

Submit 1 Copy To Appropriate District
Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised August 1, 2011

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

WELL API NO. 30-015-39625
5. Indicate Type of Lease STATE ☐ FEE ☒
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Arabian 6 Fee
8. Well Number 6H
9. OGRID Number 229137
10. Pool name or Wildcat Penasco Draw;SA-Yeso (Assoc) 50270

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well ☒ Gas Well ☐ Other	
2. Name of Operator COG Operating LLC	
3. Address of Operator One Concho Center - 600 W Illinois Ave Midland, TX 79701	
4. Well Location Unit Letter N : 150 feet from the SOUTH line and 2260 feet from the WEST line Section 6 Township 19S Range 26E NMPM County EDDY	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3372'	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: **Change SHL & BHL** ☒

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

COG Operating LLC submitted APD for this well at this location:

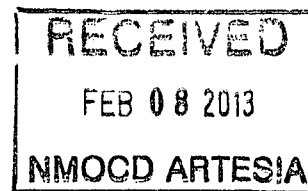
SHL: 150 FSL 2260 FWL, Unit N

BHL: 330 FNL 2260 FWL, Lot 3

COG Operating LLC respectfully requests permission to change the BHL to:

SHL: 150 FSL 2267 FWL, Unit N

BHL: 330 FNL 2177 FWL, Lot 3/c



Revision is due to skewed section and avoiding a non-standard location.

A revised Directional Plan and C102 is attached for your review.

Spud Date:

Rig Release Date:

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

SIGNATURE Kelly J. Holly TITLE Permitting Tech DATE 02/06/2013

Type or print name Kelly J. Holly E-mail address: kholly@concho.com PHONE: 432-685-4384

For State Use Only

APPROVED BY: T.C. Shepard TITLE Geologist DATE 2/11/2013

Conditions of Approval (if any):

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

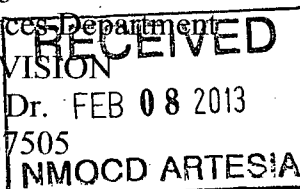
DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

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. FEB 08 2013
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 30-015-39625	Pool Code 50270	Pool Name Penasco Draw; SA-Yeso (Assoc)
Property Code	Property Name ARABIAN 6 FEE	Well Number 6H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3372

Surface Location

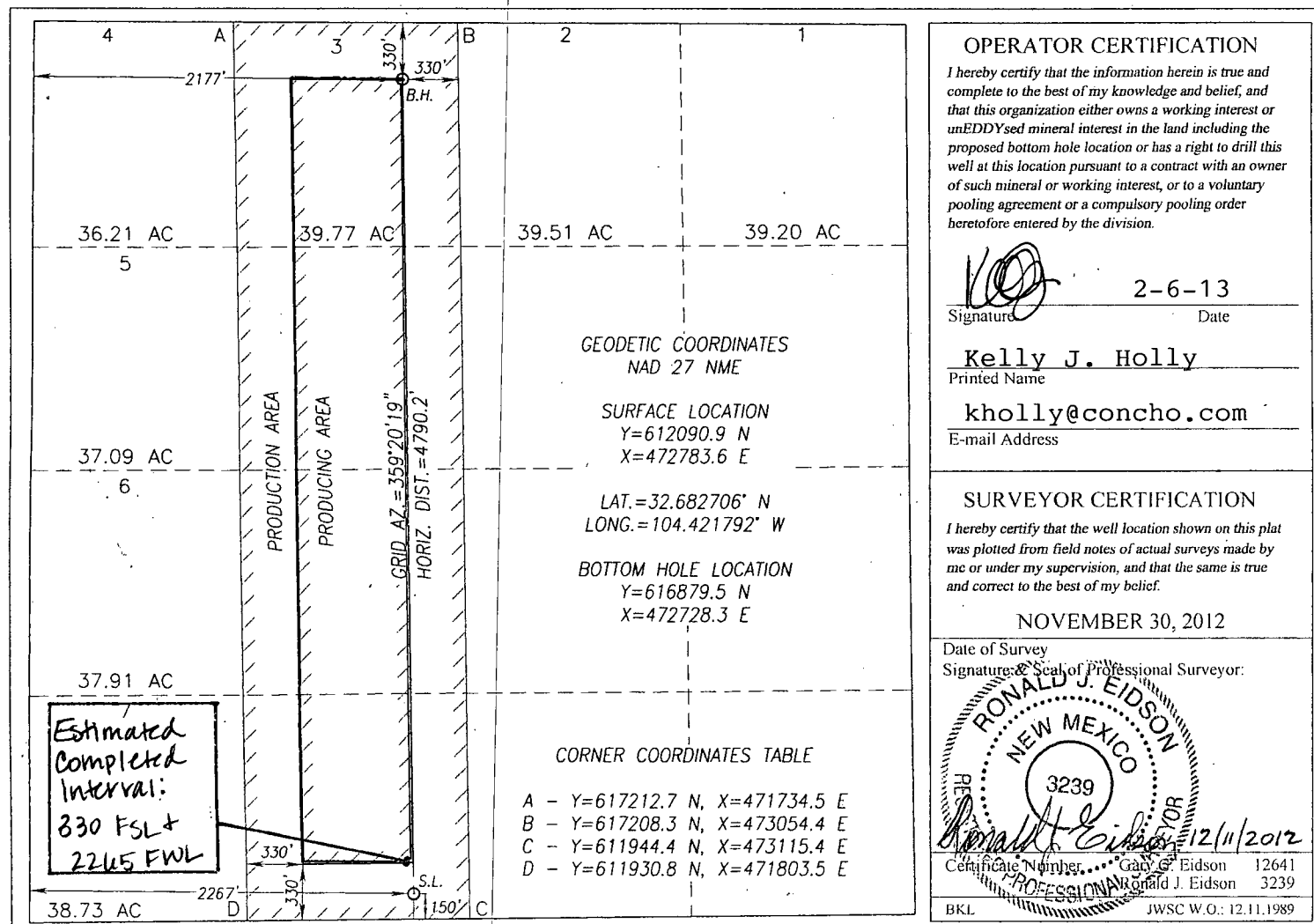
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	6	19-S	26-E		150	SOUTH	2267	WEST	EDDY

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	6	19-S	26-E		330	NORTH	2177	WEST	EDDY

Dedicated Acres 159.77	Joint or Infill	Consolidation Code	Order No.
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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.

