

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: (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, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

RECEIVED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015- 42884	² Pool Code 96610	³ Pool Name Empire; Glorieta-Yeso, East
⁴ Property Code 313320	⁵ Property Name BOSE IKARD 4 STATE COM.	⁶ Well Number 16H
⁷ OGRID No. 229137	⁸ Operator Name COG OPERATING, LLC	⁹ Elevation 3597'

¹⁰ Surface Location

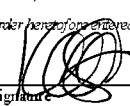
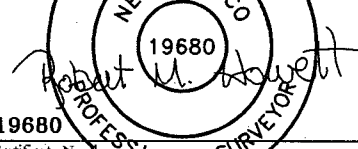
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	4	17-S	29-E		1730	SOUTH	330	WEST	EDDY

¹¹ 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	4	17-S	29-E		1650	SOUTH	330	EAST	EDDY

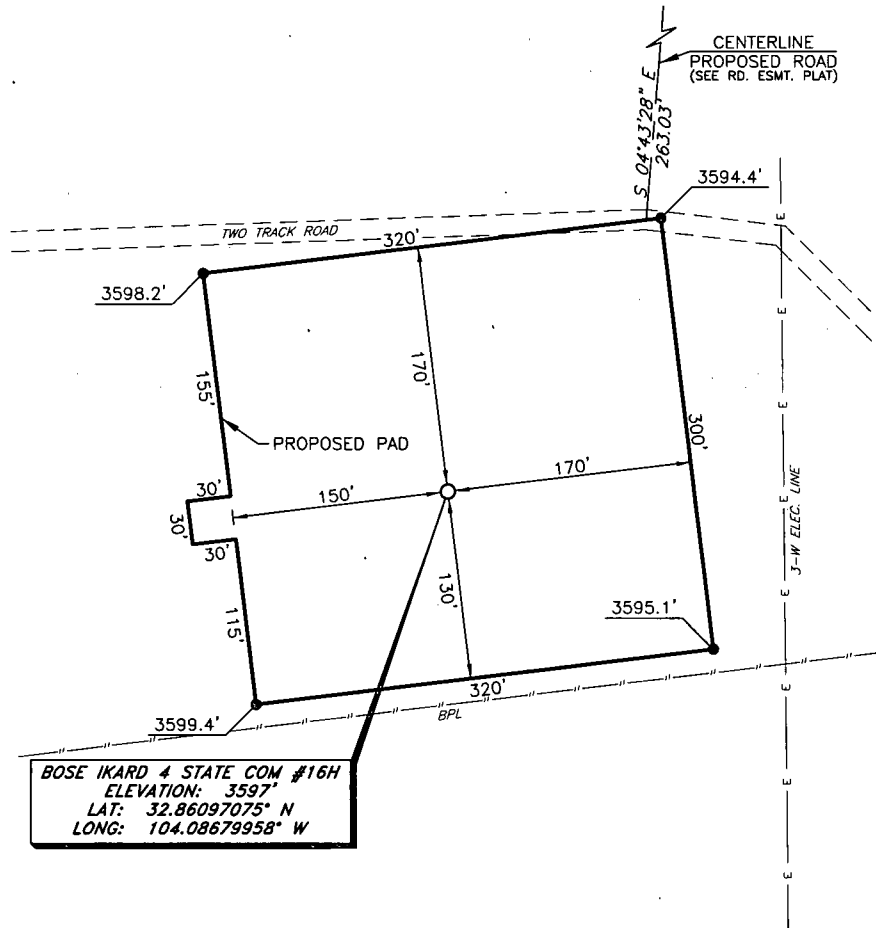
¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁶ LOT 4 GEODETIC DATA NAD 27 GRID - NM EAST SURFACE LOCATION N 677020.8 E 575701.5 LAT: 32.86097075' N LONG: 104.08679958' W BOTTOM LOCATION N 676969.3 E 580297.5	LOT 3	LOT 2 CORNER DATA NAD 27 GRID - NM EAST A: SET REBAR W/RPC LS19680 HOWETT N 675289.3 - E 575371.1 B: FND BRASS CAP 1914 N 677928.7 - E 575371.9 C: FND BRASS CAP 1914 N 680580.6 - E 575358.9 D: FND BRASS CAP 1914 N 680585.3 - E 577994.0 E: FND BRASS CAP 1914 N 680598.6 - E 580627.0 F: FND BRASS CAP 1914 N 677960.0 - E 580626.8 G: FND BRASS CAP 1914 N 675321.9 - E 580628.5 H: FND BRASS CAP 1914 N 675304.8 - E 577999.2	LOT 1	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.  12-30-14 Date Kelly J. Holly Printed Name kholly@concho.com E-mail Address
¹⁸ 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. 2/27/14 Date of Survey  Signature and Seal of Professional Surveyor 19680 Certificate Number				

