

A GYRO TECHNOLOGIES INC. COMPANY

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

May 7, 2014

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

NM OIL CONSERVATION
ARTESIA DISTRICT

AUG 01 2014

RECEIVED

Attn: Kanicia Castillo

30-015-42241

RE: Burch Keely Unit 956H

Please find enclosed a copy of the survey from 0.00' to 4258.00' ran on the
above referenced well.

Sincerely,

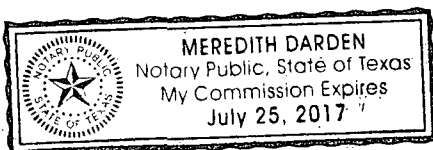
Keith Havelka
Operations

STATE OF TEXAS §

COUNTY OF NUECES §

This instrument was acknowledged before me on the 7th day of May,
A.D., 2014, by Keith Havelka.

Meredith Darden
Meredith Darden
Notary Public, State of Texas.





Company: Concho
Lease/Well: Burch Keely Unit/956H
Location: S23 T17S R29E
Rig Name: United 43
State/County: New Mexico/Eddy
Latitude: 32.82, Longitude: -104.04
GRID North is 0.16 Degrees East of True North
VS-Azi: 0.00 Degrees



NM OIL CONSERVATION
ARTESIA DISTRICT
AUG 01 2014
RECEIVED

Depth Reference : R.K.B. = 14 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 5/7/2014 / 13:59

VES Survey International
Midland, TX
432-563-5444

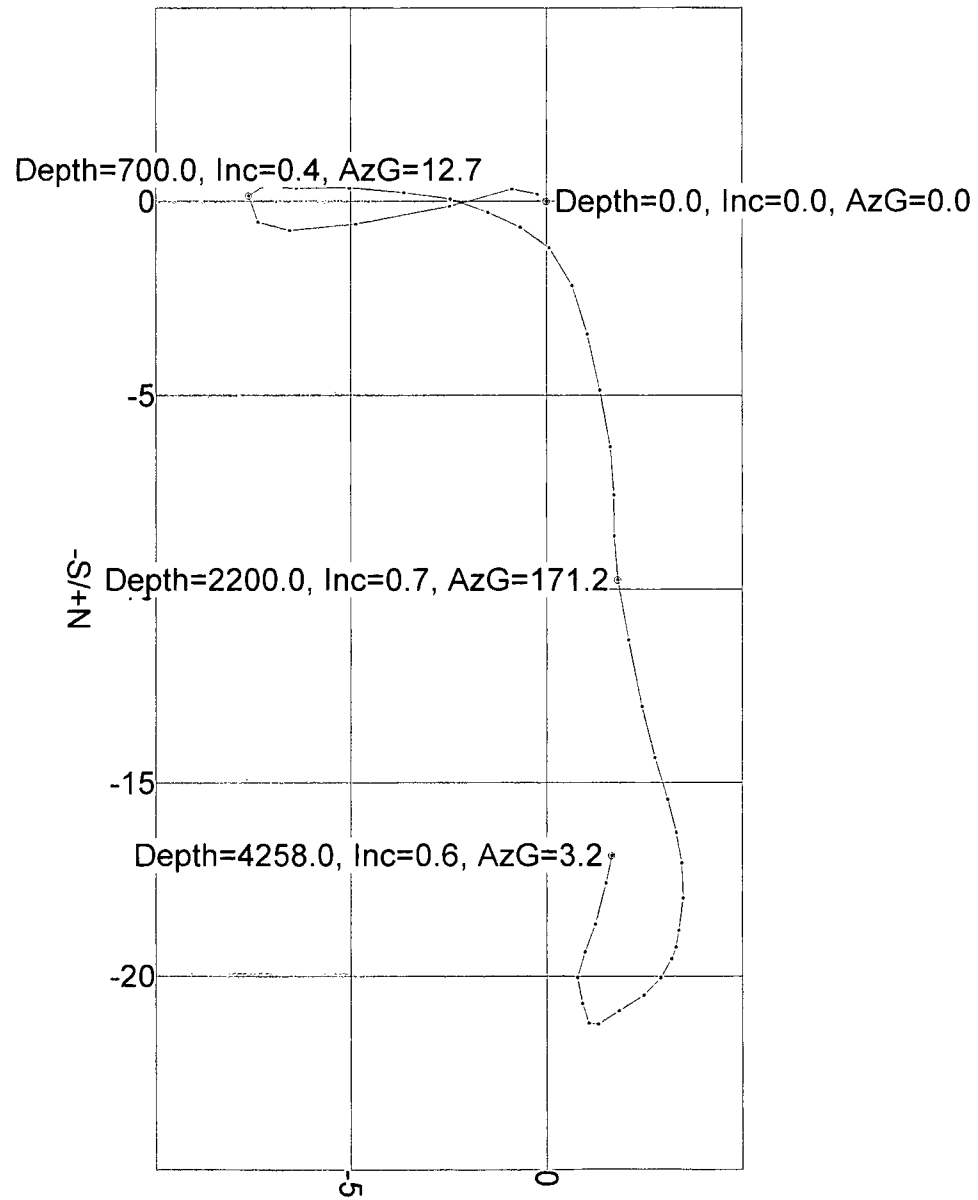
Surveyor: Andrew Askew
Burch Keely Unit 956H / API 30-015-42241

