Name LEE 3 FEE	Well Number 6H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3341'

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	2310	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	2322	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
159.15			

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

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=611997.7 N, X=487612.0 E

GEODETIC COORDINATES
 NAD 27 NME

SURFACE LOCATION
 Y=612139.8 N
 X=488590.4 E

BOTTOM HOLE LOCATION
 Y=616929.5 N
 X=488572.8 E

Estimated Completed Interval:
 330 FSL
 2310 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.

Signature
 6-17-13
 Date

Kelly J. Holly
 Printed Name
 kholly@concho.com
 E-mail Address

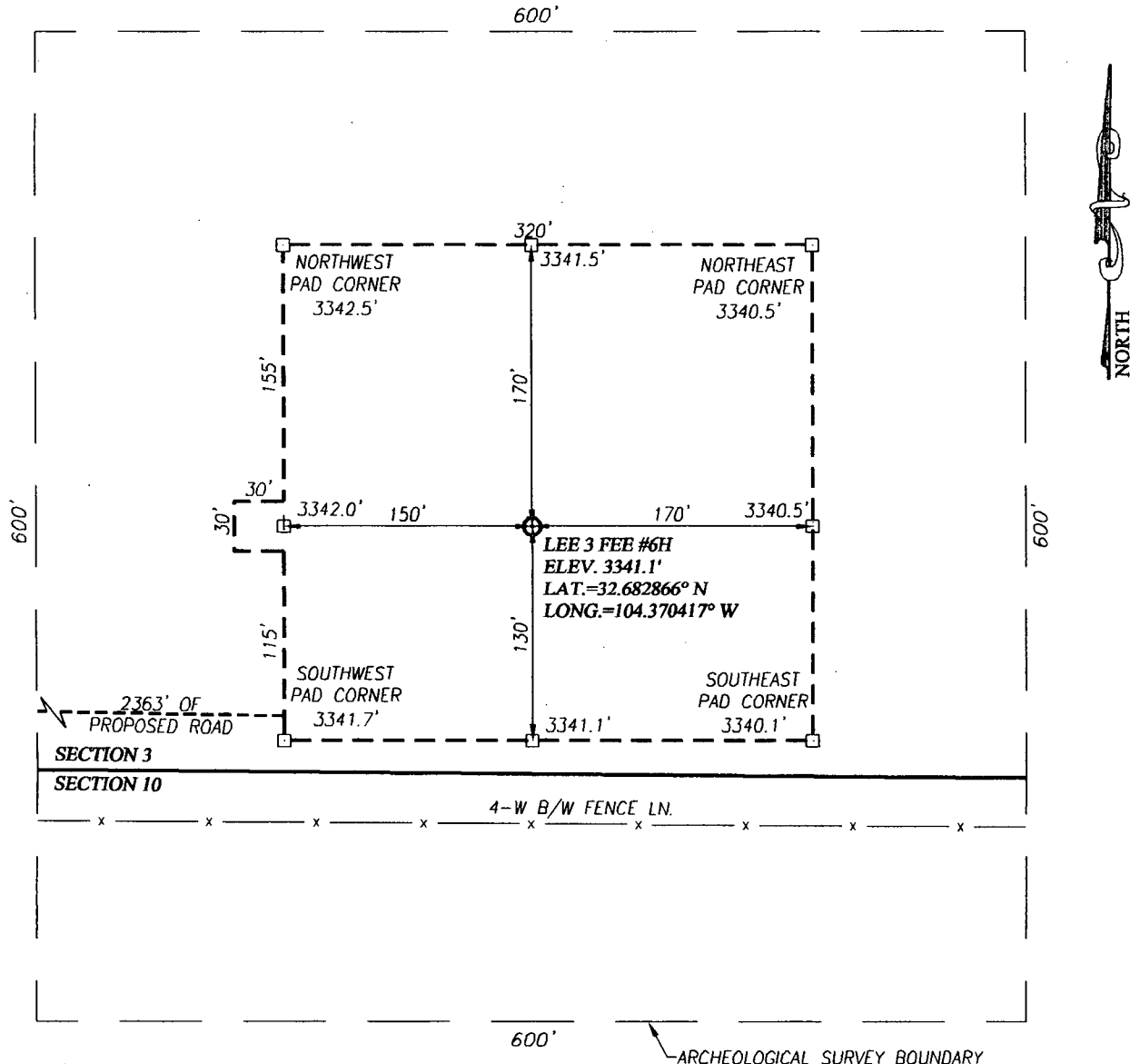
SURVEYOR CERTIFICATION

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.