COG OPERATING, LLC

Bose Ikard 4 State Com #16H
(1730' FSL & 330' FWL)
Section 4, T-17-S, R-29-E,
N. M. P. M., Eddy Co., New Mexico



DIRECTIONS TO LOCATION

From the intersection of CR-211 (Old Loco) and CR-214 (Barnaval Draw):

Go West on CR-214 approx. 0.6 mile to road survey.

Turn left and follow road survey South approx. 0.3 mile South to this location.

SCALE: 1" = 100'

BEARINGS ARE
NAD 27 GRID - NM EAST
DISTANCES ARE GROUND.

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NO.	REVISION	DATE
JOB NO.: LS140096		
DWG. NO.: 140096		

PROSPERITY CONSULTANTS, LLC

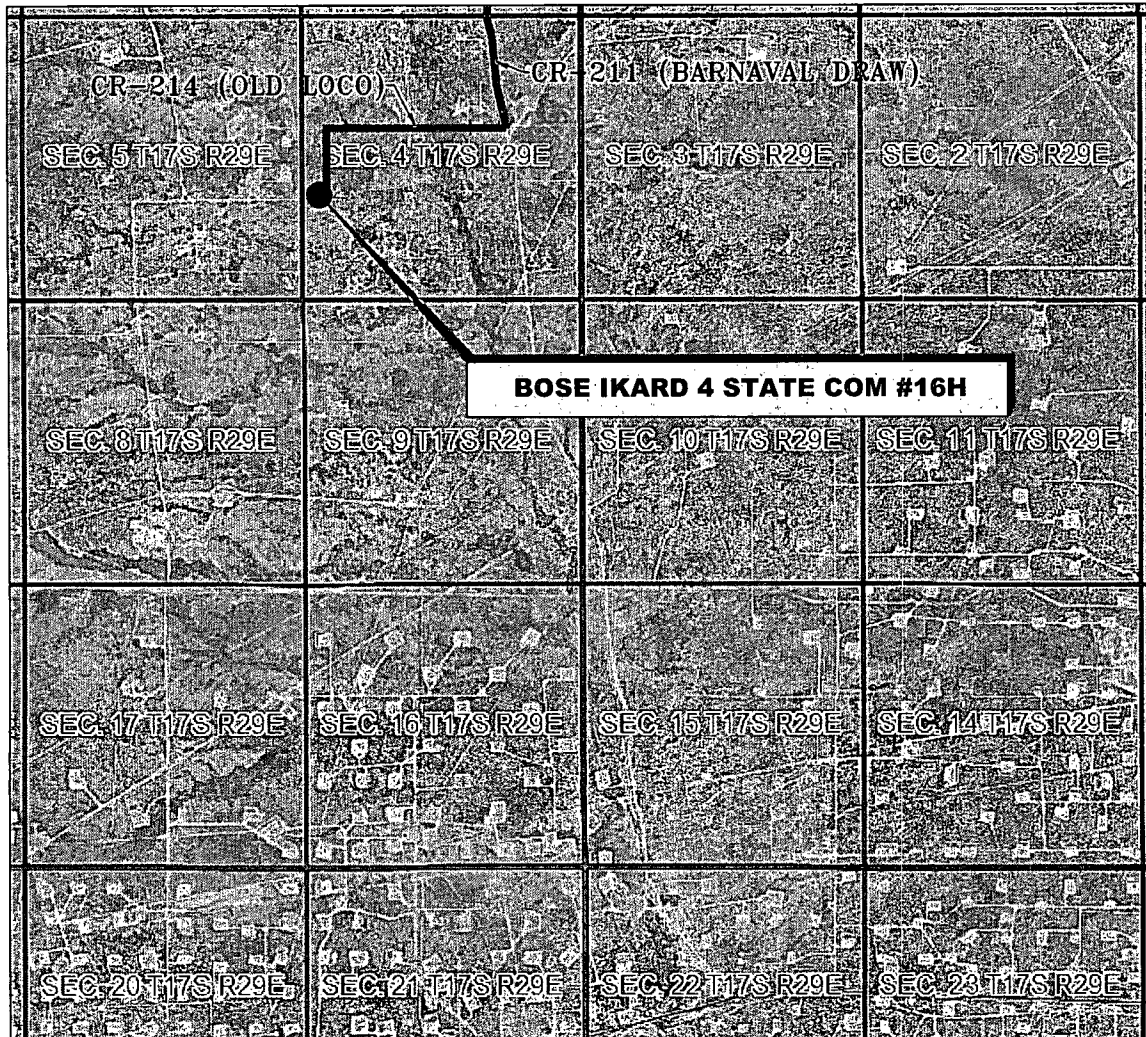


308 W. Broadway St., Hobbs, NM 88240 | Firm No.: TX 10193838 NM 4655451 | (575) 964-8200

SCALE: 1"=100'
DATE: 2/27/13
SURVEYED BY: GB/SM
DRAWN BY: AF
APPROVED BY: LWB
SHEET : 1 OF 1

VICINITY MAP

NOT TO SCALE



**SECTION 4, TWP. 17 SOUTH, RGE. 29 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO**

OPERATOR: COG Operating, LLC
LEASE: Bose Ikard 4 State Com
WELL NO.: 16H

LOCATION: 1730' FSL & 330' FWL
ELEVATION: 3597'

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NO.	REVISION	DATE
JOB NO.:	LS140096	
DWG. NO.:	140096VM	