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	0.34	306.58	100.00	0.17	-0.24	0.17	0.29	306.58	0.34
200.00	0.48	265.23	200.00	0.31	-0.88	0.31	0.94	289.59	0.31
300.00	1.44	250.76	299.98	-0.13	-2.48	-0.13	2.49	266.92	0.98
400.00	1.37	267.89	399.95	-0.59	-4.87	-0.59	4.90	263.07	0.42
500.00	0.60	256.18	499.94	-0.76	-6.57	-0.76	6.61	263.40	0.80
600.00	0.53	318.31	599.93	-0.54	-7.38	-0.54	7.40	265.85	0.59
700.00	0.39	12.71	699.93	0.14	-7.62	0.14	7.62	271.06	0.44
800.00	0.34	107.89	799.93	0.38	-7.26	0.38	7.27	272.98	0.54
900.00	0.68	85.38	899.92	0.33	-6.39	0.33	6.40	272.99	0.38
1000.00	0.87	92.10	999.92	0.35	-5.04	0.35	5.05	274.02	0.21
1100.00	0.75	99.36	1099.91	0.22	-3.64	0.22	3.65	273.46	0.16
1200.00	0.62	95.68	1199.90	0.06	-2.46	0.06	2.46	271.42	0.14
1300.00	0.59	124.64	1299.89	-0.29	-1.50	-0.29	1.53	259.19	0.30
1400.00	0.47	103.39	1399.89	-0.68	-0.67	-0.68	0.95	224.98	0.23
1500.00	0.63	142.00	1499.88	-1.20	0.06	-1.20	1.21	176.97	0.39
1600.00	0.67	155.22	1599.88	-2.17	0.65	-2.17	2.27	163.36	0.16
1700.00	0.83	168.98	1699.87	-3.42	1.03	-3.42	3.57	163.16	0.24
1800.00	0.86	166.27	1799.86	-4.87	1.35	-4.87	5.05	164.46	0.05