MAY 30, 2013
 Date of Survey

Signature of Professional Surveyor: Ronald J. Eidson
 Certificate Number: 3239
 Gary G. Eidson 12641
 Ronald J. Eidson 3239
 BKL JWSC W.O.: 13.11.0569

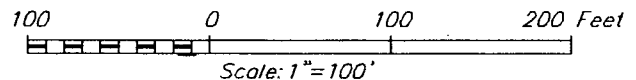
SECTION 3, TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.
EDDY COUNTY **NEW MEXICO**



NOTE:
 SEE "LOCATION VERIFICATION MAP"
 FOR PROPOSED ROAD LOCATION.

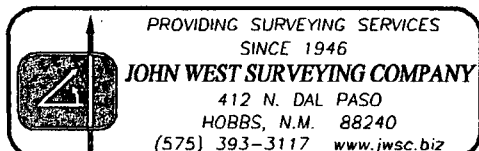
DIRECTIONS TO LEE 3 FEE #6H:

FROM THE INTERSECTION OF U.S. HIGHWAY 285 AND CO. RD.
 38' (KINCAID RANCH) GO EAST APPROX. 1.0 MILES; TURN RIGHT
 AND GO SOUTH ON CO. RD. 34 (LAKE RD.) APPROX. 1.9 MILES.
 FOLLOW STAKES 2363 FEET EAST TO THIS LOCATION.



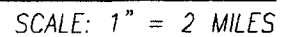
COG OPERATING, LLC

LEE 3 FEE #6H WELL
LOCATED 150 FEET FROM THE SOUTH LINE
AND 2310 FEET FROM THE WEST LINE OF SECTION 3,
TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

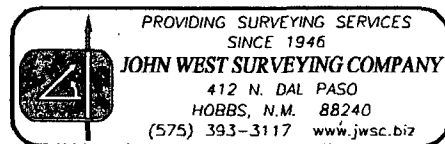


Survey Date: 5/30/13	CAD Date: 6/12/12	Drawn By: BKL
W.O. No.: 13110569	Rev.:	Rel. W.O.:
		Sheet 1 of 1

