



A GYRO TECHNOLOGIES INC. COMPANY

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

March 25, 2014

30 015 41225

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

NM OIL CONSERVATION
ARTESIA DISTRICT

JUN 24 2014

RECEIVED

Attn: Kanicia Castillo

RE: **Gissler Federal No. 040H**

Please find enclosed a copy of the survey from 0.00' to 3850.00' ran on the above referenced well.

Sincerely,

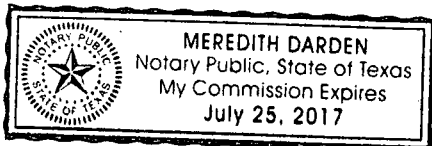

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

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



Meredith Darden
Notary Public, State of Texas



Company: COG Operating, LLC (Concho)

Well: Gissler Federal No. 040H



Rig Name: United 43

State/County: New Mexico/Eddy

Latitude: 32.86, Longitude: -104.00

GRID North is 0.18 Degrees East of True North

VS-Azi: 89.82 Degrees



NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 24 2014
RECEIVED

Depth Reference : RKB = 14 ft.

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gisslerfederal40h_final.ut

Minimum Curvature Method

Report Date/Time: 3/25/2014 / 14:37

Vaughn Energy Services

Gardendale, TX

432-563-5444

Surveyor: Dustin Wentzler

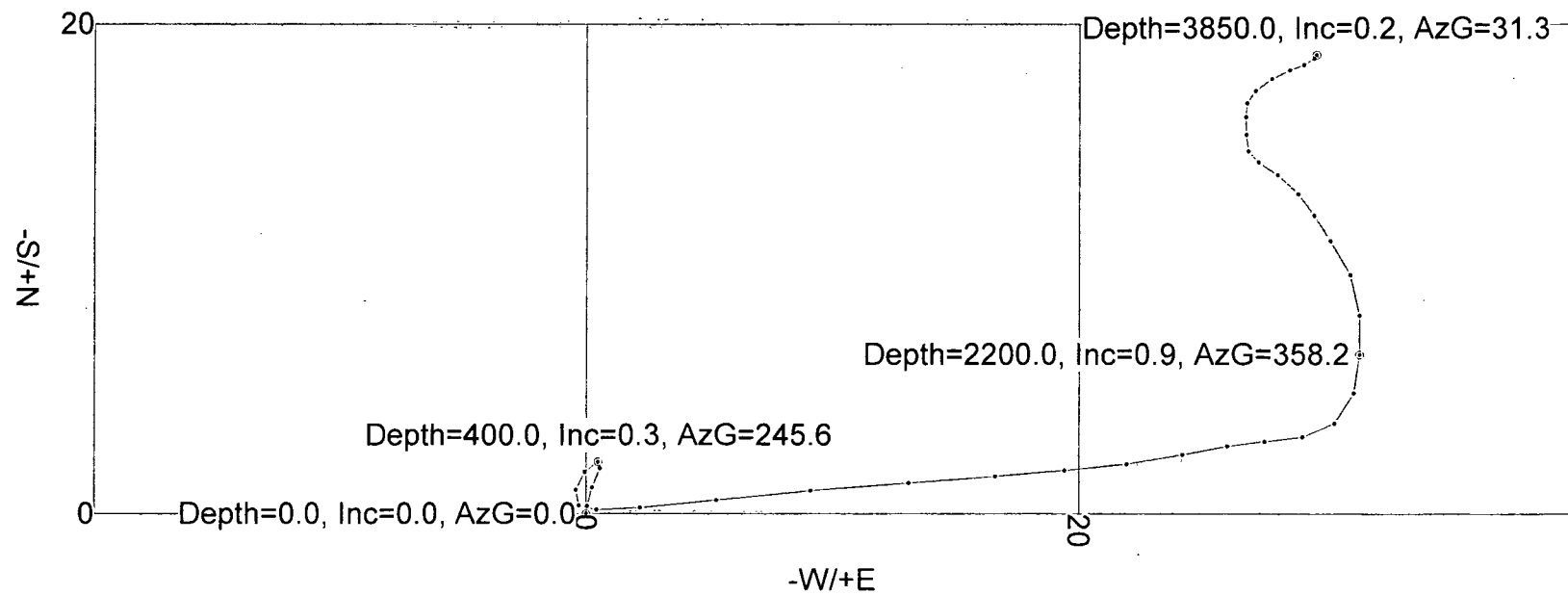
Gissler Federal 40H / API 30-015-41225

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	6.86	100.00	0.33	0.04	0.04	0.33	6.86	0.38
200.00	0.52	20.67	200.00	1.08	0.24	0.24	1.11	12.49	0.18
300.00	0.45	23.34	299.99	1.87	0.56	0.56	1.95	16.59	0.07
400.00	0.29	245.56	399.99	2.13	0.48	0.49	2.18	12.77	0.70
500.00	0.50	225.73	499.99	1.72	-0.06	-0.06	1.72	357.95	0.25
600.00	0.49	187.21	599.99	0.99	-0.43	-0.42	1.08	336.56	0.33
700.00	0.32	138.40	699.98	0.35	-0.29	-0.29	0.45	319.78	0.37
800.00	0.60	86.71	799.98	0.17	0.42	0.42	0.45	68.51	0.48
900.00	1.43	87.29	899.96	0.25	2.19	2.19	2.21	83.38	0.83
1000.00	2.14	82.54	999.91	0.56	5.29	5.29	5.32	84.00	0.72
1100.00	2.26	85.40	1099.84	0.96	9.11	9.11	9.16	84.00	0.16