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	0.85	173.01	1899.85	-6.33	1.62	-6.33	6.54	165.63	0.10
2000.00	0.57	180.06	1999.84	-7.57	1.71	-7.57	7.76	167.26	0.29
2100.00	0.64	178.94	2099.83	-8.63	1.72	-8.63	8.80	168.72	0.07
2200.00	0.65	171.24	2199.83	-9.76	1.82	-9.76	9.92	169.44	0.09
2300.00	1.16	169.61	2299.81	-11.32	2.09	-11.32	11.51	169.55	0.51
2400.00	0.85	167.55	2399.80	-13.04	2.43	-13.04	13.26	169.44	0.32
2500.00	0.71	163.43	2499.79	-14.35	2.77	-14.35	14.61	169.09	0.15
2600.00	0.58	163.06	2599.78	-15.43	3.09	-15.43	15.73	168.67	0.13
2700.00	0.43	169.37	2699.78	-16.28	3.31	-16.28	16.62	168.52	0.16
2800.00	0.49	170.12	2799.78	-17.08	3.45	-17.08	17.42	168.58	0.06
2900.00	0.56	185.24	2899.77	-17.98	3.48	-17.98	18.32	169.05	0.15
3000.00	0.40	190.58	2999.77	-18.81	3.37	-18.81	19.11	169.84	0.16
3100.00	0.10	181.91	3099.77	-19.25	3.30	-19.25	19.53	170.26	0.30
3200.00	0.27	209.39	3199.77	-19.55	3.18	-19.55	19.80	170.75	0.18
3300.00	0.38	208.97	3299.77	-20.04	2.91	-20.04	20.25	171.74	0.11
3400.00	0.37	239.30	3399.76	-20.49	2.47	-20.49	20.64	173.12	0.19
3500.00	0.49	236.20	3499.76	-20.89	1.84	-20.89	20.97	174.96	0.12
3600.00	0.24	239.02	3599.76	-21.24	1.31	-21.24	21.28	176.47	0.25
3700.00	0.17	335.65	3699.76	-21.21	1.07	-21.21	21.24	177.12	0.31
3800.00	0.44	345.72	3799.76	-20.70	0.91	-20.70	20.72	177.48	0.28
3900.00	0.34	353.04	3899.75	-20.03	0.78	-20.03	20.04	177.78	0.11
4000.00	0.48	32.55	3999.75	-19.37	0.97	-19.37	19.40	177.14	0.31
4100.00	0.41	5.76	4099.75	-18.66	1.23	-18.66	18.70	176.22	0.22
4200.00	0.86	18.40	4199.74	-17.59	1.51	-17.59	17.65	175.11	0.46
4258.00	0.59	3.19	4257.74	-16.88	1.66	-16.88	16.96	174.39	0.57



VES Survey International
Midland, TX
432-563-5444
Surveyor: Andrew Askew
Burch Keely Unit 956H / API 30-015-42241



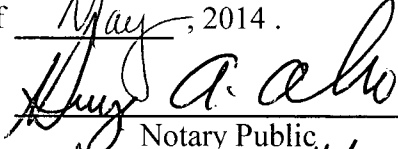
-W/+E
VES Survey Date: 04/27/2014

WELL NAME AND NUMBER **Burch Keely Unit No. 956H**LOCATION **Section 23, T17S, R29E, Unit H, 1650 FNL, 165 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
1.5° @ 275'	23.4° @ 4580'	89.2° @ 6625'
.1° @ 649'	26.7° @ 4611'	89.2° @ 6720'
1.0° @ 944'	29.9° @ 4643'	91.1° @ 7004'
.3° @ 1205'	48.7° @ 4862'	90.8° @ 7098'
.1° @ 1440'	55.10° @ 4925'	91.0° @ 7193'
.6° @ 1715'	58.10° @ 4957'	91.7° @ 7287'
.8° @ 2004'	77.8° @ 5177'	92.2° @ 7382'
.8° @ 2250'	81.8° @ 5209'	93.4° @ 7476'
.6° @ 2565'	85.3° @ 5250'	93.1° @ 7759'
.3° @ 2875'	90.6° @ 5313'	93.8° @ 7854'
.2° @ 3128'	90.6° @ 5408'	91.0° @ 8138'
.4° @ 3391'	91.0° @ 5503'	91.3° @ 8232'
.3° @ 3737'	91.0° @ 5597'	91.7° @ 8326'
.7° @ 3990'	90.8° @ 5692'	91.0° @ 8241'
.7° @ 4269'	90.8° @ 6152'	90.6° @ 8515'
.9° @ 4358'	90.6° @ 6246'	90.4° @ 8610'
2.1° @ 4390'	89.2° @ 6341'	91.0° @ 8895'
4.9° @ 4421'	89.4° @ 6531'	89.9° @ 9084'

Drilling Contractor- **UNITED DRILLING, INC.**By: 
(Luisa Noriega)Title: Asst. Office ManagerSubscribed and sworn to before me this 8th day of May, 2014.