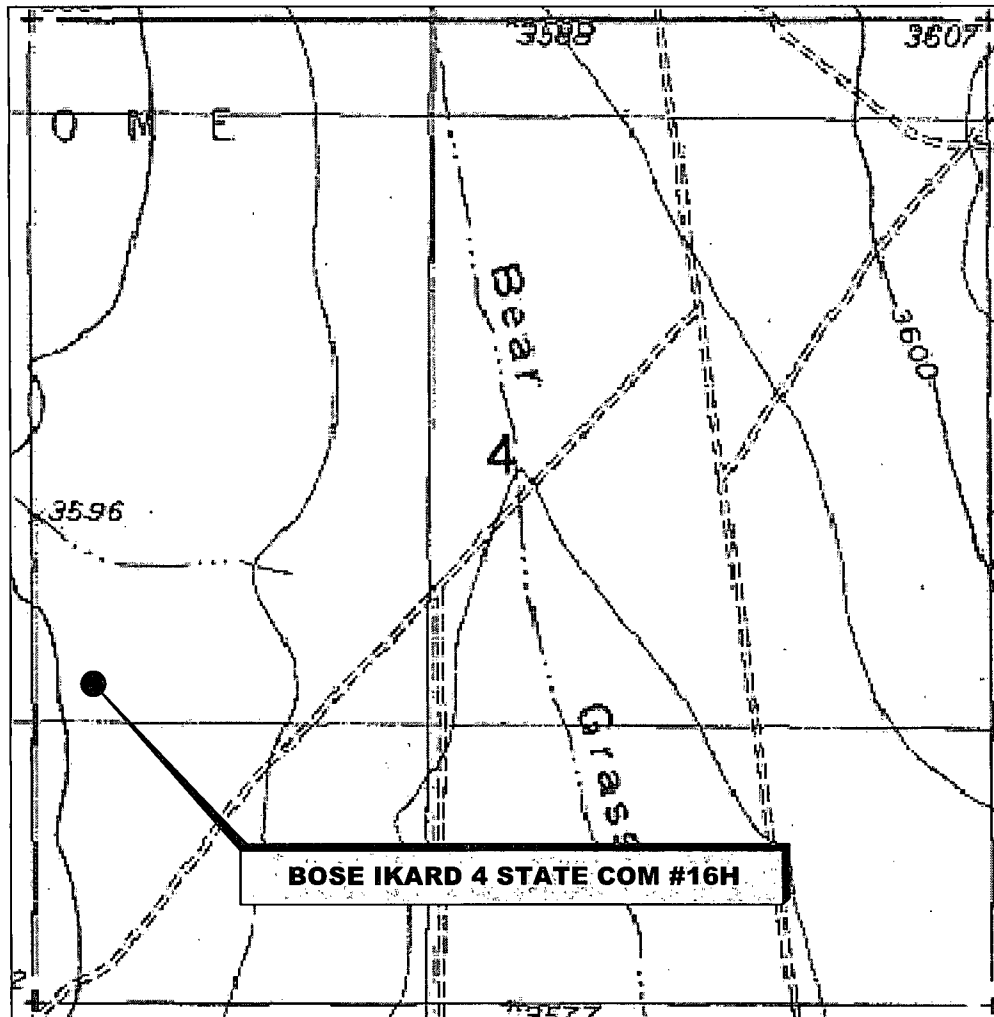
PROSPERITY CONSULTANTS, LLC



308 W. Broadway St., Hobbs, NM 88240 | Firm No. TX 10193838 NM 4655451 | (575) 964-8200

SCALE: N.T.S.
DATE: 2/27/14
SURVEYED BY: GB/SM
DRAWN BY: AF
APPROVED BY: LWB
SHEET : 1 OF 1

LOCATION VERIFICATION MAP



BOSE IKARD 4 STATE COM #16H

*SECTION 4, TWP. 17 SOUTH, RGE. 29 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO*

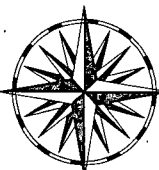
OPERATOR: COG Operating, LLC
LEASE: Bose Ikard 4 State Com
WELL NO.: 16H
ELEVATION: 3597'

LOCATION: 1730' FSL & 330' FWL
CONTOUR INTERVAL: 10'
USGS TOPO. SOURCE MAP:
Red Lake, NM (1955)

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NO.	REVISION	DATE
JOB NO.:	LS140096	
DWG. NO.:	140096LVM	

PROSPERITY CONSULTANTS, LLC



308 W. Broadway St., Hobbs, NM 88240 | Firm No. TX 10193838 NM 4655451 | (575) 964-8200

SCALE: 1"=1000'
DATE: 2/27/14
SURVEYED BY: GB/SM
DRAWN BY: AF
APPROVED BY: LWB
SHEET : 1 OF 1

COG OPERATING, LLC

Eddy County, NM

Bose Ikard 4 State Com 16H

16H

Lateral

Plan: Plan #1

Standard Planning Report

15 December, 2014

Section Distances
Sec4,T17S,R29E
SHL - Unit L
1730'FSL, 330'FWL
PBHL - Unit I
1650'FSL, 330'FEL

Archer

Planning Report

Database:	EDMR5000.1\MULTI	Local Co-ordinate Reference:	Well: 16H
Company:	COG OPERATING, LLC	TVD Reference:	3597'GL @ 3597.00usft (Planning)
Project:	Eddy County, NM	MD Reference:	3597'GL @ 3597.00usft (Planning)
Site:	Bose Ikard 4 State Com 16H	North Reference:	Grid
Well:	16H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Project:	Eddy County, NM		
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	Bose Ikard 4 State Com 16H				
Site Position:		Northing:	677,020.80 usft	Latitude:	32° 51' 39.49 N
From:	Map	Easting:	575,701.50 usft	Longitude:	104° 5' 12.48 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.13 °

Well	16H					
Well Position	+N/-S	0.00 usft	Northing:	677,020.80 usft	Latitude:	32° 51' 39.49 N
	+E/-W	0.00 usft	Easting:	575,701.50 usft	Longitude:	104° 5' 12.48 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,597.00 usft

Wellbore		Lateral			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/15/2014	7.75	60.67	48,488

Design:	Plan #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	90.64

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	
3,579.21	0.00	0.00	3,579.21	0.00	0.00	0.00	0.00	0.00	0.00	
4,406.48	91.00	90.64	4,100.00	-5.94	529.93	11.00	11.00	0.00	90.64	
8,473.43	91.00	90.64	4,029.02	-51.50	4,596.00	0.00	0.00	0.00	0.00	Bose Ikard 16H PBHL