1200.00	2.30	85.92	1199.76	1.26	13.07	13.08	13.13	84.51	0.05
1300.00	1.73	84.77	1299.70	1.54	16.58	16.59	16.65	84.70	0.57
1400.00	1.52	85.62	1399.66	1.78	19.41	19.42	19.49	84.77	0.21
1500.00	1.39	82.30	1499.63	2.04	21.94	21.94	22.03	84.68	0.16
1600.00	1.24	78.27	1599.60	2.42	24.20	24.21	24.32	84.28	0.17
1700.00	0.86	80.56	1699.58	2.77	26.00	26.01	26.15	83.92	0.39
1800.00	0.89	85.19	1799.57	2.96	27.51	27.52	27.67	83.87	0.08

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	0.88	80.78	1899.56	3.14	29.04	29.05	29.21	83.82	0.07
2000.00	0.78	51.62	1999.55	3.69	30.33	30.34	30.56	83.07	0.43
2100.00	0.98	16.67	2099.54	4.93	31.11	31.13	31.50	81.00	0.56
2200.00	0.86	358.19	2199.53	6.50	31.33	31.35	32.00	78.29	0.32
2300.00	0.98	1.25	2299.51	8.10	31.33	31.35	32.36	75.51	0.13
2400.00	1.03	334.23	2399.50	9.76	30.95	30.99	32.46	72.49	0.47
2500.00	0.81	325.08	2499.49	11.15	30.16	30.19	32.16	69.70	0.26
2600.00	0.59	330.39	2599.48	12.18	29.50	29.54	31.92	67.57	0.23
2700.00	0.68	319.54	2699.47	13.07	28.86	28.91	31.69	65.63	0.15
2800.00	0.64	305.06	2799.47	13.84	28.02	28.07	31.26	63.71	0.17
2900.00	0.43	301.63	2899.46	14.36	27.25	27.29	30.80	62.21	0.21
3000.00	0.30	339.67	2999.46	14.81	26.83	26.88	30.65	61.11	0.27
3100.00	0.48	1.58	3099.46	15.48	26.75	26.80	30.91	59.95	0.23
3200.00	0.35	354.33	3199.45	16.20	26.73	26.78	31.26	58.79	0.14
3300.00	0.32	17.63	3299.45	16.77	26.79	26.84	31.60	57.96	0.14
3400.00	0.41	47.10	3399.45	17.27	27.13	27.18	32.16	57.52	0.20
3500.00	0.54	58.61	3499.45	17.76	27.80	27.85	32.98	57.43	0.17
3600.00	0.37	70.83	3599.44	18.11	28.51	28.56	33.78	57.57	0.20
3700.00	0.34	68.41	3699.44	18.33	29.09	29.15	34.39	57.79	0.04
3800.00	0.22	38.60	3799.44	18.59	29.49	29.55	34.86	57.77	0.18
3850.00	0.19	31.25	3849.44	18.74	29.60	29.65	35.03	57.66	0.08



Vaughn Energy Services
Gardendale, TX
432-563-5444
Surveyor: Dustin Wentzler
Gissler Federal 40H / API 30-015-41225





