

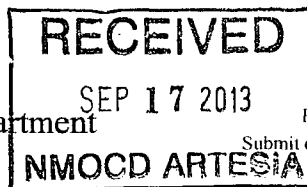
DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

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- 41667	Pool Code 50270	Pool Name Penasco Draw; SA-Yeso (Assoc)
Property Code 38979	Property Name PINTO 36 STATE COM	Well Number 8H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3449'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	36	18-S	25-E		150	SOUTH	330	EAST	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
A	36	18-S	25-E		330	NORTH	330	EAST	EDDY

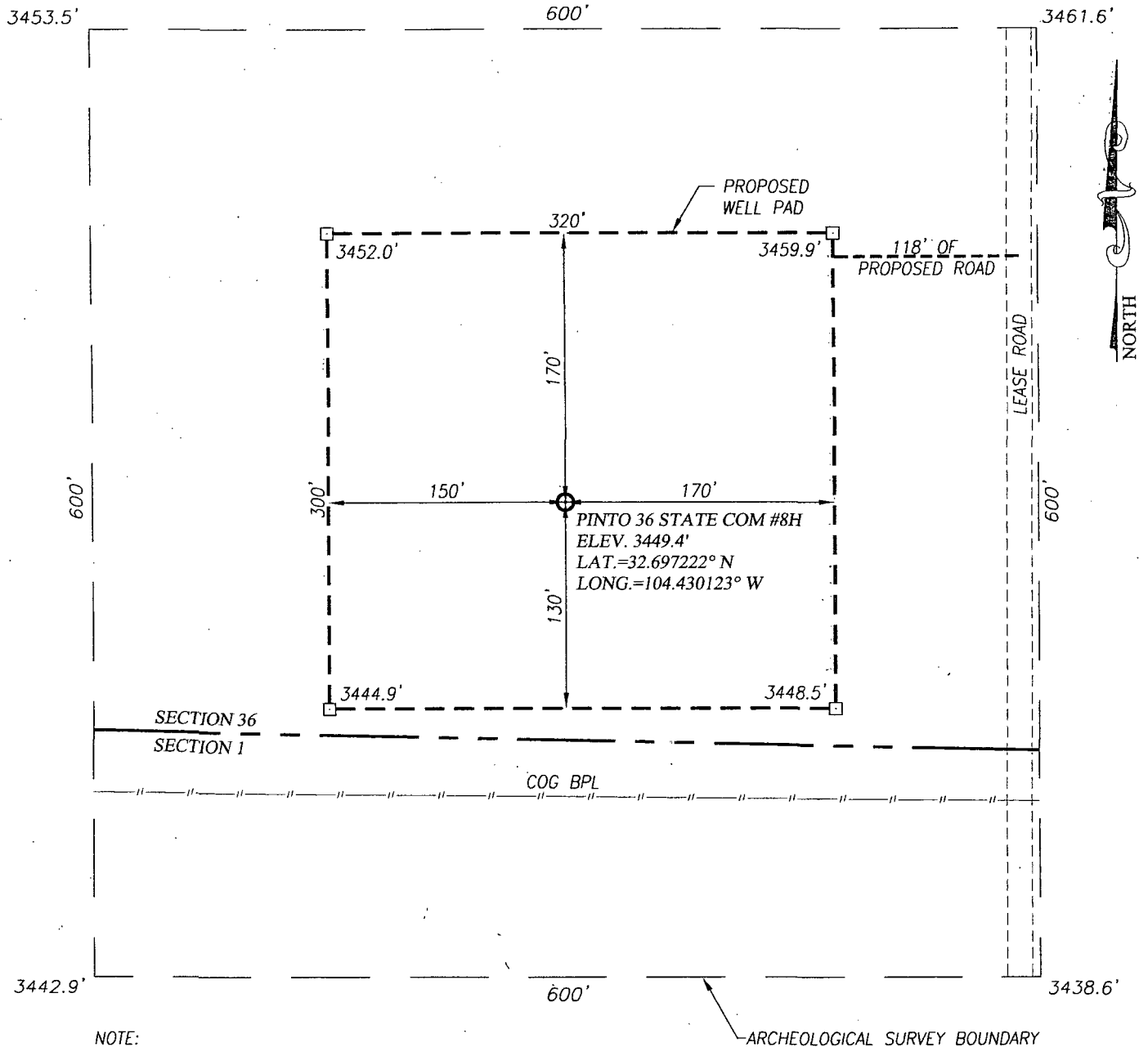
Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=617373.9 N X=470225.0 E LAT.=32.697222° N LONG.=104.430123° W BOTTOM HOLE LOCATION Y=622203.6 N X=470238.2 E CORNER COORDINATES TABLE <table> <tr><td>A</td><td>-</td><td>Y=622542.1 N, X=469248.3 E</td></tr> <tr><td>B</td><td>-</td><td>Y=622530.7 N, X=470569.0 E</td></tr> <tr><td>C</td><td>-</td><td>Y=617216.7 N, X=470554.5 E</td></tr> <tr><td>D</td><td>-</td><td>Y=617246.0 N, X=469210.7 E</td></tr> </table> DETAIL	A	-	Y=622542.1 N, X=469248.3 E	B	-	Y=622530.7 N, X=470569.0 E	C	-	Y=617216.7 N, X=470554.5 E	D	-	Y=617246.0 N, X=469210.7 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. 9-13-13 Signature Date Kelly J. Holly Printed Name 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 Seal of Professional Surveyor: 3239 Signature & Seal of Professional Surveyor Certification Number: Ronald J. Eidson 12641 Ronald J. Eidson 3239 BKL JWSC W.O.: 13.11.0793
A	-	Y=622542.1 N, X=469248.3 E											
B	-	Y=622530.7 N, X=470569.0 E											
C	-	Y=617216.7 N, X=470554.5 E											
D	-	Y=617246.0 N, X=469210.7 E											