[Signature] 2-6-13
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 30, 2012

Date of Survey
Signature & Seal of Professional Surveyor:

[Signature]
RONALD J. EIDSON
NEW MEXICO
3239
Certificate Number: Gary E. Eidson 12641
Ronald J. Eidson 3239
BKL JWSC W.O.: 12.11.1989

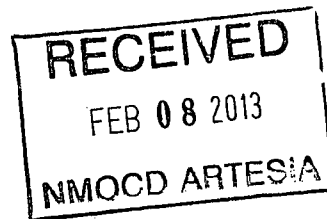


COG Operating LLC

Eddy County, New Mexico (NAD 27)

Arabian 6 Fee #6H

Wellbore #1



Plan: Plan #1 01-30-13

Surface: 150' FSL, 2267' FWL, Sec 6, T19S, R26E, Unit N

PP: 330' FSL, 2265' FWL, Sec 6, T19S, R26E, Unit N

BHL: 330' FNL, 2177' FWL, Sec 6, T19S, R26E, Lot 3

Standard Planning Report

30 January, 2013



**PHOENIX
TECHNOLOGY SERVICES**



Phoenix Technology Services
Planning Report



Database:	GCR DB	Local Co-ordinate Reference:	Well #6H
Company:	COG Operating LLC	TVD Reference:	GL @ 3372.00usft
Project:	Eddy County, New Mexico (NAD 27)	MD Reference:	GL @ 3372.00usft
Site:	Arabian 6 Fee	North Reference:	Grid
Well:	#6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 01-30-13		

Project:	Eddy County, New Mexico (NAD 27)		
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:	Arabian 6 Fee		
Site Position:		Northing:	612,084.20 usft
From:	Map	Easting:	472,131.70 usft
Position Uncertainty:	0.00'usft	Slot Radius:	13-3/16"
		Latitude:	32° 40' 57.6703 N
		Longitude:	104° 25' 26.0764 W
		Grid Convergence:	-0.05 °

Well	#6H					
Well Position	+N/-S	6.70 usft	Northing:	612,090.90 usft	Latitude:	32° 40' 57.7420 N
	+E/-W	651.90 usft	Easting:	472,783.60 usft	Longitude:	104° 25' 18.4488 W
Position Uncertainty	0.00 usft	Wellhead Elevation:		Ground Level:	3,372.00 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	01/30/13	7.81	60.42	48,635

Design:	Plan #1 01-30-13			
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	359.34

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(usft)	(°)	(°)	(usft)	(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	
2,399.57	0.00	0.00	2,399.57	0.00	0.00	0.00	0.00	0.00	0.00	
3,222.29	90.50	359.34	2,920.42	525.38	-6.07	11.00	11.00	0.00	359.34	
7,485.96	90.50	359.34	2,883.21	4,788.60	-55.30	0.00	0.00	0.00	0.00	PBHL-Arabian 6 #6H



Phoenix Technology Services
Planning Report



Database:	GCR DB	Local Co-ordinate Reference:	Well #6H
Company:	COG Operating LLC	TVD Reference:	GL @ 3372.00usft
Project:	Eddy County, New Mexico (NAD 27)	MD Reference:	GL @ 3372.00usft
Site:	Arabian 6 Fee	North Reference:	Grid
Well:	#6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 01-30-13		