Standard_report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Gissler Federal Well No. 40H
Project:	Eddy County, New Mexico	TVD Reference:	RKB=3698+13.5' @ 3711.50usft (United #43)
Site:	Gissler Federal	MD Reference:	RKB=3698+13.5' @ 3711.50usft (United #43)
Well:	Gissler Federal Well No. 40H	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:		Gissler Federal							
Site Position:		Northing:		677,666.60	usft	Latitude:		32.86254774	
From:	Map	Easting:		601,991.10	usft	Longitude:		-104.00117801	
Position Uncertainty:		0.00	usft	Slot Radius:		13-3/16	"	Grid Convergence:	0.18 °

Well: Gissler Federal Well No. 40H						
Well Position	+N/-S	0.00 usft	Northing:	677,666.60 usft	Latitude:	32.86254774
	+E/-W	0.00 usft	Easting:	601,991.10 usft	Longitude:	-104.00117801
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,698.00 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/17/2014	7.51	60.64	48,692

Design:		Surveys.Original Hole			
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	90.06	



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Gissler, Federal Well No. 40H
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Site:	Gissler Federal	MD Reference:	RKB=3698+13.5 @ 3711.50usft (United #43)
Well:	Gissler Federal Well No. 40H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	EDM 5000.1 Database

Survey Program		Date 3/21/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	3,850.00	Gyro (Original Hole)	NS-GYRO-MS	North sensing gyrocompassing m/s
3,884.00	8,842.00	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	677,666.60	601,991.10
100.00	0.38	6.86	100.00	0.33	0.04	0.38	0.04	677,666.93	601,991.14
Gyro									
200.00	0.52	20.67	200.00	1.08	0.24	0.18	0.24	677,667.68	601,991.34
300.00	0.45	23.34	299.99	1.87	0.56	0.07	0.55	677,668.47	601,991.66
400.00	0.29	245.56	399.99	2.12	0.48	0.69	0.48	677,668.72	601,991.58
500.00	0.50	225.73	499.99	1.71	-0.06	0.25	-0.06	677,668.31	601,991.04
600.00	0.49	187.21	599.99	0.99	-0.43	0.33	-0.43	677,667.59	601,990.67
700.00	0.32	138.40	699.98	0.35	-0.30	0.37	-0.30	677,666.95	601,990.80
800.00	0.60	86.71	799.98	0.17	0.41	0.47	0.41	677,666.77	601,991.51
900.00	1.43	87.29	899.96	0.26	2.18	0.83	2.18	677,666.86	601,993.28
1,000.00	2.14	82.54	999.91	0.56	5.28	0.72	5.28	677,667.16	601,996.38
1,100.00	2.26	85.40	1,099.84	0.97	9.09	0.16	9.09	677,667.57	602,000.19
1,200.00	2.30	85.92	1,199.76	1.27	13.06	0.05	13.06	677,667.87	602,004.16
1,300.00	1.73	84.77	1,299.70	1.55	16.57	0.57	16.56	677,668.15	602,007.67
1,400.00	1.52	85.62	1,399.66	1.79	19.39	0.21	19.39	677,668.39	602,010.49
1,500.00	1.39	82.30	1,499.63	2.05	21.92	0.15	21.91	677,668.65	602,013.02
1,600.00	1.24	78.27	1,599.60	2.43	24.18	0.18	24.18	677,669.03	602,015.28
1,700.00	0.86	80.56	1,699.58	2.77	25.98	0.38	25.97	677,669.37	602,017.08
1,800.00	0.89	85.19	1,799.57	2.96	27.49	0.08	27.49	677,669.56	602,018.59
1,900.00	0.88	80.78	1,899.56	3.15	29.02	0.07	29.02	677,669.75	602,020.12



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well Gissler Federal Well No. 40H
Project:	Eddy County, New Mexico	TVD Reference:	RKB=3698+13.5 @ 3711.50usft (United #43)
Site:	Gissler Federal	MD Reference:	RKB=3698+13.5 @ 3711.50usft (United #43)
Well:	Gissler Federal Well No. 40H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	EDM 5000.1 Ddatabase