Estimated
Completed 330 FSL
Interval: 330 FEL

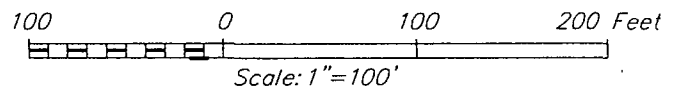
SECTION 36, TOWNSHIP 18 SOUTH, RANGE 25 EAST, N.M.P.M.
EDDY COUNTY **NEW MEXICO**



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

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 LEFT AND GO SOUTH APPROX. 0.9 MILES; TURN LEFT AND GO EAST APPROX. 0.9 MILES; TURN LEFT AND GO NORTH APPROX. 300 FEET TO ROAD SURVEY STAKES. FOLLOW STAKES WEST 118 FEET TO THE LOCATION.



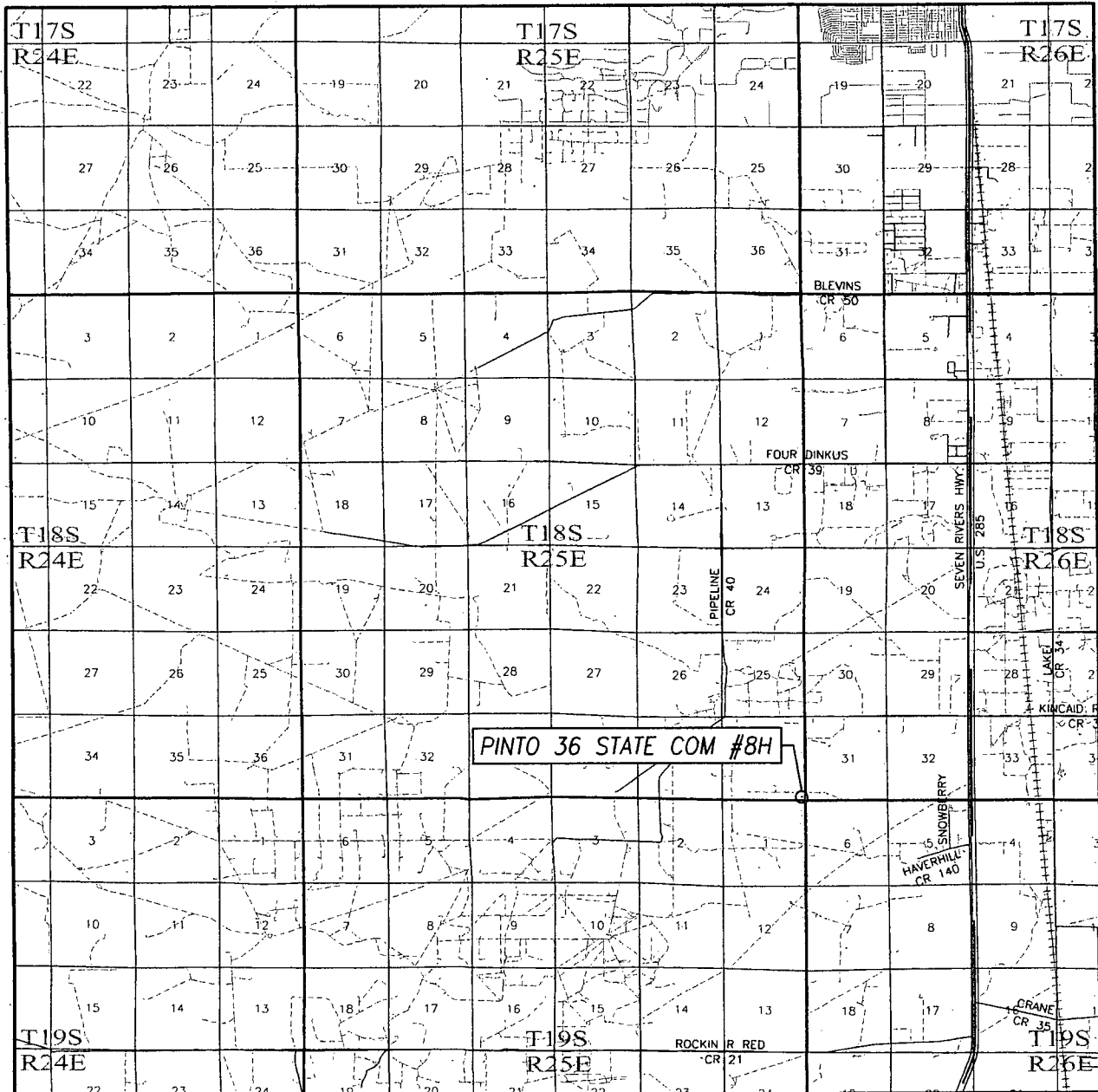
COG OPERATING, LLC

PINTO 36 STATE COM #8H WELL
 LOCATED 150 FEET FROM THE SOUTH LINE
 AND 330 FEET FROM THE EAST LINE OF SECTION 36,
 TOWNSHIP 18 SOUTH, RANGE 25 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

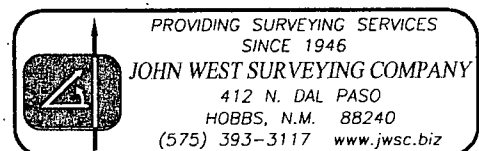
Survey Date: 7/15/2013	CAD Date: 7/17/13	Drawn By: BKL
W.O. No.: 13110793	Rev: .	Rel. W.O.: Sheet 1 of 1