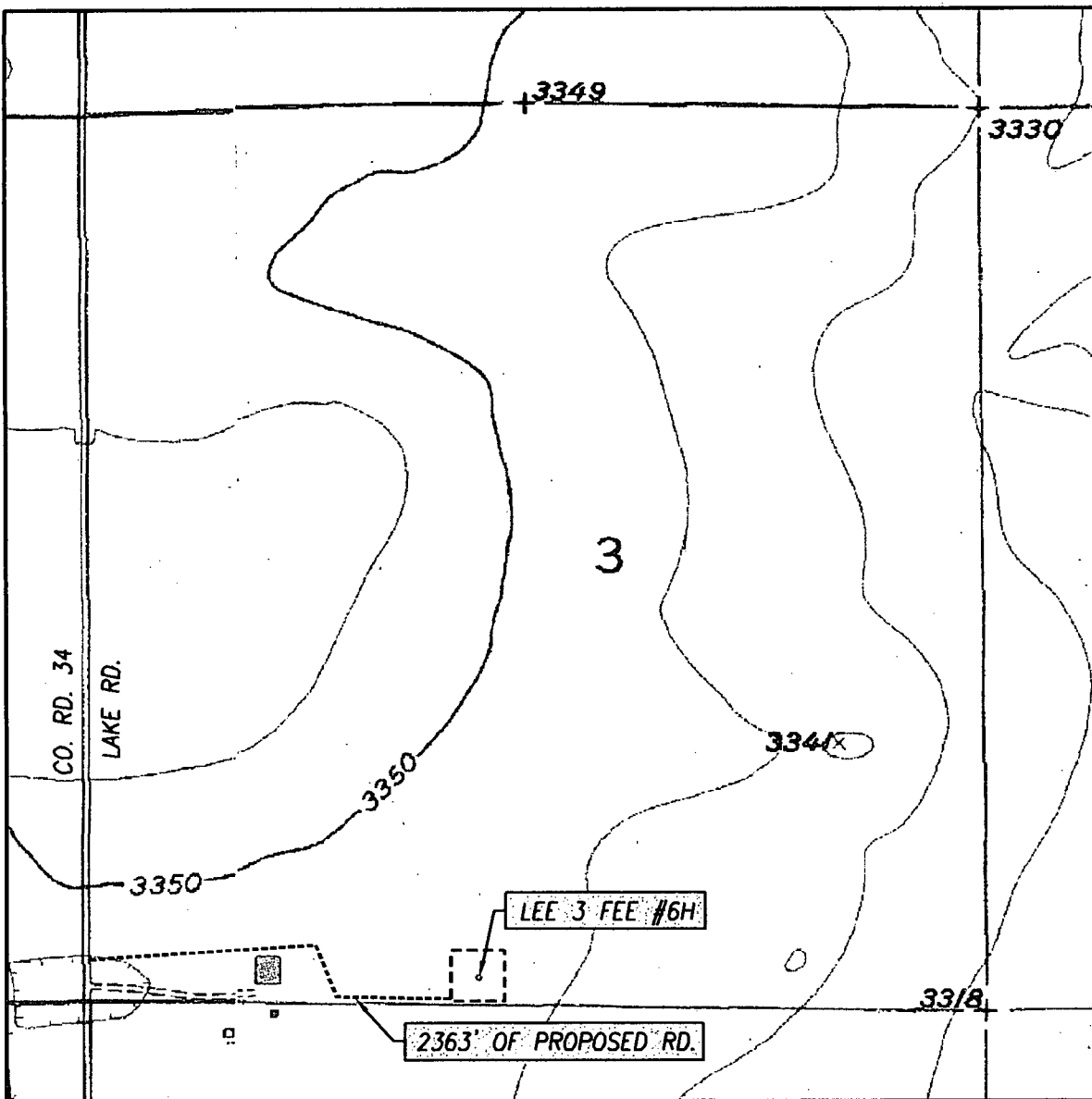
NORTH



LEASE LEE 3 FEE



LOCATION VERIFICATION MAP



SCALE: 1" = 1000'

CONTOUR INTERVAL:
LAKE McMILLAN N., N.M. - 10'
DAYTON, N.M. - 5'

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

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

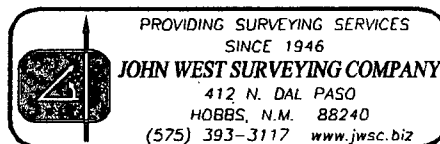
DESCRIPTION 150' FSL & 2310' FWL

ELEVATION 3341'

OPERATOR COG OPERATING, LLC

LEASE LEE 3 FEE

U.S.G.S. TOPOGRAPHIC MAP
LAKE McMILLAN N., N.M.





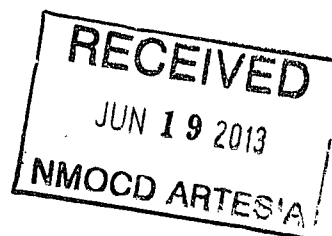
COG Operating LLC

Eddy County, New Mexico (NAD 27 NME)

Lee 3 Fee

#6H

OH



Plan: Plan #1 06-17-13

Surface: 150' FSL, 2310' FWL, Sec 3, T19S, R26E, Unit N

PP: 330' FSL, 2310' FWL, Sec 3, T19S, R26E, Unit N

BHL: 330' FNL, 2322' FWL, Sec 3, T19S, R26E, Unit C

Standard Planning Report

17 June, 2013





Phoenix Technology Services
Planning Report



Database:	GCR,DB	Local Co-ordinate Reference:	Well #6H
Company:	COG Operating LLC	TVD Reference:	GL @ 3341.00usft
Project:	Eddy County, New Mexico (NAD 27 NME)	MD Reference:	GL @ 3341.00usft
Site:	Lee 3 Fee	North Reference:	Grid
Well:	#6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1, 06-17-13		

