

Results of Directional Survey

API number:	30-025-40571		
OGRID:		Operator:	COG PRODUCTION, LLC
		Property:	EATA FAJITA STATE # 3H

surface	ULSTR:	O	08	T 24S	R 33E
				190 FSL	2073 FEL

BH Loc	ULSTR:	B	08	T 24S	R 33E
15640 MD		11126.7	TVD	348 FNL	2073 FEL
				4932 FSL	

Top Perf/OH	ULSTR:	O	08	T 24S	R 33E
11321 MD		11318.8	TVD	171 FSL	2020 FEL

Bot Perf/OH	ULSTR:	B	08	T 24S	R 33E
15585 MD		11130.0	TVD	432 FNL	2073 FEL
				4846 FSL	

	MD	N/S	E/W	VD
	11300	-18.73	53.54	11297.78
TOP PERFS/OH	11321	-19.19	52.91	11318.77
	11400	-20.92	50.56	11397.71
	15531	4433.47	-3.02	11137.57
BOT PERFS/OH	15585	4656.07	-0.30	11129.98
	15595	4697.29	0.20	11128.58

NEXT TO LAST	15595	4697.29	0.20	11128.58
LAST READING	15640	4742.25	0.00	11126.70
TD	15640	4742.25	0.00	11126.70

Surface Location	190	FS	2073	FE
Projected BHL	4932	FS	2073	FE
Location of				
Top Perfs/OH	171	FS	2020	FE
Bottom Perfs/OH	4846	FS	2073	FE

SUMMARY of Subsurface Locations

Surface Location	O-08-24S-33E	190	FS	2073	FE	Vert. Depth
Top Perfs/OH	O-08-24S-33E	171	FS	2020	FE	11318.77
Bottom Perfs/OH	B-08-24S-33E	4846	FS	2073	FE	11129.98
Projected TD	B-08-24S-33E	4932	FS	2073	FE	11126.70

NOV 12 2013

OPERATOR _____ COG _____
WELL/LEASE Eata Fajita St 3-H
COUNTY Lea

STATE OF NEW MEXICO
DEVIATION REPORT

305	0.80
581	0.80
865	0.32
1291	0.30
1575	0.60
1861	0.60
2241	0.70
2525	0.80
2809	1.20
3093	1.70
3378	1.90
3663	1.60
3947	1.20
4232	1.00
4515	1.30
4888	2.40
5273	1.20
5592	1.10
5940	0.80
6240	0.70
6610	0.50
7010	0.20
7515	1.20
7829	0.90
8210	2.00
8410	1.40
8710	0.30
9018	0.10
9448	0.60
9913	0.70
10263	1.70
10599	1.50

HOBBS OCD

AUG 13 2013

RECEIVED

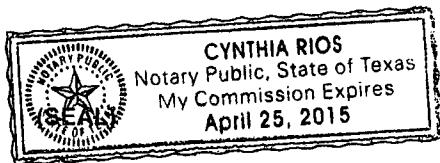
SIGNED BY: _____

RON SCANDOLARI, VP CONTRACT DRILLING

STATE OF TEXAS

COUNTY OF MIDLAND

ON THIS 11th DAY OF June, 2013, BEFORE ME, C RIOS, A NOTARY
PUBLIC, PERSONALLY APPEARED RON SCANDOLARI, WHO ACKNOWLEDGED AND EXECUTED
THIS DOCUMENT. WITNESS MY HAND AND OFFICIAL SEAL.



Cynthia Rios
NOTARY PUBLIC



A GYRO TECHNOLOGIES INC. COMPANY

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

May 23, 2013

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

HOBBS OCD

AUG 13 2013

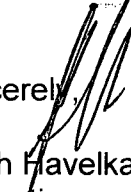
RECEIVED

Attn: Kanicia Castillo

RE: **Eata Fajita State No. 003H**

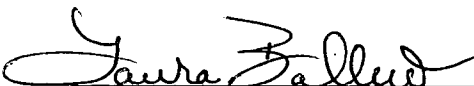
Please find enclosed a copy of the survey from 0.00' to 12100.00' ran on the above referenced well.

Sincerely,

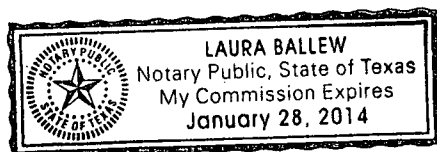

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 23rd day of May,
A.D., 2013, by Keith Havelka.



Laura Ballew
Notary Public, State of Texas





Company: COG Operating, LLC (Concho)

Lease/Well: Eata Fajita State/ No. 003H

Location: Sec 8 T24S R33E

Rig Name: Basic 46

State/County: New Mexico/Lea

Latitude: 32.23, Longitude: -103.59

GRID North is 0.39 Degrees East of True North

VS-Azi: 0.00 Degrees



Depth Reference : RKB 22 Feet

HOBBS OCD

AUG 13 2013

RECEIVED

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: eata fajita state #3h-de_01.ut