VICINITY MAP

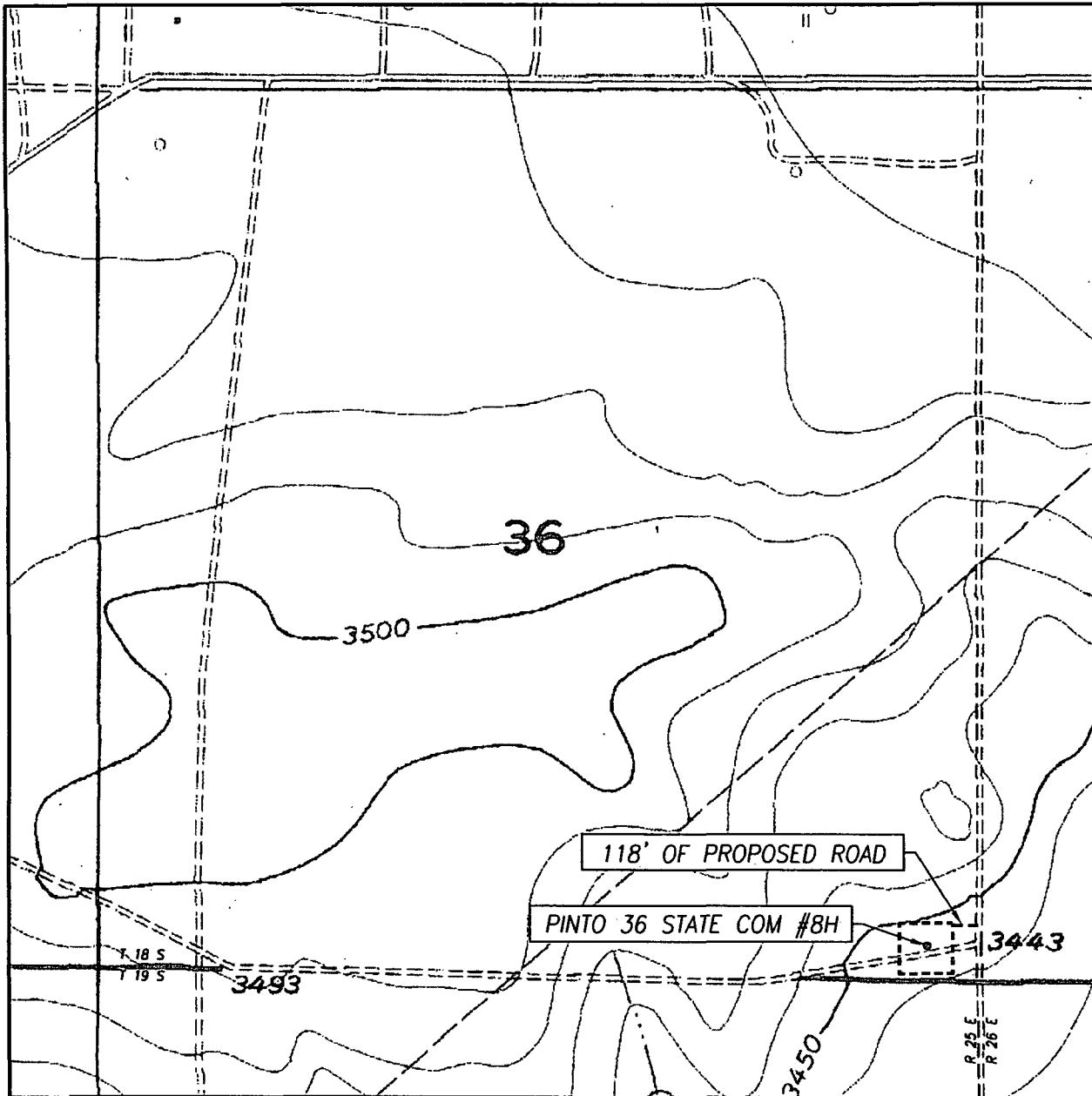


SCALE: 1" = 2 MILES

SEC. 36 TWP. 18-S RGE. 25-E
 SURVEY N.M.P.M.
 COUNTY EDDY STATE NEW MEXICO
 DESCRIPTION 150' FSL & 330' FEL
 ELEVATION 3449'
 OPERATOR COG OPERATING, LLC
 LEASE PINTO 36 STATE COM



LOCATION VERIFICATION MAP



SCALE: 1" = 1000'

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

SEC. 36 TWP. 18-S RGE. 25-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

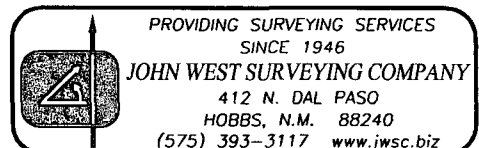
DESCRIPTION 150' FSL & 330' FEL

ELEVATION 3449'

OPERATOR COG OPERATING, LLC

LEASE PINTO 36 STATE COM

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





RECEIVED

SEP 17 2013

NMOCD ARTESIA

COG Operating LLC

Eddy County, New Mexico (NAD 27 NME)