Notary Public
Chaves NM
County State

My Commission Expires:

EXP 12-10-16

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:

[illegible]

Drilling Contractor- **UNITED DRILLING, INC.**

By: Luisa Noriega
(Luisa Noriega)

Title: Asst. Office Manager

Subscribed and sworn to before me this 8th day of May, 2014.

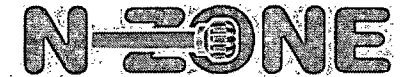
May, 2014.
Denzel A. Chaves
Notary Public
Chaves NM
County State

My Commission Expires: _____

Exp-12-10-16



Standard_report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Burch Keely Unit Well No. 956H
Project:	Eddy County, New Mexico	TVD Reference:	RKB=3592+12.5 @ 3604.50usft (United #43)
Site:	Burch Keely	MD Reference:	RKB=3592+12.5 @ 3604.50usft (United #43)
Well:	Burch Keely Unit Well No. 956H	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		Burch Keely			
Site Position:		Northing:		663,867.50 usft	
From:	Map	Easting:		596,362.80 usft	
Position Uncertainty:		Slot Radius:		13-3/16 "	
				Latitude:	
				Longitude:	
				Grid Convergence:	
				32.82466575	
				-104.01964094	
				0.17 °	

Well: Burch Keely Unit Well No. 956H, Surf Loc 1650 FNL 1651 FEL Sect 23						
Well Position	+N-S	0.00 usft	Northing:	663,115.50 usft	Latitude:	32.82264075
	+E-W	0.00 usft	Easting:	591,067.40 usft	Longitude:	-104.03688586
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,592.00 usft	

Wellbore	Original hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/16/2014	7.50	60.59	48,640

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	89.99



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Well:	Burch Keely Unit Well No. 956H	North Reference:	Grid
Wellbore:	Original hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original hole	Database:	EDM, 5000.1 Database

Survey Program		Date	5/6/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	4,258.00	Gyro (Original hole)	NS-GYRO-MS	North sensing gyrocompassing m/s	
4,327.00	9,875.00	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	663,115.50	591,067.40
100.00	0.34	306.58	100.00	0.18	-0.24	0.34	-0.24	663,115.68	591,067.16
Gyro									
200.00	0.48	265.23	200.00	0.32	-0.89	0.32	-0.89	663,115.82	591,066.51
300.00	1.44	250.76	299.98	-0.13	-2.50	0.98	-2.50	663,115.37	591,064.90
400.00	1.37	267.89	399.95	-0.59	-4.88	0.42	-4.88	663,114.91	591,062.52
500.00	0.60	256.18	499.94	-0.76	-6.58	0.79	-6.58	663,114.74	591,060.82
600.00	0.53	318.31	599.93	-0.54	-7.40	0.59	-7.40	663,114.96	591,060.00
700.00	0.39	12.71	699.93	0.14	-7.63	0.44	-7.63	663,115.64	591,059.77
800.00	0.34	107.89	799.93	0.38	-7.27	0.54	-7.27	663,115.88	591,060.13
900.00	0.68	85.38	899.92	0.34	-6.40	0.39	-6.40	663,115.84	591,061.00
1,000.00	0.87	92.10	999.92	0.36	-5.05	0.21	-5.05	663,115.86	591,062.35
1,100.00	0.75	99.36	1,099.91	0.22	-3.64	0.16	-3.64	663,115.72	591,063.76
1,200.00	0.62	95.68	1,199.90	0.06	-2.46	0.14	-2.46	663,115.56	591,064.94
1,300.00	0.59	124.64	1,299.89	-0.28	-1.50	0.30	-1.50	663,115.22	591,065.90
1,400.00	0.47	103.39	1,399.89	-0.67	-0.68	0.23	-0.68	663,114.83	591,066.72
1,500.00	0.63	142.00	1,499.88	-1.20	0.06	0.39	0.06	663,114.30	591,067.46
1,600.00	0.67	155.22	1,599.88	-2.16	0.64	0.15	0.64	663,113.34	591,068.04
1,700.00	0.83	168.98	1,699.87	-3.40	1.03	0.24	1.03	663,112.10	591,068.43
1,800.00	0.86	166.27	1,799.86	-4.84	1.34	0.05	1.34	663,110.66	591,068.74
1,900.00	0.85	173.01	1,899.85	-6.31	1.61	0.10	1.61	663,109.19	591,069.01