Minimum Curvature Method

Report Date/Time: 5/23/2013 / 16:23

Vaughn Energy Services

Midland, Texas

432-563-5444

Survey Engineer: Chris Bankson

Eata Fajita State No. 003H

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	0.51	152.22	100.00	-0.39	0.21	-0.39	0.45	152.22	0.51
200.00	0.51	147.35	199.99	-1.16	0.65	-1.16	1.33	150.60	0.04
300.00	0.70	132.81	299.99	-1.95	1.34	-1.95	2.36	145.48	0.24
400.00	0.64	138.07	399.98	-2.78	2.16	-2.78	3.52	142.13	0.08
500.00	1.01	150.77	499.97	-3.96	2.96	-3.96	4.95	143.20	0.41
600.00	0.77	143.76	599.96	-5.27	3.79	-5.27	6.49	144.28	0.26
700.00	0.48	143.03	699.95	-6.14	4.43	-6.14	7.57	144.16	0.29
800.00	0.48	153.07	799.95	-6.85	4.87	-6.85	8.40	144.55	0.08
900.00	0.26	172.52	899.95	-7.44	5.09	-7.44	9.02	145.61	0.25
1000.00	0.35	179.47	999.95	-7.97	5.13	-7.97	9.48	147.27	0.10
1100.00	0.15	171.75	1099.95	-8.41	5.15	-8.41	9.86	148.54	0.21
1200.00	0.14	127.85	1199.95	-8.62	5.26	-8.62	10.10	148.57	0.11
1300.00	0.32	80.44	1299.94	-8.65	5.64	-8.65	10.32	146.90	0.24
1400.00	0.34	49.31	1399.94	-8.41	6.13	-8.41	10.41	143.90	0.18
1500.00	0.61	45.43	1499.94	-7.84	6.73	-7.84	10.34	139.35	0.27
1600.00	0.48	43.53	1599.94	-7.17	7.40	-7.17	10.30	134.09	0.13
1700.00	0.42	36.54	1699.93	-6.57	7.90	-6.57	10.28	129.75	0.08
1800.00	0.50	25.84	1799.93	-5.89	8.31	-5.89	10.19	125.32	0.12

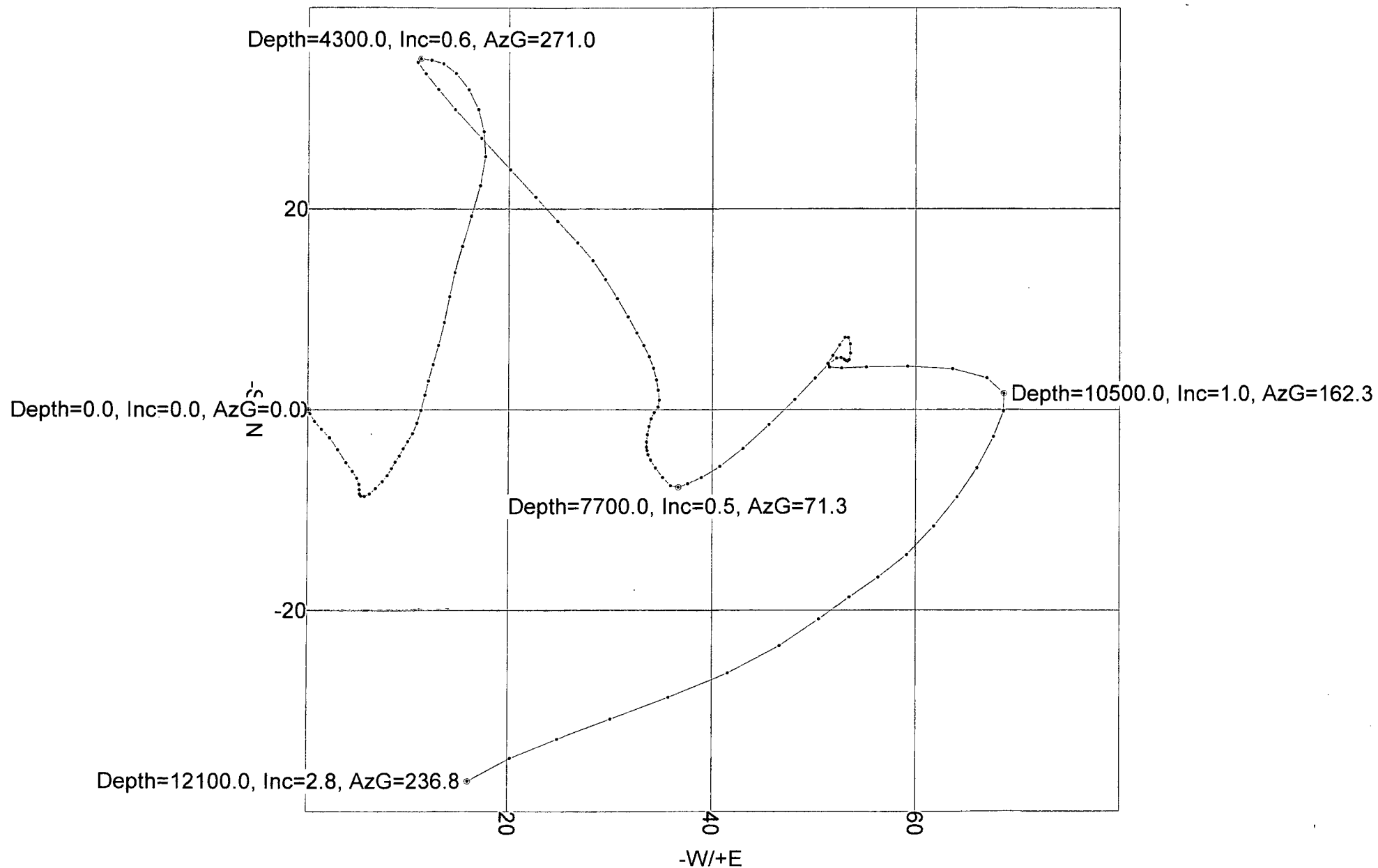
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.37	32.09	1899.93	-5.22	8.67	-5.22	10.12	121.04	0.14
2000.00	0.46	35.29	1999.92	-4.61	9.08	-4.61	10.19	116.93	0.09
2100.00	0.47	23.52	2099.92	-3.91	9.48	-3.91	10.25	112.40	0.10
2200.00	0.50	37.57	2199.92	-3.19	9.91	-3.19	10.41	107.84	0.12
2300.00	0.60	27.32	2299.91	-2.38	10.41	-2.38	10.68	102.89	0.14
2400.00	0.67	19.77	2399.91	-1.37	10.85	-1.37	10.93	97.18	0.11
2500.00	0.89	15.32	2499.90	-0.07	11.25	-0.07	11.25	90.33	0.23
2600.00	0.90	13.55	2599.88	1.45	11.64	1.45	11.73	82.91	0.03
2700.00	0.78	14.30	2699.87	2.87	11.99	2.87	12.33	76.54	0.12
2800.00	1.14	16.76	2799.86	4.48	12.45	4.48	13.23	70.19	0.36
2900.00	1.14	15.32	2899.84	6.40	13.00	6.40	14.49	63.80	0.03
3000.00	1.55	12.80	2999.81	8.67	13.56	8.67	16.10	57.40	0.41
3100.00	1.50	10.78	3099.78	11.27	14.10	11.27	18.05	51.36	0.07
3200.00	1.33	15.50	3199.75	13.68	14.66	13.68	20.05	46.98	0.20
3300.00	1.76	16.06	3299.71	16.27	15.39	16.27	22.40	43.41	0.43
3400.00	1.84	15.90	3399.66	19.29	16.26	19.29	25.23	40.12	0.08
3500.00	1.78	16.80	3499.61	22.32	17.15	22.32	28.15	37.53	0.07
3600.00	1.59	2.49	3599.57	25.19	17.65	25.19	30.76	35.02	0.46
3700.00	1.28	349.01	3699.54	27.67	17.50	27.67	32.74	32.31	0.45
3800.00	1.33	342.34	3799.51	29.88	16.94	29.88	34.35	29.54	0.16
3900.00	1.23	325.72	3899.49	31.88	15.98	31.88	35.66	26.62	0.38
4000.00	1.10	319.07	3999.47	33.49	14.75	33.49	36.59	23.77	0.19
4100.00	0.80	288.76	4099.45	34.44	13.45	34.44	36.97	21.34	0.57
4200.00	0.65	282.03	4199.44	34.78	12.23	34.78	36.87	19.38	0.17
4300.00	0.59	271.02	4299.44	34.91	11.16	34.91	36.65	17.73	0.13
4400.00	0.48	153.13	4399.44	34.55	10.83	34.55	36.21	17.41	0.92
4500.00	1.13	140.80	4499.43	33.41	11.65	33.41	35.38	19.22	0.67
4600.00	1.17	139.57	4599.41	31.87	12.93	31.87	34.39	22.08	0.04
4700.00	1.87	138.44	4699.37	29.88	14.67	29.88	33.28	26.15	0.70
4800.00	2.55	137.67	4799.29	27.01	17.25	27.01	32.05	32.57	0.68
4900.00	2.33	136.72	4899.20	23.88	20.14	23.88	31.24	40.15	0.23
5000.00	1.86	138.67	4999.14	21.19	22.61	21.19	30.98	46.85	0.47
5100.00	1.87	137.35	5099.08	18.77	24.78	18.77	31.09	52.86	0.05
5200.00	1.47	136.71	5199.04	16.64	26.77	16.64	31.52	58.14	0.41
5300.00	1.20	144.46	5299.01	14.85	28.25	14.85	31.92	62.27	0.32
5400.00	1.38	148.44	5398.99	12.98	29.49	12.98	32.22	66.25	0.21
5500.00	1.18	149.24	5498.96	11.06	30.65	11.06	32.59	70.15	0.21
5600.00	1.24	151.59	5598.94	9.23	31.69	9.23	33.01	73.76	0.08
5700.00	0.84	151.62	5698.92	7.63	32.55	7.63	33.44	76.80	0.40

