

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

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (505) 748-1283 Fax: (505) 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

RECEIVED

SEP 17 2013

NM OCD ARTESIA

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- 41665	Pool Code 50270	Pool Name Penasco Draw; SA-Yeso (Assoc)
Property Code < 38919 >	Property Name PAINT 32 FEE	Well Number 2H
OGRID No. 221937 229137	Operator Name COG OPERATING, LLC	Elevation 3400'

Surface Location

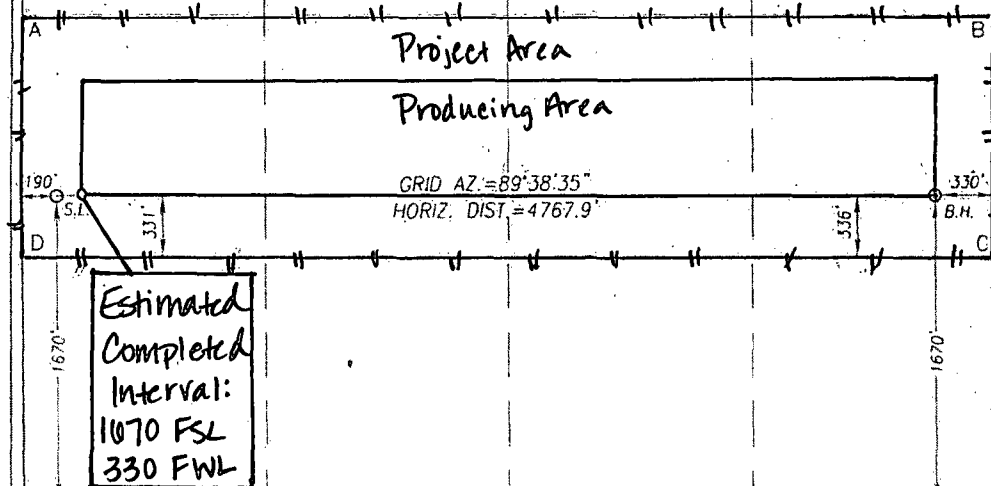
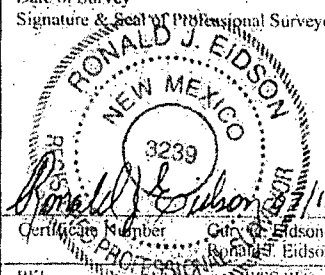
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	32	18-S	26-E		1670	SOUTH	190	WST	EDDY