Archer

Planning Report

Database:	EDM R5000.1 MULTI	Local Co-ordinate Reference:	Well 16H
Company:	COG OPERATING, LLC	TVD Reference:	3597'GL @ 3597.00usft (Planning)
Project:	Eddy County, NM	MD Reference:	3597'GL @ 3597.00usft (Planning)
Site:	Bose Ikard 4 State Com 16H	North Reference:	Grid
Well:	16H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,579.21	0.00	0.00	3,579.21	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 11:00									
3,600.00	2.29	90.64	3,599.99	0.00	0.41	0.41	11.00	11.00	0.00
3,650.00	7.79	90.64	3,649.78	-0.05	4.80	4.80	11.00	11.00	0.00
3,700.00	13.29	90.64	3,698.92	-0.16	13.94	13.94	11.00	11.00	0.00
3,750.00	18.79	90.64	3,746.96	-0.31	27.75	27.75	11.00	11.00	0.00
3,800.00	24.29	90.64	3,793.45	-0.52	46.10	46.10	11.00	11.00	0.00
3,850.00	29.79	90.64	3,837.97	-0.77	68.82	68.82	11.00	11.00	0.00
3,900.00	35.29	90.64	3,880.10	-1.07	95.70	95.70	11.00	11.00	0.00
3,950.00	40.79	90.64	3,919.47	-1.42	126.49	126.50	11.00	11.00	0.00
4,000.00	46.29	90.64	3,955.70	-1.80	160.92	160.93	11.00	11.00	0.00
4,050.00	51.79	90.64	3,988.46	-2.23	198.66	198.67	11.00	11.00	0.00
4,100.00	57.29	90.64	4,017.46	-2.68	239.36	239.38	11.00	11.00	0.00
4,150.00	62.79	90.64	4,042.42	-3.17	282.66	282.68	11.00	11.00	0.00
4,200.00	68.29	90.64	4,063.12	-3.68	328.15	328.17	11.00	11.00	0.00
4,250.00	73.79	90.64	4,079.36	-4.21	375.42	375.44	11.00	11.00	0.00
4,300.00	79.29	90.64	4,091.00	-4.75	424.02	424.05	11.00	11.00	0.00
4,350.00	84.79	90.64	4,097.92	-5.31	473.52	473.55	11.00	11.00	0.00

Archer

Planning Report

Database:	EDM.R5000.1 MULTI	Local/Co-ordinate Reference:	Well 16H
Company:	COG OPERATING, LLC	TVD Reference:	3597'GL @ 3597.00usft (Planning)
Project:	Eddy County, NM	MD Reference:	3597'GL @ 3597.00usft (Planning)
Site:	Bose Ikard 4 State Com 16H	North Reference:	Grid
Well:	16H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