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
2,399.57	0.00	0.00	2,399.57	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 11.00									
2,400.00	0.05	359.34	2,400.00	0.00	0.00	0.00	11.00	11.00	0.00
2,500.00	11.05	359.34	2,499.38	9.65	-0.11	9.65	11.00	11.00	0.00
2,600.00	22.05	359.34	2,595.09	38.09	-0.44	38.09	11.00	11.00	0.00
2,700.00	33.05	359.34	2,683.62	84.26	-0.97	84.27	11.00	11.00	0.00
2,800.00	44.05	359.34	2,761.71	146.48	-1.69	146.49	11.00	11.00	0.00
2,846.16	49.13	359.34	2,793.42	180.00	-2.08	180.01	11.00	11.00	0.00
PP-Arabian 6 #6H									
2,900.00	55.05	359.34	2,826.49	222.45	-2.57	222.47	11.00	11.00	0.00
3,000.00	66.05	359.34	2,875.58	309.39	-3.57	309.41	11.00	11.00	0.00
3,100.00	77.05	359.34	2,907.18	404.10	-4.67	404.12	11.00	11.00	0.00
3,200.00	88.05	359.34	2,920.13	503.09	-5.81	503.13	11.00	11.00	0.00
3,220.76	90.33	359.34	2,920.43	523.84	-6.05	523.88	11.00	11.00	0.00
Target Center Line									
3,222.29	90.50	359.34	2,920.42	525.38	-6.07	525.42	11.00	11.00	0.00
LP Start 4263.67 hold at 3222.29 MD									
3,300.00	90.50	359.34	2,919.74	603.08	-6.96	603.12	0.00	0.00	0.00
3,400.00	90.50	359.34	2,918.87	703.07	-8.12	703.12	0.00	0.00	0.00
3,500.00	90.50	359.34	2,917.99	803.06	-9.27	803.11	0.00	0.00	0.00
3,600.00	90.50	359.34	2,917.12	903.05	-10.43	903.11	0.00	0.00	0.00
3,700.00	90.50	359.34	2,916.25	1,003.04	-11.58	1,003.10	0.00	0.00	0.00
3,800.00	90.50	359.34	2,915.38	1,103.03	-12.74	1,103.10	0.00	0.00	0.00
3,900.00	90.50	359.34	2,914.50	1,203.02	-13.89	1,203.10	0.00	0.00	0.00
4,000.00	90.50	359.34	2,913.63	1,303.01	-15.05	1,303.09	0.00	0.00	0.00
4,100.00	90.50	359.34	2,912.76	1,403.00	-16.20	1,403.09	0.00	0.00	0.00
4,200.00	90.50	359.34	2,911.89	1,502.99	-17.36	1,503.09	0.00	0.00	0.00
4,300.00	90.50	359.34	2,911.01	1,602.97	-18.51	1,603.08	0.00	0.00	0.00
4,400.00	90.50	359.34	2,910.14	1,702.96	-19.67	1,703.08	0.00	0.00	0.00
4,500.00	90.50	359.34	2,909.27	1,802.95	-20.82	1,803.07	0.00	0.00	0.00
4,600.00	90.50	359.34	2,908.39	1,902.94	-21.98	1,903.07	0.00	0.00	0.00
4,700.00	90.50	359.34	2,907.52	2,002.93	-23.13	2,003.07	0.00	0.00	0.00
4,800.00	90.50	359.34	2,906.65	2,102.92	-24.29	2,103.06	0.00	0.00	0.00
4,900.00	90.50	359.34	2,905.78	2,202.91	-25.44	2,203.06	0.00	0.00	0.00
5,000.00	90.50	359.34	2,904.90	2,302.90	-26.59	2,303.06	0.00	0.00	0.00
5,100.00	90.50	359.34	2,904.03	2,402.89	-27.75	2,403.05	0.00	0.00	0.00
5,200.00	90.50	359.34	2,903.16	2,502.88	-28.90	2,503.05	0.00	0.00	0.00
5,300.00	90.50	359.34	2,902.29	2,602.87	-30.06	2,603.04	0.00	0.00	0.00
5,400.00	90.50	359.34	2,901.41	2,702.86	-31.21	2,703.04	0.00	0.00	0.00
5,500.00	90.50	359.34	2,900.54	2,802.85	-32.37	2,803.04	0.00	0.00	0.00
5,600.00	90.50	359.34	2,899.67	2,902.84	-33.52	2,903.03	0.00	0.00	0.00
5,700.00	90.50	359.34	2,898.80	3,002.83	-34.68	3,003.03	0.00	0.00	0.00
5,800.00	90.50	359.34	2,897.92	3,102.82	-35.83	3,103.02	0.00	0.00	0.00
5,900.00	90.50	359.34	2,897.05	3,202.81	-36.99	3,203.02	0.00	0.00	0.00
6,000.00	90.50	359.34	2,896.18	3,302.80	-38.14	3,303.02	0.00	0.00	0.00
6,100.00	90.50	359.34	2,895.30	3,402.79	-39.30	3,403.01	0.00	0.00	0.00
6,200.00	90.50	359.34	2,894.43	3,502.78	-40.45	3,503.01	0.00	0.00	0.00
6,300.00	90.50	359.34	2,893.56	3,602.77	-41.61	3,603.01	0.00	0.00	0.00
6,400.00	90.50	359.34	2,892.69	3,702.75	-42.76	3,703.00	0.00	0.00	0.00
6,500.00	90.50	359.34	2,891.81	3,802.74	-43.92	3,803.00	0.00	0.00	0.00
6,600.00	90.50	359.34	2,890.94	3,902.73	-45.07	3,902.99	0.00	0.00	0.00
6,700.00	90.50	359.34	2,890.07	4,002.72	-46.22	4,002.99	0.00	0.00	0.00
6,800.00	90.50	359.34	2,889.20	4,102.71	-47.38	4,102.99	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 @ 3372.00usft
Project:	Eddy County, New Mexico (NAD 27)	MD Reference:	GL @ 3372.00usft
Site:	Arabian 6 Fee	North Reference:	Grid
Well:	#6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 01-30-13		

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)
6,900.00	90.50	359.34	2,888.32	4,202.70	-48.53	4,202.98	0.00	0.00	0.00
7,000.00	90.50	359.34	2,887.45	4,302.69	-49.69	4,302.98	0.00	0.00	0.00
7,100.00	90.50	359.34	2,886.58	4,402.68	-50.84	4,402.98	0.00	0.00	0.00
7,200.00	90.50	359.34	2,885.71	4,502.67	-52.00	4,502.97	0.00	0.00	0.00
7,300.00	90.50	359.34	2,884.83	4,602.66	-53.15	4,602.97	0.00	0.00	0.00
7,400.00	90.50	359.34	2,883.96	4,702.65	-54.31	4,702.96	0.00	0.00	0.00
7,485.96	90.50	359.34	2,883.21	4,788.60	-55.30	4,788.92	0.00	0.00	0.00
TD at 7485.96 - PBHL-Arabian 6 #6H									

