

FEB 2 2015



RECEIVED

September 25, 2014


Concho Resources, Inc.
One Concho Center
600 W. Illinois Avenue
Midland, Texas 79701

Attn: Kanicia Castillo

30-015 - 42240


RE: **Burch Keely Unit 954H**

Please find enclosed a copy of the survey from 0.00' to 4230.00' ran on the above referenced well.

Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 25 day of September A.D., 2014, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas



Company: COG Operating, LLC (Concho)

Lease/Well: Burch Keely Unit /954H



Rig Name: United 43

State/County: New Mexico/Eddy

Latitude: 32.83, Longitude: -104.04

GRID North is 0.16 Degrees East of True North

VS-Azi: 0.00 Degrees



Depth Reference : RKB=14 feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut

Minimum Curvature Method

Report Date/Time: 9/25/2014 / 16:30

VES Survey International

West Texas

(432) 563-5444

Surveyor: Adam Gathright

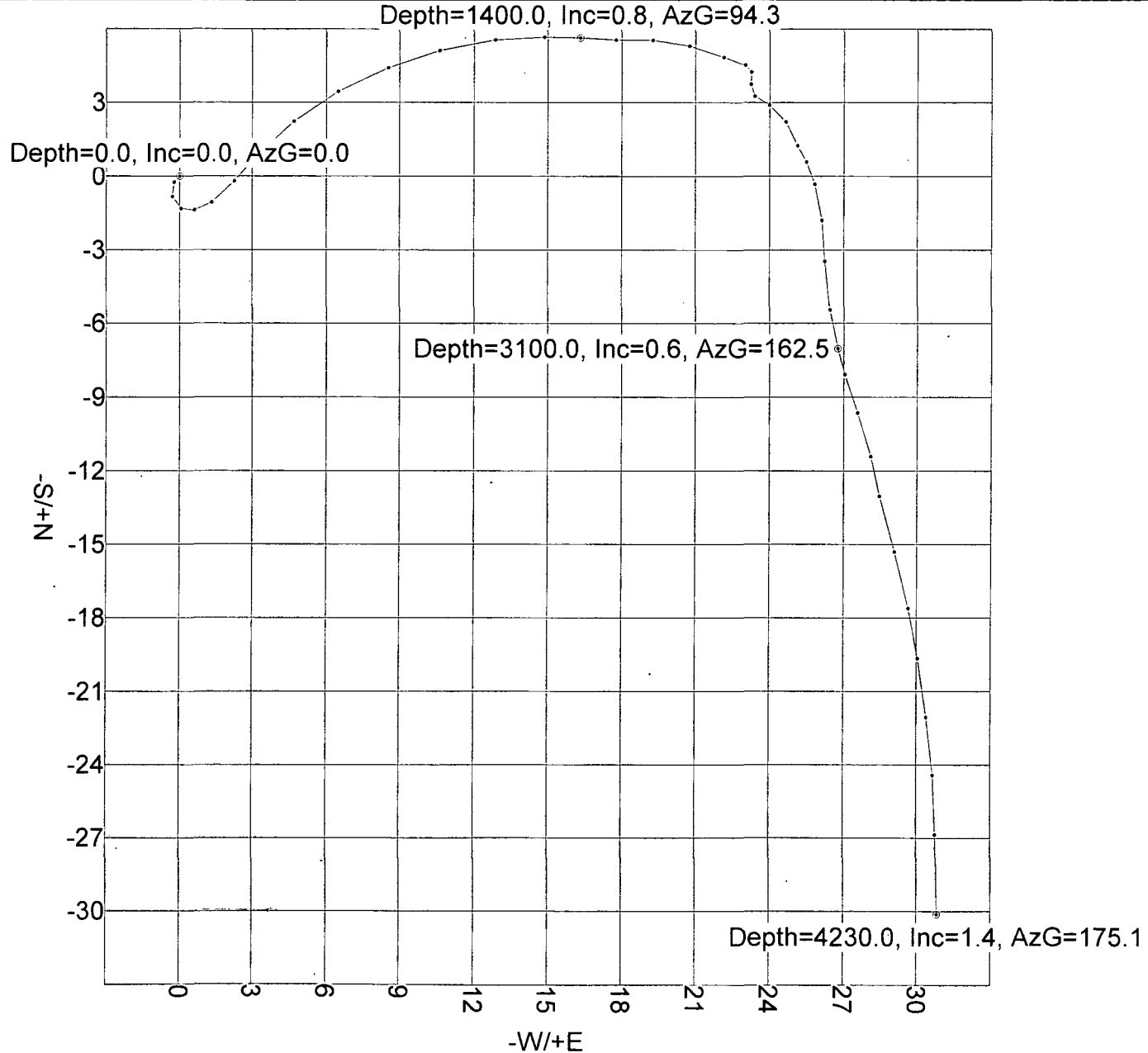
Burch Keely Unit 954H / API 30-015-42240