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well Burch Keely Unit Well No. 956H
Project:	Eddy County, New Mexico	TVD Reference:	RKB=3592+12.5 @ 3604.50usft (United #43)
Site:	Burch Keely	MD Reference:	RKB=3592+12.5 @ 3604.50usft (United #43)
Well:	Burch Keely Unit Well No. 956H	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	0.57	180.06	1,999.84	-7.54	1.70	0.29	1.70	663,107.96	591,069.10	
2,100.00	0.64	178.94	2,099.83	-8.60	1.71	0.07	1.71	663,106.90	591,069.11	
2,200.00	0.65	171.24	2,199.83	-9.72	1.81	0.09	1.81	663,105.78	591,069.21	
2,300.00	1.16	169.61	2,299.82	-11.27	2.08	0.51	2.08	663,104.23	591,069.48	
2,400.00	0.85	167.55	2,399.80	-12.99	2.42	0.31	2.42	663,102.51	591,069.82	
2,500.00	0.71	163.43	2,499.79	-14.31	2.76	0.15	2.76	663,101.19	591,070.16	
2,600.00	0.58	163.06	2,599.78	-15.39	3.08	0.13	3.08	663,100.11	591,070.48	
2,700.00	0.43	169.37	2,699.78	-16.24	3.30	0.16	3.30	663,099.26	591,070.70	
2,800.00	0.49	170.12	2,799.78	-17.03	3.44	0.06	3.44	663,098.47	591,070.84	
2,900.00	0.56	185.24	2,899.77	-17.94	3.47	0.15	3.47	663,097.56	591,070.87	
3,000.00	0.40	190.58	2,999.77	-18.77	3.36	0.17	3.36	663,096.73	591,070.76	
3,100.00	0.10	181.91	3,099.77	-19.20	3.29	0.30	3.29	663,096.30	591,070.69	
3,200.00	0.27	209.39	3,199.77	-19.49	3.18	0.19	3.17	663,096.01	591,070.58	
3,300.00	0.38	208.97	3,299.77	-19.99	2.90	0.11	2.90	663,095.51	591,070.30	
3,400.00	0.37	239.30	3,399.76	-20.44	2.46	0.20	2.46	663,095.06	591,069.86	
3,500.00	0.49	236.20	3,499.76	-20.85	1.83	0.12	1.82	663,094.65	591,069.23	
3,600.00	0.24	239.02	3,599.76	-21.19	1.29	0.25	1.29	663,094.31	591,068.69	
3,700.00	0.17	335.65	3,699.76	-21.17	1.05	0.31	1.05	663,094.33	591,068.45	
3,800.00	0.44	345.72	3,799.76	-20.66	0.90	0.27	0.89	663,094.84	591,068.30	
3,900.00	0.34	353.04	3,899.75	-19.99	0.77	0.11	0.76	663,095.51	591,068.17	
4,000.00	0.48	32.55	3,999.75	-19.34	0.96	0.31	0.95	663,096.16	591,068.36	
4,100.00	0.41	5.76	4,099.75	-18.63	1.22	0.22	1.21	663,096.87	591,068.62	
4,200.00	0.86	18.40	4,199.74	-17.57	1.49	0.47	1.49	663,097.93	591,068.89	
4,258.00	0.59	3.19	4,257.74	-16.86	1.64	0.57	1.64	663,098.64	591,069.04	
4,327.00	1.10	9.80	4,326.73	-15.85	1.78	0.75	1.77	663,099.65	591,069.18	
MWD surveys										
4,358.00	0.90	25.60	4,357.73	-15.34	1.93	1.09	1.93	663,100.16	591,069.33	



