

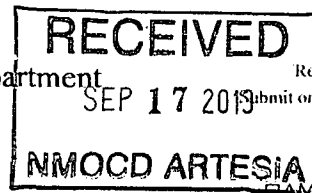
DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

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

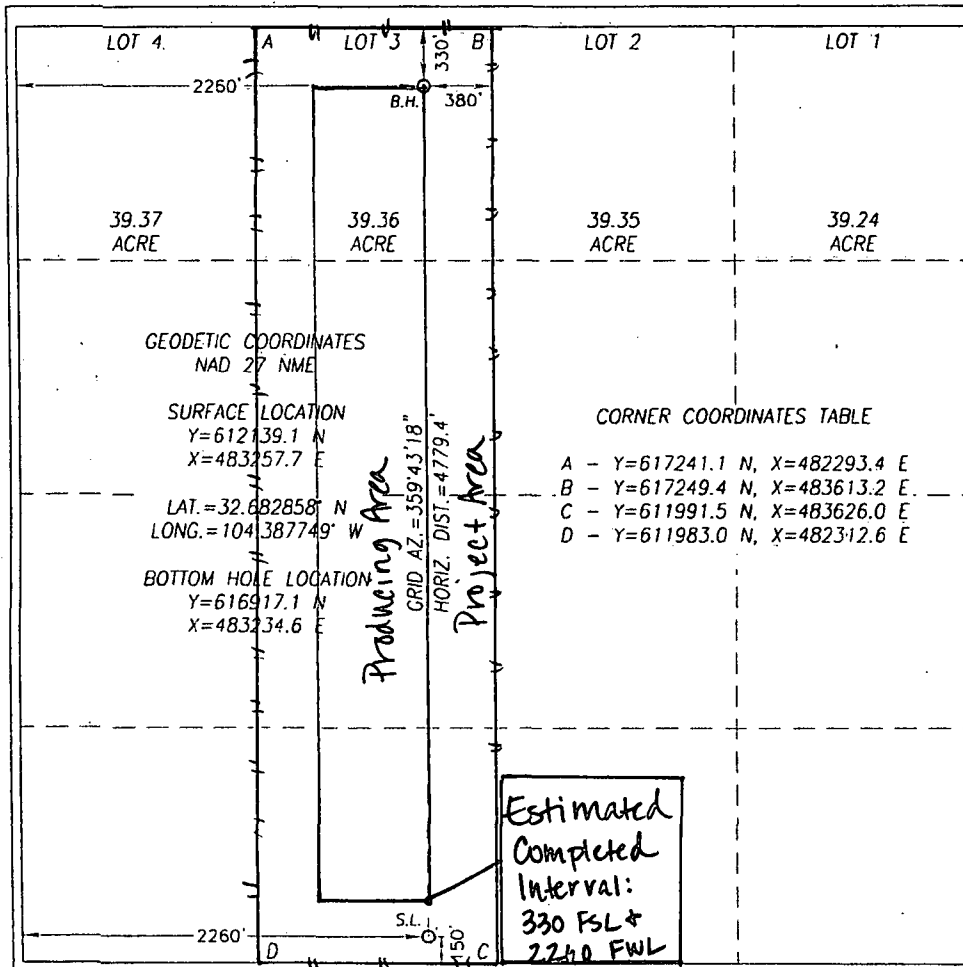
WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015- 41666	Pool Code 3250	Pool Name Atoka; Glorieta Yeso
Property Code 38909	Property Name SHERMAN 4 FEE	Well Number 6H
GRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3348

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	4	19-S	26-E		150	SOUTH	2260	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
3	4	19-S	26-E		330	NORTH	2260	WEST	EDDY
Dedicated Acres 159.06	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 herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unEDDYsed 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.

9-12-13
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.

NOVEMBER 20, 2012

Date of Survey

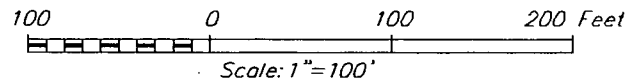
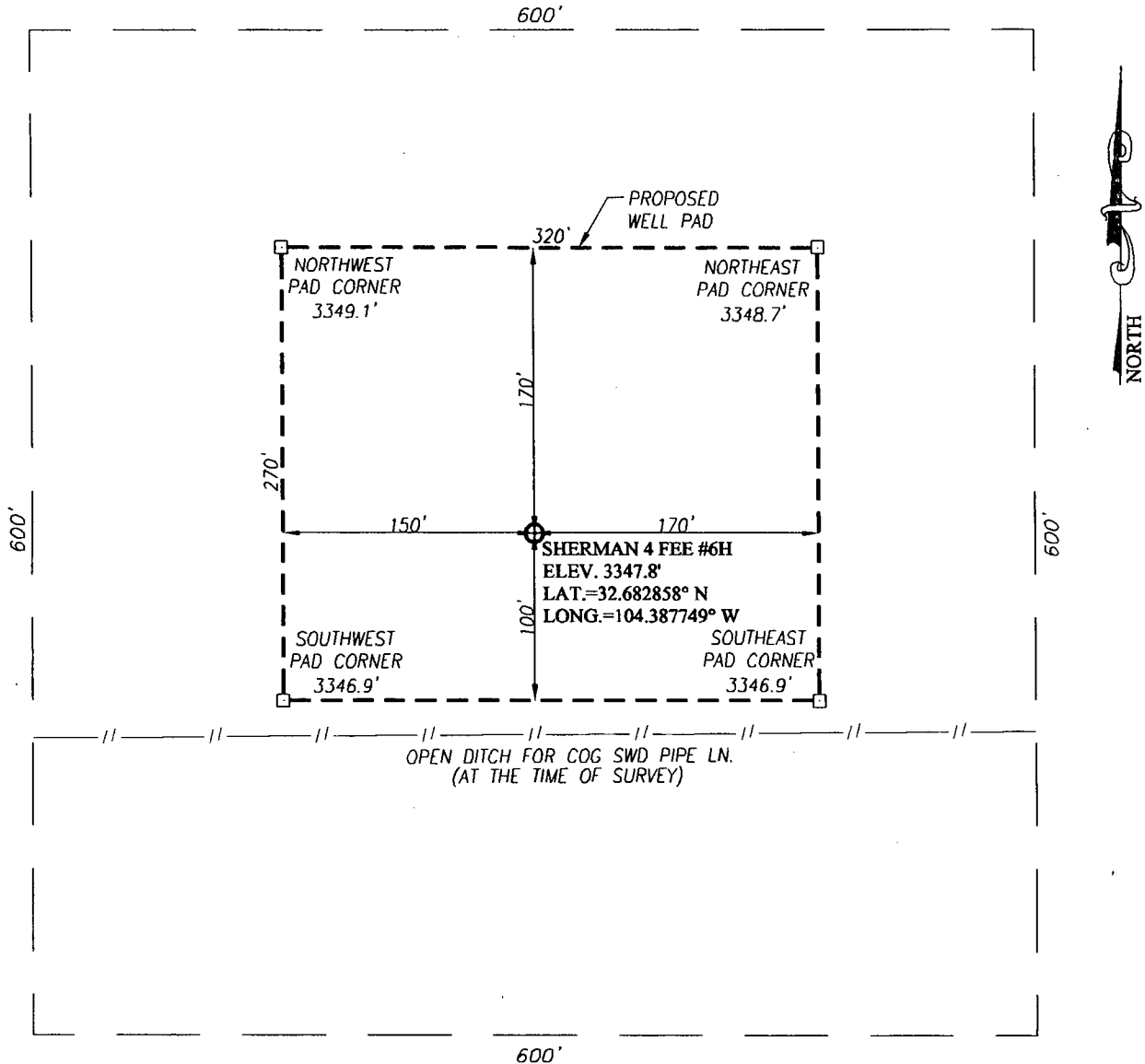
Signature & Seal of Professional Surveyor:

11/26/2012

Certificate Number Gary G. Eidson 12641
Ronald J. Eidson 3239

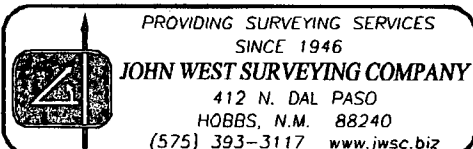
BKL

SECTION 4, TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.
EDDY COUNTY **NEW MEXICO**



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF HIGHWAY 285 AND CO RD 140 (HAVER HILL RD), GO SOUTH ON HWY 285 APPROX 0.15 MILES; TURN LEFT AND GO EAST APPROX 0.45 MILES; THIS LOCATION STAKE IS SOUTH APPROX 0.3 MILES.

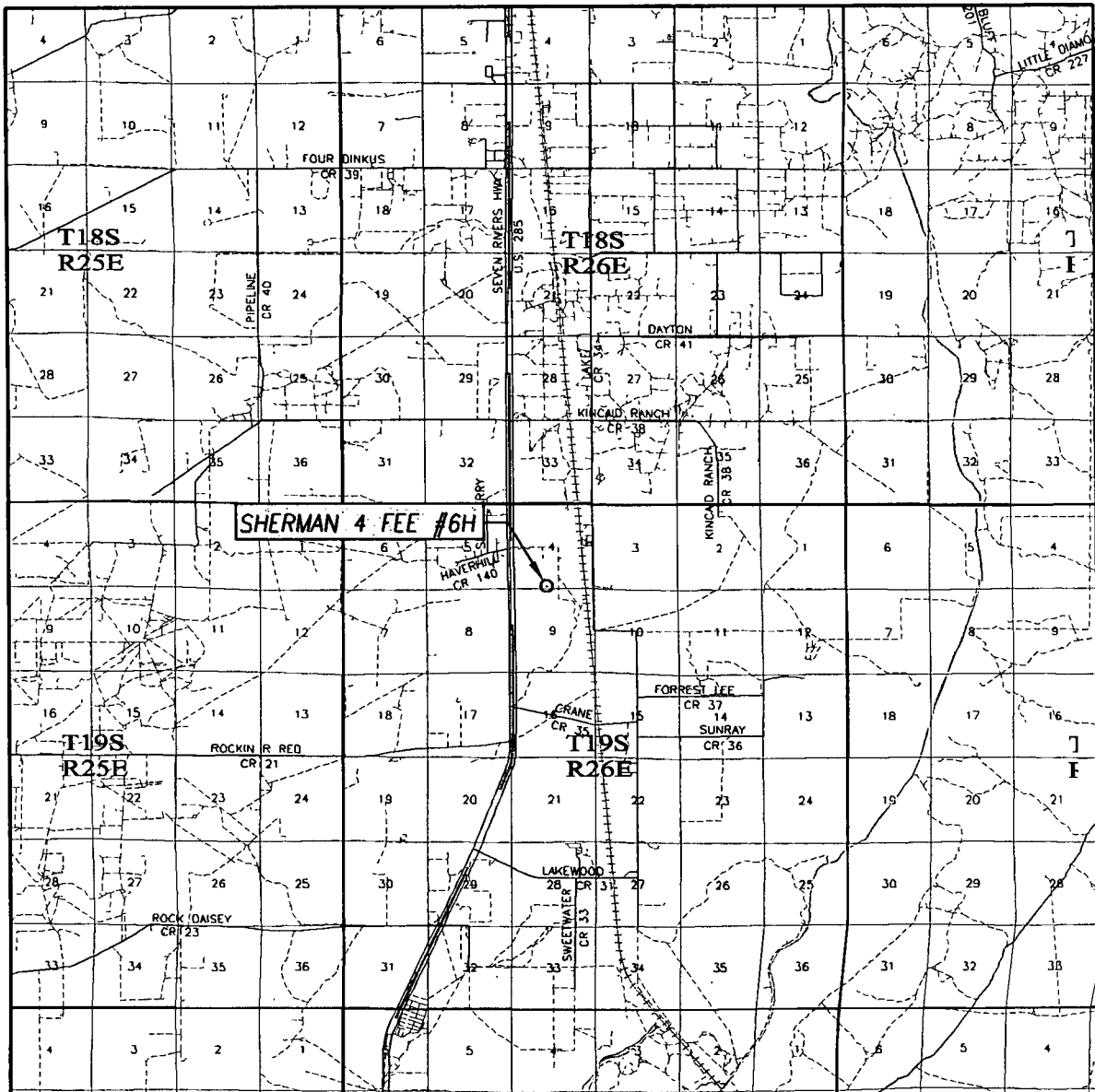


COG OPERATING, LLC

SHERMAN 4 FEE #6H WELL
LOCATED 150 FEET FROM THE SOUTH LINE
AND 2260 FEET FROM THE WEST LINE OF SECTION 4,
TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 11/20/12	CAD Date: 11/26/12	Drawn By: BKL
W.O. No.: 12111957	Rev.:	Rel. W.O.:
		Sheet 1 of 1

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 4 TWP. 19-S RGE. 26-E

SURVEY N.M.P.M.