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
5800.00	0.78	152.04	5798.91	6.39	33.22	6.39	33.83	79.11	0.06
5900.00	0.65	155.65	5898.91	5.27	33.77	5.27	34.18	81.12	0.14
6000.00	0.75	164.14	5998.90	4.12	34.19	4.12	34.43	83.12	0.15
6100.00	0.61	168.00	6098.89	2.97	34.48	2.97	34.60	85.07	0.16
6200.00	0.59	172.28	6198.89	1.95	34.65	1.95	34.71	86.78	0.05
6300.00	0.55	176.75	6298.88	0.96	34.75	0.96	34.76	88.41	0.06
6400.00	0.31	211.83	6398.88	0.26	34.64	0.26	34.64	89.57	0.34
6500.00	0.44	216.29	6498.88	-0.28	34.27	-0.28	34.27	90.47	0.14
6600.00	0.37	195.38	6598.87	-0.90	33.95	-0.90	33.97	91.52	0.16
6700.00	0.54	192.26	6698.87	-1.67	33.77	-1.67	33.81	92.83	0.17
6800.00	0.42	190.21	6798.87	-2.49	33.60	-2.49	33.70	94.24	0.11
6900.00	0.42	182.18	6898.87	-3.22	33.52	-3.22	33.68	95.48	0.06
7000.00	0.17	174.74	6998.86	-3.73	33.52	-3.73	33.73	96.35	0.25
7100.00	0.22	168.90	7098.86	-4.07	33.58	-4.07	33.82	96.91	0.06
7200.00	0.27	166.93	7198.86	-4.49	33.67	-4.49	33.96	97.59	0.04
7300.00	0.45	149.92	7298.86	-5.05	33.92	-5.05	34.29	98.48	0.21
7400.00	0.59	145.14	7398.86	-5.82	34.41	-5.82	34.90	99.60	0.15
7500.00	0.76	142.28	7498.85	-6.77	35.11	-6.77	35.75	100.91	0.17
7600.00	0.54	128.05	7598.84	-7.58	35.89	-7.58	36.68	101.93	0.27
7700.00	0.47	71.33	7698.84	-7.75	36.65	-7.75	37.46	101.93	0.48
7800.00	0.67	68.32	7798.83	-7.40	37.57	-7.40	38.30	101.14	0.21
7900.00	1.03	64.09	7898.82	-6.79	38.93	-6.79	39.52	99.89	0.37
8000.00	1.42	55.65	7998.80	-5.70	40.76	-5.70	41.16	97.95	0.43
8100.00	1.92	48.00	8098.76	-3.88	43.03	-3.88	43.21	95.15	0.54
8200.00	2.11	46.38	8198.70	-1.49	45.61	-1.49	45.63	91.87	0.20
8300.00	1.96	44.10	8298.63	1.01	48.13	1.01	48.14	88.80	0.17
8400.00	1.37	41.84	8398.59	3.13	50.12	3.13	50.22	86.42	0.59
8500.00	0.79	45.16	8498.57	4.51	51.41	4.51	51.61	84.98	0.59
8600.00	0.35	68.17	8598.57	5.11	52.18	5.11	52.43	84.40	0.49
8700.00	0.21	111.63	8698.57	5.16	52.64	5.16	52.89	84.40	0.25
8800.00	0.20	123.78	8798.57	5.00	52.95	5.00	53.19	84.61	0.04
8900.00	0.08	142.96	8898.56	4.84	53.14	4.84	53.36	84.79	0.12
9000.00	0.10	72.93	8998.56	4.81	53.26	4.81	53.48	84.84	0.10
9100.00	0.17	37.97	9098.56	4.95	53.44	4.95	53.67	84.70	0.11
9200.00	0.62	2.93	9198.56	5.61	53.56	5.61	53.85	84.02	0.49
9300.00	0.44	354.05	9298.56	6.53	53.54	6.53	53.94	83.05	0.19
9400.00	0.34	327.94	9398.56	7.17	53.35	7.17	53.83	82.35	0.21
9500.00	0.33	214.85	9498.55	7.18	53.03	7.18	53.51	82.29	0.56
9600.00	0.73	213.76	9598.55	6.41	52.51	6.41	52.90	83.04	0.40