Bottom Hole Location If Different From Surface

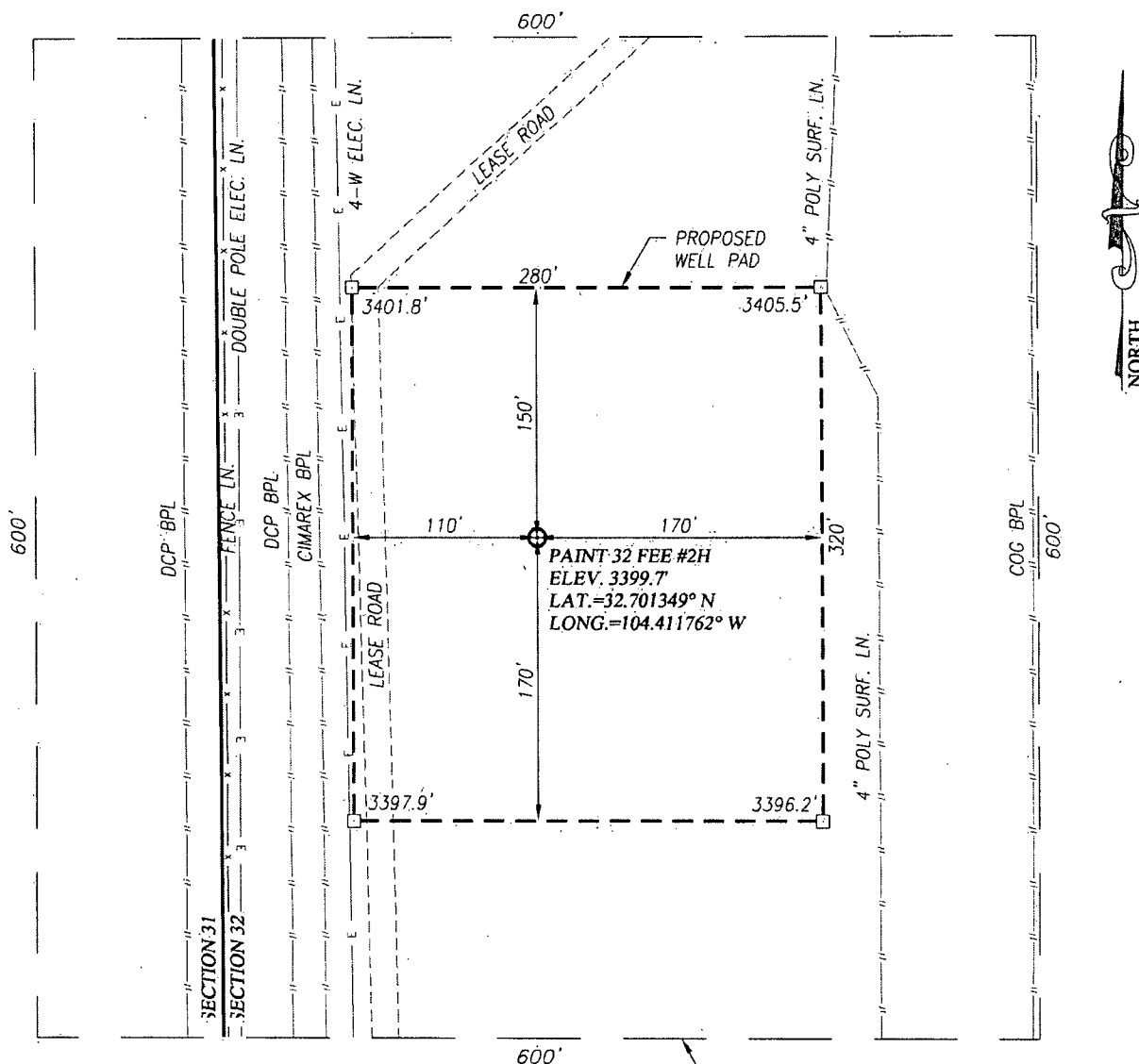
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	32	18-S	26-E		1670	SOUTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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

GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=618870.8 N X=475874.3 E LAT.=32.701349° N LONG.=104.411762° W BOTTOM HOLE LOCATION Y=618900.4 N X=480640.9 E	CORNER COORDINATES TABLE A = Y=619876.5 N, X=475978.4 E B = Y=619898.9 N, X=480969.1 E C = Y=618565.9 N, X=480971.3 E D = Y=618538.3 N, X=475686.4 E	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.  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. JULY 15, 2013 Date of Survey Signature & Seal of Professional Surveyor.  3/18/2013 Certificate Number 3239 Ronald J. Eidson 12641 Ronald J. Eidson 3239 BKL JWSC W.O. 1311 0794

SECTION 36, TOWNSHIP 18 SOUTH, RANGE 25 EAST, N.M.P.M.
EDDY COUNTY **NEW MEXICO**

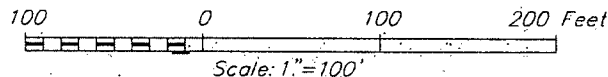


NOTE:
 SEE "LOCATION VERIFICATION MAP"
 FOR PROPOSED ROAD LOCATION.

ARCHEOLOGICAL SURVEY BOUNDARY

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF US. HIGHWAY 285 & CO. RD. 38
 (KINCAID) GO WEST APPROX 2.8 MILES ON CO. RD. 38; TURN
 SOUTH AND GO LEFT APPROX. 0.9 MILES; TURN LEFT AND GO
 EAST APPROX. 1.9 MILES; TURN LEFT AND GO NORTH APPROX.
 0.2 MILES. THE LOCATION STAKE IS 100 FEET EAST.



