



A GYRO TECHNOLOGIES INC. COMPANY

PO Box 261021
Corpus Christi, Texas 78426
(361) 767-0602 • (800) 606-GYRO • Fax (361) 767-0612

April 28, 2014

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

Attn: Kanicia Castillo

NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 28 2014

RECEIVED

30-015-41224

RE: **Red Stripe 5 Federal Com 2H**

Please find enclosed a copy of the survey from 0.00' to 3885.00' ran on the above referenced well.

Sincerely,

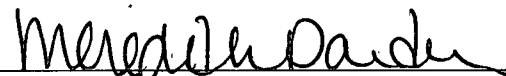

Keith Havelka
Operations

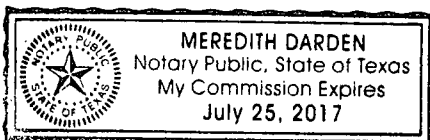
STATE OF TEXAS §

§

COUNTY OF NUECES §

This instrument was acknowledged before me on the 28th day of April,
A.D., 2014, by Keith Havelka.


Meredith Darden
Notary Public, State of Texas





Company: COG OPERATING
Lease/Well: RED STRIPE 5 FEDERAL COM/2H

Rig Name: UNITED 43
State/County: NEW MEXICO/EDDY
Latitude: 32.87, Longitude: -104.00
GRID North is 0.18 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: 4/28/2014 / 16:40

VES Survey International
West Texas
(432) 563-5444
Surveyor: Jordan Shelleby
Red Stripe 5 Federal Com 2H / API 30-015-41224