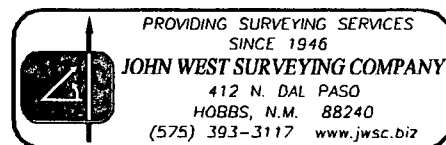
COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 150' FSL & 2260' FWL

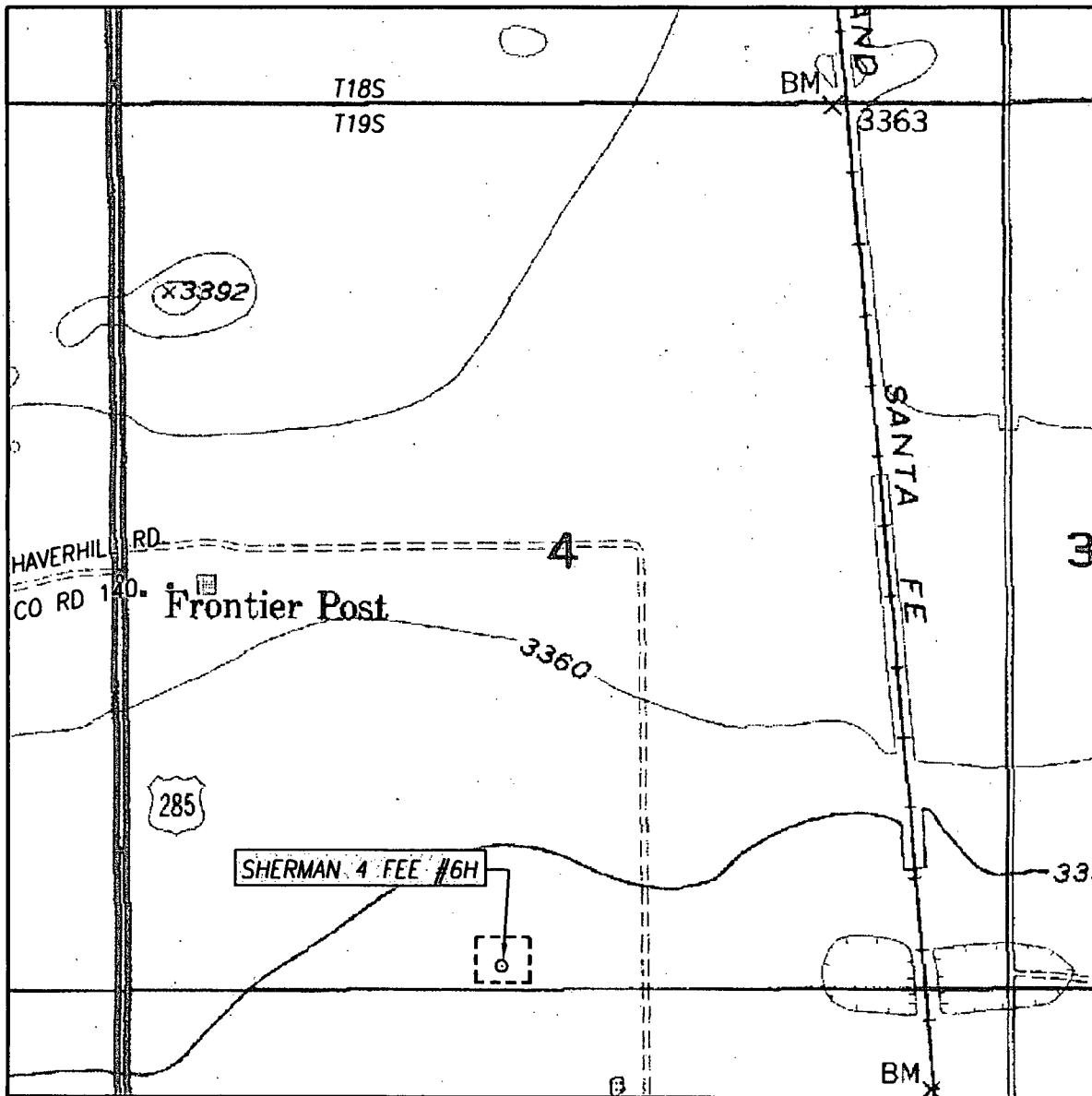
ELEVATION 3348'

OPERATOR COG OPERATING, LLC

EDDYSE SHERMAN 4 FEE



LOCATION VERIFICATION MAP



SCALE: 1" = 1000'

CONTOUR INTERVAL:
DAYTON, N.M. - 10'

SEC. 4 TWP. 19-S RGE. 26-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

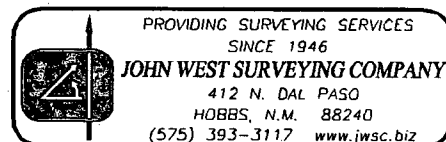
DESCRIPTION 150' FSL & 2260' FWL

ELEVATION 3348'

OPERATOR COG OPERATING, LLC

EDDYSE SHERMAN 4 FEE

U.S.G.S. TOPOGRAPHIC MAP
DAYTON, N.M.





COG Operating LLC

Eddy County, New Mexico (NAD 27 NME)

Sherman 4 Fee

#6H

OH

Plan: Plan #1 09-04-13

Surface: 150' FSL, 2260' FWL, Sec 4, T19S, R26E, Unit N

PP: 330' FSL, 2260' FWL, Sec 4, T19S, R26E, Unit N

BHL: 330' FNL, 2260' FWL, Sec 4, T19S, R26E, Lot #3

Standard Planning Report

04 September, 2013





Phoenix Technology Services
Planning Report



Database:	GCR.DB	Local Co-ordinate Reference:	Well #6H
Company:	COG Operating LLC	TVD Reference:	GL @ 3348.00usft
Project:	Eddy County New Mexico (NAD 27 NME)	MD Reference:	GL @ 3348.00usft
Site:	Sherman 4 Fee	North Reference:	Grid
Well:	#6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 09-04-13		

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	Sherman 4 Fee		
Site Position:		Northing:	612,151.80 usft
From:	Map	Easting:	485,212.40 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 40' 58.42381 N
		Longitude:	104° 22' 53.02452 W
		Grid Convergence:	-0.03 °