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Wellbore:	Original hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original hole	Database:	EDM 5000:1 Ddatabase

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)	
4,390.00	2.10	88.20	4,389.72	-15.09	2.63	5.83	2.62	663,100.41	591,070.03	
4,421.00	4.90	98.00	4,420.66	-15.26	4.51	9.20	4.50	663,100.24	591,071.91	
4,453.00	8.60	97.30	4,452.43	-15.75	8.23	11.57	8.23	663,099.75	591,075.63	
4,485.00	12.50	93.50	4,483.88	-16.27	14.07	12.37	14.06	663,099.23	591,081.47	
4,516.00	16.20	89.20	4,513.91	-16.41	21.74	12.41	21.74	663,099.09	591,089.14	
4,548.00	19.70	88.20	4,544.35	-16.18	31.60	10.98	31.60	663,099.32	591,099.00	
4,580.00	23.40	88.50	4,574.11	-15.84	43.35	11.57	43.34	663,099.66	591,110.75	
4,611.00	26.70	88.90	4,602.19	-15.55	56.47	10.66	56.46	663,099.95	591,123.87	
4,643.00	29.90	89.60	4,630.36	-15.35	71.63	10.05	71.63	663,100.15	591,139.03	
4,674.00	32.70	90.30	4,656.84	-15.34	87.74	9.11	87.73	663,100.16	591,155.14	
4,706.00	36.10	91.00	4,683.24	-15.55	105.81	10.70	105.81	663,099.95	591,173.21	
4,737.00	39.10	91.00	4,707.80	-15.88	124.72	9.68	124.72	663,099.62	591,192.12	
4,767.00	40.80	90.30	4,730.80	-16.10	143.98	5.86	143.98	663,099.40	591,211.38	
4,799.00	43.30	90.30	4,754.56	-16.21	165.41	7.81	165.41	663,099.29	591,232.81	
4,830.00	45.60	89.20	4,776.69	-16.11	187.12	7.82	187.12	663,099.39	591,254.52	
4,862.00	48.70	88.20	4,798.45	-15.58	210.57	9.95	210.57	663,099.92	591,277.97	
4,893.00	51.90	87.50	4,818.25	-14.68	234.40	10.47	234.40	663,100.82	591,301.80	
4,925.00	55.10	87.50	4,837.28	-13.56	260.10	10.00	260.09	663,101.94	591,327.50	
4,957.00	58.10	87.50	4,854.89	-12.39	286.78	9.37	286.78	663,103.11	591,354.18	
4,988.00	60.50	88.20	4,870.72	-11.39	313.42	7.98	313.42	663,104.11	591,380.82	
5,020.00	63.30	89.60	4,885.79	-10.86	341.64	9.56	341.64	663,104.64	591,409.04	
5,051.00	66.30	90.30	4,898.99	-10.83	369.68	9.89	369.68	663,104.67	591,437.08	
5,082.00	69.30	90.30	4,910.70	-10.98	398.38	9.68	398.38	663,104.52	591,465.78	
5,114.00	72.00	89.90	4,921.30	-11.04	428.57	8.52	428.57	663,104.46	591,495.97	
5,146.00	75.10	89.60	4,930.36	-10.90	459.26	9.73	459.26	663,104.60	591,526.66	
5,177.00	77.80	89.60	4,937.62	-10.69	489.39	8.71	489.39	663,104.81	591,556.79	