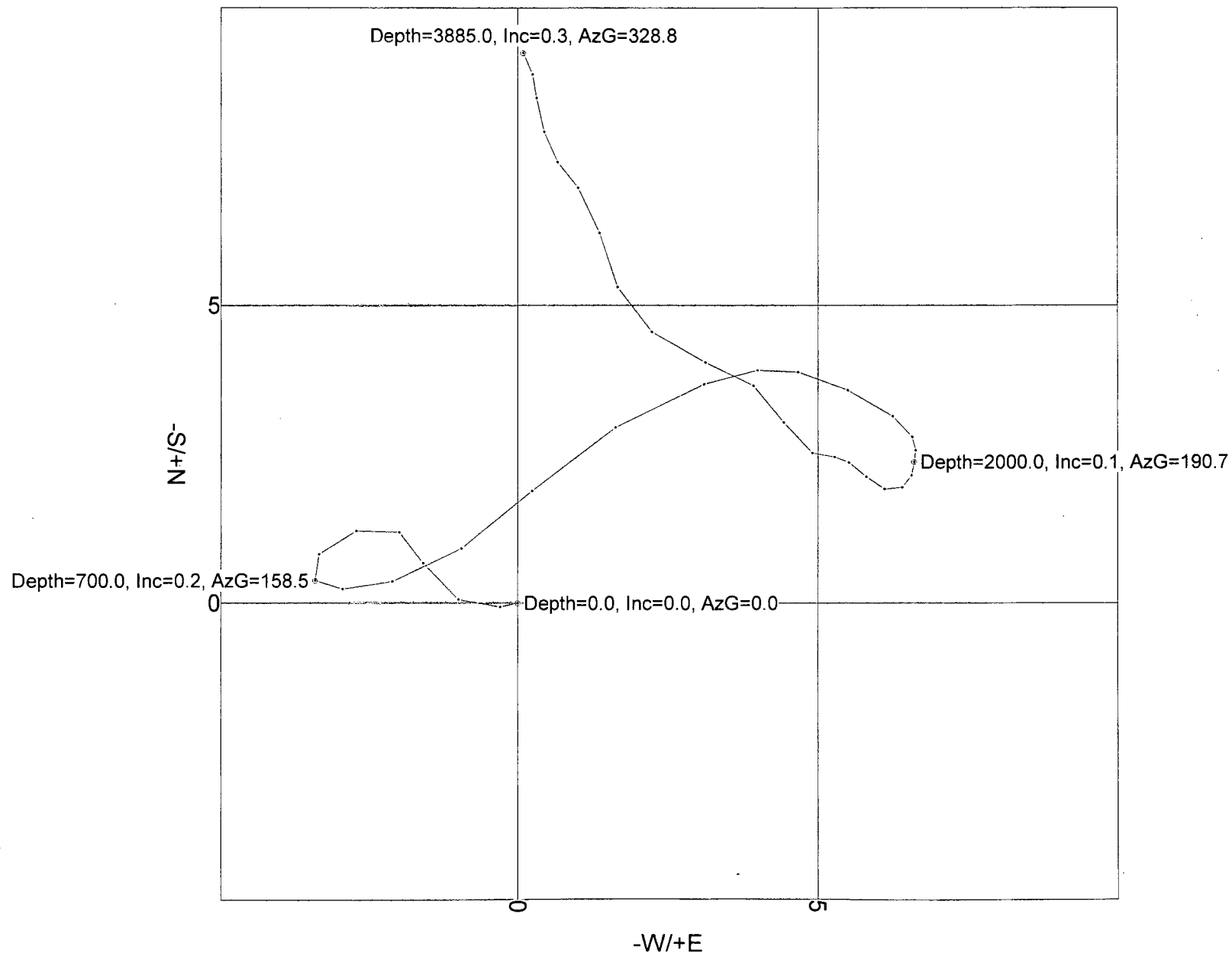
NM OIL CONSERVATION
ARTESIA DISTRICT
JUL 28 2014
RECEIVED

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	0.35	256.67	100.00	-0.07	-0.30	-0.07	0.31	256.67	0.35
200.00	0.51	296.45	200.00	0.06	-1.00	0.06	1.00	273.32	0.33
300.00	0.52	335.65	299.99	0.67	-1.59	0.67	1.72	292.85	0.35
400.00	0.28	296.75	399.99	1.19	-1.99	1.19	2.32	300.86	0.35
500.00	0.59	260.08	499.99	1.21	-2.71	1.21	2.97	294.03	0.40
600.00	0.37	202.13	599.98	0.82	-3.34	0.82	3.44	283.80	0.50
700.00	0.18	158.47	699.98	0.38	-3.41	0.38	3.43	276.32	0.27
800.00	0.46	89.73	799.98	0.24	-2.95	0.24	2.96	274.57	0.43
900.00	0.53	74.84	899.98	0.36	-2.09	0.36	2.12	279.74	0.15
1000.00	0.94	57.87	999.97	0.92	-0.95	0.92	1.32	314.06	0.46
1100.00	0.83	43.03	1099.96	1.88	0.24	1.88	1.90	7.22	0.25
1200.00	1.20	58.93	1199.94	2.95	1.63	2.95	3.37	28.93	0.47
1300.00	0.68	72.05	1299.93	3.68	3.10	3.68	4.81	40.13	0.56
1400.00	0.38	81.33	1399.92	3.91	3.99	3.91	5.59	45.60	0.32
1500.00	0.41	102.68	1499.92	3.88	4.67	3.88	6.07	50.26	0.15
1600.00	0.62	114.80	1599.92	3.58	5.50	3.58	6.56	56.99	0.23
1700.00	0.39	129.52	1699.91	3.14	6.25	3.14	7.00	63.37	0.26
1800.00	0.16	155.12	1799.91	2.79	6.57	2.79	7.14	66.99	0.25