Project:	Eddy County, New Mexico (NAD 27 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:		Northing:	612,139.80 usft
From:	Map	Easting:	488,590.40 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 40' 58.318469 N
		Longitude:	104° 22' 13.499689 W
		Grid Convergence:	-0.02 °

Well:	#6H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level:
			3,341.00 usft

Wellbore:	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010_14	06/17/13	7.74
			Dip Angle
			(°)
			60.42
			Field Strength
			(mT)
			48,604

Design:	Plan #1, 06-17-13		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			359.79

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,804.96	0.00	0.00	2,804.96	0.00	0.00	0.00	0.00	0.00	0.00	
3,632.24	91.00	359.79	3,325.75	529.96	-1.95	11.00	11.00	0.00	359.79	
7,892.66	91.00	359.79	3,251.40	4,789.70	-17.60	0.00	0.00	0.00	0.00	PBHL-Lee 3 Fee #6H



Phoenix Technology Services

Planning Report



Database:	GCR DB	Local Co-ordinate Reference:	Well #6H
Company:	COG Operating LLC	TVD Reference:	GL @ 3341.00usft
Project:	Eddy County, New Mexico (NAD 27 NME)	MD Reference:	GL @ 3341.00usft
Site:	Lee 3/Fee	North Reference:	Grid
Well:	#6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 06-17-13		