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)	
4,400.00	90.29	90.64	4,100.07	-5.87	523.45	523.48	11.00	11.00	0.00	
4,406.48	91.00	90.64	4,100.00	-5.94	529.93	529.96	11.00	11.00	0.00	
Start 4066.95 hold at 4406.48 MD										
4,500.00	91.00	90.64	4,098.37	-6.99	623.43	623.47	0.00	0.00	0.00	
4,600.00	91.00	90.64	4,096.62	-8.11	723.41	723.45	0.00	0.00	0.00	
4,700.00	91.00	90.64	4,094.88	-9.23	823.39	823.44	0.00	0.00	0.00	
4,800.00	91.00	90.64	4,093.13	-10.35	923.36	923.42	0.00	0.00	0.00	
4,900.00	91.00	90.64	4,091.38	-11.47	1,023.34	1,023.41	0.00	0.00	0.00	
5,000.00	91.00	90.64	4,089.64	-12.59	1,123.32	1,123.39	0.00	0.00	0.00	
5,100.00	91.00	90.64	4,087.89	-13.71	1,223.30	1,223.38	0.00	0.00	0.00	
5,200.00	91.00	90.64	4,086.15	-14.83	1,323.28	1,323.36	0.00	0.00	0.00	
5,300.00	91.00	90.64	4,084.40	-15.95	1,423.26	1,423.35	0.00	0.00	0.00	
5,400.00	91.00	90.64	4,082.66	-17.07	1,523.23	1,523.33	0.00	0.00	0.00	
5,500.00	91.00	90.64	4,080.91	-18.19	1,623.21	1,623.32	0.00	0.00	0.00	
5,600.00	91.00	90.64	4,079.17	-19.31	1,723.19	1,723.30	0.00	0.00	0.00	
5,700.00	91.00	90.64	4,077.42	-20.43	1,823.17	1,823.28	0.00	0.00	0.00	
5,800.00	91.00	90.64	4,075.68	-21.55	1,923.15	1,923.27	0.00	0.00	0.00	
5,900.00	91.00	90.64	4,073.93	-22.67	2,023.13	2,023.25	0.00	0.00	0.00	
6,000.00	91.00	90.64	4,072.19	-23.79	2,123.11	2,123.24	0.00	0.00	0.00	
6,100.00	91.00	90.64	4,070.44	-24.91	2,223.08	2,223.22	0.00	0.00	0.00	
6,200.00	91.00	90.64	4,068.70	-26.03	2,323.06	2,323.21	0.00	0.00	0.00	
6,300.00	91.00	90.64	4,066.95	-27.15	2,423.04	2,423.19	0.00	0.00	0.00	
6,400.00	91.00	90.64	4,065.21	-28.27	2,523.02	2,523.18	0.00	0.00	0.00	
6,500.00	91.00	90.64	4,063.46	-29.39	2,623.00	2,623.16	0.00	0.00	0.00	
6,600.00	91.00	90.64	4,061.72	-30.51	2,722.98	2,723.15	0.00	0.00	0.00	
6,700.00	91.00	90.64	4,059.97	-31.63	2,822.96	2,823.13	0.00	0.00	0.00	
6,800.00	91.00	90.64	4,058.23	-32.75	2,922.93	2,923.12	0.00	0.00	0.00	
6,900.00	91.00	90.64	4,056.48	-33.87	3,022.91	3,023.10	0.00	0.00	0.00	
7,000.00	91.00	90.64	4,054.73	-34.99	3,122.89	3,123.09	0.00	0.00	0.00	
7,100.00	91.00	90.64	4,052.99	-36.11	3,222.87	3,223.07	0.00	0.00	0.00	
7,200.00	91.00	90.64	4,051.24	-37.23	3,322.85	3,323.06	0.00	0.00	0.00	
7,300.00	91.00	90.64	4,049.50	-38.35	3,422.83	3,423.04	0.00	0.00	0.00	
7,400.00	91.00	90.64	4,047.75	-39.47	3,522.80	3,523.03	0.00	0.00	0.00	
7,500.00	91.00	90.64	4,046.01	-40.59	3,622.78	3,623.01	0.00	0.00	0.00	
7,600.00	91.00	90.64	4,044.26	-41.72	3,722.76	3,723.00	0.00	0.00	0.00	
7,700.00	91.00	90.64	4,042.52	-42.84	3,822.74	3,822.98	0.00	0.00	0.00	
7,800.00	91.00	90.64	4,040.77	-43.96	3,922.72	3,922.97	0.00	0.00	0.00	
7,900.00	91.00	90.64	4,039.03	-45.08	4,022.70	4,022.95	0.00	0.00	0.00	
8,000.00	91.00	90.64	4,037.28	-46.20	4,122.68	4,122.93	0.00	0.00	0.00	
8,100.00	91.00	90.64	4,035.54	-47.32	4,222.65	4,222.92	0.00	0.00	0.00	
8,200.00	91.00	90.64	4,033.79	-48.44	4,322.63	4,322.90	0.00	0.00	0.00	
8,300.00	91.00	90.64	4,032.05	-49.56	4,422.61	4,422.89	0.00	0.00	0.00	
8,400.00	91.00	90.64	4,030.30	-50.68	4,522.59	4,522.87	0.00	0.00	0.00	
8,473.43	91.00	90.64	4,029.02	-51.50	4,596.00	4,596.29	0.00	0.00	0.00	
TD at 8473.43										