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	0.11	182.09	1899.91	2.57	6.63	2.57	7.11	68.85	0.08
2000.00	0.12	190.65	1999.91	2.37	6.61	2.37	7.02	70.30	0.02
2100.00	0.15	191.74	2099.91	2.14	6.56	2.14	6.90	71.93	0.03
2200.00	0.17	238.32	2199.91	1.94	6.41	1.94	6.70	73.16	0.12
2300.00	0.20	285.61	2299.91	1.91	6.12	1.91	6.41	72.65	0.15
2400.00	0.24	319.60	2399.91	2.12	5.81	2.12	6.19	69.99	0.13
2500.00	0.20	298.45	2499.91	2.36	5.53	2.36	6.01	66.88	0.09
2600.00	0.11	276.05	2599.91	2.45	5.28	2.45	5.82	65.08	0.11
2700.00	0.33	281.87	2699.91	2.52	4.91	2.52	5.52	62.81	0.22
2800.00	0.56	336.66	2799.91	3.03	4.43	3.03	5.37	55.62	0.46
2900.00	0.41	297.93	2899.90	3.65	3.92	3.65	5.36	47.06	0.35
3000.00	0.62	294.59	2999.90	4.04	3.12	4.04	5.10	37.66	0.22
3100.00	0.56	305.77	3099.89	4.55	2.23	4.55	5.07	26.10	0.13
3200.00	0.57	339.87	3199.89	5.31	1.66	5.31	5.56	17.37	0.33
3300.00	0.52	344.14	3299.88	6.22	1.36	6.22	6.37	12.36	0.06
3400.00	0.45	323.28	3399.88	6.97	1.00	6.97	7.04	8.19	0.19
3500.00	0.18	318.34	3499.88	7.40	0.66	7.40	7.43	5.13	0.27
3600.00	0.47	342.94	3599.88	7.92	0.44	7.92	7.93	3.18	0.32
3700.00	0.20	358.27	3699.88	8.48	0.31	8.48	8.49	2.12	0.29
3800.00	0.27	344.31	3799.87	8.88	0.25	8.88	8.88	1.58	0.09
3885.00	0.27	328.81	3884.87	9.24	0.09	9.24	9.24	0.55	0.08



VES Survey International
West Texas
(432) 563-5444
Surveyor: Jordan Shelleby
Red Stripe 5 Federal Com 2H / API 30-015-41224



VES Survey Date: 04/13/2014



Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well: Red Stripe 5, Fed Com Well 2H
Project:	Eddy County, New Mexico	TVD Reference:	RKB=3703+12.5 @ 3715.50usft (United #43)
Site:	Red Stripe 5 Fed Com	MD Reference:	RKB=3703+12.5 @ 3715.50usft (United #43)
Well:	Red Stripe 5, Fed Com Well 2H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	EDM 5000.1 Database

Project	Eddy County, New Mexico		
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		Red Stripe 5 Fed Com			
Site Position:		Northing:		679,626.90 usft	
From:		Easting:		601,564.20 usft	
Position Uncertainty:		Slot Radius:		13-3/16 "	
Map				Latitude:	
				32.86793963	
				Longitude:	
				-104.00254828	
0.00 usft				Grid Convergence:	
				0.18 °	

Well:	Red Stripe 5 Fed Com Well 2H					
Well Position	+N/-S	0.00 usft	Northing:	679,626.90 usft	Latitude:	32.86793963
	+E/-W	0.00 usft	Easting:	601,564.20 usft	Longitude:	-104.00254828
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,703.00 usft	

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/1/2014	7.49	60.64	48,674

Design:		Surveys:Original Hole			
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	89.37	



Standard_report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well: Red Stripe 5 Fed. Com. Well 2H
Project:	Eddy County, New Mexico	TVD Reference:	RKB=3703+12.5 @ 3715'50usft (United #43)
Site:	Red Stripe 5 Fed. Com	MD Reference:	RKB=3703+12.5 @ 3715'50usft (United #43)
Well:	Red Stripe 5 Fed. Com Well 2H	North Reference:	Grid:
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	EDM 5000.1 Database

Survey Program		Date: 4/24/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	3,800.00	Gyro (Original Hole)	NS-GYRO-MS	North sensing gyrocompassing m/s
3,950.00	9,375.00	MWD (Original Hole)	MWD	MWD - Standard