Target Name	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PP-Arabian 6 #6H - hit/miss target - Shape - Point	0.00	360.00	2,793.42	180.00	-2.08	612,270.90	472,781.52	32° 40' 59.5232 N	104° 25' 18.4749 W
PBHL-Arabian 6 #6H - plan hits target center - Point	0.00	360.00	2,883.21	4,788.60	-55.30	616,879.50	472,728.30	32° 41' 45.1278 N	104° 25' 19.1427 W

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,220.76	2,920.43	Target Center Line		-0.50	359.34

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	Comment
2,399.57	2,399.57	+N-S (usft) 0.00 +E-W (usft) 0.00	KOP Start Build 11.00
3,222.29	2,920.42	+N-S (usft) 525.38 +E-W (usft) -6.07	LP Start 4263.67 hold at 3222.29 MD
7,485.96	2,883.21	+N-S (usft) 4,788.60 +E-W (usft) -55.30	TD at 7485.96



Project: Eddy County, New Mexico (NAD 27)
Site: Arabian 6 Fee
Well: #6H
Wellbore: Wellbore #1
Design: Plan #1 01-30-13



Azimuth to Grid North:
True North: 0.03°
Magnetic North: 7.86°
Magnetic Field:
Strength: 48635.1 nT
Dip Angle: 60.42°
Date: 01/30/2013
Model: IGRF2010_14

WELL DETAILS

+N/S	-E/W	Northing	Ground Level	Easting	3372.00	Latitude	Longitude
0.00	0.00	612090.90	472783.60	32° 40' 57.7420 N	104° 25' 18.4498 W		

SECTION DETAILS

SW	MD	Inr	Azi	TVD	+N/S	-E/W	Deg	TFace	VSecl	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		KOP Start Build 11.00
2	3398.57	0.00	0.00	3398.57	0.00	0.00	0.00	0.00	0.00		LP Start 4263.67 hold at 3222.29 MD
3	3222.29	90.50	359.34	2920.42	525.38	-5.07	11.00	359.34	525.42		ID at 7435.36
4	7435.36	90.50	359.34	2893.21	4788.50	-55.30	0.00	4788.92		PBHL-Arabian 6 #6H	

DESIGN TARGET DETAILS

Name	TVD	+N/S	-E/W	Northing	Easting	Latitude	Longitude	Shape
PP-Arabian 6 #6H	2793.42	180.00	-2.08	612270.90	472781.52	32° 40' 59.5322 N	104° 25' 18.4749 W	Point
PBHL-Arabian 6 #6H	2893.21	-4788.50	-55.30	616879.50	-472728.30	-32° 41' 45.1278 N	104° 25' 19.1427 W	Point

- plan hits target center
- plan hits target center

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

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: Arabian 6 Fee

Site Centre Northing: 612094.20
Easting: 472131.70
Positional Uncertainty: 0.00
Convergence: -0.06
Local North: Grid

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' 57.7420 N
Longitude: 104° 25' 18.4498 W
Grid East: 472783.60
Grid North: 612090.90
Scale Factor: 1.000

Geomagnetic Model: IGRF2010_14
Sample Date: 30-Jan-13
Magnetic Declination: 7.81°
Dip Angle from Horizontal: 60.42°
Magnetic Field Strength: 48635