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	0.78	51.62	1,999.55	3.70	30.32	0.43	30.31	677,670.30	602,021.42
2,100.00	0.98	16.67	2,099.54	4.94	31.09	0.56	31.09	677,671.54	602,022.19
2,200.00	0.86	358.19	2,199.53	6.51	31.32	0.32	31.31	677,673.11	602,022.42
2,300.00	0.98	1.25	2,299.51	8.11	31.31	0.13	31.30	677,674.71	602,022.41
2,400.00	1.03	334.23	2,399.50	9.78	30.94	0.47	30.93	677,676.38	602,022.04
2,500.00	0.81	325.08	2,499.49	11.17	30.14	0.26	30.13	677,677.77	602,021.24
2,600.00	0.59	330.39	2,599.48	12.19	29.48	0.23	29.47	677,678.79	602,020.58
2,700.00	0.68	319.54	2,699.47	13.09	28.84	0.15	28.83	677,679.69	602,019.94
2,800.00	0.64	305.06	2,799.47	13.86	28.00	0.17	27.99	677,680.46	602,019.10
2,900.00	0.43	301.63	2,899.46	14.38	27.23	0.21	27.21	677,680.98	602,018.33
3,000.00	0.30	339.67	2,999.46	14.82	26.82	0.27	26.80	677,681.42	602,017.92
3,100.00	0.48	1.58	3,099.46	15.49	26.74	0.23	26.72	677,682.09	602,017.84
3,200.00	0.35	354.33	3,199.45	16.21	26.72	0.14	26.70	677,682.81	602,017.82
3,300.00	0.32	17.63	3,299.45	16.78	26.77	0.14	26.75	677,683.38	602,017.87
3,400.00	0.41	47.10	3,399.45	17.29	27.12	0.21	27.10	677,683.89	602,018.22
3,500.00	0.54	58.61	3,499.45	17.78	27.78	0.16	27.76	677,684.38	602,018.88
3,600.00	0.37	70.83	3,599.44	18.13	28.49	0.19	28.47	677,684.73	602,019.59
3,700.00	0.34	68.41	3,699.44	18.35	29.07	0.03	29.05	677,684.95	602,020.17
3,800.00	0.22	38.60	3,799.44	18.61	29.47	0.18	29.45	677,685.21	602,020.57
3,850.00	0.19	31.25	3,849.44	18.75	29.57	0.08	29.55	677,685.35	602,020.67
3,884.00	0.20	355.70	3,883.44	18.86	29.59	0.35	29.57	677,685.46	602,020.69
MWD surveys									
3,915.00	0.20	353.60	3,914.44	18.97	29.58	0.02	29.56	677,685.57	602,020.68
3,947.86	0.20	322.30	3,947.30	19.07	29.54	0.33	29.52	677,685.67	602,020.64
3,978.00	1.10	89.60	3,977.44	19.11	29.80	4.09	29.78	677,685.71	602,020.90
4,010.00	4.60	95.60	4,009.39	18.99	31.38	10.96	31.36	677,685.59	602,022.48
4,041.00	9.10	96.30	4,040.16	18.60	35.06	14.52	35.04	677,685.20	602,026.16



Standard_report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well, Gissler, Federal Well, No. 40H
Project:	Eddy, County, New Mexico	TVD Reference:	RKB=3698+13.5 @ 3711.50usft (United #43)
Site:	Gissler, Federal	MD Reference:	RKB=3698+13.5 @ 3711.50usft (United #43)
Well:	Gissler, Federal Well, No. 40H	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)	
4,073.00	14.10	94.20	4,071.50	18.04	41.47	15.68	41.45	677,684.64	602,032.57	
4,105.00	18.50	91.40	4,102.21	17.63	50.43	13.96	50.42	677,684.23	602,041.53	
4,136.00	21.10	90.30	4,131.37	17.48	60.93	8.47	60.91	677,684.08	602,052.03	
4,168.00	23.60	91.40	4,160.97	17.29	73.10	7.92	73.08	677,683.89	602,064.20	
4,199.00	26.20	92.80	4,189.08	16.80	86.14	8.60	86.12	677,683.40	602,077.24	
4,231.00	28.00	93.80	4,217.57	15.96	100.69	5.80	100.67	677,682.56	602,091.79	
4,262.00	30.60	95.20	4,244.60	14.76	115.81	8.67	115.80	677,681.36	602,106.91	
4,294.00	33.40	96.30	4,271.74	13.06	132.68	8.94	132.67	677,679.66	602,123.78	
4,325.00	36.60	95.60	4,297.13	11.22	150.36	10.40	150.35	677,677.82	602,141.46	
4,357.00	38.90	94.20	4,322.43	9.55	169.88	7.67	169.87	677,676.15	602,160.98	
4,388.00	41.90	92.40	4,346.03	8.41	189.94	10.38	189.93	677,675.01	602,181.04	
4,420.00	45.20	91.00	4,369.22	7.76	211.97	10.74	211.96	677,674.36	602,203.07	
4,451.00	48.20	91.00	4,390.48	7.37	234.53	9.68	234.52	677,673.97	602,225.63	
4,483.00	50.70	91.70	4,411.28	6.79	258.83	7.99	258.82	677,673.39	602,249.93	
4,514.00	53.10	93.10	4,430.41	5.77	283.20	8.52	283.20	677,672.37	602,274.30	
4,546.00	56.10	94.90	4,448.95	3.94	309.22	10.44	309.21	677,670.54	602,300.32	
4,577.00	58.40	95.20	4,465.72	1.64	335.19	7.46	335.18	677,668.24	602,326.29	
4,585.00	59.10	95.12	4,469.87	1.03	342.00	8.79	342.00	677,667.63	602,333.10	
330 Hard line intercept @ 4585 MD 2310 FSL 672 FWL										
4,609.00	61.20	94.90	4,481.81	-0.79	362.73	8.79	362.73	677,665.81	602,353.83	
4,641.00	63.70	93.80	4,496.61	-2.94	391.02	8.39	391.02	677,663.66	602,382.12	
4,672.00	66.90	93.80	4,509.56	-4.81	419.12	10.32	419.12	677,661.79	602,410.22	
4,704.00	71.40	93.80	4,520.95	-6.79	448.95	14.06	448.96	677,659.81	602,440.05	
4,735.00	76.40	93.50	4,529.54	-8.68	478.66	16.16	478.67	677,657.92	602,469.76	
4,767.00	79.50	93.10	4,536.22	-10.48	509.90	9.76	509.91	677,656.12	602,501.00	
4,798.00	82.50	93.10	4,541.07	-12.14	540.47	9.68	540.49	677,654.46	602,531.57	
4,830.00	84.60	93.10	4,544.67	-13.86	572.22	6.56	572.24	677,652.74	602,563.32	