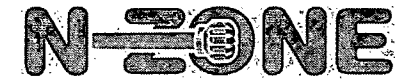


Standard_report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Burch Keely Unit Well No 956H
Project:	Eddy County, New Mexico	TVD Reference:	RKB=3592+12.5' @ 3604.50usft (United #43)
Site:	Burch Keely	MD Reference:	RKB=3592+12.5' @ 3604.50usft (United #43)
Well:	Burch Keely Unit Well No 956H	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)	
5,183.00	78.55	89.66	4,938.85	-10.65	495.26	12.53	495.26	663,104.85	591,562.66	
330 Hard line intercept @ 5183 MD										
5,209.00	81.80	89.90	4,943.29	-10.66	520.88	12.53	520.88	663,104.95	591,588.28	
5,240.00	85.00	89.90	4,946.85	-10.50	551.67	10.32	551.67	663,105.00	591,619.07	
5,313.00	90.60	91.00	4,949.65	-11.07	624.58	7.82	624.58	663,104.43	591,691.98	
5,408.00	90.60	90.30	4,948.66	-12.15	719.57	0.74	719.57	663,103.35	591,786.97	
5,503.00	91.00	90.70	4,947.33	-12.98	814.56	0.60	814.56	663,102.52	591,881.96	
5,597.00	91.00	90.70	4,945.69	-14.13	908.54	0.00	908.53	663,101.37	591,975.94	
5,692.00	90.80	90.70	4,944.20	-15.29	1,003.52	0.21	1,003.51	663,100.21	592,070.92	
5,787.00	90.10	89.90	4,943.45	-15.79	1,098.51	1.12	1,098.51	663,099.71	592,165.91	
5,881.00	90.40	90.30	4,943.04	-15.95	1,192.51	0.53	1,192.51	663,099.55	592,259.91	
5,975.00	90.40	90.30	4,942.39	-16.44	1,286.51	0.00	1,286.50	663,099.06	592,353.91	
6,070.00	90.60	90.30	4,941.56	-16.94	1,381.50	0.21	1,381.50	663,098.56	592,448.90	
6,152.00	90.80	89.90	4,940.56	-17.08	1,463.50	0.55	1,463.49	663,098.42	592,530.90	
6,246.00	90.60	90.70	4,939.41	-17.58	1,557.49	0.88	1,557.48	663,097.92	592,624.89	
6,341.00	89.20	88.50	4,939.57	-16.91	1,652.48	2.74	1,652.47	663,098.59	592,719.88	
6,436.00	89.60	88.90	4,940.57	-14.76	1,747.45	0.60	1,747.44	663,100.74	592,814.85	
6,531.00	89.40	87.50	4,941.40	-11.77	1,842.39	1.49	1,842.39	663,103.73	592,909.79	
6,625.00	89.20	86.80	4,942.55	-7.10	1,936.27	0.77	1,936.27	663,108.40	593,003.67	
6,720.00	89.20	86.80	4,943.87	-1.80	2,031.11	0.00	2,031.11	663,113.70	593,098.51	
6,815.00	91.10	87.10	4,943.62	3.26	2,125.97	2.02	2,125.97	663,118.76	593,193.37	
6,909.00	90.70	88.20	4,942.15	7.11	2,219.88	1.25	2,219.88	663,122.61	593,287.28	
7,004.00	91.10	88.50	4,940.65	9.85	2,314.83	0.53	2,314.83	663,125.35	593,382.23	
7,098.00	90.80	88.90	4,939.10	11.98	2,408.79	0.53	2,408.79	663,127.48	593,476.19	
7,193.00	91.00	89.90	4,937.60	12.97	2,503.77	1.07	2,503.78	663,128.47	593,571.17	
7,287.00	91.70	89.90	4,935.39	13.14	2,597.75	0.74	2,597.75	663,128.64	593,665.15	
7,382.00	92.20	91.00	4,932.16	12.39	2,692.69	1.27	2,692.69	663,127.89	593,760.09	