COG OPERATING, LLC

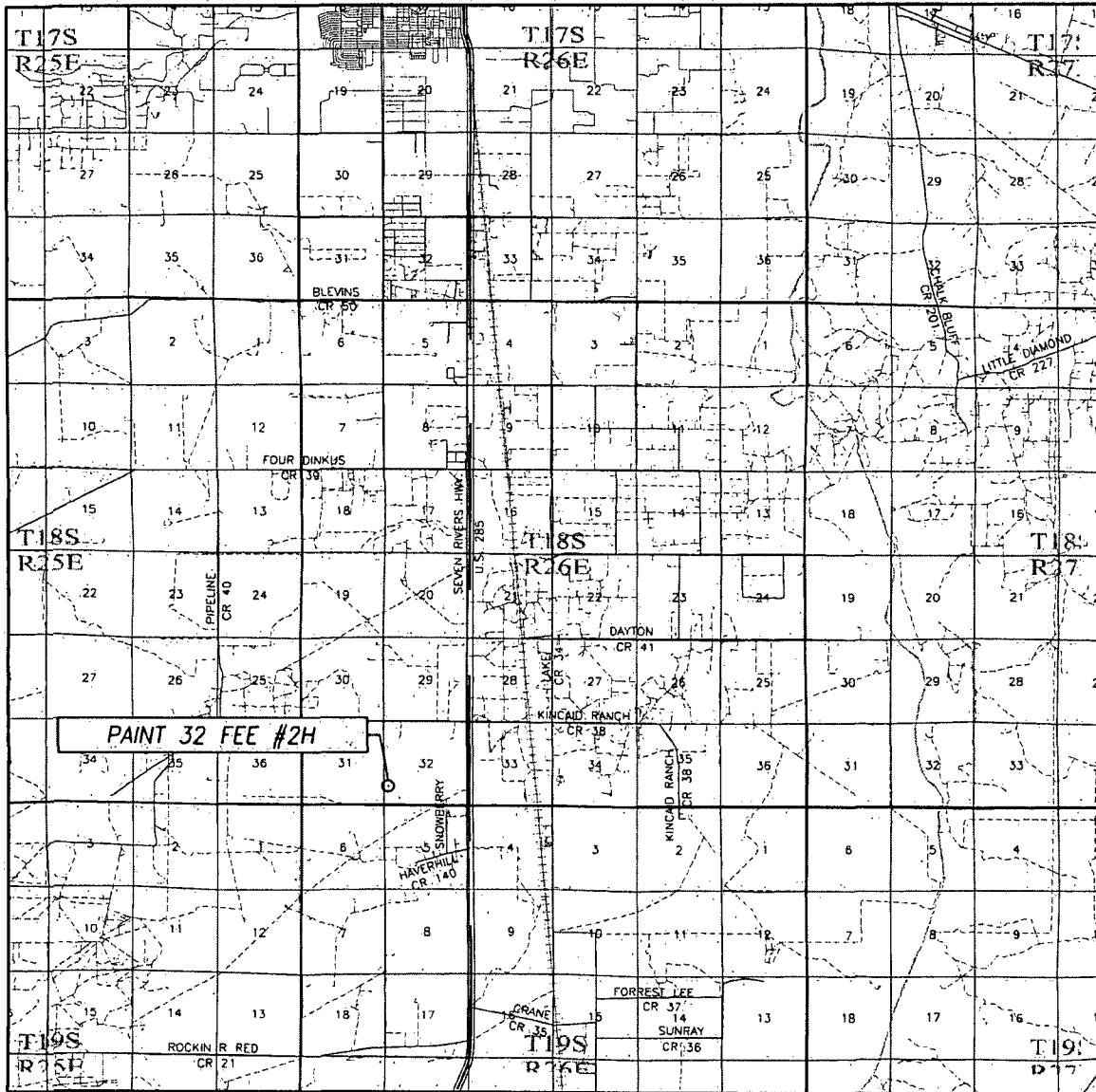
PAINT 32 FEE #2H WELL
LOCATED 1670 FEET FROM THE SOUTH LINE
AND 190 FEET FROM THE WEST LINE OF SECTION 32,
TOWNSHIP 18 SOUTH, RANGE 26 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

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: 7/15/2013	CAD Date: 7/17/13	Drawn By: BKL
W.O. No.: 13110794	Rev:	Rel. W.O.:

Sheet 1 of 1

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 32 TWP. 18-S RGE. 26-E

SURVEY N.M.P.M.