Well	#6H		
Well Position	+N/-S	-12.70 usft	Northing: 612,139.10 usft
	+E/-W	-1,954.70 usft	Easting: 483,257.70 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level: 3,348.00 usft
		Latitude:	32° 40' 58.28879 N
		Longitude:	104° 23' 15.89570 W

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010_14	01/30/13	7.80
			Dip Angle
			(°)
			Field Strength
			(nT)
			48,639

Design	Plan #1 09-04-13		
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
			(°)
			359.72

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	
2,554.57	0.00	0.00	2,554.57	0.00	0.00	0.00	0.00	0.00	0.00	
3,377.30	90.50	359.72	3,075.42	525.41	-2.54	11.00	11.00	0.00	359.72	
7,630.10	90.50	359.72	3,038.31	4,778.00	-23.10	0.00	0.00	0.00	0.00	PBHL-Sherman 4 Fee



Phoenix Technology Services
Planning Report



Database:	GCR/DB	Local Co-ordinate/Reference:	Well #6H
Company:	COG Operating LLC	TVD Reference:	GL @ 3348.00usft
Project:	Eddy County, New Mexico (NAD 27 NME)	MD Reference:	GL @ 3348.00usft
Site:	Sherman 4 Fee	North Reference:	Grid
Well:	#6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 09-04-13		

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
2,554.57	0.00	0.00	2,554.57	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 11.00									
2,600.00	5.00	359.72	2,599.94	1.98	-0.01	1.98	11.00	11.00	0.00
2,700.00	16.00	359.72	2,698.12	20.17	-0.10	20.17	11.00	11.00	0.00
2,800.00	27.00	359.72	2,791.02	56.76	-0.27	56.76	11.00	11.00	0.00
2,900.00	38.00	359.72	2,875.23	110.40	-0.53	110.40	11.00	11.00	0.00
3,000.00	49.00	359.72	2,947.66	179.13	-0.87	179.13	11.00	11.00	0.00
3,001.15	49.12	359.72	2,948.42	180.00	-0.87	180.00	11.00	11.00	0.00
PP-Sherman 4 Fee #6H									
3,100.00	60.00	359.72	3,005.65	260.41	-1.26	260.41	11.00	11.00	0.00
3,200.00	71.00	359.72	3,047.06	351.26	-1.70	351.27	11.00	11.00	0.00
3,300.00	82.00	359.72	3,070.37	448.35	-2.17	448.35	11.00	11.00	0.00
3,374.51	90.19	359.72	3,075.44	522.62	-2.53	522.63	11.00	11.00	0.00
TL 3080 TVD @ 0 VZ 90.5° Inc									
3,377.30	90.50	359.72	3,075.42	525.41	-2.54	525.42	11.00	11.00	0.00
LP Start 4252.80 hold at 3377.30 MD									
3,400.00	90.50	359.72	3,075.22	548.11	-2.65	548.12	0.00	0.00	0.00
3,500.00	90.50	359.72	3,074.35	648.11	-3.13	648.11	0.00	0.00	0.00
3,600.00	90.50	359.72	3,073.48	748.10	-3.62	748.11	0.00	0.00	0.00
3,700.00	90.50	359.72	3,072.61	848.10	-4.10	848.11	0.00	0.00	0.00
3,800.00	90.50	359.72	3,071.73	948.09	-4.58	948.10	0.00	0.00	0.00
3,900.00	90.50	359.72	3,070.86	1,048.09	-5.07	1,048.10	0.00	0.00	0.00
4,000.00	90.50	359.72	3,069.99	1,148.08	-5.55	1,148.09	0.00	0.00	0.00
4,100.00	90.50	359.72	3,069.12	1,248.08	-6.03	1,248.09	0.00	0.00	0.00
4,200.00	90.50	359.72	3,068.24	1,348.07	-6.52	1,348.09	0.00	0.00	0.00
4,300.00	90.50	359.72	3,067.37	1,448.07	-7.00	1,448.08	0.00	0.00	0.00
4,400.00	90.50	359.72	3,066.50	1,548.06	-7.48	1,548.08	0.00	0.00	0.00
4,500.00	90.50	359.72	3,065.62	1,648.06	-7.97	1,648.07	0.00	0.00	0.00
4,600.00	90.50	359.72	3,064.75	1,748.05	-8.45	1,748.07	0.00	0.00	0.00
4,700.00	90.50	359.72	3,063.88	1,848.05	-8.93	1,848.07	0.00	0.00	0.00
4,800.00	90.50	359.72	3,063.01	1,948.04	-9.42	1,948.06	0.00	0.00	0.00
4,900.00	90.50	359.72	3,062.13	2,048.04	-9.90	2,048.06	0.00	0.00	0.00
5,000.00	90.50	359.72	3,061.26	2,148.03	-10.38	2,148.06	0.00	0.00	0.00
5,100.00	90.50	359.72	3,060.39	2,248.03	-10.87	2,248.05	0.00	0.00	0.00
5,200.00	90.50	359.72	3,059.52	2,348.02	-11.35	2,348.05	0.00	0.00	0.00
5,300.00	90.50	359.72	3,058.64	2,448.02	-11.84	2,448.04	0.00	0.00	0.00
5,400.00	90.50	359.72	3,057.77	2,548.01	-12.32	2,548.04	0.00	0.00	0.00
5,500.00	90.50	359.72	3,056.90	2,648.01	-12.80	2,648.04	0.00	0.00	0.00
5,600.00	90.50	359.72	3,056.03	2,748.00	-13.29	2,748.03	0.00	0.00	0.00
5,700.00	90.50	359.72	3,055.15	2,848.00	-13.77	2,848.03	0.00	0.00	0.00
5,800.00	90.50	359.72	3,054.28	2,947.99	-14.25	2,948.03	0.00	0.00	0.00
5,900.00	90.50	359.72	3,053.41	3,047.99	-14.74	3,048.02	0.00	0.00	0.00
6,000.00	90.50	359.72	3,052.54	3,147.98	-15.22	3,148.02	0.00	0.00	0.00
6,100.00	90.50	359.72	3,051.66	3,247.98	-15.70	3,248.01	0.00	0.00	0.00
6,200.00	90.50	359.72	3,050.79	3,347.97	-16.19	3,348.01	0.00	0.00	0.00
6,300.00	90.50	359.72	3,049.92	3,447.97	-16.67	3,448.01	0.00	0.00	0.00
6,400.00	90.50	359.72	3,049.04	3,547.96	-17.15	3,548.00	0.00	0.00	0.00
6,500.00	90.50	359.72	3,048.17	3,647.96	-17.64	3,648.00	0.00	0.00	0.00
6,600.00	90.50	359.72	3,047.30	3,747.95	-18.12	3,747.99	0.00	0.00	0.00
6,700.00	90.50	359.72	3,046.43	3,847.95	-18.60	3,847.99	0.00	0.00	0.00
6,800.00	90.50	359.72	3,045.55	3,947.94	-19.09	3,947.99	0.00	0.00	0.00
6,900.00	90.50	359.72	3,044.68	4,047.94	-19.57	4,047.98	0.00	0.00	0.00
7,000.00	90.50	359.72	3,043.81	4,147.93	-20.05	4,147.98	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 @ 3348.00usft
Project:	Eddy County New Mexico (NAD 27 NME)	MD Reference:	GL @ 3348.00usft
Site:	Sherman 4 Fee	North Reference:	Grid
Well:	#6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1, 09-04-13		