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Planning Report

Database:	EDM R5000.1 MULTI	Local Co-ordinate Reference:	Well 16H
Company:	COG OPERATING, LLC	TVD Reference:	3597'GL @ 3597.00usft (Planning)
Project:	Eddy County, NM	MD Reference:	3597'GL @ 3597.00usft (Planning)
Site:	Bose Ikard 4 State Com 16H	North Reference:	Grid
Well:	16H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Design Targets									
Target Name	hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	
Shape		(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	
Bose Ikard 16H Surface		0.00	0.00	0.00	0.00	0.00	677,020.80	575,701.50	32° 51' 39.49 N
- plan hits target center									104° 5' 12.48 W
- Point									
Bose Ikard 16H PBHL		0.00	0.01	4,029.02	-51.50	4,596.00	676,969.30	580,297.50	32° 51' 38.88 N
- plan hits target center									104° 4' 18.60 W
- Point									

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	Comment
3,579.21	3,579.21	0.00	0.00	Start Build 11.00
4,406.48	4,100.00	-5.94	529.93	Start 4066.95 hold at 4406.48 MD
8,473.43	4,029.02	-51.50	4,596.00	TD at 8473.43

COG OPERATING, LLC

Field: Eddy County, NM
Site: Bose Ikard 4 State Corn 16H
Well: 16H
Wellbore: Lateral
Plan: Plan #1

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Bose Ikard 16H Surface	0.00	0.00	0.00	677020.80	575701.50	32° 51' 39.49 N	104° 5' 12.48 W	Point
Bose Ikard 16H PBHL	4029.02	-51.50	4596.00	676969.30	580297.50	32° 51' 38.88 N	104° 4' 18.60 W	Point