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
9700.00	0.69	211.75	9698.54	5.37	51.83	5.37	52.11	84.09	0.05
9800.00	0.38	209.86	9798.54	4.56	51.35	4.56	51.55	84.92	0.31
9900.00	0.39	101.06	9898.54	4.21	51.51	4.21	51.69	85.33	0.63
10000.00	0.96	92.06	9998.53	4.11	52.68	4.11	52.84	85.53	0.58
10100.00	1.82	85.10	10098.50	4.22	55.11	4.22	55.27	85.62	0.88
10200.00	2.84	91.29	10198.41	4.30	59.17	4.30	59.33	85.84	1.05
10300.00	2.26	95.65	10298.32	4.05	63.61	4.05	63.74	86.36	0.61
10400.00	1.81	116.62	10398.25	3.15	66.98	3.15	67.06	87.31	0.86
10500.00	1.02	162.27	10498.23	1.60	68.66	1.60	68.68	88.67	1.32
10600.00	1.10	198.88	10598.21	-0.16	68.62	-0.16	68.62	90.13	0.67
10700.00	2.03	201.82	10698.17	-2.70	67.66	-2.70	67.71	92.29	0.93
10800.00	2.04	212.86	10798.11	-5.84	66.03	-5.84	66.29	95.05	0.39
10900.00	1.95	215.00	10898.05	-8.73	64.09	-8.73	64.68	97.75	0.11
11000.00	2.29	221.19	10997.98	-11.63	61.80	-11.63	62.88	100.66	0.41
11100.00	2.18	225.34	11097.90	-14.47	59.13	-14.47	60.87	103.75	0.20
11200.00	1.97	237.68	11197.84	-16.72	56.33	-16.72	58.76	106.53	0.49
11300.00	1.98	232.77	11297.78	-18.68	53.50	-18.68	56.67	109.25	0.17
11400.00	2.26	234.57	11397.71	-20.87	50.52	-20.87	54.66	112.44	0.29
11500.00	3.13	236.20	11497.60	-23.53	46.65	-23.53	52.25	116.76	0.88
11600.00	3.50	247.13	11597.43	-26.24	41.56	-26.24	49.15	122.26	0.73
11700.00	3.71	248.42	11697.23	-28.61	35.74	-28.61	45.78	128.68	0.23
11800.00	3.27	249.40	11797.05	-30.81	30.06	-30.81	43.04	135.70	0.45
11900.00	3.10	248.67	11896.89	-32.79	24.87	-32.79	41.16	142.82	0.17
12000.00	2.65	246.41	11996.77	-34.70	20.24	-34.70	40.17	149.75	0.47
12100.00	2.84	236.78	12096.65	-36.98	16.05	-36.98	40.31	156.54	0.50



Vaughn Energy Services
Midland, Texas
432-563-5444
Survey Engineer: Chris Bankson
Eata Fajita State No. 003H



VES Survey Date: 05/18/2013

Rolfson Oilfield Services, Inc.

Company: COG Operating, LLC
Well: Eata Fajita 3H (Basic 46)
Location: Lea County, New Mexico