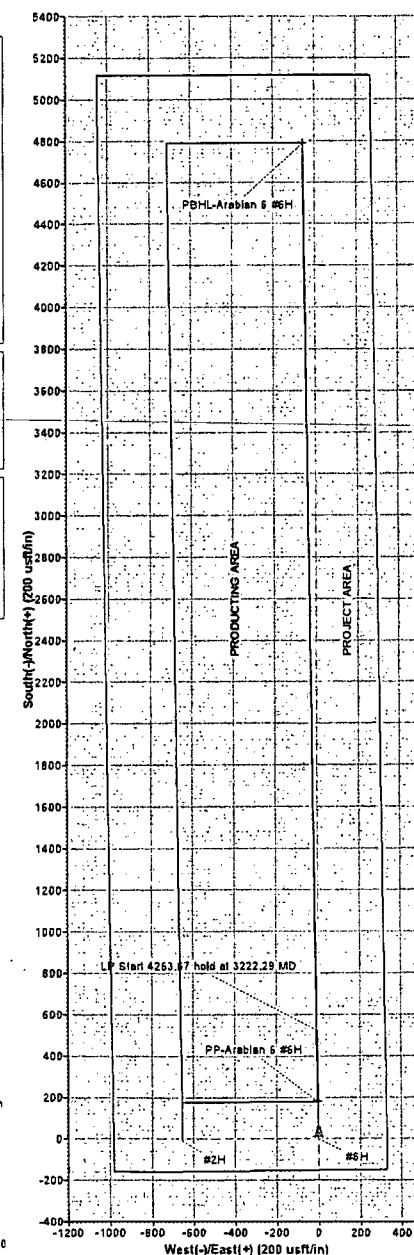
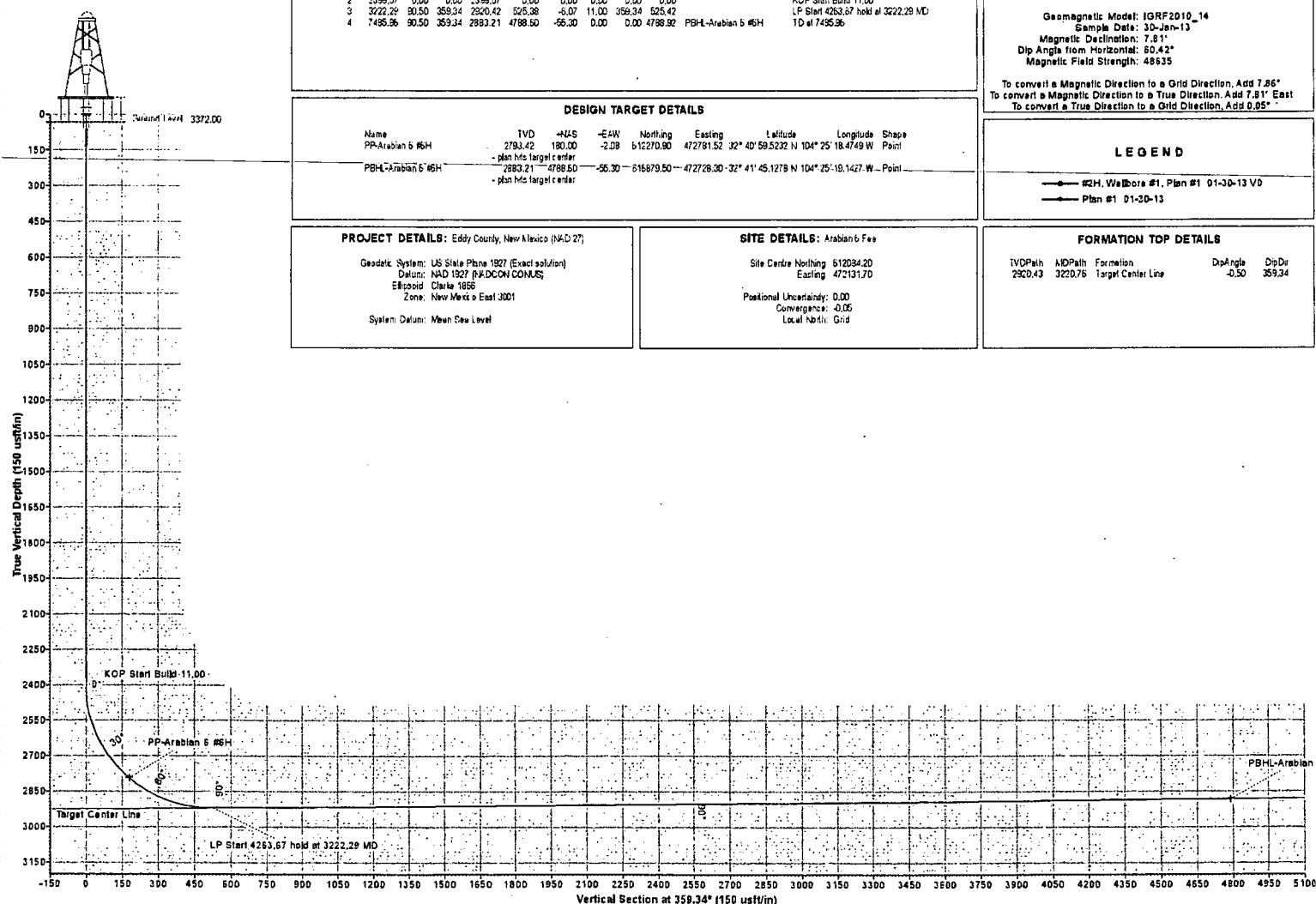
To convert a Magnetic Direction to a Grid Direction, Add 7.86°
To convert a Magnetic Direction to a True Direction, Add 7.81° East
To convert a True Direction to a Grid Direction, Add 0.05°

LEGEND

— #2H, Wellbore #1, Plan #1 01-30-13 V0
— Plan #1 01-30-13

FORMATION TOP DETAILS

IVDPwh	MDPath	Formation	DipAngle	DipDr
2920.43	3220.76	Target Center Line	-0.50	359.34



RECEIVED

FEB 08 2013

OIL CONSERVATION DIVISION

NMUCD ARTESIA

1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.

30-015-39625

5. Indicate Type of Lease

STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

Arabian 6 Fee

8. Well Number 6H

9. OGRID Number

229137

10. Pool name or Wildcat

Penasco Draw;SA-Yeso (Assoc) 50270

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

COG Operating LLC

3. Address of Operator

One Concho Center - 600 W Illinois Ave Midland, TX 79701

4. Well Location

Unit Letter N : 150 feet from the SOUTH line and 2260 feet from the WEST lineSection 6 Township 19S Range 26E NMPM County EDDY

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

3372'

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
 DOWNHOLE COMMINGLE ☐

OTHER: Change casing program

☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
 COMMENCE DRILLING OPNS. ☐ P AND A ☐
 CASING/CEMENT JOB ☐

OTHER:

☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

COG proposes to drill an 11" hole to 1200' w/fresh water, run 8-5/8" 32# J-55 and cement to surface. Drill a 7-7/8" hole to 2400' MD and kick off and drill curve to 2920' TVD 3222' MD. Drill a 7-7/8" lateral to new BHL @ 2883' TVD 7486' MD. Run a 5 1/2" 17# L-80 casing to TD cement to surface with 800 sacks.

A revised directional plan is attached.