Section Distances

Sec4.T17S.R29E
SHL - Unit L
1730'FSL, 330'FWL
PBHL - Unit I
1650'FSL, 330'FEL

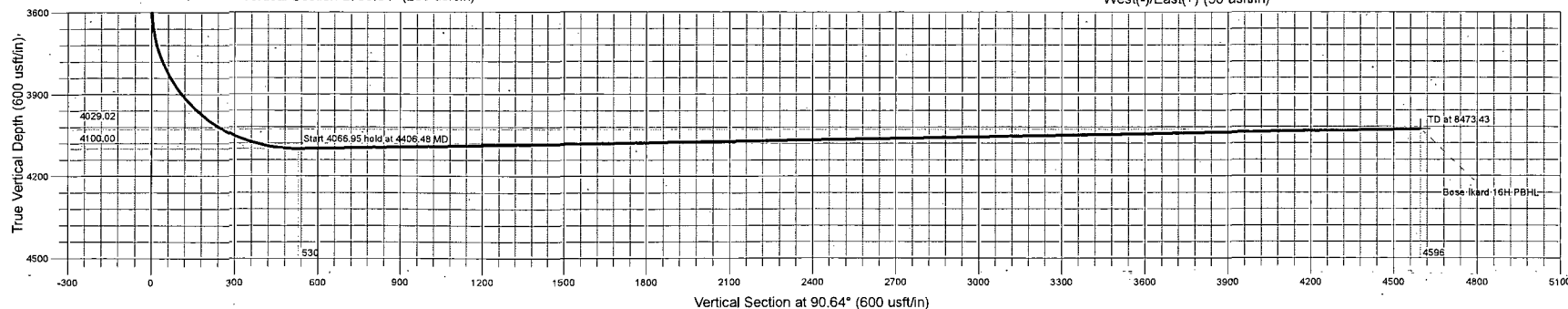
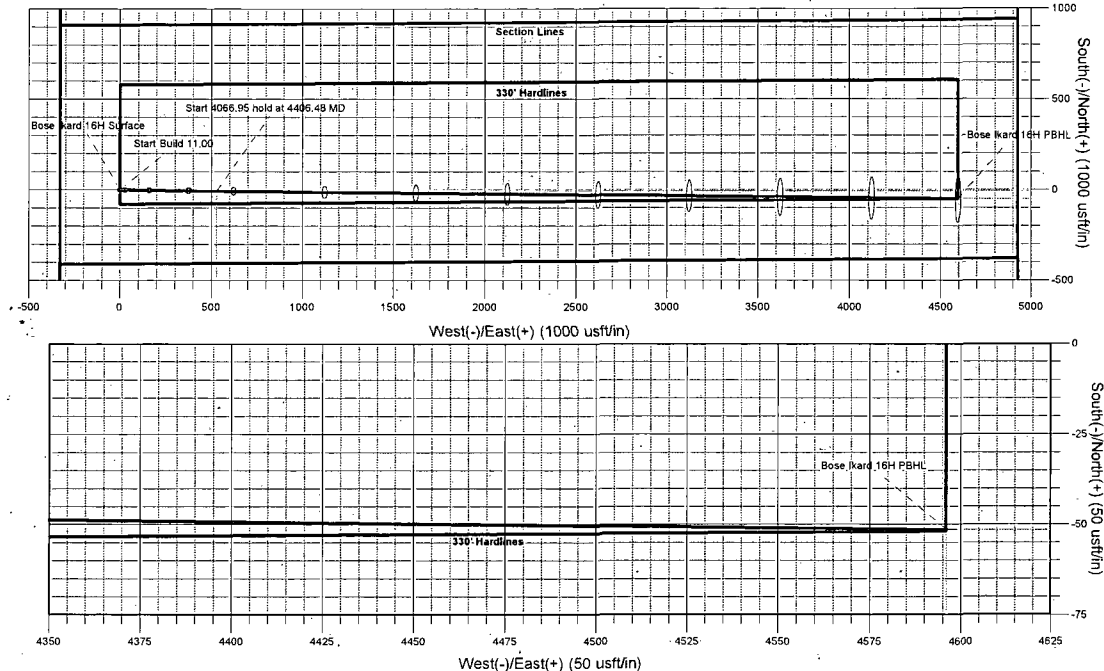
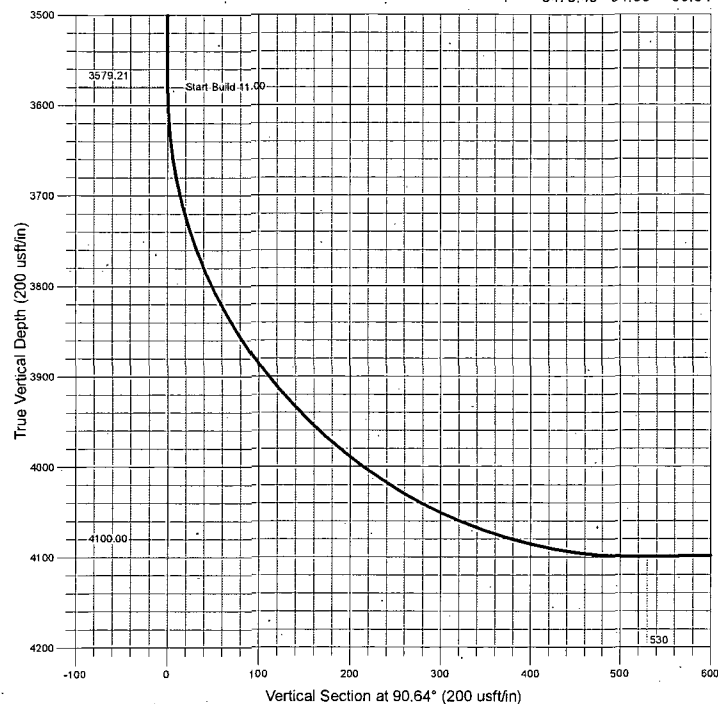
SECTION DETAILS

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	3579.21	0.00	0.00	3579.21	0.00	0.00	0.00	0.00	0.00	
3	4406.48	91.00	90.64	4100.00	-5.94	529.93	11.00	90.64	529.96	
4	8473.43	91.00	90.64	4029.02	-51.50	4596.00	0.00	0.00	4596.29	Bose Ikard 16H PBHL



Azimuths to Grid North
True North: -0.13°
Magnetic North: 7.62°

Magnetic Field
Strength: 48488.2snT
Dip Angle: 60.67°
Date: 12/15/2014
Model: HDGM



Archer

ARCHER DIRECTIONAL DRILLING SERVICES
12101 Cutten Rd. Houston, Texas 77066
Phone: 281-301-2600 Fax: 281-301-2795

Design: Plan #1 (16H/Lateral)
Created By: Ivonne Gonzalez
Date: 13:30, December 15 2014