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	679,626.90	601,564.20
100.00	0.35	256.67	100.00	-0.07	-0.30	0.35	-0.30	679,626.83	601,563.90
Gyro									
200.00	0.51	296.45	200.00	0.06	-0.99	0.33	-0.99	679,626.96	601,563.21
300.00	0.52	335.65	299.99	0.67	-1.58	0.35	-1.57	679,627.57	601,562.62
400.00	0.28	296.75	399.99	1.19	-1.98	0.35	-1.97	679,628.09	601,562.22
500.00	0.59	260.08	499.99	1.21	-2.71	0.40	-2.70	679,628.11	601,561.49
600.00	0.37	202.13	599.98	0.83	-3.34	0.50	-3.33	679,627.73	601,560.86
700.00	0.18	158.47	699.98	0.38	-3.40	0.27	-3.40	679,627.28	601,560.80
800.00	0.46	89.73	799.98	0.24	-2.94	0.43	-2.94	679,627.14	601,561.26
900.00	0.53	74.84	899.98	0.36	-2.09	0.15	-2.09	679,627.26	601,562.11
1,000.00	0.94	57.87	999.97	0.92	-0.95	0.46	-0.94	679,627.82	601,563.25
1,100.00	0.83	43.03	1,099.96	1.88	0.23	0.25	0.26	679,628.78	601,564.43
1,200.00	1.20	58.93	1,199.94	2.95	1.63	0.46	1.66	679,629.85	601,565.83
1,300.00	0.68	72.05	1,299.93	3.68	3.09	0.56	3.13	679,630.58	601,567.29
1,400.00	0.38	81.33	1,399.92	3.91	3.98	0.31	4.02	679,630.81	601,568.18
1,500.00	0.41	102.68	1,499.92	3.88	4.66	0.15	4.70	679,630.78	601,568.86
1,600.00	0.62	114.80	1,599.92	3.57	5.50	0.24	5.54	679,630.47	601,569.70
1,700.00	0.39	129.52	1,699.91	3.13	6.25	0.26	6.28	679,630.03	601,570.45
1,800.00	0.16	155.12	1,799.91	2.79	6.57	0.26	6.60	679,629.69	601,570.77
1,900.00	0.11	182.09	1,899.91	2.56	6.63	0.08	6.65	679,629.46	601,570.83



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Red Stripe 5 Fed Com Well 2H
Project:	Eddy County New Mexico	TVD Reference:	RKB=3703+12.5'@ 3715.50usft (United #43)
Site:	Red Stripe 5 Fed Com	MD Reference:	RKB=3703+12.5'@ 3715.50usft (United #43)
Well:	Red Stripe 5 Fed Com Well 2H	North Reference:	Grid
Wellbore:	Original Hole	Survey/Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	EDM:5000.1 Database

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)	
2,000.00	0.12	190.65	1,999.91	2.37	6.60	0.02	6.63	679,629.27	601,570.80	
2,100.00	0.15	191.74	2,099.91	2.13	6.56	0.03	6.58	679,629.03	601,570.76	
2,200.00	0.17	238.32	2,199.91	1.93	6.41	0.13	6.43	679,628.83	601,570.61	
2,300.00	0.20	285.61	2,299.91	1.90	6.11	0.15	6.13	679,628.80	601,570.31	
2,400.00	0.24	319.60	2,399.91	2.10	5.81	0.13	5.83	679,629.00	601,570.01	
2,500.00	0.20	298.45	2,499.91	2.35	5.52	0.09	5.54	679,629.25	601,569.72	
2,600.00	0.11	276.05	2,599.91	2.44	5.27	0.11	5.30	679,629.34	601,569.47	
2,700.00	0.33	281.87	2,699.91	2.51	4.89	0.22	4.92	679,629.41	601,569.09	
2,800.00	0.56	336.66	2,799.91	3.02	4.42	0.46	4.45	679,629.92	601,568.62	
2,900.00	0.41	297.93	2,899.90	3.63	3.91	0.35	3.95	679,630.53	601,568.11	
3,000.00	0.62	294.59	2,999.90	4.03	3.10	0.21	3.14	679,630.93	601,567.30	
3,100.00	0.56	305.77	3,099.89	4.54	2.21	0.13	2.26	679,631.44	601,566.41	
3,200.00	0.57	339.87	3,199.89	5.20	1.64	0.33	1.70	679,632.19	601,565.84	
3,300.00	0.52	344.14	3,299.88	6.19	1.35	0.06	1.42	679,633.09	601,565.55	
3,400.00	0.45	323.28	3,399.88	6.94	0.99	0.19	1.06	679,633.84	601,565.19	
3,500.00	0.18	318.34	3,499.88	7.38	0.65	0.27	0.73	679,634.28	601,564.85	
3,600.00	0.47	342.94	3,599.88	7.89	0.42	0.32	0.51	679,634.79	601,564.62	
3,700.00	0.20	358.27	3,699.88	8.45	0.30	0.28	0.39	679,635.35	601,564.50	
3,800.00	0.27	344.31	3,799.88	8.85	0.23	0.09	0.33	679,635.75	601,564.43	
3,950.00	0.40	326.20	3,949.87	9.63	-0.16	0.11	-0.05	679,636.53	601,564.04	
MWD surveys										
3,981.00	0.50	336.40	3,980.87	9.84	-0.27	0.41	-0.16	679,636.74	601,563.93	
4,013.00	0.50	9.10	4,012.87	10.11	-0.31	0.88	-0.19	679,637.01	601,563.89	
4,044.00	1.80	83.20	4,043.86	10.30	0.20	5.58	0.31	679,637.20	601,564.40	
4,076.00	4.20	86.80	4,075.82	10.43	1.87	7.52	1.98	679,637.33	601,566.07	
4,107.00	8.10	85.00	4,106.63	10.68	5.18	12.59	5.30	679,637.58	601,569.38	
4,139.00	11.10	84.30	4,138.18	11.18	10.49	9.38	10.61	679,638.08	601,574.69	