Spud Date:

Rig Release Date:

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

SIGNATURE

TITLE

Permitting Tech

DATE

02/06/2013

Type or print name Kelly J. Holly

E-mail address:

kholly@concho.comPHONE: 432-685-4384

For State Use Only

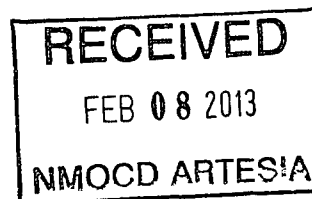
APPROVED BY:

TITLE

DATE

2/11/2013

Conditions of Approval (if any):



COG Operating LLC

**Eddy County, New Mexico (NAD 27)
Arabian 6 Fee #6H**

Wellbore #1

Plan: Plan #1 01-30-13

Surface: 150' FSL, 2267' FWL, Sec 6, T19S, R26E, Unit N

PP: 330' FSL, 2265' FWL, Sec 6, T19S, R26E, Unit N

BHL: 330' FNL, 2177' FWL, Sec 6, T19S, R26E, Lot 3

Standard Planning Report

30 January, 2013



**PHOENIX
TECHNOLOGY SERVICES**



Phoenix Technology Services
Planning Report



Database:	GCR DB	Local Co-ordinate Reference:	Well #6H
Company:	COG Operating LLC	TVD Reference:	GL @ 3372.00usft
Project:	Eddy County, New Mexico (NAD 27)	MD Reference:	GL @ 3372.00usft
Site:	Arabian 6 Fee	North Reference:	Grid
Well:	#6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 01-30-13		

Project:	Eddy County, New Mexico (NAD 27)		
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:	Arabian 6 Fee		
Site Position:		Northing:	612,084.20 usft
From:	Map	Easting:	472,131.70 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 40' 57.6703 N
		Longitude:	104° 25' 26.0764 W
		Grid Convergence:	-0.05 °

Well:	#6H		
Well Position	+N-S	6.70 usft	Northing:
	+E-W	651.90 usft	Easting:
Position Uncertainty	0.00 usft		Wellhead Elevation:
			Ground Level:
			3,372.00 usft

Wellbore:	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010_14	01/30/13	7.81
			Dip Angle
			(°)
			Field Strength
			(nT)
			60.42
			48,635

Design:	Plan #1 01-30-13		
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
			(°)
			359.34

Plan Sections										
Measured			Vertical			Dogleg	Build	Turn		
Depth	Inclination	Azimuth	Depth	+N-S	+E-W	Rate	Rate	Rate	TFO	Target
(usft)	(°)	(°)	(usft)	(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	
2,399.57	0.00	0.00	2,399.57	0.00	0.00	0.00	0.00	0.00	0.00	
3,222.29	90.50	359.34	2,920.42	525.38	-6.07	11.00	11.00	0.00	359.34	
7,485.96	90.50	359.34	2,883.21	4,788.60	-55.30	0.00	0.00	0.00	0.00	PBHL-Arabian 6 #6H



Phoenix Technology Services

Planning Report



Database:	GCR DB	Local Co-ordinate Reference:	Well #6H
Company:	COG Operating LLC	TVD Reference:	GL @ 3372.00usft
Project:	Eddy County New Mexico (NAD 27)	MD Reference:	GL @ 3372.00usft
Site:	Arabian 6 Fee	North Reference:	Grid
Well:	#6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1_01-30-13		