Pinto 36 State

#8H

WB1

Plan: Plan #1 09-05-13

Surface: 150' FSL, 330' FEL, Sec 36, T18S, R25E, Unit P

PP: 330' FSL, 330' FEL, Sec 36, T18S, R25E, Unit P

BHL: 330' FNL, 330' FEL, Sec 36, T18S, R25E, Unit A

Standard Planning Report

05 September, 2013





Phoenix Technology Services
Planning Report



Database:	GCR-DB	Local Co-ordinate Reference:	Well #8H
Company:	COG-Operating, LLC	TVD Reference:	GL @ 3449.00usft
Project:	Eddy County, New Mexico (NAD 27 NME)	MD Reference:	GL @ 3449.00usft
Site:	Pinto 36, State	North Reference:	Grid
Well:	#8H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB1		
Design:	Plan #1 09-05-13		

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:	Pinto 36, State		
Site Position:		Northing:	617,373.90 usft
From:	Map	Easting:	470,225.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 41' 49.99854 N
		Longitude:	104° 25' 48.44242 W
		Grid Convergence:	-0.05 °

Well:	#8H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level:
			3,449.00 usft

Wellbore:	WB1		
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Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010_14	09/05/13	7.74	60.42	48,583

Design:	Plan #1 09-05-13		
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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	0.16

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	
2,243.12	0.00	0.00	2,243.12	0.00	0.00	0.00	0.00	0.00	0.00	
3,072.21	91.20	0.16	2,763.88	531.78	1.45	11.00	11.00	0.00	0.16	
7,371.10	91.20	0.16	2,673.85	4,829.70	13.20	0.00	0.00	0.00	0.00	PBHL-Pinto 36 State ;



Phoenix Technology Services

Planning Report



Database:	GCR-DB	Local Co-ordinate Reference:	Well #8H
Company:	COG Operating LLC	TVD Reference:	GL @ 3449.00usft
Project:	Eddy County, New Mexico (NAD 27 NME)	MD Reference:	GL @ 3449.00usft
Site:	Pinto 36 State	North Reference:	Grid
Well:	#8H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB1		
Design:	Plan #1, 09-05-13		