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.38	223.22	100.00	-0.24	-0.23	-0.24	0.33	223.22	0.38
200.00	0.44	154.50	200.00	-0.83	-0.29	-0.83	0.88	199.42	0.46
300.00	0.28	127.74	300.00	-1.32	0.06	-1.32	1.32	177.27	0.23
400.00	0.41	75.56	399.99	-1.38	0.61	-1.38	1.51	156.32	0.33
500.00	0.49	58.36	499.99	-1.06	1.32	-1.06	1.70	128.89	0.15
600.00	0.97	41.55	599.98	-0.21	2.25	-0.21	2.26	95.26	0.52
700.00	0.94	43.07	699.97	1.03	3.37	1.03	3.52	73.06	0.04
800.00	1.11	51.22	799.95	2.23	4.68	2.23	5.19	64.52	0.22
900.00	1.38	59.88	899.93	3.44	6.48	3.44	7.34	62.02	0.33
1000.00	1.25	69.98	999.90	4.42	8.54	4.42	9.62	62.65	0.27
1100.00	1.25	72.45	1099.88	5.12	10.61	5.12	11.78	64.23	0.05
1200.00	1.40	84.96	1199.85	5.56	12.87	5.56	14.02	66.63	0.32
1300.00	0.88	89.22	1299.83	5.68	14.85	5.68	15.90	69.08	0.52
1400.00	0.79	94.29	1399.82	5.64	16.31	5.64	17.26	70.94	0.12
1500.00	0.86	92.36	1499.81	5.55	17.76	5.55	18.61	72.64	0.07
1600.00	0.86	88.02	1599.80	5.55	19.26	5.55	20.04	73.93	0.07
1700.00	0.90	108.88	1699.79	5.32	20.75	5.32	21.42	75.62	0.32
1800.00	0.78	108.71	1799.78	4.85	22.14	4.85	22.66	77.65	0.11

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.29	112.48	1899.77	4.53	23.02	4.53	23.46	78.86	0.50
2000.00	0.21	176.65	1999.77	4.25	23.26	4.25	23.65	79.64	0.27
2100.00	0.36	183.70	2099.77	3.75	23.25	3.75	23.55	80.83	0.15
2200.00	0.28	136.70	2199.77	3.26	23.40	3.26	23.62	82.06	0.27
2300.00	0.53	113.17	2299.77	2.90	23.99	2.90	24.16	83.10	0.30
2400.00	0.65	154.21	2399.76	2.21	24.66	2.21	24.76	84.88	0.43
2500.00	0.58	153.60	2499.76	1.24	25.13	1.24	25.16	87.17	0.07
2600.00	0.27	147.96	2599.75	0.59	25.48	0.59	25.49	88.68	0.32
2700.00	0.85	162.96	2699.75	-0.32	25.82	-0.32	25.83	90.71	0.60
2800.00	0.89	174.61	2799.74	-1.80	26.12	-1.80	26.18	93.94	0.18
2900.00	1.03	177.23	2899.72	-3.47	26.23	-3.47	26.46	97.53	0.15
3000.00	1.26	171.39	2999.70	-5.45	26.44	-5.45	26.99	101.64	0.26
3100.00	0.59	162.46	3099.69	-7.02	26.76	-7.02	27.66	104.71	0.68
3200.00	0.66	167.10	3199.68	-8.07	27.04	-8.07	28.22	106.62	0.09
3300.00	1.24	158.51	3299.67	-9.64	27.56	-9.64	29.20	109.27	0.59
3400.00	0.90	169.26	3399.65	-11.41	28.11	-11.41	30.34	112.10	0.39
3500.00	1.00	165.84	3499.64	-13.03	28.47	-13.03	31.31	114.60	0.11
3600.00	1.69	164.39	3599.61	-15.30	29.08	-15.30	32.86	117.75	0.69
3700.00	1.03	169.53	3699.58	-17.61	29.64	-17.61	34.47	120.72	0.67
3800.00	1.35	168.32	3799.56	-19.65	30.04	-19.65	35.90	123.19	0.32
3900.00	1.43	174.94	3899.53	-22.06	30.39	-22.06	37.55	125.97	0.18
4000.00	1.29	171.96	3999.50	-24.42	30.66	-24.42	39.20	128.54	0.16
4100.00	1.51	182.38	4099.47	-26.86	30.76	-26.86	40.84	131.12	0.33
4230.00	1.37	175.09	4229.43	-30.11	30.82	-30.11	43.09	134.33	0.18



VES Survey International
West Texas
(432) 563-5444
Surveyor: Adam Gathright
Burch Keely Unit 954H / API 30-015-42240



V.E.S. Survey Date: 09/07/2014

WELL NAME AND NUMBER Burch Keely Unit No. 954H
 LOCATION Section 23, T17S, R29E, Unit A, 507 FNL, 172 FEL, Eddy County
 OPERATOR COG Operating LLC
 DRILLING CONTRACTOR United Drilling, Inc.