Standard_report



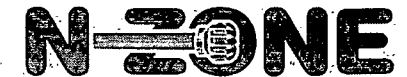
Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well: Red Stripe 5 Fed Com Well 2H
Project:	Eddy County, New Mexico	TVD Reference:	RKB=3703+12.5 @ 3715.50usft (United #43)
Site:	Red Stripe 5 Fed Com	MD Reference:	RKB=3703+12.5 @ 3715.50usft (United #43)
Well:	Red Stripe 5 Fed Com Well 2H	North Reference:	Grid
Wellbore:	Original Hole	Survey/Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	EDM 5000.1 Database

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)
4,170.00	15.00	82.20	4,168.38	12.02	17.44	12.67	17.57	679,638.92	601,581.64
4,202.00	18.10	82.90	4,199.05	13.20	26.48	9.71	26.62	679,640.10	601,590.68
4,233.00	21.10	86.10	4,228.25	14.17	36.82	10.27	36.98	679,641.07	601,601.02
4,265.00	24.50	89.60	4,257.74	14.61	49.21	11.43	49.37	679,641.51	601,613.41
4,296.00	26.40	93.40	4,285.74	14.25	62.52	8.08	62.67	679,641.15	601,626.72
4,328.00	28.00	96.30	4,314.20	13.00	77.09	6.49	77.23	679,639.90	601,641.29
4,359.00	29.20	93.40	4,341.42	11.76	91.87	5.92	92.00	679,638.66	601,656.07
4,391.00	31.70	90.30	4,369.00	11.25	108.07	9.22	108.19	679,638.15	601,672.27
4,423.00	34.70	88.20	4,395.78	11.49	125.59	10.04	125.71	679,638.39	601,689.79
4,454.00	36.80	86.80	4,420.93	12.29	143.68	7.27	143.81	679,639.19	601,707.88
4,486.00	40.30	87.10	4,445.96	13.35	163.59	10.95	163.73	679,640.25	601,727.79
4,517.00	43.80	87.10	4,468.97	14.40	184.33	11.29	184.47	679,641.30	601,748.53
4,549.00	47.30	87.10	4,491.38	15.55	207.14	10.94	207.30	679,642.45	601,771.34
4,580.00	51.60	87.50	4,511.53	16.66	230.66	13.91	230.83	679,643.56	601,794.86
4,612.00	55.80	88.50	4,530.47	17.55	256.43	13.36	256.61	679,644.45	601,820.63
4,643.00	60.40	88.90	4,546.85	18.15	282.73	14.88	282.92	679,645.05	601,846.93
4,675.00	64.20	89.60	4,561.72	18.51	311.06	12.03	311.24	679,645.41	601,875.26
4,706.00	68.30	89.90	4,574.20	18.64	339.43	13.26	339.61	679,645.54	601,903.63
4,738.00	72.70	89.60	4,584.88	18.77	369.58	13.78	369.77	679,645.67	601,933.78
4,770.00	76.90	89.60	4,593.27	18.98	400.46	13.12	400.64	679,645.88	601,964.66
4,790.00	79.48	89.15	4,597.36	19.20	420.03	13.09	420.22	679,646.10	601,984.23
330 Hard line intercept @ 4790 MD									
4,801.00	80.90	88.90	4,599.23	19.38	430.87	13.09	431.05	679,646.28	601,995.07
4,833.00	85.00	88.50	4,603.16	20.10	462.61	12.87	462.80	679,647.00	602,026.81
4,941.00	90.60	87.10	4,607.31	24.25	570.41	5.34	570.64	679,651.15	602,134.61
5,036.00	91.50	86.40	4,605.56	29.63	665.23	1.20	665.52	679,656.53	602,229.43
5,131.00	91.80	87.10	4,602.83	35.02	760.04	0.80	760.38	679,661.92	602,324.24