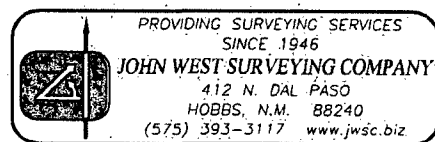
COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 1670' FSL & 190' FWL

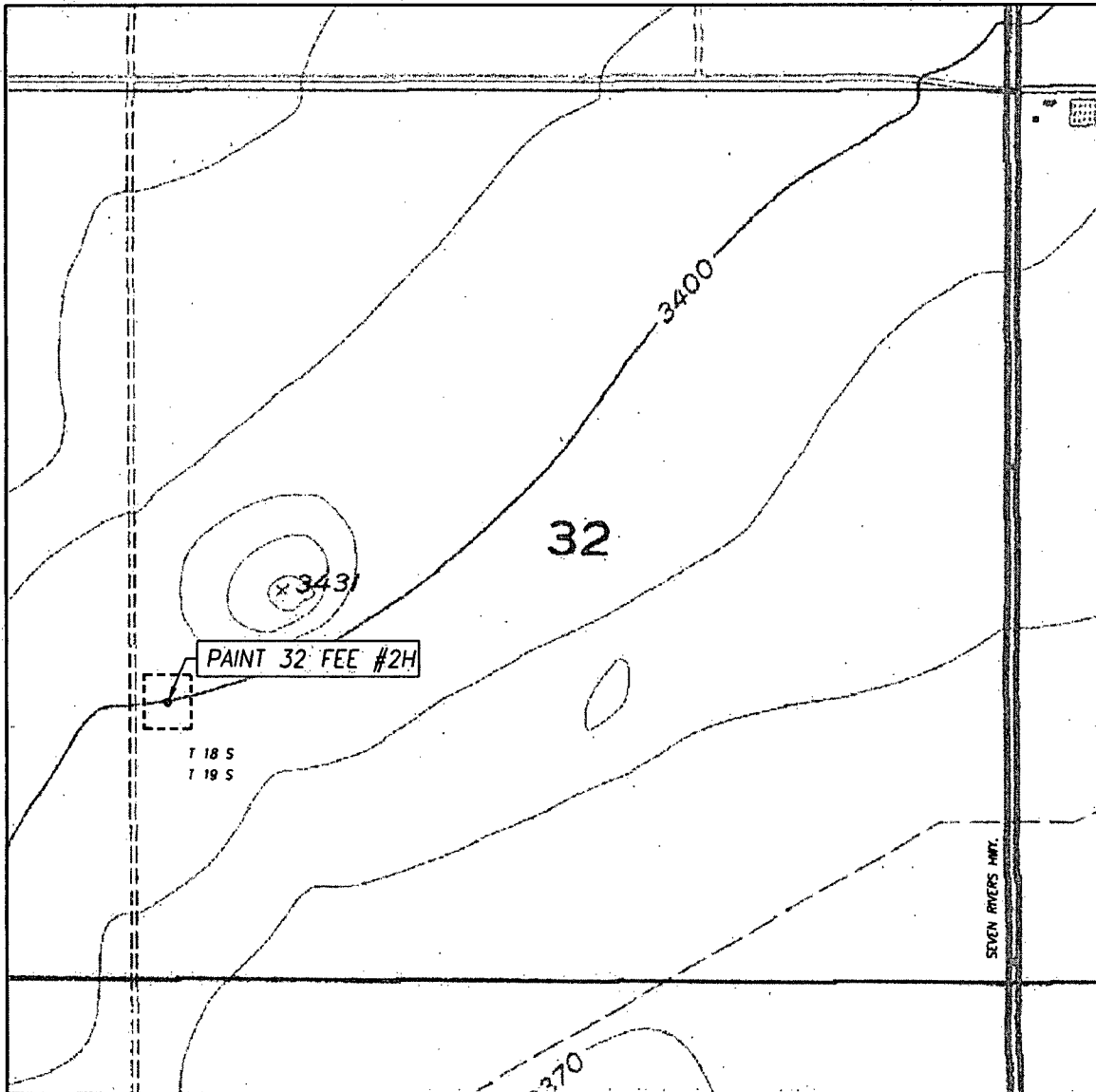
ELEVATION 3400'

OPERATOR COG OPERATING, LLC

LEASE PAINT 32 FEE



LOCATION VERIFICATION MAP



SCALE: 1" = 1000'

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

SEC. 32 TWP. 18-S RGE. 26-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 1670' FSL & 190' FWL

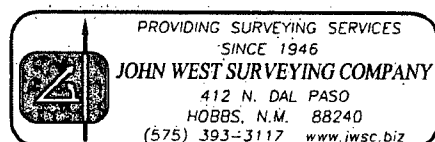
ELEVATION 3400'

OPERATOR COG OPERATING, LLC

LEASE PAINT 32 FEE

U.S.G.S. TOPOGRAPHIC MAP

DAYTON, N.M.