The undersigned hereby certifies that he is an authorized representative of the drilling contractor who drilled the above described well and had conducted deviation test and obtained the following results:

Degrees @ Depth	Degrees @ Depth	Degrees @ Depth
.5° @ 268'	23.1° @ 4581'	93.7° @ 5525'
1.7° @ 683'	25.7° @ 4613'	93.4° @ 5620'
1.2° @ 908'	29.3° @ 4644'	93.1° @ 5715'
1.2° @ 1370'	32.6° @ 4676'	93.1° @ 5809'
.8° @ 1812'	36.9° @ 4739'	92.8° @ 5904'
.4° @ 2256'	42.4° @ 4802'	93.9° @ 5998'
.8° @ 2698'	45.6° @ 4834'	91.6° @ 6093'
1.0° @ 3140'	47.6° @ 4930'	90.6° @ 6188'
.9° @ 3577'	56.2° @ 4992'	89.6° @ 6282'
1.1° @ 4022'	59.5° @ 5023'	88.6° @ 6376'
1.6° @ 4297'	62.8° @ 5055'	88.9° @ 6471'
1.5° @ 4329'	66.3° @ 5087'	89.6° @ 6566'
2.2° @ 4360'	70.0° @ 5118'	89.4° @ 6660'
9.6° @ 4423'	73.9° @ 5150'	89.3° @ 6755'
13.7° @ 4455'	82.3° @ 5213'	91.5° @ 6945'
17.0° @ 4487'	86.0° @ 5241'	90.9° @ 7040'
19.4° @ 4518'	89.1° @ 5273'	91.2° @ 7135'
21.8° @ 4550'	89.2° @ 5305'	91.8° @ 7229'

Drilling Contractor- UNITED DRILLING, INC.

By: *Angel Salazar*
 (Angel Salazar)

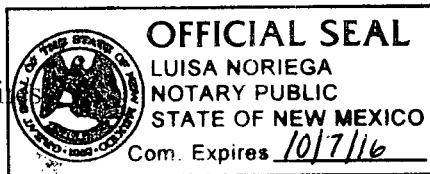
Title: Vice President

Subscribed and sworn to before me this 19th day of September, 2014.

Luisa Noriega
 Notary Public

Chaves NM
 County State

My Commission Expires



WELL NAME AND NUMBER Burch Keely Unit No. 954H
 LOCATION Section 23, T17S, R29E, Unit A, 507 FNL, 172 FEL, Eddy County
 OPERATOR COG Operating LLC
 DRILLING CONTRACTOR United Drilling, Inc.

The undersigned hereby certifies that he is an authorized representative of the drilling contractor who drilled the above described well and had conducted deviation test and obtained the following results:

Degrees @ Depth	Degrees @ Depth	Degrees @ Depth
91.6° @ 7324'	91.3° @ 9122'	
91.8° @ 7419'	91.3° @ 9216'	
91.9° @ 7513'	91.1° @ 9311'	
91.8° @ 7608'	91.3° @ 9406'	
91.8° @ 7702'	91.3° @ 9500'	
91.8° @ 7797'	91.5° @ 9595'	
72.0° @ 7891'	93.6° @ 9784'	
90.7° @ 8080'	94.5° @ 9878'	
90.7° @ 8175'		
90.8° @ 8270'		
89.0° @ 8364'		
89.1° @ 8459'		
90.1° @ 8553'		
90.6° @ 8647'		
90.3° @ 8742'		
90.2° @ 8837'		
91.5° @ 8932'		
91.3° @ 9027'		

Drilling Contractor- UNITED DRILLING, INC.

By: *Angel Salazar*
 (Angel Salazar)

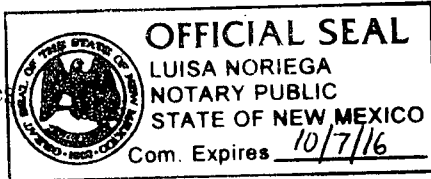
Title: Vice President

Subscribed and sworn to before me this 19th day of September, 2014.