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)
7,100.00	90.50	359.72	3,042.94	4,247.93	-20.54	4,247.98	0.00	0.00	0.00
7,200.00	90.50	359.72	3,042.06	4,347.92	-21.02	4,347.97	0.00	0.00	0.00
7,300.00	90.50	359.72	3,041.19	4,447.92	-21.50	4,447.97	0.00	0.00	0.00
7,400.00	90.50	359.72	3,040.32	4,547.91	-21.99	4,547.96	0.00	0.00	0.00
7,500.00	90.50	359.72	3,039.45	4,647.91	-22.47	4,647.96	0.00	0.00	0.00
7,600.00	90.50	359.72	3,038.57	4,747.90	-22.95	4,747.96	0.00	0.00	0.00
7,630.10	90.50	359.72	3,038.31	4,778.00	-23.10	4,778.06	0.00	0.00	0.00
TD at 7630.10 - PBHL-Sherman 4 Fee #6H									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
hit/miss target									
Shape									
PP-Sherman 4 Fee #6H	0.00	360.00	2,948.42	180.00	-0.87	612,319.10	483,256.83	32° 41' 0.07000 N	104° 23' 15.90696 W
- plan hits target center									
- Point									
PBHL-Sherman 4 Fee #	0.00	360.00	3,038.31	4,778.00	-23.10	616,917.10	483,234.60	32° 41' 45.57003 N	104° 23' 16.19470 W
- plan hits target center									
- Point									

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,374.51	3,075.44	TL, 3080' TVD @ 0 VZ, 90.5° Inc		-0.50	359.72

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,554.57	2,554.57	0.00	0.00	KOP Start Build 11.00
3,377.30	3,075.42	525.41	-2.54	LP Start 4252.80 hold at 3377.30 MD
7,630.10	3,038.31	4,778.00	-23.10	TD at 7630.10



Project: Eddy County, New Mexico (NAD 27 NME)
Site: Skelly Unit
Well: #668
Wellbore: WB1
Design: Plan #1 08-26-13

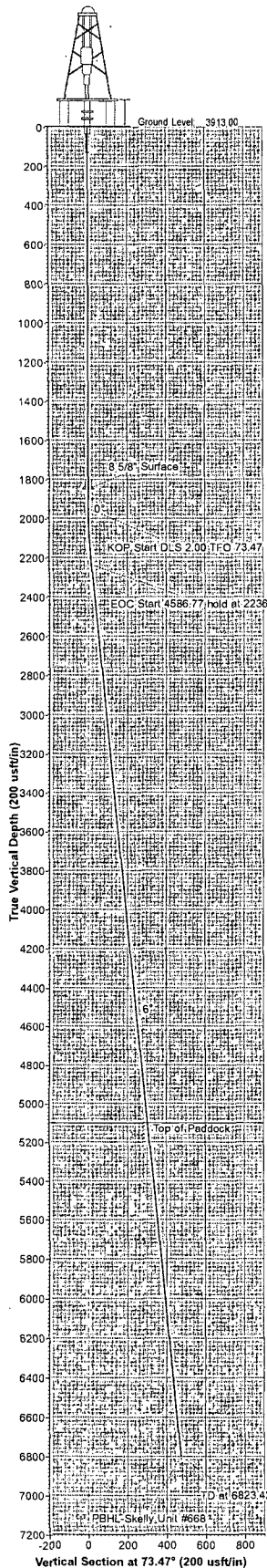


PHOENIX
TECHNOLOGY SERVICES



Azimuths to Grid North
True North: -0.27°
Magnetic North: 7.22°

Magnetic Field
Strength: 48731.6nT
Dip Angle: 60.65°
Date: 08/26/2013
Model: IGRF2010_14



WELL DETAILS													
				Ground Level:	3913.00								
+N/-S		+E/-W		-Northing		Easting		Latitude		Longitude			
0.00		0.00		668509.80		650797.90		32° 50' 12.68239 N		103° 50' 32.53672 W			

SECTION DETAILS													
Sec	MD	-Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target	Annotation		
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
2	1950.00	0.00	0.00	1950.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP Start DLS 2.00 TFO 73.47		
3	2236.65	5.73	73.47	2236.17	4.08	13.74	2.00	73.47	14.33		EOC Start 4586.77 hold at 2236.65 MD		
4	6823.42	5.73	73.47	6800.00	134.40	453.00	0.00	0.00	472.52	PBHL-Skelly Unit #668	TD at 6823.42		

DESIGN TARGET DETAILS													
Name:				TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape		
PBHL-Skelly Unit #668				6800.00	134.40	453.00	668644.20	651250.90	32° 50' 13.99142 N	103° 50' 27.22005 W	Circle (Radius: 10.00)		
				-plan hits target center									