COG Operating LLC

Eddy County, New Mexico (NAD 27 NME)

Paint 32 Fee

#2H

WB1

Plan: Plan #1 09-04-13

Surface: 1670' FSL, 190' FWL, Sec 32, T18S, R26E, Unit L

PP: 1670' FSL, 330' FWL, Sec 32, T18S, R26E, Unit L

BHL: 1670' FSL, 330' FEL, Sec 32, T18S, R26E, Unit I

Standard Planning Report

04 September, 2013





Phoenix Technology Services
Planning Report



Database:	GCR DB	Local Co-ordinate Reference:	Well #2H
Company:	COG Operating LLC	TVD Reference:	GL @ 3400.00usft
Project:	Eddy County, New Mexico (NAD 27 NME)	MD Reference:	GL @ 3400.00usft
Site:	Paint 32 Fee	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB1		
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:	Paint 32 Fee		
Site Position:		Northing:	618,870.80 usft
From:	Map	Easting:	475,874.30 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Latitude:	32° 42' 4.85746 N
		Longitude:	104° 24' 42.34441 W
		Grid Convergence:	-0.04 °

Well:	#2H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level:
			3,400.00 usft

Wellbore:	WB1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010_14	08/23/13	7.74
			Dip Angle
			(°)
			60.43
			Field Strength
			(nT)
			48,591

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
			(°)
			89.64

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	
3,222.30	90.50	89.64	2,920.42	3.26	525.41	11.00	11.00	0.00	89.64	
7,463.74	90.50	89.64	2,883.41	29.60	4,766.60	0.00	0.00	0.00	0.00	PBHL-Paint 32 Fee #:



Phoenix Technology Services
Planning Report



Database:	GCR DB	Local Co-ordinate Reference:	Well #2H
Company:	COG Operating LLC	TVD Reference:	GL @ 3400.00usft
Project:	Eddy County, New Mexico (NAD 27 NME)	MD Reference:	GL @ 3400.00usft
Site:	Paint 32 Fee	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB1		
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
2,399.57	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	89.64	2,400.00	0.00	0.00	0.00	11.00	11.00	0.00
2,500.00	11.05	89.64	2,499.38	0.06	9.65	9.65	11.00	11.00	0.00
2,600.00	22.05	89.64	2,595.09	0.24	38.09	38.09	11.00	11.00	0.00
2,700.00	33.05	89.64	2,683.62	0.52	84.26	84.26	11.00	11.00	0.00
2,790.61	43.01	89.64	2,754.90	0.87	140.01	140.02	11.00	11.00	0.00
PP Paint 32 Fee #2H									
2,800.00	44.05	89.64	2,761.71	0.91	146.48	146.49	11.00	11.00	0.00
2,900.00	55.05	89.64	2,826.49	1.38	222.46	222.46	11.00	11.00	0.00
3,000.00	66.05	89.64	2,875.59	1.92	309.40	309.40	11.00	11.00	0.00
3,100.00	77.05	89.64	2,907.19	2.51	404.11	404.12	11.00	11.00	0.00
3,200.00	88.05	89.64	2,920.14	3.12	503.11	503.12	11.00	11.00	0.00
3,219.36	90.18	89.64	2,920.44	3.24	522.47	522.48	11.00	11.00	0.00
TL 2925° TVD @ 0° VZ 90.5° Inc									
3,222.30	90.50	89.64	2,920.42	3.26	525.41	525.42	11.00	11.00	0.00
LP Start 4241.44 hold at 3222.30 MD									
3,300.00	90.50	89.64	2,919.75	3.75	603.10	603.11	0.00	0.00	0.00
3,400.00	90.50	89.64	2,918.87	4.37	703.10	703.11	0.00	0.00	0.00
3,500.00	90.50	89.64	2,918.00	4.99	803.09	803.11	0.00	0.00	0.00
3,600.00	90.50	89.64	2,917.13	5.61	903.08	903.10	0.00	0.00	0.00
3,700.00	90.50	89.64	2,916.25	6.23	1,003.08	1,003.10	0.00	0.00	0.00
3,800.00	90.50	89.64	2,915.38	6.85	1,103.07	1,103.09	0.00	0.00	0.00
3,900.00	90.50	89.64	2,914.51	7.47	1,203.07	1,203.09	0.00	0.00	0.00
4,000.00	90.50	89.64	2,913.64	8.09	1,303.06	1,303.09	0.00	0.00	0.00
4,100.00	90.50	89.64	2,912.76	8.71	1,403.06	1,403.08	0.00	0.00	0.00
4,200.00	90.50	89.64	2,911.89	9.33	1,503.05	1,503.08	0.00	0.00	0.00
4,300.00	90.50	89.64	2,911.02	9.95	1,603.04	1,603.08	0.00	0.00	0.00
4,400.00	90.50	89.64	2,910.15	10.58	1,703.04	1,703.07	0.00	0.00	0.00
4,500.00	90.50	89.64	2,909.27	11.20	1,803.03	1,803.07	0.00	0.00	0.00
4,600.00	90.50	89.64	2,908.40	11.82	1,903.03	1,903.06	0.00	0.00	0.00
4,700.00	90.50	89.64	2,907.53	12.44	2,003.02	2,003.06	0.00	0.00	0.00
4,800.00	90.50	89.64	2,906.66	13.06	2,103.02	2,103.06	0.00	0.00	0.00
4,900.00	90.50	89.64	2,905.78	13.68	2,203.01	2,203.05	0.00	0.00	0.00
5,000.00	90.50	89.64	2,904.91	14.30	2,303.00	2,303.05	0.00	0.00	0.00
5,100.00	90.50	89.64	2,904.04	14.92	2,403.00	2,403.05	0.00	0.00	0.00
5,200.00	90.50	89.64	2,903.16	15.54	2,502.99	2,503.04	0.00	0.00	0.00
5,300.00	90.50	89.64	2,902.29	16.16	2,602.99	2,603.04	0.00	0.00	0.00
5,400.00	90.50	89.64	2,901.42	16.79	2,702.98	2,703.03	0.00	0.00	0.00
5,500.00	90.50	89.64	2,900.55	17.41	2,802.98	2,803.03	0.00	0.00	0.00
5,600.00	90.50	89.64	2,899.67	18.03	2,902.97	2,903.03	0.00	0.00	0.00
5,700.00	90.50	89.64	2,898.80	18.65	3,002.96	3,003.02	0.00	0.00	0.00
5,800.00	90.50	89.64	2,897.93	19.27	3,102.96	3,103.02	0.00	0.00	0.00
5,900.00	90.50	89.64	2,897.06	19.89	3,202.95	3,203.01	0.00	0.00	0.00
6,000.00	90.50	89.64	2,896.18	20.51	3,302.95	3,303.01	0.00	0.00	0.00
6,100.00	90.50	89.64	2,895.31	21.13	3,402.94	3,403.01	0.00	0.00	0.00
6,200.00	90.50	89.64	2,894.44	21.75	3,502.94	3,503.00	0.00	0.00	0.00
6,300.00	90.50	89.64	2,893.57	22.37	3,602.93	3,603.00	0.00	0.00	0.00
6,400.00	90.50	89.64	2,892.69	22.99	3,702.92	3,703.00	0.00	0.00	0.00
6,500.00	90.50	89.64	2,891.82	23.62	3,802.92	3,802.99	0.00	0.00	0.00
6,600.00	90.50	89.64	2,890.95	24.24	3,902.91	3,902.99	0.00	0.00	0.00
6,700.00	90.50	89.64	2,890.07	24.86	4,002.91	4,002.98	0.00	0.00	0.00
6,800.00	90.50	89.64	2,889.20	25.48	4,102.90	4,102.98	0.00	0.00	0.00