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
2,243.12	0.00	0.00	2,243.12	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build:11.00									
2,300.00	6.26	0.16	2,299.89	3.10	0.01	3.10	11.00	11.00	0.00
2,400.00	17.26	0.16	2,397.64	23.45	0.06	23.45	11.00	11.00	0.00
2,500.00	28.26	0.16	2,489.71	62.07	0.17	62.07	11.00	11.00	0.00
2,600.00	39.26	0.16	2,572.73	117.55	0.32	117.55	11.00	11.00	0.00
2,689.73	49.13	0.16	2,636.98	180.02	0.49	180.02	11.00	11.00	0.00
PP Pinto 36 State #8H									
2,700.00	50.26	0.16	2,643.63	187.85	0.51	187.85	11.00	11.00	0.00
2,800.00	61.26	0.16	2,699.81	270.39	0.74	270.39	11.00	11.00	0.00
2,900.00	72.26	0.16	2,739.22	362.13	0.99	362.13	11.00	11.00	0.00
3,000.00	83.26	0.16	2,760.39	459.71	1.26	459.71	11.00	11.00	0.00
3,067.86	90.72	0.16	2,763.95	527.43	1.44	527.43	11.00	11.00	0.00
TL 2775' TVD @ 0 VZ, 91.2° Inc									
3,072.21	91.20	0.16	2,763.88	531.78	1.45	531.78	11.00	11.00	0.00
LP Start 4298.88 hold at 3072.21 MD									
3,100.00	91.20	0.16	2,763.30	559.56	1.53	559.56	0.00	0.00	0.00
3,200.00	91.20	0.16	2,761.20	659.54	1.80	659.54	0.00	0.00	0.00
3,300.00	91.20	0.16	2,759.11	759.51	2.08	759.52	0.00	0.00	0.00
3,400.00	91.20	0.16	2,757.01	859.49	2.35	859.49	0.00	0.00	0.00
3,500.00	91.20	0.16	2,754.92	959.47	2.62	959.47	0.00	0.00	0.00
3,600.00	91.20	0.16	2,752.83	1,059.45	2.90	1,059.45	0.00	0.00	0.00
3,700.00	91.20	0.16	2,750.73	1,159.42	3.17	1,159.43	0.00	0.00	0.00
3,800.00	91.20	0.16	2,748.64	1,259.40	3.44	1,259.41	0.00	0.00	0.00
3,900.00	91.20	0.16	2,746.54	1,359.38	3.72	1,359.38	0.00	0.00	0.00
4,000.00	91.20	0.16	2,744.45	1,459.36	3.99	1,459.36	0.00	0.00	0.00
4,100.00	91.20	0.16	2,742.35	1,559.33	4.26	1,559.34	0.00	0.00	0.00
4,200.00	91.20	0.16	2,740.26	1,659.31	4.54	1,659.32	0.00	0.00	0.00
4,300.00	91.20	0.16	2,738.17	1,759.29	4.81	1,759.30	0.00	0.00	0.00
4,400.00	91.20	0.16	2,736.07	1,859.27	5.08	1,859.27	0.00	0.00	0.00