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well: Burch Keely Unit Well No. 956H
Project:	Eddy County New Mexico	TVD Reference:	RKB=3592+12.5 @ 3604.50usft (United #43)
Site:	Burch Keely	MD Reference:	RKB=3592+12.5 @ 3604.50usft (United #43)
Well:	Burch Keely Unit Well No. 956H	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)	
7,476.00	93.40	90.70	4,927.56	11.00	2,786.56	1.32	2,786.56	663,126.50	593,853.96	
7,571.00	92.90	89.90	4,922.34	10.50	2,881.42	0.99	2,881.42	663,126.00	593,948.82	
7,665.00	92.20	89.90	4,918.16	10.67	2,975.32	0.74	2,975.32	663,126.17	594,042.72	
7,759.00	93.10	89.60	4,913.82	11.07	3,069.22	1.01	3,069.22	663,126.57	594,136.62	
7,854.00	93.80	89.20	4,908.10	12.07	3,164.04	0.85	3,164.04	663,127.57	594,231.44	
7,948.00	92.40	89.20	4,903.02	13.38	3,257.89	1.49	3,257.89	663,128.88	594,325.29	
8,043.00	91.70	89.90	4,899.62	14.12	3,352.83	1.04	3,352.83	663,129.62	594,420.23	
8,138.00	91.00	91.70	4,897.38	12.80	3,447.79	2.03	3,447.79	663,128.30	594,515.19	
8,232.00	91.30	91.00	4,895.49	10.58	3,541.74	0.81	3,541.74	663,126.08	594,609.14	
8,326.00	91.70	91.40	4,893.03	8.62	3,635.69	0.60	3,635.69	663,124.12	594,703.09	
8,421.00	91.00	90.70	4,890.79	6.88	3,730.65	1.04	3,730.65	663,122.38	594,798.05	
8,515.00	90.60	91.00	4,889.48	5.48	3,824.63	0.53	3,824.63	663,120.98	594,892.03	
8,610.00	90.40	90.30	4,888.65	4.40	3,919.61	0.77	3,919.62	663,119.90	594,987.01	
8,704.00	90.10	90.30	4,888.24	3.91	4,013.61	0.32	4,013.61	663,119.41	595,081.01	
8,800.00	91.10	90.70	4,887.24	3.07	4,109.60	1.12	4,109.60	663,118.57	595,177.00	
8,895.00	91.00	90.30	4,885.50	2.24	4,204.58	0.43	4,204.58	663,117.74	595,271.98	
8,988.00	90.60	89.20	4,884.20	2.65	4,297.57	1.26	4,297.57	663,118.15	595,364.97	
9,083.00	89.90	88.90	4,883.78	4.23	4,392.56	0.80	4,392.56	663,119.73	595,459.96	
9,177.00	89.40	89.60	4,884.36	5.46	4,486.55	0.92	4,486.55	663,120.96	595,553.95	
9,272.44	88.50	90.70	4,886.11	5.21	4,581.97	1.49	4,581.97	663,120.71	595,649.37	
9,366.00	89.70	92.40	4,887.58	2.68	4,675.48	2.22	4,675.48	663,118.18	595,742.88	
9,461.00	91.40	89.70	4,886.66	0.93	4,770.44	3.36	4,770.44	663,116.43	595,837.84	
9,556.00	91.30	90.00	4,884.43	1.18	4,865.42	0.33	4,865.42	663,116.68	595,932.82	
9,651.00	91.00	89.50	4,882.52	1.60	4,960.40	0.61	4,960.40	663,117.10	596,027.80	
9,745.00	91.30	89.70	4,880.63	2.25	5,054.37	0.38	5,054.38	663,117.75	596,121.77	
9,809.00	91.11	89.70	4,879.29	2.59	5,118.36	0.30	5,118.36	663,118.09	596,185.76	
330 Hard line intercept @ 9809 MD										



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Burch Keely Unit Well No. 956H
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Site:	Burch Keely	MD Reference:	RKB=3592+12.5 @ 3604.50usft (United #43)
Well:	Burch Keely Unit Well No. 956H	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)
9,811.00	91.10	89.70	4,879.25	2.60	5,120.36	0.30	5,120.36	663,118.10	596,187.76
9,875.00	91.10	89.70	4,878.02	2.93	5,184.35	0.00	5,184.35	663,118.43	596,251.75
Survey projected to 9875.00 MD									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
100.00	100.00	0.18	-0.24	Gyro
4,327.00	4,326.73	-15.85	1.78	MWD surveys
5,183.00	4,938.85	-10.65	495.26	330 Hard line intercept @ 5183 MD
9,809.00	4,879.29	2.59	5,118.36	330 Hard line intercept @ 9809 MD
9,875.00	4,878.02	2.93	5,184.35	Survey projected to 9875.00 MD