Company:	COG Operating, LLC	Local Co-ordinate/Reference:	Well: Red Stripe 5 Fed Com Well 2H
Project:	Eddy County New Mexico	TVD Reference:	RKB=3703+12.5 @ 37.15:50usft (United #43)
Site:	Red Stripe 5 Fed Com	MD Reference:	RKB=3703+12.5 @ 37.15:50usft (United #43)
Well:	Red Stripe 5 Fed Com Well 2H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	EDM-5000.1 Database

Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V: Sec (usft)	Northing (usft)	Easting (usft)
5,226.00	92.00	86.40	4,599.68	40.40	854.84	0.77	855.23	679,667.30	602,419.04
5,320.00	92.00	86.40	4,596.40	46.30	948.59	0.00	949.05	679,673.20	602,512.79
5,415.00	92.20	85.70	4,592.92	52.84	1,043.30	0.77	1,043.82	679,679.74	602,607.50
5,510.00	91.70	87.10	4,589.68	58.80	1,138.06	1.56	1,138.64	679,685.70	602,702.26
5,605.00	92.00	88.90	4,586.62	62.41	1,232.95	1.92	1,233.56	679,689.01	602,797.15
5,699.00	92.40	89.20	4,583.01	63.67	1,326.87	0.53	1,327.48	679,690.57	602,891.07
5,794.00	91.70	90.30	4,579.61	64.08	1,421.80	1.37	1,422.42	679,690.98	602,986.00
5,875.00	91.70	90.60	4,577.21	63.45	1,502.76	0.37	1,503.37	679,690.35	603,066.96
5,970.00	92.20	90.60	4,573.98	62.45	1,597.70	0.53	1,598.29	679,689.35	603,161.90
6,064.00	92.00	89.20	4,570.53	62.62	1,691.64	1.50	1,692.22	679,689.52	603,255.84
6,159.00	92.00	91.00	4,567.22	62.45	1,786.57	1.89	1,787.15	679,689.35	603,350.77
6,254.00	92.20	91.30	4,563.73	60.55	1,881.49	0.38	1,882.04	679,687.45	603,445.69
6,348.00	92.00	91.70	4,560.29	58.09	1,975.40	0.48	1,975.92	679,684.99	603,539.60
6,443.00	93.10	91.70	4,556.06	55.27	2,070.26	1.16	2,070.74	679,682.17	603,634.46
6,537.00	91.30	91.30	4,552.45	52.81	2,164.15	1.96	2,164.60	679,679.71	603,728.35
6,632.00	91.70	90.60	4,549.97	51.24	2,259.11	0.85	2,259.53	679,678.14	603,823.31
6,727.00	92.20	91.00	4,546.73	49.91	2,354.04	0.67	2,354.45	679,676.81	603,918.24
6,821.00	92.40	90.60	4,542.96	48.60	2,447.96	0.48	2,448.34	679,675.50	604,012.16
6,915.00	92.60	91.00	4,538.86	47.29	2,541.86	0.48	2,542.22	679,674.19	604,106.06
7,010.00	90.40	88.90	4,536.38	47.38	2,636.81	3.20	2,637.18	679,674.28	604,201.01
7,104.00	90.80	89.20	4,535.39	48.93	2,730.80	0.53	2,731.17	679,675.83	604,295.00
7,198.00	91.30	89.20	4,533.67	50.25	2,824.77	0.53	2,825.15	679,677.15	604,388.97
7,293.00	91.80	89.90	4,531.10	50.99	2,919.73	0.91	2,920.12	679,677.89	604,483.93
7,388.00	91.10	89.20	4,528.69	51.74	3,014.70	1.04	3,015.08	679,678.64	604,578.90
7,483.00	88.70	88.20	4,528.86	53.89	3,109.67	2.74	3,110.07	679,680.79	604,673.87
7,577.00	89.60	87.10	4,530.26	57.75	3,203.57	1.51	3,204.01	679,684.65	604,767.77
7,671.00	90.40	86.80	4,530.26	62.75	3,297.44	0.91	3,297.93	679,689.65	604,861.64