4,500.00	91.20	0.16	2,733.98	1,959.25	5.35	1,959.25	0.00	0.00	0.00
4,600.00	91.20	0.16	2,731.88	2,059.22	5.63	2,059.23	0.00	0.00	0.00
4,700.00	91.20	0.16	2,729.79	2,159.20	5.90	2,159.21	0.00	0.00	0.00
4,800.00	91.20	0.16	2,727.70	2,259.18	6.17	2,259.19	0.00	0.00	0.00
4,900.00	91.20	0.16	2,725.60	2,359.16	6.45	2,359.16	0.00	0.00	0.00
5,000.00	91.20	0.16	2,723.51	2,459.13	6.72	2,459.14	0.00	0.00	0.00
5,100.00	91.20	0.16	2,721.41	2,559.11	6.99	2,559.12	0.00	0.00	0.00
5,200.00	91.20	0.16	2,719.32	2,659.09	7.27	2,659.10	0.00	0.00	0.00
5,300.00	91.20	0.16	2,717.22	2,759.07	7.54	2,759.08	0.00	0.00	0.00
5,400.00	91.20	0.16	2,715.13	2,859.04	7.81	2,859.06	0.00	0.00	0.00
5,500.00	91.20	0.16	2,713.04	2,959.02	8.09	2,959.03	0.00	0.00	0.00
5,600.00	91.20	0.16	2,710.94	3,059.00	8.36	3,059.01	0.00	0.00	0.00
5,700.00	91.20	0.16	2,708.85	3,158.98	8.63	3,158.99	0.00	0.00	0.00
5,800.00	91.20	0.16	2,706.75	3,258.96	8.91	3,258.97	0.00	0.00	0.00
5,900.00	91.20	0.16	2,704.66	3,358.93	9.18	3,358.95	0.00	0.00	0.00
6,000.00	91.20	0.16	2,702.56	3,458.91	9.45	3,458.92	0.00	0.00	0.00
6,100.00	91.20	0.16	2,700.47	3,558.89	9.73	3,558.90	0.00	0.00	0.00
6,200.00	91.20	0.16	2,698.38	3,658.87	10.00	3,658.88	0.00	0.00	0.00
6,300.00	91.20	0.16	2,696.28	3,758.84	10.27	3,758.86	0.00	0.00	0.00
6,400.00	91.20	0.16	2,694.19	3,858.82	10.55	3,858.84	0.00	0.00	0.00
6,500.00	91.20	0.16	2,692.09	3,958.80	10.82	3,958.81	0.00	0.00	0.00
6,600.00	91.20	0.16	2,690.00	4,058.78	11.09	4,058.79	0.00	0.00	0.00
6,700.00	91.20	0.16	2,687.90	4,158.75	11.37	4,158.77	0.00	0.00	0.00



Phoenix Technology Services

Planning Report



Database:	GCR/DB	Local Co-ordinate Reference:	Well #8H
Company:	COG Operating LLC	TVD Reference:	GL @ 3449.00usft
Project:	Eddy County, New Mexico (NAD 27 NME)	MD Reference:	GL @ 3449.00usft
Site:	Pinto 36 State	North Reference:	Grid
Well:	#8H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB1		
Design:	Plan #1 09-05-13		