Date: 5-Jun2013
Surveys Original Hole
Page 1

Job# : 7233

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 359.59° Az (feet)	Grid Y	Grid X	Comments
Surface Location								446482.40	729244.20	150 FSL 1980 FEL Sect10
0.00	0.00	152.22	0.00	0.00	0.00	0.00	0.00	446482.40	729244.20	Gyro
100.00	0.51	152.22	100.00	-0.39	0.21	0.51	-0.40	446482.01	729244.41	
200.00	0.51	147.35	199.99	-1.16	0.65	0.04	-1.17	446481.24	729244.85	
300.00	0.70	132.81	299.99	-1.95	1.34	0.24	-1.96	446480.45	729245.54	
400.00	0.64	138.07	399.98	-2.78	2.16	0.09	-2.80	446479.62	729246.36	
500.00	1.01	150.77	499.97	-3.97	2.97	0.41	-3.99	446478.43	729247.17	
600.00	0.77	143.76	599.96	-5.28	3.80	0.26	-5.31	446477.12	729248.00	
700.00	0.48	143.03	699.95	-6.15	4.44	0.29	-6.19	446476.25	729248.64	
800.00	0.48	153.07	799.95	-6.86	4.89	0.08	-6.90	446475.54	729249.09	
900.00	0.26	172.52	899.95	-7.46	5.11	0.25	-7.50	446474.94	729249.31	
1000.00	0.35	179.47	999.95	-7.99	5.14	0.10	-8.03	446474.41	729249.34	
1100.00	0.15	171.75	1099.95	-8.43	5.16	0.20	-8.46	446473.97	729249.36	
1200.00	0.14	127.85	1199.95	-8.63	5.27	0.11	-8.67	446473.77	729249.47	
1300.00	0.32	80.44	1299.95	-8.66	5.65	0.25	-8.70	446473.74	729249.85	
1400.00	0.34	49.34	1399.94	-8.42	6.15	0.18	-8.46	446473.98	729250.35	
1500.00	0.61	45.43	1499.94	-7.85	6.75	0.27	-7.90	446474.55	729250.95	
1600.00	0.48	43.53	1599.94	-7.18	7.42	0.13	-7.23	446475.22	729251.62	
1700.00	0.42	36.54	1699.93	-6.58	7.93	0.08	-6.63	446475.82	729252.13	
1800.00	0.50	25.84	1799.93	-5.89	8.33	0.12	-5.95	446476.51	729252.53	
1900.00	0.37	32.09	1899.93	-5.22	8.70	0.14	-5.29	446477.18	729252.90	
2000.00	0.46	35.29	1999.92	-4.62	9.10	0.09	-4.69	446477.78	729253.30	
2100.00	0.47	23.52	2099.92	-3.92	9.50	0.10	-3.99	446478.48	729253.70	
2200.00	0.50	37.57	2199.92	-3.20	9.92	0.12	-3.27	446479.20	729254.12	
2300.00	0.60	27.32	2299.91	-2.39	10.43	0.14	-2.46	446480.01	729254.63	
2400.00	0.67	19.77	2399.91	-1.37	10.87	0.11	-1.45	446481.03	729255.07	
2500.00	0.89	15.32	2499.90	-0.07	11.27	0.23	-0.15	446482.33	729255.47	
2600.00	0.90	13.55	2599.88	1.44	11.66	0.03	1.36	446483.84	729255.86	
2700.00	0.78	14.30	2699.87	2.86	12.01	0.12	2.78	446485.26	729256.21	
2800.00	1.14	16.76	2799.86	4.48	12.47	0.36	4.39	446486.88	729256.67	
2900.00	1.14	15.32	2899.84	6.39	13.02	0.03	6.29	446488.79	729257.22	

Rolfson Oilfield Services, Inc.

Company: COG Operating, LLC
Well: Eata Fajita 3H (Basic 46)
Location: Lea County, New Mexico

Date: 5-Jun2013
Surveys Original Hole
Page 2

Job#: 7233

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 359.59° Az (feet)	Grid Y	NAD27 NM East gr elev=3592.3 RKB=3614 Grid X	Comments
3000.00	1.55	12.80	2999.81	8.67	13.58	0.41	8.57	446491.07	729257.78	
3100.00	1.50	10.78	3099.78	11.27	14.13	0.07	11.17	446493.67	729258.33	
3200.00	1.33	15.50	3199.75	13.67	14.68	0.21	13.57	446496.07	729258.88	
3300.00	1.76	16.06	3299.71	16.27	15.42	0.43	16.16	446498.67	729259.62	
3400.00	1.84	15.90	3399.66	19.29	16.28	0.08	19.17	446501.69	729260.48	
3500.00	1.78	16.80	3499.61	22.32	17.17	0.07	22.20	446504.72	729261.37	
3600.00	1.59	2.49	3599.57	25.19	17.68	0.46	25.06	446507.59	729261.88	
3700.00	1.28	349.01	3699.54	27.67	17.52	0.46	27.55	446510.07	729261.72	
3800.00	1.33	342.34	3799.51	29.88	16.96	0.16	29.75	446512.28	729261.16	
3900.00	1.23	325.72	3899.49	31.87	16.00	0.38	31.75	446514.27	729260.20	
4000.00	1.10	319.07	3999.47	33.48	14.77	0.19	33.38	446515.88	729258.97	
4100.00	0.80	288.76	4099.45	34.43	13.48	0.57	34.33	446516.83	729257.68	
4200.00	0.65	282.03	4199.44	34.77	12.26	0.17	34.69	446517.17	729256.46	
4300.00	0.59	271.02	4299.44	34.90	11.19	0.13	34.82	446517.30	729255.39	
4400.00	0.48	153.13	4399.44	34.54	10.87	0.92	34.46	446516.94	729255.07	
4500.00	1.13	140.80	4499.43	33.40	11.68	0.67	33.31	446515.80	729255.88	
4600.00	1.17	139.57	4599.41	31.86	12.97	0.05	31.76	446514.26	729257.17	
4700.00	1.87	138.44	4699.37	29.86	14.71	0.70	29.75	446512.26	729258.91	
4800.00	2.55	137.67	4799.29	26.99	17.29	0.68	26.87	446509.39	729261.49	
4900.00	2.33	136.72	4899.20	23.87	20.18	0.22	23.72	446506.27	729264.38	
5000.00	1.86	138.67	4999.14	21.17	22.65	0.48	21.01	446503.57	729266.85	
5100.00	1.87	137.35	5099.08	18.75	24.83	0.04	18.57	446501.15	729269.03	
5200.00	1.47	136.71	5199.04	16.62	26.81	0.40	16.43	446499.02	729271.01	
5300.00	1.20	144.46	5299.01	14.83	28.30	0.32	14.63	446497.23	729272.50	
5400.00	1.38	148.44	5398.99	12.96	29.54	0.20	12.74	446495.36	729273.74	
5500.00	1.18	149.24	5498.96	11.04	30.70	0.20	10.82	446493.44	729274.90	
5600.00	1.24	151.59	5598.94	9.21	31.74	0.08	8.98	446491.61	729275.94	
5700.00	0.84	151.62	5698.92	7.61	32.60	0.40	7.38	446490.01	729276.80	
5800.00	0.78	152.04	5798.91	6.37	33.27	0.06	6.13	446488.77	729277.47	
5900.00	0.65	155.65	5898.91	5.25	33.82	0.14	5.01	446487.65	729278.02	

Rolfson Oilfield Services, Inc.