Standard_report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well: Gissler, Federal Well No. 40H
Project:	Eddy County, New Mexico	TVD Reference:	RKB=3698+13.5'@37.11:50usft (United #43)
Site:	Gissler, Federal	MD Reference:	RKB=3698+13.5'@37.11:50usft (United #43)
Well:	Gissler, Federal Well No. 40H	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)	
4,861.00	87.10	93.10	4,546.91	-15.53	603.09	8.06	603.11	677,651.07	602,594.19	
4,906.00	89.00	91.70	4,548.44	-17.41	648.02	5.24	648.04	677,649.19	602,639.12	
5,000.00	91.00	91.40	4,548.44	-19.95	741.99	2.15	742.01	677,646.65	602,733.09	
5,031.00	90.60	91.40	4,548.01	-20.71	772.97	1.29	772.99	677,645.89	602,764.07	
5,126.00	91.00	90.30	4,546.68	-22.12	867.95	1.23	867.97	677,644.48	602,859.05	
5,220.00	91.80	89.90	4,544.39	-22.29	961.92	0.95	961.95	677,644.31	602,953.02	
5,315.00	93.30	90.70	4,540.16	-22.78	1,056.82	1.79	1,056.85	677,643.82	603,047.92	
5,395.00	92.90	89.60	4,535.83	-22.99	1,136.70	1.46	1,136.73	677,643.61	603,127.80	
5,490.00	91.30	89.60	4,532.35	-22.33	1,231.64	1.68	1,231.66	677,644.27	603,222.74	
5,585.00	91.70	89.60	4,529.86	-21.66	1,326.60	0.42	1,326.62	677,644.94	603,317.70	
5,679.00	91.70	88.50	4,527.08	-20.11	1,420.54	1.17	1,420.57	677,646.49	603,411.64	
5,774.00	91.50	88.50	4,524.42	-17.62	1,515.48	0.21	1,515.49	677,648.98	603,506.58	
5,868.00	91.30	89.20	4,522.13	-15.74	1,609.43	0.77	1,609.44	677,650.86	603,600.53	
5,963.00	90.60	89.90	4,520.55	-14.99	1,704.41	1.04	1,704.43	677,651.61	603,695.51	
6,057.00	91.00	89.90	4,519.24	-14.83	1,798.40	0.43	1,798.42	677,651.77	603,789.50	
6,152.00	91.30	89.20	4,517.33	-14.08	1,893.38	0.80	1,893.39	677,652.52	603,884.48	
6,247.00	90.10	88.50	4,516.17	-12.17	1,988.35	1.46	1,988.36	677,654.43	603,979.45	
6,341.00	89.60	88.90	4,516.42	-10.04	2,082.32	0.68	2,082.33	677,656.56	604,073.42	
6,436.00	89.40	89.90	4,517.25	-9.05	2,177.31	1.07	2,177.32	677,657.55	604,168.41	
6,531.00	89.60	89.90	4,518.08	-8.88	2,272.31	0.21	2,272.32	677,657.72	604,263.41	
6,625.00	90.30	89.90	4,518.16	-8.72	2,366.31	0.74	2,366.32	677,657.88	604,357.41	
6,720.00	90.10	91.40	4,517.83	-9.79	2,461.30	1.59	2,461.31	677,656.81	604,452.40	
6,815.00	89.70	91.00	4,517.99	-11.78	2,556.28	0.60	2,556.29	677,654.82	604,547.38	
6,910.00	89.40	90.30	4,518.74	-12.86	2,651.27	0.80	2,651.28	677,653.74	604,642.37	
7,004.00	90.80	91.70	4,518.57	-14.50	2,745.25	2.11	2,745.26	677,652.10	604,736.35	
7,098.00	91.10	91.40	4,517.02	-17.04	2,839.20	0.45	2,839.22	677,649.56	604,830.30	
7,193.00	91.70	91.40	4,514.69	-19.36	2,934.15	0.63	2,934.16	677,647.24	604,925.25	