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)
6,800.00	91.20	0.16	2,685.81	4,258.73	11.64	4,258.75	0.00	0.00	0.00
6,900.00	91.20	0.16	2,683.72	4,358.71	11.91	4,358.73	0.00	0.00	0.00
7,000.00	91.20	0.16	2,681.62	4,458.69	12.19	4,458.70	0.00	0.00	0.00
7,100.00	91.20	0.16	2,679.53	4,558.67	12.46	4,558.68	0.00	0.00	0.00
7,200.00	91.20	0.16	2,677.43	4,658.64	12.73	4,658.66	0.00	0.00	0.00
7,300.00	91.20	0.16	2,675.34	4,758.62	13.01	4,758.64	0.00	0.00	0.00
7,371.10	91.20	0.16	2,673.85	4,829.70	13.20	4,829.72	0.00	0.00	0.00
TD at 7371.10 - PBHL-Pinto 36 State #8H									

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-Pinto 36 State #8H	- plan hits target center	0.00	0.00	2,636.97	180.00	0.49	617,553.90	470,225.49	32° 41' 51.77975 N	104° 25' 48.43859 W
	- Point									
PBHL-Pinto 36 State #8I	- plan hits target center	0.00	360.00	2,673.85	4,829.70	13.20	622,203.60	470,238.20	32° 42' 37.79146 N	104° 25' 48.33952 W
	- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,067.86	2,763.95	TL, 2775' TVD @ 0 VZ, 91.2° Inc		-1.20	0.16

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,243.12	2,243.12	0.00	0.00	KOP Start Build 11.00
3,072.21	2,763.88	531.78	1.45	LP Start 4298.88 hold at 3072.21 MD
7,371.10	2,673.85	4,829.70	13.20	TD at 7371.10



Project: Eddy County, New Mexico (NAD 27 NME)
Site: Pinto 36 State
Well: #8H
Wellbore: WB1
Design: Plan #1 09-05-13



PHOENIX
TECHNOLOGY SERVICES



Azimuths to Grid North
True North: 0.05°
Magnetic North: 7.79°
Magnetic Field
Strength: 48583.0nT
Dip Angle: 60.42°
Date: 09/05/2013
Model: IGRF2010_14

WELL DETAILS									
	+N-S	+E-W	Northing	Ground Level	3449.00	Latitude	Longitude		
	0.00	0.00	617373.90	470225.00		32° 41' 49.99854 N	104° 25' 48.44242 W		

SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSec	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	2243.12	0.00	0.00	2243.12	0.00	0.00	0.00	0.00	0.00		KOP Start Build 11.00
3	3072.21	91.20	0.16	2763.88	531.78	1.45	11.00	0.16	531.78		LP Start 4258.88 hold at 3072.21 MD
4	7371.10	91.20	0.16	2673.85	4829.70	13.20	0.00	0.00	4829.72	PBHL-Pinto 36 State #8H	TD at 7371.10

DESIGN TARGET DETAILS									
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape	
PP-Pinto 36 State #8H	2636.97	180.00	0.49	617553.90	470225.49	32° 41' 51.77975 N	104° 25' 48.43859 W	Point	
PBHL-Pinto 36 State #8H	2673.85	4829.70	13.20	622203.60	470238.20	32° 42' 37.79145 N	104° 25' 48.33952 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: Pinto 36 State
Site Centre Northing: 617373.90
Easting: 470225.00
Positional Uncertainty: 0.00
Convergence: -0.05
Local North: Grid

LEGEND
Plan #1 09-05-13

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 #8H, Grid North
Latitude: 32° 41' 49.99854 N
Longitude: 104° 25' 48.44242 W
Grid East: 470225.00
Grid North: 617373.90
Scale Factor: 1.000
Geomagnetic Model: IGRF2010_14
Sample Date: 05-Sep-13
Magnetic Declination: 7.74°
Dip Angle from Horizontal: 60.42°
Magnetic Field Strength: 48583
To convert a Magnetic Direction to a Grid Direction, Add 7.80°
To convert a Magnetic Direction to a True Direction, Add 7.74° East
To convert a True Direction to a Grid Direction, Add 0.05°

FORMATION TOP DETAILS				
TVDPath	MDPath	Formation	DipAngle	DipDir
2763.85	3087.85	TL 2775 TVD @ 0 VZ, 91.2° Inc	-1.20	0.16