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
2,804.96	0.00	0.00	2,804.96	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 11.00									
2,900.00	10.45	359.79	2,899.47	8.65	-0.03	8.65	11.00	11.00	0.00
3,000.00	21.45	359.79	2,995.47	36.09	-0.13	36.09	11.00	11.00	0.00
3,100.00	32.45	359.79	3,084.47	81.35	-0.30	81.35	11.00	11.00	0.00
3,200.00	43.45	359.79	3,163.20	142.76	-0.52	142.76	11.00	11.00	0.00
3,251.55	49.12	359.79	3,198.81	180.00	-0.66	180.00	11.00	11.00	0.00
PP-Lee 3 Fee #6H									
3,300.00	54.45	359.79	3,228.77	218.06	-0.80	218.06	11.00	11.00	0.00
3,400.00	65.45	359.79	3,278.76	304.49	-1.12	304.49	11.00	11.00	0.00
3,500.00	76.45	359.79	3,311.34	398.87	-1.47	398.87	11.00	11.00	0.00
3,600.00	87.45	359.79	3,325.32	497.73	-1.83	497.73	11.00	11.00	0.00
3,629.93	90.75	359.79	3,325.79	527.66	-1.94	527.66	11.00	11.00	0.00
TL 3335' TVD @ 0 VZ, 91° Inc									
3,632.24	91.00	359.79	3,325.75	529.96	-1.95	529.96	11.00	11.00	0.00
LP Start 4260.42 hold at 3632.24 MD									
3,700.00	91.00	359.79	3,324.57	597.71	-2.20	597.71	0.00	0.00	0.00
3,800.00	91.00	359.79	3,322.83	697.70	-2.56	697.70	0.00	0.00	0.00
3,900.00	91.00	359.79	3,321.08	797.68	-2.93	797.68	0.00	0.00	0.00
4,000.00	91.00	359.79	3,319.34	897.66	-3.30	897.67	0.00	0.00	0.00
4,100.00	91.00	359.79	3,317.59	997.65	-3.67	997.65	0.00	0.00	0.00
4,200.00	91.00	359.79	3,315.85	1,097.63	-4.03	1,097.64	0.00	0.00	0.00
4,300.00	91.00	359.79	3,314.10	1,197.62	-4.40	1,197.62	0.00	0.00	0.00
4,400.00	91.00	359.79	3,312.36	1,297.60	-4.77	1,297.61	0.00	0.00	0.00
4,500.00	91.00	359.79	3,310.61	1,397.58	-5.14	1,397.59	0.00	0.00	0.00
4,600.00	91.00	359.79	3,308.86	1,497.57	-5.50	1,497.58	0.00	0.00	0.00
4,700.00	91.00	359.79	3,307.12	1,597.55	-5.87	1,597.56	0.00	0.00	0.00
4,800.00	91.00	359.79	3,305.37	1,697.54	-6.24	1,697.55	0.00	0.00	0.00
4,900.00	91.00	359.79	3,303.63	1,797.52	-6.61	1,797.53	0.00	0.00	0.00
5,000.00	91.00	359.79	3,301.88	1,897.50	-6.97	1,897.52	0.00	0.00	0.00
5,100.00	91.00	359.79	3,300.14	1,997.49	-7.34	1,997.50	0.00	0.00	0.00
5,200.00	91.00	359.79	3,298.39	2,097.47	-7.71	2,097.49	0.00	0.00	0.00
5,300.00	91.00	359.79	3,296.65	2,197.46	-8.07	2,197.47	0.00	0.00	0.00
5,400.00	91.00	359.79	3,294.90	2,297.44	-8.44	2,297.46	0.00	0.00	0.00
5,500.00	91.00	359.79	3,293.16	2,397.42	-8.81	2,397.44	0.00	0.00	0.00
5,600.00	91.00	359.79	3,291.41	2,497.41	-9.18	2,497.43	0.00	0.00	0.00
5,700.00	91.00	359.79	3,289.67	2,597.39	-9.54	2,597.41	0.00	0.00	0.00
5,800.00	91.00	359.79	3,287.92	2,697.38	-9.91	2,697.40	0.00	0.00	0.00
5,900.00	91.00	359.79	3,286.18	2,797.36	-10.28	2,797.38	0.00	0.00	0.00
6,000.00	91.00	359.79	3,284.43	2,897.35	-10.65	2,897.36	0.00	0.00	0.00
6,100.00	91.00	359.79	3,282.69	2,997.33	-11.01	2,997.35	0.00	0.00	0.00
6,200.00	91.00	359.79	3,280.94	3,097.31	-11.38	3,097.33	0.00	0.00	0.00
6,300.00	91.00	359.79	3,279.20	3,197.30	-11.75	3,197.32	0.00	0.00	0.00
6,400.00	91.00	359.79	3,277.45	3,297.28	-12.12	3,297.30	0.00	0.00	0.00
6,500.00	91.00	359.79	3,275.71	3,397.27	-12.48	3,397.29	0.00	0.00	0.00
6,600.00	91.00	359.79	3,273.96	3,497.25	-12.85	3,497.27	0.00	0.00	0.00
6,700.00	91.00	359.79	3,272.21	3,597.23	-13.22	3,597.26	0.00	0.00	0.00
6,800.00	91.00	359.79	3,270.47	3,697.22	-13.59	3,697.24	0.00	0.00	0.00
6,900.00	91.00	359.79	3,268.72	3,797.20	-13.95	3,797.23	0.00	0.00	0.00
7,000.00	91.00	359.79	3,266.98	3,897.19	-14.32	3,897.21	0.00	0.00	0.00
7,100.00	91.00	359.79	3,265.23	3,997.17	-14.69	3,997.20	0.00	0.00	0.00
7,200.00	91.00	359.79	3,263.49	4,097.15	-15.06	4,097.18	0.00	0.00	0.00
7,300.00	91.00	359.79	3,261.74	4,197.14	-15.42	4,197.17	0.00	0.00	0.00



Phoenix Technology Services
Planning Report



Database:	GCR-DB	Local Co-ordinate Reference:	Well #6H
Company:	COG Operating LLC	TVD Reference:	GL @ 3341.00usft
Project:	Eddy County, New Mexico (NAD 27 NME)	MD Reference:	GL @ 3341.00usft
Site:	Lee 3 Fee	North Reference:	Grid
Well:	#6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1, 06-17-13		

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)
7,400.00	91.00	359.79	3,260.00	4,297.12	-15.79	4,297.15	0.00	0.00	0.00
7,500.00	91.00	359.79	3,258.25	4,397.11	-16.16	4,397.14	0.00	0.00	0.00
7,600.00	91.00	359.79	3,256.51	4,497.09	-16.52	4,497.12	0.00	0.00	0.00
7,700.00	91.00	359.79	3,254.76	4,597.07	-16.89	4,597.11	0.00	0.00	0.00
7,800.00	91.00	359.79	3,253.02	4,697.06	-17.26	4,697.09	0.00	0.00	0.00
7,892.66	91.00	359.79	3,251.40	4,789.70	-17.60	4,789.73	0.00	0.00	0.00
TD at 7892.66 - PBHL-Lee 3 Fee #6H									