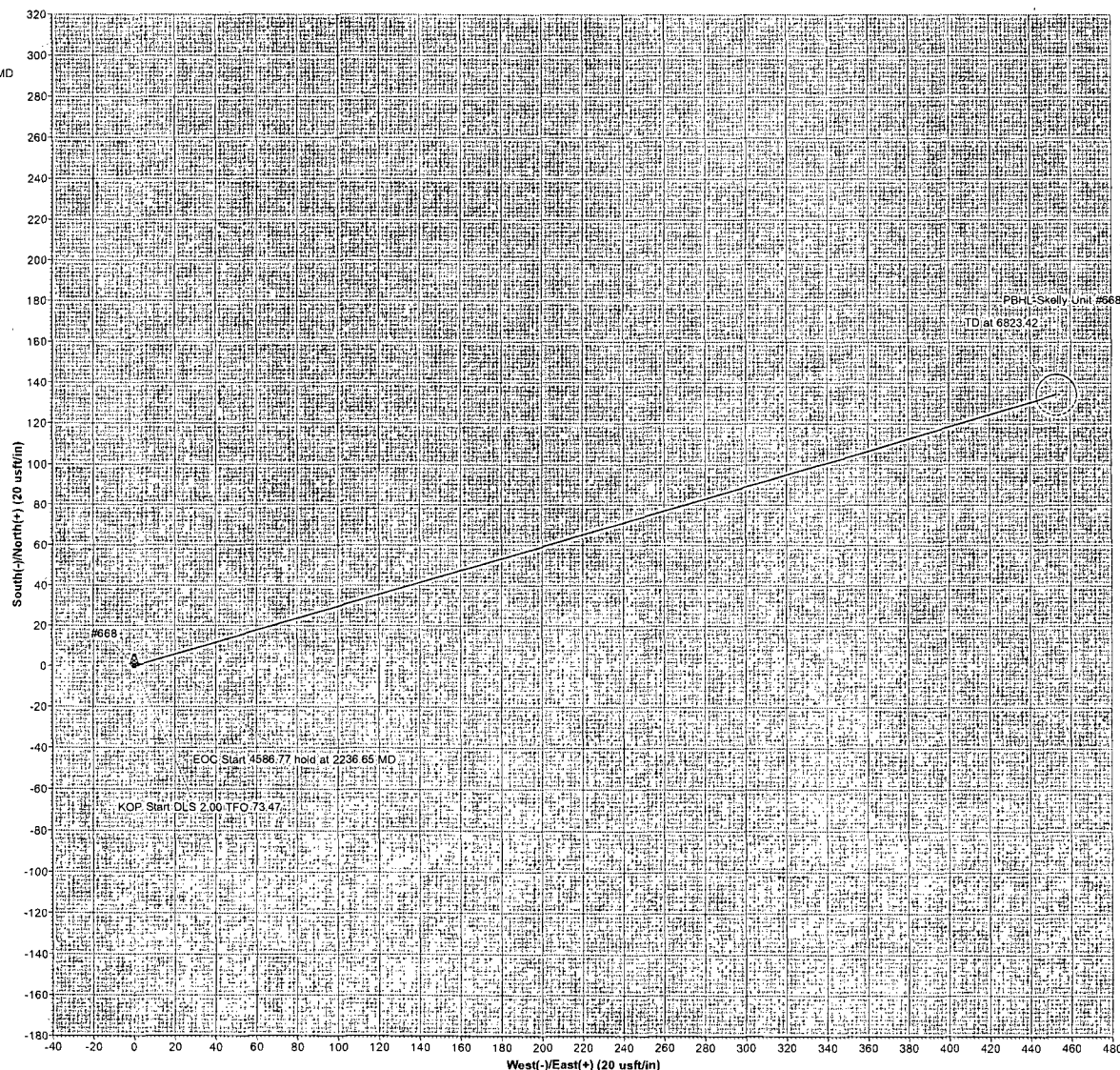
SITE DETAILS: Skelly Unit													
Site Centre Northing:				667953.00									
Easting:				643940.30									
Positional Uncertainty:				0.00									
Convergence:				0.25									
Local North:				Grid									

PROJECT DETAILS: Eddy County, New Mexico (NAD 27 NME)													
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									

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 #668, Grid North		
Latitude:	32° 50' 12.68239 N		
Longitude:	103° 50' 32.53672 W		
Grid East:	650797.90		
Grid North:	668509.80		
Scale Factor:	1.000		
Geomagnetic Model:	IGRF2010_14		
Sample Date:	26-Aug-13		
Magnetic Declination:	7.49°		
Dip Angle from Horizontal:	60.65°		
Magnetic Field Strength:	48732		
To convert a Magnetic Direction to a Grid Direction, Add 7.22°			
To convert a Magnetic Direction to a True Direction, Add 7.49° East			
To convert a True Direction to a Grid Direction, Subtract 0.27°			

CASING DETAILS			
TVD	MD	Name	Size
1850.00	1850.00	8 5/8" Surface	8-5/8

LEGEND	
—	Plan #1 08-26-13





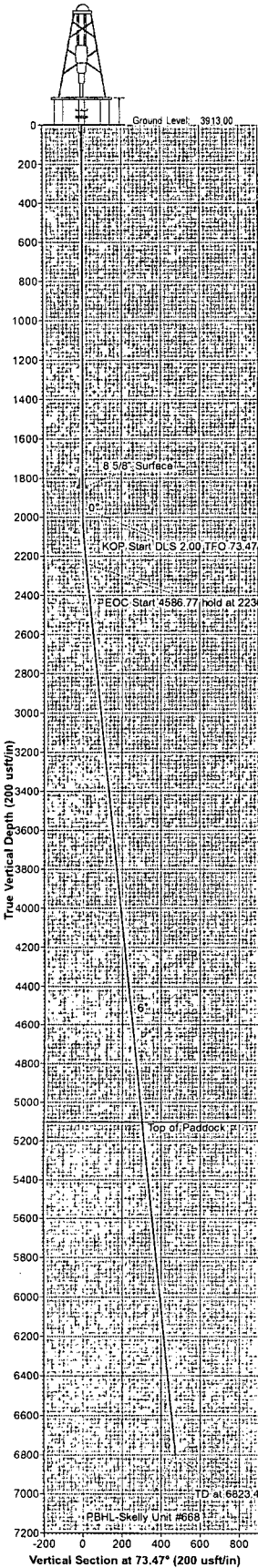
Project: Eddy County, New Mexico (NAD 27 NME)
Site: Skelly Unit
Well: #668
Wellbore: WB1
Design: Plan #1 08-26-13



PHOENIX
TECHNOLOGY SERVICES



Azimuths to Grid North
True North: -0.27°
Magnetic North: 7.22°
Magnetic Field
Strength: 48731.6nT
Dip Angle: 60.65°
Date: 08/26/2013
Model: IGRF2010_14