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
2,399.57	0.00	0.00	2,399.57	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 11:00									
2,400.00	0.05	359.34	2,400.00	0.00	0.00	0.00	11.00	11.00	0.00
2,500.00	11.05	359.34	2,499.38	9.65	-0.11	9.65	11.00	11.00	0.00
2,600.00	22.05	359.34	2,595.09	38.09	-0.44	38.09	11.00	11.00	0.00
2,700.00	33.05	359.34	2,683.62	84.26	-0.97	84.27	11.00	11.00	0.00
2,800.00	44.05	359.34	2,761.71	146.48	-1.69	146.49	11.00	11.00	0.00
2,846.16	49.13	359.34	2,793.42	180.00	-2.08	180.01	11.00	11.00	0.00
PP Arabian 6 #6H									
2,900.00	55.05	359.34	2,826.49	222.45	-2.57	222.47	11.00	11.00	0.00
3,000.00	66.05	359.34	2,875.58	309.39	-3.57	309.41	11.00	11.00	0.00
3,100.00	77.05	359.34	2,907.18	404.10	-4.67	404.12	11.00	11.00	0.00
3,200.00	88.05	359.34	2,920.13	503.09	-5.81	503.13	11.00	11.00	0.00
3,220.76	90.33	359.34	2,920.43	523.84	-6.05	523.88	11.00	11.00	0.00
Target Center Line									
3,222.29	90.50	359.34	2,920.42	525.38	-6.07	525.42	11.00	11.00	0.00
LP Start 4263.67 hold at 3222.29 MD									
3,300.00	90.50	359.34	2,919.74	603.08	-6.96	603.12	0.00	0.00	0.00
3,400.00	90.50	359.34	2,918.87	703.07	-8.12	703.12	0.00	0.00	0.00
3,500.00	90.50	359.34	2,917.99	803.06	-9.27	803.11	0.00	0.00	0.00
3,600.00	90.50	359.34	2,917.12	903.05	-10.43	903.11	0.00	0.00	0.00
3,700.00	90.50	359.34	2,916.25	1,003.04	-11.58	1,003.10	0.00	0.00	0.00
3,800.00	90.50	359.34	2,915.38	1,103.03	-12.74	1,103.10	0.00	0.00	0.00
3,900.00	90.50	359.34	2,914.50	1,203.02	-13.89	1,203.10	0.00	0.00	0.00
4,000.00	90.50	359.34	2,913.63	1,303.01	-15.05	1,303.09	0.00	0.00	0.00
4,100.00	90.50	359.34	2,912.76	1,403.00	-16.20	1,403.09	0.00	0.00	0.00
4,200.00	90.50	359.34	2,911.89	1,502.99	-17.36	1,503.09	0.00	0.00	0.00
4,300.00	90.50	359.34	2,911.01	1,602.97	-18.51	1,603.08	0.00	0.00	0.00
4,400.00	90.50	359.34	2,910.14	1,702.96	-19.67	1,703.08	0.00	0.00	0.00
4,500.00	90.50	359.34	2,909.27	1,802.95	-20.82	1,803.07	0.00	0.00	0.00
4,600.00	90.50	359.34	2,908.39	1,902.94	-21.98	1,903.07	0.00	0.00	0.00
4,700.00	90.50	359.34	2,907.52	2,002.93	-23.13	2,003.07	0.00	0.00	0.00
4,800.00	90.50	359.34	2,906.65	2,102.92	-24.29	2,103.06	0.00	0.00	0.00
4,900.00	90.50	359.34	2,905.78	2,202.91	-25.44	2,203.06	0.00	0.00	0.00
5,000.00	90.50	359.34	2,904.90	2,302.90	-26.59	2,303.06	0.00	0.00	0.00
5,100.00	90.50	359.34	2,904.03	2,402.89	-27.75	2,403.05	0.00	0.00	0.00
5,200.00	90.50	359.34	2,903.16	2,502.88	-28.90	2,503.05	0.00	0.00	0.00
5,300.00	90.50	359.34	2,902.29	2,602.87	-30.06	2,603.04	0.00	0.00	0.00
5,400.00	90.50	359.34	2,901.41	2,702.86	-31.21	2,703.04	0.00	0.00	0.00
5,500.00	90.50	359.34	2,900.54	2,802.85	-32.37	2,803.04	0.00	0.00	0.00
5,600.00	90.50	359.34	2,899.67	2,902.84	-33.52	2,903.03	0.00	0.00	0.00
5,700.00	90.50	359.34	2,898.80	3,002.83	-34.68	3,003.03	0.00	0.00	0.00
5,800.00	90.50	359.34	2,897.92	3,102.82	-35.83	3,103.02	0.00	0.00	0.00
5,900.00	90.50	359.34	2,897.05	3,202.81	-36.99	3,203.02	0.00	0.00	0.00
6,000.00	90.50	359.34	2,896.18	3,302.80	-38.14	3,303.02	0.00	0.00	0.00
6,100.00	90.50	359.34	2,895.30	3,402.79	-39.30	3,403.01	0.00	0.00	0.00
6,200.00	90.50	359.34	2,894.43	3,502.78	-40.45	3,503.01	0.00	0.00	0.00
6,300.00	90.50	359.34	2,893.56	3,602.77	-41.61	3,603.01	0.00	0.00	0.00
6,400.00	90.50	359.34	2,892.69	3,702.75	-42.76	3,703.00	0.00	0.00	0.00
6,500.00	90.50	359.34	2,891.81	3,802.74	-43.92	3,803.00	0.00	0.00	0.00
6,600.00	90.50	359.34	2,890.94	3,902.73	-45.07	3,902.99	0.00	0.00	0.00
6,700.00	90.50	359.34	2,890.07	4,002.72	-46.22	4,002.99	0.00	0.00	0.00
6,800.00	90.50	359.34	2,889.20	4,102.71	-47.38	4,102.99	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 @ 3372.00usft
Project:	Eddy County, New Mexico (NAD 27)	MD Reference:	GL @ 3372.00usft
Site:	Arabian 6 Fee	North Reference:	Grid
Well:	#6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 01-30-13		

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)
6,900.00	90.50	359.34	2,888.32	4,202.70	-48.53	4,202.98	0.00	0.00	0.00
7,000.00	90.50	359.34	2,887.45	4,302.69	-49.69	4,302.98	0.00	0.00	0.00
7,100.00	90.50	359.34	2,886.58	4,402.68	-50.84	4,402.98	0.00	0.00	0.00
7,200.00	90.50	359.34	2,885.71	4,502.67	-52.00	4,502.97	0.00	0.00	0.00
7,300.00	90.50	359.34	2,884.83	4,602.66	-53.15	4,602.97	0.00	0.00	0.00
7,400.00	90.50	359.34	2,883.96	4,702.65	-54.31	4,702.96	0.00	0.00	0.00
7,485.96	90.50	359.34	2,883.21	4,788.60	-55.30	4,788.92	0.00	0.00	0.00
TD at 7485.96 - PBHL-Arabian 6 #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-Arabian 6 #6H - plan hits target center - Point	0.00	360.00	2,793.42	180.00	-2.08	612,270.90	472,781.52	32° 40' 59.5232 N	104° 25' 18.4749 W
PBHL-Arabian 6 #6H - plan hits target center - Point	0.00	360.00	2,883.21	4,788.60	-55.30	616,879.50	472,728.30	32° 41' 45.1278 N	104° 25' 19.1427 W

Formations									
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)				
3,220.76	2,920.43	Target Center Line		-0.50	359.34				