Design Targets									
Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	
Shape									Latitude Longitude
PP-Lee 3 Fee #6H	- plan hits target center	0.00	0.00	3,198.81	180.00	-0.66	612,319.80	488,589.74	32° 41' 0.099684 N 104° 22' 13.508164 W
	- Point								
PBHL-Lee 3 Fee #6H	- plan hits target center	-90.40	0.07	3,251.40	4,789.70	-17.60	616,929.50	488,572.80	32° 41' 45.715558 N 104° 22' 13.725243 W
	- Point								

Formations							
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)		
3,629.93	3,325.79	TL, 3335' TVD @ 0 VZ, 91° Inc		-1.00	359.79		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			Comment
		+N/-S (usft)	+E/-W (usft)		
2,804.96	2,804.96	0.00	0.00		KOP Start Build 11.00
3,632.24	3,325.75	529.96	-1.95		LP Start 4260.42 hold at 3632.24 MD
7,892.66	3,251.40	4,789.70	-17.60		TD at 7892.66



Project: Eddy County, New Mexico (NAD 27 NME)

Site: Lee 3 Fee

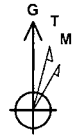
Well: #6H

Wellbore: OH

Design: Plan #1 06-17-13



PHOENIX
TECHNOLOGY SERVICES



Azimuths to Grid North
True North: 0.02°
Magnetic North: 7.76°
Magnetic Field
Strength: 48604.35 nT
Dip Angle: 60.42°
Date: 06/17/2013
Model: IGRF2010_14

WELL DETAILS									
	+N/S	+E/W	Northing	Ground Level	Easting	3341.00	Latitude	Longitude	
	0.00	0.00	612139.80	488590.40	32° 40' 58.318469 N	104° 22' 13.499689 W			

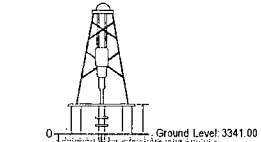
SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	TFace	VSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2804.96	0.00	0.00	2804.96	0.00	0.00	0.00	0.00	0.00
3	3632.24	91.00	359.79	3325.75	529.98	-1.95	11.00	359.79	529.98
4	7892.66	91.00	359.79	3251.40	4789.70	-17.60	0.00	4789.73	PBHL-Lee 3 Fee #6H

DESIGN TARGET DETAILS									
Name	TVD	+N/S	+E/W	Northing	Easting	Latitude	Longitude	Shape	
PP-Lee 3 Fee #6H	3198.81	180.00	-0.66	612319.80	488589.74	32° 41' 0.099684 N	104° 22' 13.508164 W	Point	
- plan hits target center									
PBHL-Lee 3 Fee #6H	3251.40	4789.70	-17.60	616929.50	486572.80	32° 41' 45.715558 N	104° 22' 13.725243 W	Point	
- 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 #6H, Grid North
Latitude: 32° 40' 58.318469 N
Longitude: 104° 22' 13.499689 W
Grid East: 488590.40
Grid North: 612139.80
Scale Factor: 1.000
Geomagnetic Model: IGRF2010_14
Sample Date: 17-Jun-13
Magnetic Declination: 7.74°
Dip Angle from Horizontal: 60.42°
Magnetic Field Strength: 48604
To convert a Magnetic Direction to a Grid Direction, Add 7.76°
To convert a Magnetic Direction to a True Direction, Add 7.74° East
To convert a True Direction to a Grid Direction, Add 0.02°

FORMATION TOP DETAILS				
TVDPath	MDPath	Formation	DipAngle	DipDir
3325.79	3629.33	TL 3335 TVD @ 0 VZ 91° Inc	-1.00	359.79

LEGEND
Plan #1 06-17-13



Ground Level: 3341.00

0

150

300

450

600

750

900

1050

1200

1350

1500

1650

1800

1950

2100

2250

2400

2550

2700

2850

3000

3150

3300

3450

3600

True Vertical Depth (150 usf/in)