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well: Gissler Federal Well No. 40H
Project:	Eddy County, New Mexico	TVD Reference:	RKB=3698+13.5 @ 3711.50usft (United #43)
Site:	Gissler Federal	MD Reference:	RKB=3698+13.5 @ 3711.50usft (United #43)
Well:	Gissler Federal Well No. 40H	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)	
7,287.00	91.70	90.70	4,511.91	-21.09	3,028.09	0.74	3,028.11	677,645.51	605,019.19	
7,382.00	91.70	91.00	4,509.09	-22.49	3,123.04	0.32	3,123.06	677,644.11	605,114.14	
7,477.00	91.80	91.00	4,506.19	-24.15	3,217.98	0.11	3,218.00	677,642.45	605,209.08	
7,571.00	91.80	90.30	4,503.23	-25.22	3,311.92	0.74	3,311.95	677,641.38	605,303.02	
7,665.00	91.70	90.30	4,500.36	-25.71	3,405.88	0.11	3,405.90	677,640.89	605,396.98	
7,759.00	91.10	89.20	4,498.07	-25.30	3,499.85	1.33	3,499.87	677,641.30	605,490.95	
7,854.00	91.00	88.90	4,496.33	-23.72	3,594.82	0.33	3,594.84	677,642.88	605,585.92	
7,949.00	91.10	88.90	4,494.58	-21.90	3,689.79	0.11	3,689.81	677,644.70	605,680.89	
8,043.00	91.00	88.20	4,492.86	-19.52	3,783.74	0.75	3,783.76	677,647.08	605,774.84	
8,138.00	91.10	87.80	4,491.12	-16.21	3,878.66	0.43	3,878.68	677,650.39	605,869.76	
8,233.00	91.00	87.50	4,489.38	-12.31	3,973.57	0.33	3,973.58	677,654.29	605,964.67	
8,328.00	90.80	86.80	4,487.89	-7.59	4,068.44	0.77	4,068.44	677,659.01	606,059.54	
8,423.00	90.80	89.20	4,486.56	-4.27	4,163.36	2.53	4,163.37	677,662.33	606,154.46	
8,518.00	91.00	88.90	4,485.07	-2.70	4,258.34	0.38	4,258.34	677,663.90	606,249.44	
8,613.00	91.00	88.50	4,483.41	-0.55	4,353.30	0.42	4,353.30	677,666.05	606,344.40	
8,707.00	91.10	88.20	4,481.69	2.16	4,447.25	0.34	4,447.24	677,668.76	606,438.35	
8,779.00	90.10	89.60	4,480.93	3.54	4,519.23	2.39	4,519.22	677,670.14	606,510.33	
8,842.00	90.10	89.60	4,480.82	3.98	4,582.22	0.00	4,582.22	677,670.58	606,573.32	
Survey projected to 8842.00 MD										



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Site:	Gissler Federal	MD Reference:	RKB=3698+13.5 @ 3711.50usft (United #43)
Well:	Gissler Federal Well No. 40H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	EDM 5000.1 Ddatabase

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
100.00	100.00	0.33	0.04	Gyro
3,884.00	3,883.44	18.86	29.59	MWD surveys
4,585.00	4,469.87	1.03	342.00	330 Hard line intercept @ 4585 MD 2310 FSL 672 FWL
8,842.00	4,480.82	3.98	4,582.22	Survey projected to 8842.00 MD