Phoenix Technology Services
Planning Report



Database:	GCR-DB	Local Co-ordinate/Reference:	Well #2H
Company:	COG Operating LLC	TVD Reference:	GL @ 3400.00usft
Project:	Eddy County, New Mexico (NAD 27-NME)	MD Reference:	GL @ 3400.00usft
Site:	Paint 32 Fee	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB1		
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)
6,900.00	90.50	89.64	2,888.33	26.10	4,202.90	4,202.98	0.00	0.00	0.00
7,000.00	90.50	89.64	2,887.46	26.72	4,302.89	4,302.97	0.00	0.00	0.00
7,100.00	90.50	89.64	2,886.58	27.34	4,402.88	4,402.97	0.00	0.00	0.00
7,200.00	90.50	89.64	2,885.71	27.96	4,502.88	4,502.97	0.00	0.00	0.00
7,300.00	90.50	89.64	2,884.84	28.58	4,602.87	4,602.96	0.00	0.00	0.00
7,400.00	90.50	89.64	2,883.97	29.20	4,702.87	4,702.96	0.00	0.00	0.00
7,463.74	90.50	89.64	2,883.41	29.60	4,766.60	4,766.69	0.00	0.00	0.00
TD at 7463.74 - PBHL-Paint 32 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)	
PP-Paint 32 Fee #2H	- plan hits target center	0.00	360.00	2,754.88	0.87	140.00	618,871.67	476,014.30	32° 42' 4.86709 N 104° 24' 40.70599 W
	- Point								
PBHL-Paint 32 Fee #2H	- plan hits target center	0.00	360.00	2,883.41	29.60	4,766.60	618,900.40	480,640.90	32° 42' 5.18181 N 104° 23' 46.56087 W
	- Point								

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,219.36	2,920.44	TL, 2925' TVD @ 0 VZ, 90.5° Inc		-0.50	89.64	

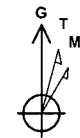
Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,399.57	2,399.57	0.00	0.00	KOP Start Build 11.00
3,222.30	2,920.42	3.26	525.41	LP Start 4241.44 hold at 3222.30 MD
7,463.74	2,883.41	29.60	4,766.60	TD at 7463.74



Project: Eddy County, New Mexico (NAD 27 NME)
Site: Paint 32 Fee
Well: #2H
Wellbore: WB1
Design: Plan #1 09-04-13



PHOENIX
TECHNOLOGY SERVICES



Azimuths to Grid North
True North: 0.04°
Magnetic North: 7.78°
Magnetic Field
Strength: 48591.5nT
Dip Angle: 60.43°
Date: 08/23/2013
Model: IGRF2010_14

WELL DETAILS

+N/S	+E/W	Northing	Ground Level	3400.00	Latitude	Longitude
0.00	0.00	618870.80	475874.30	32° 42' 4.85746 N	104° 24' 42.34441 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	TFace	VSeal	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	2399.57	0.00	0.00	2399.57	0.00	0.00	0.00	0.00	0.00		LP Start 4241.44 hold at 3222.30 MD
3	3222.30	90.50	89.64	2920.42	3.26	525.41	11.00	89.64	525.42		TD at 7463.74
4	7463.74	90.50	89.64	2883.41	29.60	4766.60	0.00	0.00	4766.69	PBHL-Point 32 Fee #2H	

DESIGN TARGET DETAILS

Name	TVD	+N/S	+E/W	Northing	Easting	Latitude	Longitude	Shape
PP-Point 32 Fee #2H	2754.88	0.87	140.00	618871.67	476014.30	32° 42' 4.85709 N	104° 24' 40.70599 W	Point
PBHL-Point 32 Fee #2H	2883.41	29.60	4766.60	618900.40	480640.90	32° 42' 5.18161 N	104° 23' 46.56086 W	Point

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: Point 32 Fee

Site Centre Northing: 618870.80
Easting: 475874.30

Positional Uncertainty: 0.00
Convergence: -0.04
Local North: Grid

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
2920.44	3219.36	TL 2925 TVD @ 0 VZ, 90.5° Inc	-0.50	89.64

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° 42' 4.85746 N
Longitude: 104° 24' 42.34441 W

Grid East: 475874.30
Grid North: 618870.80
Scale Factor: 1.000

Geomagnetic Model: IGRF2010_14
Sample Date: 23-Aug-13

Magnetic Declination: 7.74°
Dip Angle from Horizontal: 60.43°
Magnetic Field Strength: 48591

To convert a Magnetic Direction to a Grid Direction, Add 7.78°
To convert a Magnetic Direction to a True Direction, Add 7.74° East
To convert a True Direction to a Grid Direction, Add 0.04°

LEGEND

Plan #1 09-04-13