WELL DETAILS											
+N/-S		+E/-W		Northing	Ground Level	3913.00	Latitude	Longitude			
0.00		0.00		668509.80	Easting	650797.90	32° 50' 12.68239 N	103° 50' 32.53672 W			

SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VFace	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	1950.00	0.00	0.00	1950.00	0.00	0.00	0.00	0.00	0.00		KOP Start DLS 2.00 TFO 73.47
3	2236.65	5.73	73.47	2236.17	4.08	13.74	2.00	73.47	14.33		EOC Start 4586.77 hold at 2236.65 MD
4	6823.42	5.73	73.47	6800.00	134.40	453.00	0.00	0.00	472.52	PBHL-Skelly Unit #668	TD at 6823.42

DESIGN TARGET DETAILS											
Name		TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape		
PBHL-Skelly Unit #668		6800.00	134.40	453.00	668644.20	651250.90	32° 50' 13.99142 N	103° 50' 27.22005 W	Circle (Radius: 10.00)		
- plan hits target center											

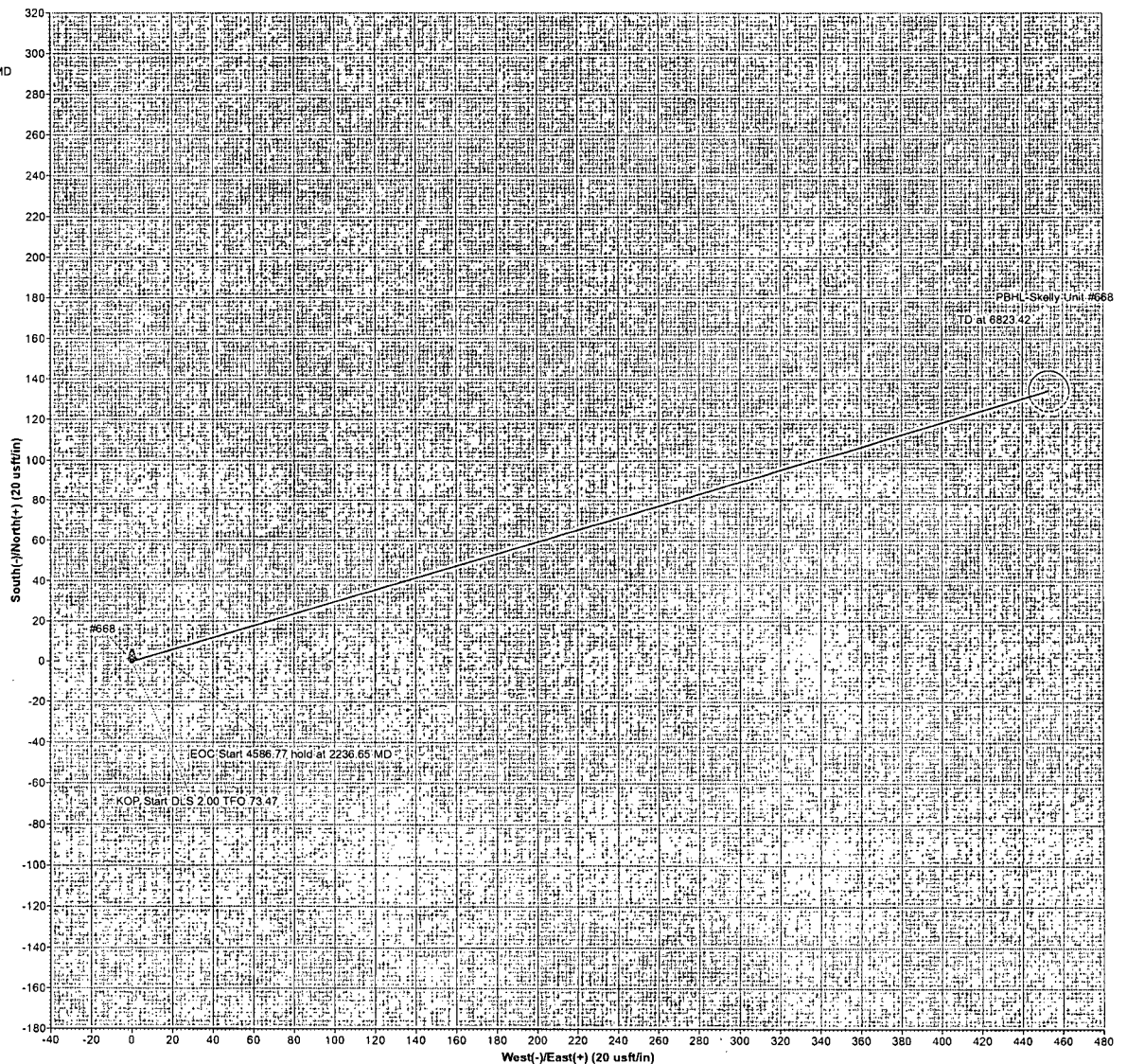
SITE DETAILS: Skelly Unit			
Site Centre Northing:		667953.00	
Easting		643940.30	
Positional Uncertainty:		0.00	
Convergence:		0.25	
Local North:		Grid	

PROJECT DETAILS: Eddy County, New Mexico (NAD 27 NME)	
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

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 #668, Grid North			
Latitude: 32° 50' 12.68239 N		Longitude: 103° 50' 32.53672 W	
Grid East: 650797.90			
Grid North: 668509.80			
Scale Factor: 1.000			
Geomagnetic Model: IGRF2010_14			
Sample Date: 26-Aug-13			
Magnetic Declination: 7.49°			
Dip Angle from Horizontal: 60.65°			
Magnetic Field Strength: 48732			
To convert a Magnetic Direction to a Grid Direction, Add 7.22°			
To convert a Magnetic Direction to a True Direction, Add 7.49° East			
To convert a True Direction to a Grid Direction, Subtract 0.27°			