Company: COG Operating, LLC
Well: Eata Fajita 3H (Basic 46)
Location: Lea County, New Mexico

Date: 5-Jun2013
Surveys Original Hole
Page 3

Job# : 7233

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 359.59° Az (feet)	Grid Y	NAD27 NM East gr elev=3592.3 RKB=3614 Grid X	Comments
6000.00	0.75	164.14	5998.90	4.10	34.23	0.14	3.86	446486.50	729278.43	
6100.00	0.61	168.00	6098.89	2.95	34.52	0.15	2.70	446485.35	729278.72	
6200.00	0.59	172.28	6198.89	1.92	34.70	0.05	1.67	446484.32	729278.90	
6300.00	0.55	176.75	6298.88	0.93	34.80	0.06	0.68	446483.33	729279.00	
6400.00	0.31	211.83	6398.88	0.22	34.68	0.35	-0.03	446482.62	729278.88	
6500.00	0.44	216.29	6498.88	-0.32	34.31	0.13	-0.56	446482.08	729278.51	
6600.00	0.37	195.38	6598.87	-0.94	34.00	0.16	-1.18	446481.46	729278.20	
6700.00	0.54	192.26	6698.87	-1.71	33.81	0.17	-1.95	446480.69	729278.01	
6800.00	0.42	190.21	6798.87	-2.53	33.65	0.12	-2.77	446479.87	729277.85	
6900.00	0.42	182.18	6898.87	-3.26	33.57	0.06	-3.50	446479.14	729277.77	
7000.00	0.17	174.74	6998.86	-3.77	33.57	0.25	-4.01	446478.63	729277.77	
7100.00	0.22	168.90	7098.86	-4.11	33.62	0.05	-4.35	446478.29	729277.82	
7200.00	0.27	166.93	7198.86	-4.53	33.71	0.05	-4.77	446477.87	729277.91	
7300.00	0.45	149.92	7298.86	-5.10	33.96	0.21	-5.34	446477.30	729278.16	
7400.00	0.59	145.14	7398.86	-5.86	34.45	0.15	-6.10	446476.54	729278.65	
7500.00	0.76	142.28	7498.85	-6.81	35.15	0.17	-7.06	446475.59	729279.35	
7600.00	0.54	128.05	7598.84	-7.62	35.93	0.27	-7.88	446474.78	729280.13	
7700.00	0.47	71.33	7698.84	-7.78	36.69	0.48	-8.04	446474.62	729280.89	
7800.00	0.67	68.32	7798.83	-7.43	37.62	0.20	-7.70	446474.97	729281.82	
7900.00	1.03	64.09	7898.82	-6.82	38.97	0.37	-7.10	446475.58	729283.17	
8000.00	1.42	55.65	7998.80	-5.73	40.80	0.43	-6.02	446476.67	729285.00	
8100.00	1.92	48.00	8098.76	-3.91	43.07	0.55	-4.22	446478.49	729287.27	
8200.00	2.11	46.38	8198.70	-1.52	45.65	0.20	-1.85	446480.88	729289.85	
8300.00	1.96	44.10	8298.63	0.98	48.17	0.17	0.63	446483.38	729292.37	
8400.00	1.37	41.84	8398.59	3.10	50.16	0.59	2.74	446485.50	729294.36	
8500.00	0.79	45.16	8498.57	4.47	51.45	0.58	4.10	446486.87	729295.65	
8600.00	0.35	68.17	8598.57	5.07	52.22	0.49	4.70	446487.47	729296.42	
8700.00	0.21	111.63	8698.57	5.12	52.67	0.24	4.74	446487.52	729296.87	
8800.00	0.20	123.78	8798.56	4.95	52.99	0.04	4.57	446487.35	729297.19	
8900.00	0.08	142.96	8898.56	4.80	53.17	0.13	4.42	446487.20	729297.37	

Rolfson Oilfield Services, Inc.

Company: COG Operating, LLC
Well: Eata Fajita 3H (Basic 46)
Location: Lea County, New Mexico