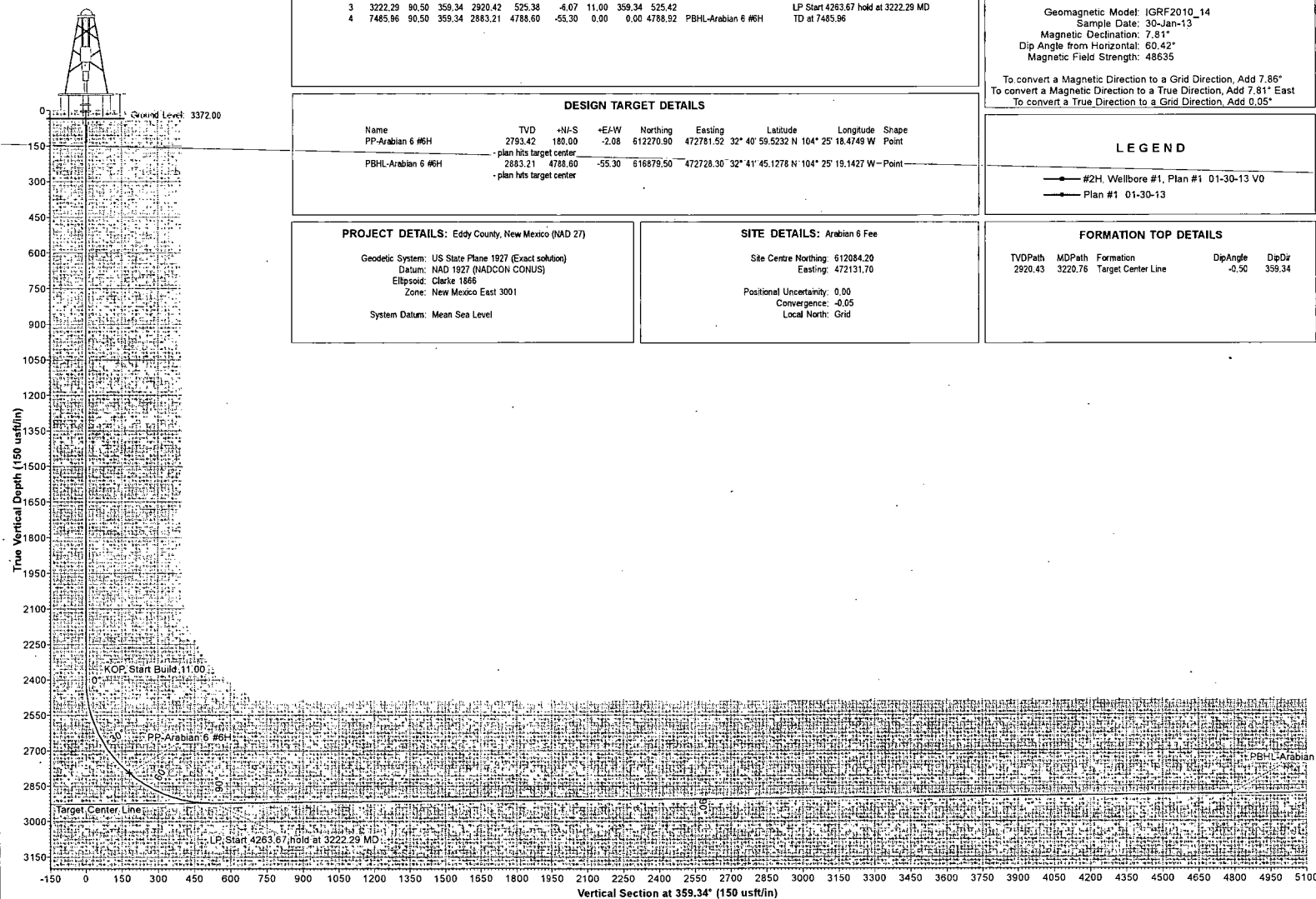
Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
2,399.57	2,399.57	0.00	0.00	KOP Start Build 11.00	
3,222.29	2,920.42	525.38	-6.07	LP Start 4263.67 hold at 3222.29 MD	
7,485.96	2,883.21	4,788.60	-55.30	TD at 7485.96	



Project: Eddy County, New Mexico (NAD 27)
Site: Arabian 6 Fee
Well: #6H
Wellbore: Wellbore #1
Design: Plan #1 01-30-13



Azimuths to Grid North
True North: 0.05°
Magnetic North: 7.86°
Magnetic Field
Strength: 48635.1nT
Dip Angle: 60.42°
Date: 01/30/2013
Model: IGRF2010_14



WELL DETAILS

+N-S	+E-W	North	Ground Level	Easting	Latitude	Longitude
0.00	0.00	612090.90	3372.00	472783.60	32° 40' 57.7420 N	104° 25' 18.4488 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		
2	2399.57	0.00	0.00	2399.57	0.00	0.00	0.00	0.00	0.00		KOP Start Build 11.00
3	3222.29	90.50	359.34	2920.42	525.38	-6.07	11.00	359.34	525.42		LP Start 4263.67 hold at 3222.29 MD
4	7485.96	90.50	359.34	2883.21	4788.60	-55.30	0.00	4788.92		PBHL-Arabian 6 #6H	TD at 7485.96

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	North	Easting	Latitude	Longitude	Shape
PP-Arabian 6 #6H	2793.42	180.00	-2.08	612270.90	472781.52	32° 40' 59.5232 N	104° 25' 18.4749 W	Point
PBHL-Arabian 6 #6H	2883.21	4788.60	-55.30	616879.50	472728.30	32° 41' 45.1278 N	104° 25' 19.1427 W	Point

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

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: Arabian 6 Fee

Site Centre Northing: 612084.20
Easting: 472131.70
Positional Uncertainty: 0.00
Convergence: -0.05
Local North: Grid

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' 57.7420 N
Longitude: 104° 25' 18.4488 W

Grid East: 472783.60
Grid North: 612090.90
Scale Factor: 1.000

Geomagnetic Model: IGRF2010_14
Sample Date: 30-Jan-13
Magnetic Declination: 7.81°
Dip Angle from Horizontal: 60.42°
Magnetic Field Strength: 48635

To convert a Magnetic Direction to a Grid Direction, Add 7.86°
To convert a Magnetic Direction to a True Direction, Add 7.81° East
To convert a True Direction to a Grid Direction, Add 0.05°

LEGEND

—●— #2H Wellbore #1, Plan #1 01-30-13 V0
—●— Plan #1 01-30-13

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
2920.43	3220.76	Target Center Line	-0.50	359.34