Luisa Noriega
 Notary Public

Chaves NM
 County State

My Commission Expires



COG OPERATING, LLC

Field: Eddy County, NM
 Site: Burch Keely Unit 954H
 Well: 954H
 Wellbore: Lateral
 Plan: Surveys

LEGEND

- 954H, Lateral, Plan #1 V0
- Surveys



Azimuths to Grid North
 True North: -0.16°
 Magnetic North: 7.29°

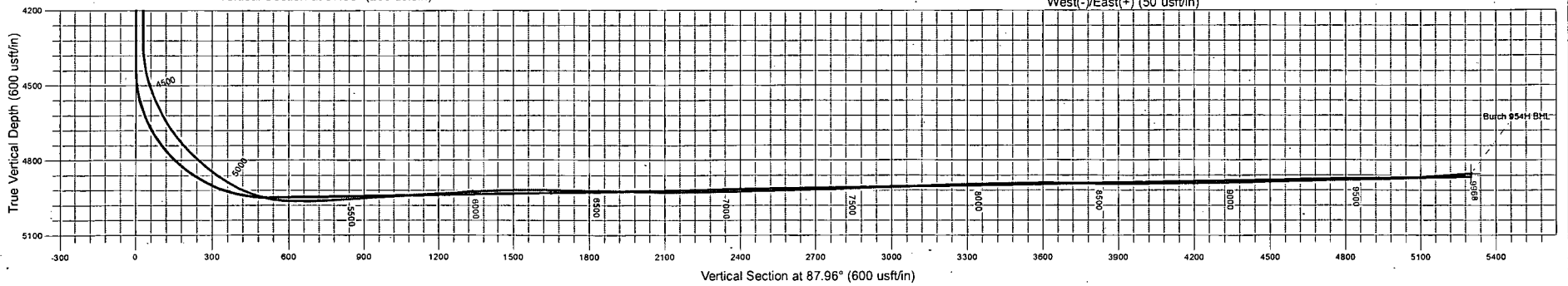
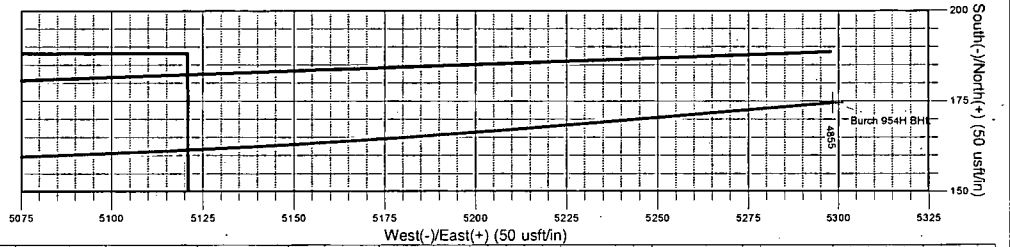
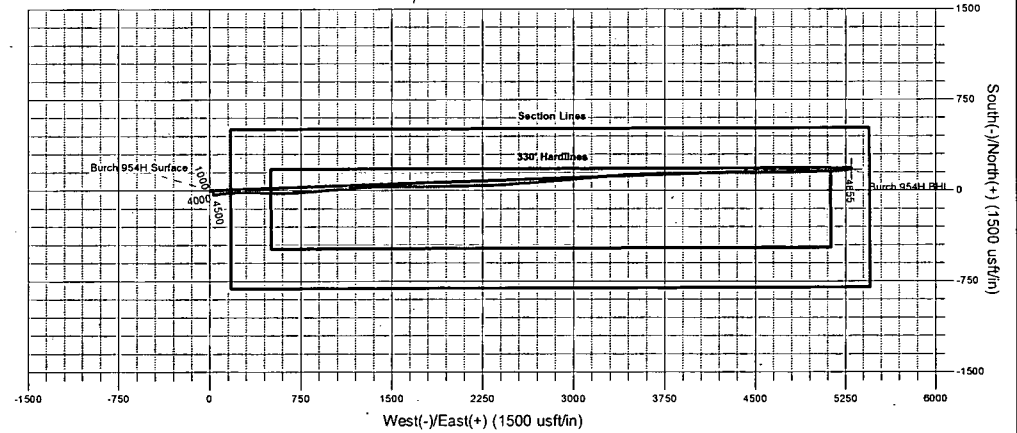
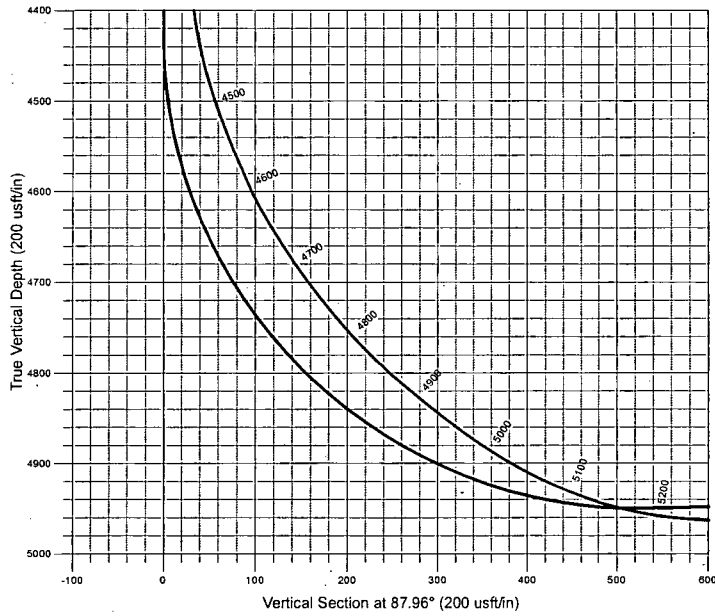