CASING DETAILS			
TVD	MD	Name	Size
1850.00	1850.00	8 5/8" Surface	8-5/8

LEGEND			
 Plan #1 08-26-13			

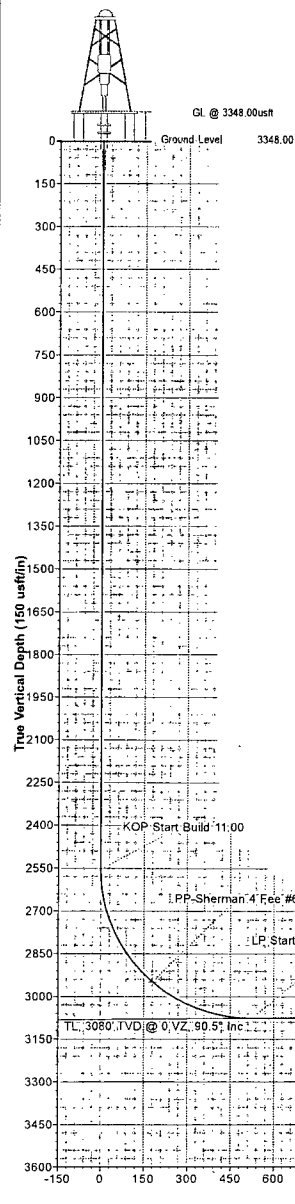




Project: Eddy County, New Mexico (NAD 27 NME)
Site: Sherman 4 Fee
Well: #6H
Wellbore: OH
Design: Plan #1 09-04-13



North
True North: 0.03°
Magnetic North: 7.83°
Magnet® Field
Strength: 48639.3anT
Dip Angle: 60.43°
Date: 01/30/2013
Model: IGRF2010_14



WELL DETAILS										
	+N/S	+E/W	North	Ground Level	3348.00	Latitude	Longitude			
	0.00	0.00	612138.10	Easting	483257.70	32° 40' 58.28879 N	104° 23' 15.89570 W			

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2554.57	0.00	0.00	2554.57	0.00	0.00	0.00	0.00	0.00	
3	3377.30	90.50	359.72	3075.42	525.41	-2.54	11.00	359.72	525.42	
4	7630.10	90.50	359.72	3038.31	4778.00	-23.10	0.00	0.00	4778.08	PBHL-Sherman 4 Fee #6H

DESIGN TARGET DETAILS										
Name	TVD	+N/S	+E/W	North	Easting	Latitude	Longitude	Shape		
PP-Sherman 4 Fee #6H	2948.42	180.00	-0.87	612319.10	483256.83	32° 41' 0.07000 N	104° 23' 15.90695 W	Point		
-plan hits target center										
PBHL-Sherman 4 Fee #6H	3038.31	4778.00	-23.10	616917.10	483234.60	32° 41' 45.57003 N	104° 23' 16.19470 W	Point		
-plan hits target center										

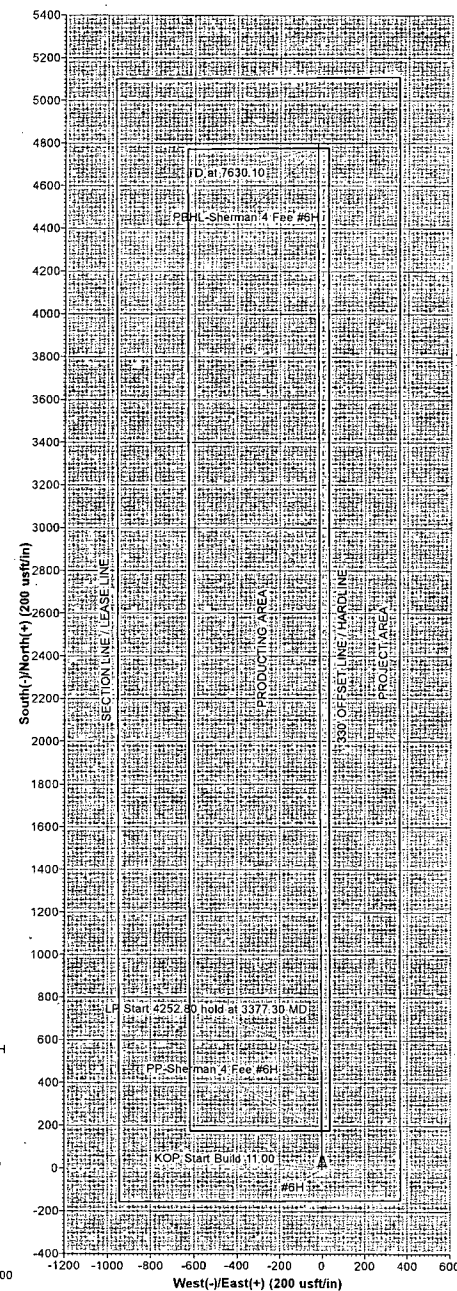
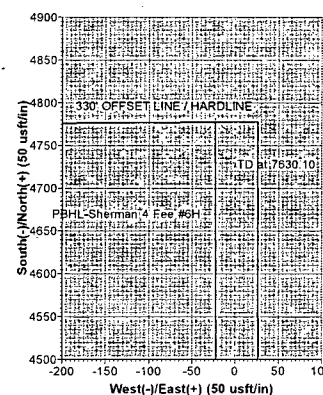
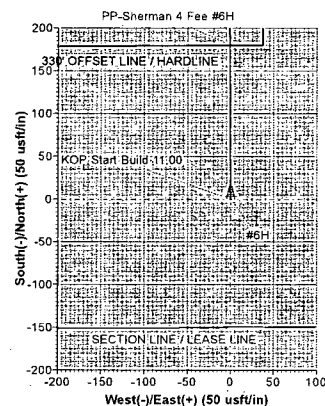
PROJECT DETAILS: Eddy County, New Mexico (NAD 27 NME)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

SITE DETAILS: Sherman 4 Fee
Site Centre Northing: 612151.80
Easting: 485212.40
Positional Uncertainty: 0.00
Convergence: -0.03
Local North: Grid

LEGEND
Plan #1 09-04-13

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' 58.28879 N
Longitude: 104° 23' 15.89570 W
Grid East: 483257.70
Grid North: 612139.10
Scale Factor: 1.000
Geomagnetic Model: IGRF2010_14
Sample Date: 30-Jan-13
Magnetic Declination: 7.80°
Dip Angle from Horizontal: 60.43°
Magnetic Field Strength: 48639
To convert a Magnetic Direction to a Grid Direction, Add 7.83°
To convert a Magnetic Direction to a True Direction, Add 7.80° East
To convert a True Direction to a Grid Direction, Add 0.03°

FORMATION TOP DETAILS				
TVDPath	MDPath	Formation	DipAngle	DipDir
3075.44	3374.51	TL 3080° TVD @ 0 VZ, 90.5° Inc	-0.50	359.72



Vertical Section at 359.72° (150 usf/in)