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well Red Stripe 5 Fed Com Well 2H
Project:	Eddy County, New Mexico	TVD Reference:	RKB=3703+12.5 @ 3715.50usft (United #43)
Site:	Red Stripe 5 Fed Com	MD Reference:	RKB=3703+12.5 @ 3715.50usft (United #43)
Well:	Red Stripe 5 Fed Com Well 2H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	EDM 5000.1 Database

Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)
7,766.00	90.80	86.40	4,529.26	68.38	3,392.27	0.60	3,392.81	679,695.28	604,956.47
7,861.00	91.10	87.50	4,527.69	73.44	3,487.12	1.20	3,487.71	679,700.34	605,051.32
7,955.00	90.30	90.30	4,526.54	75.24	3,581.08	3.10	3,581.69	679,702.14	605,145.28
8,050.00	90.30	90.60	4,526.04	74.49	3,676.08	0.32	3,676.68	679,701.39	605,240.28
8,145.00	90.60	90.60	4,525.29	73.50	3,771.07	0.32	3,771.65	679,700.40	605,335.27
8,240.00	91.10	90.60	4,523.88	72.50	3,866.05	0.53	3,866.62	679,699.40	605,430.25
8,334.00	91.10	92.00	4,522.08	70.37	3,960.01	1.49	3,960.54	679,697.27	605,524.21
8,429.00	90.40	89.90	4,520.84	68.80	4,054.98	2.33	4,055.49	679,695.70	605,619.18
8,523.00	92.60	90.60	4,518.37	68.39	4,148.94	2.46	4,149.45	679,695.29	605,713.14
8,618.00	92.60	90.60	4,514.07	67.39	4,243.84	0.00	4,244.33	679,694.29	605,808.04
8,712.00	90.60	91.30	4,511.44	65.84	4,337.79	2.25	4,338.25	679,692.74	605,901.99
8,807.00	91.10	92.00	4,510.03	63.10	4,432.74	0.91	4,433.16	679,690.00	605,996.94
8,901.00	91.30	92.00	4,508.06	59.82	4,526.66	0.21	4,527.04	679,686.72	606,090.86
8,996.00	91.00	92.00	4,506.16	56.51	4,621.58	0.32	4,621.92	679,683.41	606,185.78
9,091.00	91.30	89.90	4,504.25	54.93	4,716.54	2.23	4,716.86	679,681.83	606,280.74
9,185.00	91.10	90.30	4,502.28	54.77	4,810.52	0.48	4,810.83	679,681.67	606,374.72
9,280.00	91.00	90.60	4,500.54	54.02	4,905.50	0.33	4,905.80	679,680.92	606,469.70
9,320.00	91.00	90.30	4,499.84	53.71	4,945.50	0.75	4,945.79	679,680.61	606,509.70
9,375.00	91.00	90.30	4,498.88	53.42	5,000.49	0.00	5,000.77	679,680.32	606,564.69
Survey projected to 9375.00 MD									



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Red Stripe 5 Fed Com Well 2H
Project:	Eddy County, New Mexico	TVD Reference:	RKB=3703+12.5 @ 3715.50usft (United #43)
Site:	Red Stripe 5 Fed Com	MD Reference:	RKB=3703+12.5 @ 3715.50usft (United #43)
Well:	Red Stripe 5 Fed Com Well 2H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	EDM/5000:1 Database

Design/Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
100.00	100.00	-0.07	-0.30	Gyro
3,950.00	3,949.87	9.63	-0.16	MWD surveys
4,790.00	4,597.36	19.20	420.03	330 Hard line intercept @ 4790 MD
9,375.00	4,498.88	53.42	5,000.49	Survey projected to 9375.00 MD