Magnetic Field
 Strength: 48603.0snT
 Dip Angle: 60.58°
 Date: 9/5/2014
 Model: IGRF2010

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Burch 954H Surface	0.00	0.00	0.00	664258.10	591058.00	32° 49' 32.81 N	104° 2' 12.86 W	Point
Burch 954H BHL	4854.93	174.53	5298.37	664432.63	596356.37	32° 49' 34.39 N	104° 1' 10.76 W	Point

Surveys for offset wells
 are Inclination only surveys.
 Radius show possible displacement



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

Design: Surveys (954H/Lateral)
 Created By: Ivonne Gonzalez
 Date: 7:56, September 16 2014

Archer Survey Report

Company:	COG OPERATING, LLC	Local Co-ordinate Reference:	Well 954H - Slot 954H
Project:	Eddy County, NM	TVD Reference:	3603'GL+12'KB @ 3615.00usft (United 43)
Site:	Burch Keely Unit 954H	MD Reference:	3603'GL+12'KB @ 3615.00usft (United 43)
Well:	954H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM-R5000.1\MULTI

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: Burch Keely Unit 954H			
Site Position:		Northing:	664,258.10 usft
From:	Map	Easting:	591,058.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in
		Latitude:	32° 49' 32.81 N
		Longitude:	104° 2' 12.86 W
		Grid Convergence:	0.16 °

Well: 954H - Slot 954H			
Well Position	+N-S	0.00 usft	Northing: 664,258.10 usft
	+E-W	0.00 usft	Easting: 591,058.00 usft
Position Uncertainty		0.00 usft	Wellhead Elevation: 0.00 usft
			Ground Level: 3,603.00 usft
			Latitude: 32° 49' 32.81 N
			Longitude: 104° 2' 12.86 W

Wellbore: Lateral					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	9/5/2014	(°) 7.45	(°) 60.58	(nT) 48,603

Design: Surveys					
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:		Depth From (TVD)	+N-S	+E-W	Direction
		(usft)	(usft)	(usft)	(°)
		0.00	0.00	0.00	87.96

Survey Program Date: 9/16/2014					
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
100.00	4,230.00	Survey #1 (Lateral)	NS-GYRO-MS	Gyrocompass Gyro	
4,297.00	9,904.00	Survey #2 (Lateral)	MWD	MWD - Standard	
9,968.00	9,968.00	Survey #3 (Lateral)	Project	Projection	

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	0.38	223.22	100.00	-0.24	-0.23	-0.24	0.38	0.38	0.00
200.00	0.44	154.50	200.00	-0.83	-0.29	-0.32	0.47	0.06	-68.72
300.00	0.28	127.74	300.00	-1.33	0.07	0.02	0.23	-0.16	-26.76
400.00	0.41	75.56	399.99	-1.39	0.61	0.56	0.33	0.13	-52.18
500.00	0.49	58.36	499.99	-1.07	1.32	1.28	0.16	0.08	-17.20
600.00	0.97	41.55	599.98	-0.22	2.25	2.24	0.52	0.48	-16.81
700.00	0.94	43.07	699.97	1.02	3.37	3.40	0.04	-0.03	1.52
800.00	1.11	51.22	799.95	2.22	4.68	4.76	0.22	0.17	8.15

Archer
Survey Report

Company:	COG OPERATING, LLC	Local Co-ordinate Reference:	Well: 954H - Slot: 954H
Project:	Eddy County, NM	TVD Reference:	3603'GL+12'KB @ 3615.00usft (United 43)
Site:	Burch Keely Unit 954H	MD Reference:	3603'GL+12'KB @ 3615.00usft (United 43)
Well:	954H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM R5000.1 MULTI