Date: 5-Jun2013
Surveys Original Hole
Page 4

Job#: 7233

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 359.59° Az (feet)	Grid Y	NAD27 NM East gr elev=3592.3 RKB=3614 Grid X	Comments
9000.00	0.10	72.93	8998.56	4.77	53.30	0.10	4.39	446487.17	729297.50	
9100.00	0.17	37.97	9098.56	4.91	53.48	0.11	4.53	446487.31	729297.68	
9200.00	0.62	2.93	9198.56	5.57	53.59	0.49	5.19	446487.97	729297.79	
9300.00	0.44	354.05	9298.56	6.49	53.58	0.20	6.11	446488.89	729297.78	
9400.00	0.34	327.94	9398.56	7.13	53.38	0.20	6.74	446489.53	729297.58	
9500.00	0.33	214.85	9498.55	7.14	53.06	0.56	6.76	446489.54	729297.26	
9600.00	0.73	213.76	9598.55	6.38	52.54	0.40	6.00	446488.78	729296.74	
9700.00	0.69	211.75	9698.54	5.33	51.87	0.05	4.96	446487.73	729296.07	
9800.00	0.38	209.86	9798.54	4.53	51.39	0.31	4.17	446486.93	729295.59	
9900.00	0.39	101.06	9898.54	4.18	51.56	0.63	3.81	446486.58	729295.76	
10000.00	0.96	92.06	9998.53	4.09	52.73	0.58	3.71	446486.49	729296.93	
10100.00	1.82	85.10	10098.50	4.19	55.15	0.87	3.80	446486.59	729299.35	
10200.00	2.84	91.29	10198.41	4.27	59.21	1.05	3.85	446486.67	729303.41	
10300.00	2.26	95.65	10298.32	4.02	63.65	0.61	3.57	446486.42	729307.85	
10400.00	1.81	116.62	10398.25	3.12	67.02	0.86	2.64	446485.52	729311.22	
10500.00	1.02	162.27	10498.22	1.56	68.71	1.32	1.07	446483.96	729312.91	
10600.00	1.10	198.88	10598.21	-0.19	68.67	0.67	-0.68	446482.21	729312.87	
10700.00	2.03	201.82	10698.17	-2.74	67.70	0.93	-3.23	446479.66	729311.90	
10800.00	2.04	212.86	10798.11	-5.88	66.07	0.39	-6.36	446476.52	729310.27	
10900.00	1.95	215.00	10898.05	-8.77	64.13	0.12	-9.23	446473.63	729308.33	
11000.00	2.29	221.19	10997.98	-11.67	61.84	0.41	-12.11	446470.73	729306.04	
11100.00	2.18	225.34	11097.90	-14.51	59.17	0.20	-14.93	446467.89	729303.37	
11200.00	1.97	237.68	11197.84	-16.77	56.37	0.49	-17.17	446465.63	729300.57	
11300.00	1.98	232.77	11297.78	-18.73	53.54	0.17	-19.11	446463.67	729297.74	
11400.00	2.26	234.57	11397.71	-20.92	50.56	0.29	-21.28	446461.48	729294.76	
11500.00	3.13	236.20	11497.60	-23.58	46.68	0.87	-23.91	446458.82	729290.88	
11600.00	3.50	247.13	11597.43	-26.28	41.60	0.73	-26.58	446456.12	729285.80	
11700.00	3.71	248.42	11697.23	-28.66	35.78	0.23	-28.92	446453.74	729279.98	
11800.00	3.27	249.40	11797.05	-30.85	30.10	0.44	-31.07	446451.55	729274.30	
11900.00	3.10	248.67	11896.89	-32.84	24.91	0.17	-33.02	446449.56	729269.11	

Rolfson Oilfield Services, Inc.

Company: COG Operating, LLC
Well: Eata Fajita 3H (Basic 46)
Location: Lea County, New Mexico

Date: 5-Jun2013
Surveys Original Hole

Page 5

Job# : 7233

NAD27 NM East gr elev=3592.3 RKB=3614

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 359.59° Az (feet)	Grid Y	Grid X	Comments
12000.00	2.65	246.41	11996.77	-34.75	20.27	0.46	-34.89	446447.65	729264.47	
12100.00	2.84	236.78	12096.65	-37.03	16.08	0.50	-37.15	446445.37	729260.28	

Rolfson Oilfield Services, Inc.

Company: COG Operating, LLC
Well: Eata Fajita 3H (Basic 46)
Location: Lea County, New Mexico

Date: 5-Jun2013

Surveys Lateral

Page 1

Job#: 7233

Job# : 7233

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 359.59° Az (feet)	Grid Y	Grid X	Comments	
Surface Location									446482.40	729244.20	150 FSL 1980 FEL Sect10
10600.00	1.10	198.88	10598.21	-0.19	68.67	0.00	-0.68	446482.21	729312.87	Tie into original hole	
10658.00	19.30	14.00	10655.18	8.68	70.83	35.17	8.17	446491.08	729315.03		
10689.00	25.90	19.90	10683.79	20.03	74.38	22.49	19.50	446502.43	729318.58		
10721.00	28.10	20.90	10712.30	33.64	79.45	7.02	33.07	446516.04	729323.65		
10752.00	27.80	21.40	10739.68	47.19	84.69	1.23	46.59	446529.59	729328.89		
10784.00	28.70	20.10	10767.87	61.36	90.05	3.41	60.71	446543.76	729334.25		
10815.00	31.40	18.40	10794.70	76.01	95.16	9.13	75.33	446558.41	729339.36		
10847.00	33.90	16.90	10821.64	92.46	100.39	8.21	91.74	446574.86	729344.59		
10879.00	34.40	17.00	10848.12	109.65	105.63	1.57	108.89	446592.05	729349.83		
10910.00	34.20	17.00	10873.73	126.35	110.73	0.65	125.56	446608.75	729354.93		
10942.00	36.10	16.20	10899.90	144.01	115.99	6.11	143.17	446626.41	729360.19		
10974.00	38.10	13.10	10925.42	162.68	120.86	8.55	161.81	446645.08	729365.06		
11005.00	39.60	10.20	10949.56	181.72	124.78	7.60	180.82	446664.12	729368.98		
11037.00	42.00	8.10	10973.79	202.36	128.09	8.64	201.44	446684.76	729372.29		
11069.00	44.20	5.90	10997.15	224.06	130.75	8.33	223.12	446706.46	729374.95		
11100.00	45.20	3.90	11019.19	245.78	132.61	5.57	244.83	446728.18	729376.81		
11132.00	48.80	2.30	11041.01	269.15	133.86	11.83	268.18	446751.55	729378.06		
11163.00	53.20	1.70	11060.51	293.22	134.70	14.27	292.25	446775.62	729378.90		
11195.00	57.60	359.60	11078.68	319.55	134.99	14.77	318.58	446801.95	729379.19		
11226.00	61.90	0.50	11094.29	346.32	135.02	14.10	345.35	446828.72	729379.22		
11258.00	66.20	2.10	11108.29	375.08	135.68	14.17	374.10	446857.48	729379.88		
11290.00	71.00	1.20	11119.97	404.85	136.53	15.23	403.87	446887.25	729380.73		
11321.00	75.20	359.00	11128.98	434.50	136.57	15.15	433.52	446916.90	729380.77		
11353.00	77.20	355.00	11136.61	465.53	134.94	13.65	464.55	446947.93	729379.14		
11385.00	79.10	352.30	11143.19	496.65	131.48	10.17	495.70	446979.05	729375.68		
11416.00	81.40	352.30	11148.44	526.93	127.38	7.42	526.00	447009.33	729371.58		
11448.00	84.30	352.00	11152.42	558.38	123.05	9.11	557.48	447040.78	729367.25		
11479.00	86.50	352.00	11154.90	588.97	118.75	7.10	588.11	447071.37	729362.95		
11511.00	88.80	350.70	11156.22	620.58	113.94	8.25	619.75	447102.98	729358.14		
11542.00	89.90	350.60	11156.57	651.17	108.90	3.56	650.37	447133.57	729353.10		

Rolfson Oilfield Services, Inc.