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)
900.00	1.38	59.88	899.93	3.43	6.48	6.60	0.33	0.27	8.66
1,000.00	1.25	69.98	999.90	4.41	8.55	8.70	0.27	-0.13	10.10
1,100.00	1.25	72.45	1,099.88	5.11	10.61	10.79	0.05	0.00	2.47
1,200.00	1.40	84.96	1,199.85	5.55	12.87	13.06	0.32	0.15	12.51
1,300.00	0.88	89.22	1,299.83	5.67	14.85	15.04	0.53	-0.52	4.26
1,400.00	0.79	94.29	1,399.82	5.63	16.31	16.50	0.12	-0.09	5.07
1,500.00	0.86	92.36	1,499.81	5.54	17.74	17.93	0.08	0.07	-1.93
1,600.00	0.86	88.02	1,599.80	5.54	19.24	19.43	0.07	0.00	-4.34
1,700.00	0.90	108.88	1,699.79	5.31	20.74	20.91	0.32	0.04	20.86
1,800.00	0.78	108.71	1,799.78	4.84	22.13	22.28	0.12	-0.12	-0.17
1,900.00	0.29	112.48	1,899.77	4.52	23.00	23.15	0.49	-0.49	3.77
2,000.00	0.21	176.65	1,999.77	4.24	23.25	23.38	0.27	-0.08	64.17
2,100.00	0.36	183.70	2,099.77	3.75	23.24	23.36	0.15	0.15	7.05
2,200.00	0.28	136.70	2,199.77	3.26	23.39	23.49	0.27	-0.08	-47.00
2,300.00	0.53	113.17	2,299.77	2.90	23.98	24.07	0.30	0.25	-23.53
2,400.00	0.65	154.21	2,399.76	2.20	24.65	24.71	0.43	0.12	41.04
2,500.00	0.58	153.60	2,499.76	1.24	25.12	25.15	0.07	-0.07	-0.61
2,600.00	0.27	147.96	2,599.75	0.59	25.47	25.48	0.31	-0.31	-5.64
2,700.00	0.85	162.96	2,699.75	-0.32	25.81	25.79	0.59	0.58	15.00
2,800.00	0.89	174.61	2,799.74	-1.80	26.11	26.02	0.18	0.04	11.65
2,900.00	1.03	177.23	2,899.72	-3.48	26.22	26.08	0.15	0.14	2.62
3,000.00	1.26	171.39	2,999.70	-5.46	26.43	26.22	0.26	0.23	-5.84
3,100.00	0.59	162.46	3,099.69	-7.04	26.75	26.48	0.68	-0.67	-8.93
3,200.00	0.66	167.10	3,199.68	-8.09	27.03	26.73	0.09	0.07	4.64
3,300.00	1.24	158.51	3,299.67	-9.66	27.56	27.20	0.60	0.58	-8.59
3,400.00	0.90	169.26	3,399.65	-11.44	28.10	27.68	0.39	-0.34	10.75
3,500.00	1.00	165.84	3,499.64	-13.05	28.46	27.98	0.11	0.10	-3.42
3,600.00	1.69	164.39	3,599.61	-15.32	29.07	28.51	0.69	0.69	-1.45
3,700.00	1.03	169.53	3,699.58	-17.63	29.63	28.99	0.67	-0.66	5.14
3,800.00	1.35	168.32	3,799.56	-19.66	30.03	29.31	0.32	0.32	-1.21
3,900.00	1.43	174.94	3,899.53	-22.06	30.38	29.58	0.18	0.08	6.62
4,000.00	1.29	171.96	3,999.50	-24.42	30.65	29.76	0.16	-0.14	-2.98
4,100.00	1.51	182.38	4,099.47	-26.85	30.75	29.78	0.34	0.22	10.42
4,230.00	1.37	175.09	4,229.43	-30.11	30.81	29.72	0.18	-0.11	-5.61
4,297.00	1.60	168.90	4,296.41	-31.82	31.06	29.91	0.42	0.34	-9.24
4,329.00	1.50	171.10	4,328.40	-32.68	31.21	30.03	0.36	-0.31	6.88
4,360.00	2.20	124.70	4,359.38	-33.42	31.76	30.56	5.14	2.26	-149.68
4,392.00	5.50	96.30	4,391.31	-33.93	33.79	32.57	11.61	10.31	-88.75
4,423.00	9.60	86.00	4,422.03	-33.92	37.85	36.62	13.88	13.23	-33.23
4,455.00	13.70	80.00	4,453.37	-33.07	44.25	43.04	13.34	12.81	-18.75
4,487.00	17.00	78.40	4,484.22	-31.47	52.57	51.41	10.40	10.31	-5.00
4,518.00	19.40	80.20	4,513.67	-29.68	62.08	60.98	7.95	7.74	5.81
4,550.00	21.80	79.90	4,543.62	-27.74	73.17	72.13	7.51	7.50	-0.94

Archer

Survey Report

Company:	COGI OPERATING, LLC	Local Co-ordinate Reference:	Well: 954H - Slot: 954H
Project:	Eddy County, NM	TVD Reference:	3603'GL+12'KB @ 3615'00usft. (United 43)
Site:	Burch Keely Unit 954H	MD Reference:	3603'GL+12'KB @ 3615'00usft. (United 43)
Well:	954H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM R5000-1; MULTI

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)
4,581.00	23.10	80.00	4,572.27	-25.67	84.82	83.86	4.20	4.19	0.32
4,613.00	25.70	83.10	4,601.41	-23.75	97.90	96.99	9.05	8.13	9.69
4,644.00	29.30	83.80	4,628.91	-22.12	112.12	111.26	11.66	11.61	2.26
4,676.00	32.60	84.40	4,656.35	-20.43	128.48	127.68	10.36	10.31	1.88
4,708.00	34.40	87.40	4,683.03	-19.18	146.10	145.32	7.64	5.63	9.38
4,739.00	36.90	88.30	4,708.22	-18.51	164.15	163.39	8.24	8.06	2.90
4,771.00	39.30	88.50	4,733.40	-17.96	183.89	183.13	7.51	7.50	0.63
4,802.00	42.40	88.20	4,756.85	-17.37	204.15	203.40	10.02	10.00	-0.97
4,834.00	45.60	86.70	4,779.86	-16.38	226.35	225.63	10.52	10.00	-4.69
4,866.00	47.60	87.40	4,801.85	-15.18	249.57	248.87	6.45	6.25	2.19
4,897.00	50.00	88.90	4,822.27	-14.43	272.88	272.20	8.55	7.74	4.84
4,929.00	52.30	90.70	4,842.34	-14.35	297.80	297.10	8.42	7.19	5.63
4,960.00	54.10	91.40	4,860.91	-14.81	322.62	321.89	6.08	5.81	2.26
4,992.00	56.20	91.20	4,879.19	-15.41	348.87	348.10	6.58	6.56	-0.63
5,024.00	59.50	91.00	4,896.22	-15.92	375.95	375.15	10.33	10.31	-0.63
5,055.00	62.80	91.20	4,911.18	-16.45	403.10	402.26	10.66	10.65	0.65
5,087.00	66.30	91.80	4,924.92	-17.20	431.98	431.09	11.07	10.94	1.88
5,118.00	70.00	92.30	4,936.46	-18.24	460.73	459.79	12.03	11.94	1.61
5,150.00	73.90	92.50	4,946.37	-19.51	491.12	490.11	12.20	12.19	0.63
5,181.00	78.10	92.10	4,953.87	-20.72	521.17	520.10	13.61	13.55	-1.29
5,213.00	82.30	91.50	4,959.32	-21.70	552.68	551.56	13.25	13.13	-1.88
5,241.00	86.00	90.40	4,962.17	-22.17	580.52	579.37	13.78	13.21	-3.93
5,273.00	89.10	88.30	4,963.54	-21.80	612.49	611.32	11.70	9.69	-6.56
5,305.00	89.20	86.70	4,964.01	-20.41	644.45	643.32	5.01	0.31	-5.00
5,337.00	89.30	86.70	4,964.43	-18.57	676.39	675.31	0.31	0.31	0.00
5,431.00	95.10	85.30	4,960.82	-12.02	770.05	769.14	6.35	6.17	-1.49
5,525.00	93.70	85.90	4,953.61	-4.83	863.50	862.78	1.62	-1.49	0.64
5,620.00	93.40	85.70	4,947.73	2.12	958.06	957.53	0.38	-0.32	-0.21
5,715.00	93.10	85.60	4,942.35	9.31	1,052.64	1,052.30	0.33	-0.32	-0.11
5,809.00	93.10	85.50	4,937.26	16.59	1,146.21	1,146.08	0.11	0.00	-0.11
5,904.00	92.80	85.20	4,932.37	24.28	1,240.78	1,240.86	0.45	-0.32	-0.32
5,998.00	93.90	87.70	4,926.88	30.10	1,334.43	1,334.65	2.90	1.17	2.66
6,093.00	91.60	88.40	4,922.32	33.32	1,429.26	1,429.54	2.53	-2.42	0.74
6,188.00	90.60	89.80	4,920.50	34.81	1,524.22	1,524.50	1.81	-1.05	1.47
6,282.00	89.60	90.60	4,920.33	34.49	1,618.22	1,618.42	1.36	-1.06	0.85
6,376.00	88.60	90.30	4,921.81	33.75	1,712.20	1,712.32	1.11	-1.06	-0.32
6,471.00	88.90	89.60	4,923.88	33.83	1,807.18	1,807.24	0.80	0.32	-0.74
6,566.00	89.60	89.10	4,925.13	34.91	1,902.17	1,902.20	0.91	0.74	-0.53
6,660.00	89.40	89.00	4,925.95	36.47	1,996.15	1,996.18	0.24	-0.21	-0.11
6,755.00	89.30	88.90	4,927.02	38.21	2,091.13	2,091.16	0.15	-0.11	-0.11
6,850.00	89.50	88.50	4,928.02	40.36	2,186.10	2,186.15	0.47	0.21	-0.42
6,945.00	91.50	87.50	4,927.19	43.68	2,281.03	2,281.14	2.35	2.11	-1.05
7,040.00	90.90	86.90	4,925.20	48.32	2,375.89	2,376.11	0.89	-0.63	-0.63