Company: COG Operating, LLC
Well: Eata Fajita 3H (Basic 46)
Location: Lea County, New Mexico

Date: 5-Jun2013

Surveys Lateral

Page 2

Job#: 7233

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 359.59° Az (feet)	Grid Y	NAD27 NM East gr elev=3592.3 RKB=3614 Grid X	Comments
11574.00	90.70	351.00	11156.40	682.75	103.79	2.80	681.99	447165.15	729347.99	
11668.00	92.20	351.30	11154.02	775.60	89.33	1.63	774.94	447258.00	729333.53	
11763.00	92.00	354.50	11150.54	869.80	77.60	3.37	869.22	447352.20	729321.80	
11857.00	90.40	354.60	11148.57	963.35	68.67	1.71	962.83	447445.75	729312.87	
11952.00	90.20	354.40	11148.07	1057.91	59.57	0.30	1057.46	447540.31	729303.77	
12046.00	90.50	354.90	11147.50	1151.50	50.80	0.62	1151.11	447633.90	729295.00	
12140.00	90.90	355.20	11146.35	1245.14	42.69	0.53	1244.80	447727.54	729286.89	
12235.00	91.50	354.60	11144.36	1339.74	34.25	0.89	1339.46	447822.14	729278.45	
12330.00	91.20	355.30	11142.12	1434.35	25.89	0.80	1434.13	447916.75	729270.09	
12424.00	88.80	356.10	11142.12	1528.08	18.84	2.69	1527.90	448010.48	729263.04	
12519.00	89.10	356.00	11143.86	1622.83	12.30	0.33	1622.70	448105.23	729256.50	
12614.00	89.00	355.90	11145.44	1717.58	5.59	0.15	1717.50	448199.98	729249.79	
12708.00	88.90	357.50	11147.16	1811.41	0.18	1.71	1811.36	448293.81	729244.38	
12803.00	89.50	357.40	11148.49	1906.30	-4.05	0.64	1906.29	448388.70	729240.15	
12898.00	89.10	358.10	11149.65	2001.22	-7.78	0.85	2001.23	448483.62	729236.42	
12992.00	89.10	359.60	11151.13	2095.19	-9.66	1.60	2095.21	448577.59	729234.54	
13087.00	90.20	359.50	11151.71	2190.18	-10.41	1.16	2190.20	448672.58	729233.79	
13181.00	90.40	358.90	11151.21	2284.17	-11.72	0.67	2284.20	448766.57	729232.48	
13276.00	91.60	358.90	11149.56	2379.14	-13.54	1.26	2379.18	448861.54	729230.66	
13370.00	90.10	359.50	11148.16	2473.12	-14.86	1.72	2473.16	448955.52	729229.34	
13465.00	90.30	358.60	11147.83	2568.10	-16.43	0.97	2568.15	449050.50	729227.77	
13559.00	90.50	359.70	11147.17	2662.09	-17.82	1.19	2662.15	449144.49	729226.38	
13654.00	90.80	359.60	11146.10	2757.08	-18.41	0.33	2757.14	449239.48	729225.79	
13748.00	91.70	359.10	11144.04	2851.05	-19.47	1.10	2851.12	449333.45	729224.73	
13843.00	90.50	0.90	11142.22	2946.03	-19.47	2.28	2946.09	449428.43	729224.73	
13937.00	89.10	0.30	11142.55	3040.02	-18.49	1.62	3040.07	449522.42	729225.71	
14032.00	90.10	0.10	11143.21	3135.01	-18.16	1.07	3135.06	449617.41	729226.04	
14126.00	88.50	0.60	11144.36	3229.00	-17.58	1.78	3229.05	449711.40	729226.62	
14221.00	88.80	1.80	11146.60	3323.95	-15.59	1.30	3323.98	449806.35	729228.61	
14315.00	89.80	1.40	11147.75	3417.91	-12.97	1.15	3417.91	449900.31	729231.23	

Company: COG Operating, LLC
Well: Eata Fajita 3H (Basic 46)
Location: Lea County, New Mexico

Job# : 7233

N 32° 14' 18.09" W 103° 35' 30.86"



Eata Fajita 3H (Basic 46)

Lea County, New Mexico

WELL PROFILE DATA rev2							
MD	Inc.	Azi.	TVD	N-S	E-W	DLS	Comment
10600	1.10	198.88	10598	-0	69	0.00	Tie in survey @ 10600 MD
10662	1.67	201.08	10660	-2	68	0.93	KOP Begin 12°/100' build/turn
11424	90.00	358.84	11150	475	53	12.00	Begin 90° Lateral Section
15710	90.00	358.84	11150	4760	-34	0.00	PBHL/TD

WELL PROFILE DATA svys							
MD	Inc.	Azi.	TVD	N-S	E-W	DLS	Comment
15640	92.40	0.20	11127	4742	0	0.00	Survey Proj. to 15640 MD

Surface Location	NAD27 NM East
Lat: N 32.225323°	Long: W 103.592014°
x: 729244.2	y: 446482.4
Model IGRF2011	Date: 21-Apr-2013
Declination (MN to TN):	7.37° East
Dip:	60.14
Field Strength:	48432.5
Total Corr. (MN to GN):	6.97° East

rolfson oil