Archer

Survey Report

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Project:	Eddy County, NM	TVD Reference:	3603'GL+12'KB @ 3615'00usft (United 43)
Site:	Burch Keely Unit 954H	MD Reference:	3603'GL+12'KB @ 3615'00usft (United 43)
Well:	954H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM:R5000.1\MULTI

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)
7,134.00	91.20	86.80	4,923.48	53.48	2,469.74	2,470.08	0.34	0.32	-0.11
7,229.00	91.80	86.60	4,920.99	58.95	2,564.55	2,565.02	0.67	0.63	-0.21
7,324.00	91.60	86.00	4,918.17	65.08	2,659.31	2,659.94	0.67	-0.21	-0.63
7,419.00	91.80	85.30	4,915.35	72.28	2,753.99	2,754.82	0.77	0.21	-0.74
7,513.00	91.90	84.70	4,912.32	80.47	2,847.58	2,848.64	0.65	0.11	-0.64
7,608.00	91.80	85.20	4,909.25	88.83	2,942.16	2,943.46	0.54	-0.11	0.53
7,702.00	91.80	84.70	4,906.30	97.10	3,035.75	3,037.29	0.53	0.00	-0.53
7,797.00	91.80	84.50	4,903.32	106.03	3,130.29	3,132.08	0.21	0.00	-0.21
7,891.00	92.00	84.50	4,900.20	115.04	3,223.80	3,225.85	0.21	0.21	0.00
7,986.00	92.00	86.30	4,896.88	122.65	3,318.43	3,320.70	1.89	0.00	1.89
8,080.00	90.70	86.60	4,894.67	128.47	3,412.22	3,414.64	1.42	-1.38	0.32
8,175.00	90.70	88.20	4,893.51	132.78	3,507.12	3,509.62	1.68	0.00	1.68
8,270.00	90.80	88.10	4,892.26	135.84	3,602.06	3,604.61	0.15	0.11	-0.11
8,364.00	89.00	88.60	4,892.43	138.55	3,696.02	3,698.61	1.99	-1.91	0.53
8,459.00	89.10	88.60	4,894.00	140.87	3,790.97	3,793.59	0.11	0.11	0.00
8,553.00	90.10	89.60	4,894.66	142.35	3,884.96	3,887.56	1.50	1.06	1.06
8,647.00	90.60	89.40	4,894.09	143.17	3,978.95	3,981.53	0.57	0.53	-0.21
8,742.00	90.30	89.20	4,893.34	144.33	4,073.94	4,076.50	0.38	-0.32	-0.21
8,837.00	90.20	88.90	4,892.93	145.90	4,168.93	4,171.48	0.33	-0.11	-0.32
8,932.00	91.50	89.90	4,891.52	146.90	4,263.91	4,266.44	1.73	1.37	1.05
9,027.00	91.30	89.80	4,889.20	147.15	4,358.88	4,361.36	0.24	-0.21	-0.11
9,122.00	91.30	89.90	4,887.04	147.40	4,453.86	4,456.28	0.11	0.00	0.11
9,216.00	91.30	89.50	4,884.91	147.89	4,547.83	4,550.21	0.43	0.00	-0.43
9,311.00	91.10	89.10	4,882.92	149.05	4,642.80	4,645.17	0.47	-0.21	-0.42
9,406.00	91.30	89.00	4,880.93	150.62	4,737.77	4,740.13	0.24	0.21	-0.11
9,500.00	91.30	88.90	4,878.80	152.35	4,831.73	4,834.09	0.11	0.00	-0.11
9,595.00	91.50	88.40	4,876.47	154.58	4,926.67	4,929.05	0.57	0.21	-0.53
9,689.00	92.20	88.10	4,873.44	157.45	5,020.58	5,023.00	0.81	0.74	-0.32
9,784.00	93.60	87.40	4,868.63	161.18	5,115.38	5,117.88	1.65	1.47	-0.74
9,878.00	94.50	85.40	4,861.99	167.06	5,208.96	5,211.60	2.33	0.96	-2.13
9,904.00	94.50	85.20	4,859.95	169.19	5,234.79	5,237.49	0.77	0.00	-0.77
9,968.00	94.50	85.20	4,854.93	174.53	5,298.37	5,301.22	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/S (usft)	+E/W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Burch 954H Surface	0.00	0.00	0.00	0.00	0.00	664,258.10	591,058.00	32° 49' 32.81 N	104° 2' 12.86 W
- actual wellpath hits target center									
- Point									
Burch 954H BHL	0.00	0.00	4,854.93	174.53	5,298.37	664,432.63	596,356.37	32° 49' 34.39 N	104° 1' 10.76 W
- actual wellpath hits target center									
- Point									