



PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288

30-015-38284

October 12, 2011

COG, LLC
Fasken Center, Tower II
550 West Texas Ave, Suite 1300
Midland, TX 79701

RE: Skelly Unit #750
1252' FSL & 94' FEL
Sec. 22, T17S, R31E
Eddy County, New Mexico

Dear Sir,

The attached is the Deviation Survey for the above captioned well.

Very truly yours,

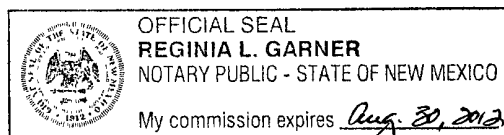
A handwritten signature in cursive script, appearing to read "Eddie C. LaRue".

Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 12th day of October, 2011.

A handwritten signature in cursive script, appearing to read "Regina L. Garner".

Notary Public

Skelly Unit #750

Date	Depth	Dev/Inc	Dir/AZ	TVD	Hor Disp.
9/30/2011	564	0.20		581	
10/1/2011	854	0.40			
10/2/2011	1321	0.30		1376	
10/2/2011	1803	1.50		1815	
10/3/2011	1897	1.60	53.10		
10/3/2011	1866	1.40	52.40		
10/3/2011	1928	1.90	47.30		
10/3/2011	1959	1.70	40.70		
10/3/2011	2022	1.40	19.70	2021.77	2.33
10/3/2011	2115	1.50	358.90	2144.74	0.56
10/4/2011	2208	2.20	349.90	2207.69	2.15
10/4/2011	2301	3.30	347.30		
10/4/2011	2395	4.50	335.00		
10/4/2011	2488	5.20	334.00		
10/4/2011	2582	6.90	333.10		
10/4/2011	2675	6.20	327.30		
10/4/2011	2764	6.60	323.30	2766.32	31.31
10/4/2011	2862	6.50	322.50	2858.71	61.87
10/5/2011	2955	5.90	323.80		
10/5/2011	3049	6.70	320.30		
10/5/2011	3142	6.20	320.90		
10/5/2011	3236	6.20	320.10		
10/5/2011	3329	6.00	322.20		
10/5/2011	3423	6.90	324.30		
10/5/2011	3576	6.50	323.50		
10/5/2011	3610	6.10	324.20		
10/5/2011	3703	7.20	319.90		
10/5/2011	3796	6.60	321.80	3736.90	165.30
10/5/2011	3889	6.60	323.20	3879.25	175.97
10/5/2011	3983	6.60	320.40		
10/5/2011	4076	6.70	328.70		
10/6/2011	4170	6.00	326.50		
10/6/2011	4357	5.80	326.00		
10/6/2011	4263	6.00	324.60		
10/6/2011	4357	5.80	326.00		
10/6/2011	4450	5.80	320.50		
10/6/2011	4543	5.70	337.00	4529.50	
10/6/2011	4637	5.80	334.80	4623.00	
10/7/2011	4791	5.80	334.60		
10/7/2011	4885	5.50	335.10		
10/7/2011	4978	5.30	334.10		
10/7/2011	5072	5.10	335.10		
10/7/2011	5166	4.80	330.20	5213.00	
10/7/2011	5259	4.80	328.40	5307.00	
10/7/2011	5352	5.10	327.00	5400.00	
10/7/2011	5446	5.00	325.50	5424.00	
10/7/2011	5539	4.50	328.20	5587.00	
10/7/2011	5633	5.40	326.00	5614.91	
10/7/2011	5820	5.70	317.50	5801.04	
10/7/2011	5924	5.20	228.20		

Skelly Unit #750

Date	Depth	Dev/Inc	Dir/AZ	TVD Hor. Disp.
10/7/2011	5913	5.40	319.10	
10/8/2011	6006	5.50	319.10	
10/8/2011	6099	5.70	321.40	
10/8/2011	6193	6.00	324.10	6171.30
10/8/2011	6286	6.00	324.60	6269.79
10/8/2011	6379	5.80	325.40	6367.30
10/8/2011	6474	5.80	324.00	6451.81
10/9/2011	6567	5.80	324.80	
10/9/2011	6659	5.90	326.40	
10/9/2011	6754	5.80	326.90	
10/9/2011	6847	5.80	326.40	

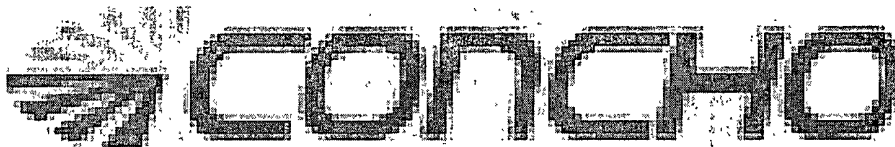


Ryan Energy Directional Drilling Report

Field: Eddy Co, NM
Site: Skelly Unit #750
Well: #750
Wellpath: OH

Prepared For:

COG Operating LLC



Ryan Energy Technology

19510 Oil Center Blvd
Houston, TX 77073
Ph 281-443-1414
Fx 281-443-1676

www.ryanenergy.com

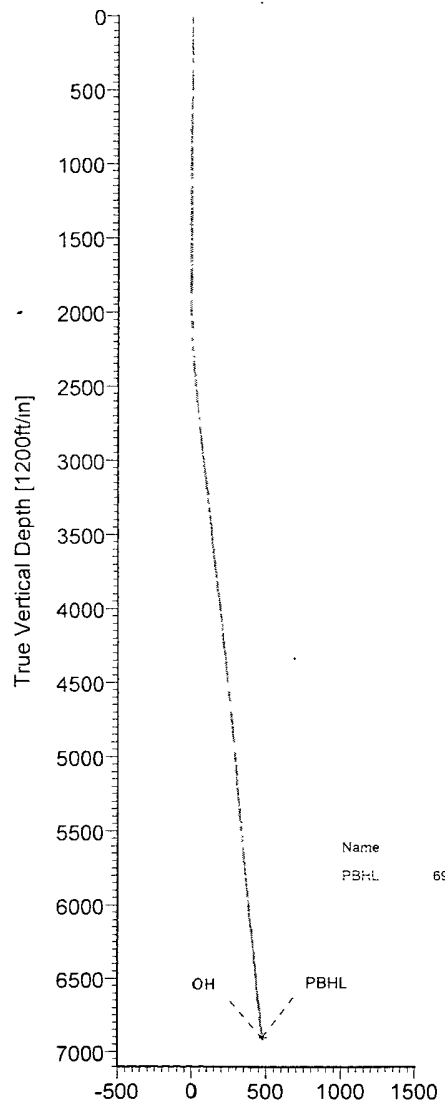


COG Operating LLC

Field: Eddy Co, NM
Site: Skelly Unit #750
Well: #750
Wellpath: OH



Azimuths to Grid North
True North -0.26°
Magnetic North 7.46°
Magnetic Field
Strength: 48939nT
Dip Angle: 60.68°
Date: 9/28/2011
Model: IGRF2010



Vertical Section at 328.58° [1200ft/in]

FIELD DETAILS

Eddy Co, NM
New Mexico
U S A
Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico Eastern Zone
Magnetic Model: IGRF2010
System Datum: Mean Sea Level
Local North: Grid North

SITE DETAILS

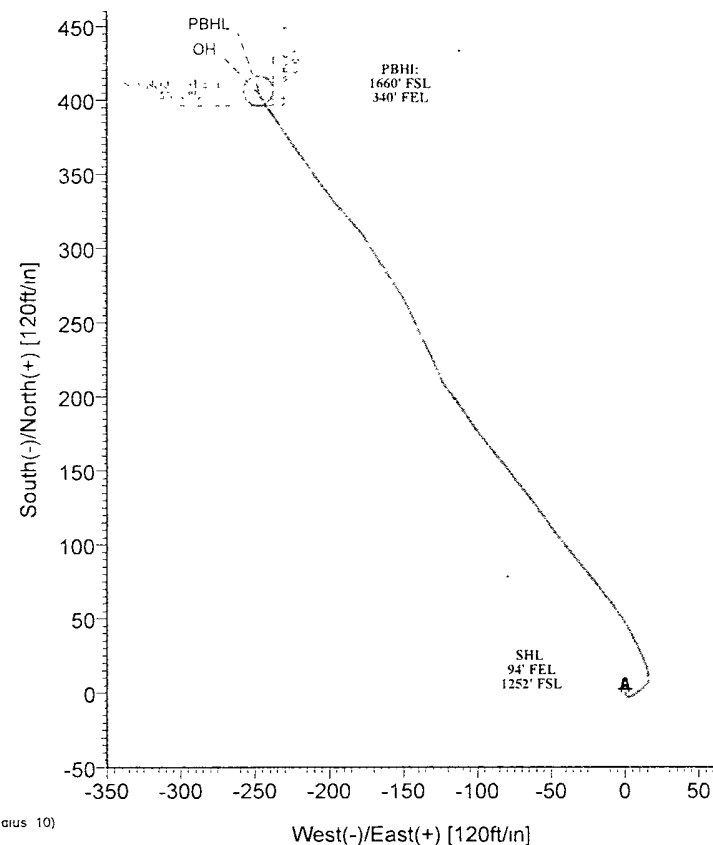
Skelly Unit #750
Eddy Co, NM
Site Centre Northing: 660975.60
Easting: 648900.70
Ground Level: 3850.00
Positional Uncertainty: 0.00
Convergence: 0.26

WELLPATH DETAILS

OH
Rig Ref Datum: SITE 3850.00ft
V Section Angle: Origin -N/-S Origin -E/-W Starting From TVD
328.58° 0.00 0.00 0.00

TARGET DETAILS

Name	TVD	-N/-S	-E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	6900.00	406.20	-248.10	661381.80	648652.60	32°49'02.248N	103°50'58.063W	Circle (Radius: 10)





Ryan Energy Technologies

Survey Report



Company: COG Operating LLC		Date: 10/10/2011	Time: 12:50:10	Page: 1
Field: Eddy Co, NM		Co-ordinate(NE) Reference:	Site: Skelly Unit #750, Grid North	
Site: Skelly Unit #750		Vertical (TVD) Reference:	SITE 3850 0	
Well: #750		Section (VS) Reference:	Well: (0 00N,0.00E,328.58Azi)	
Wellpath: OH		Survey Calculation Method:	Minimum Curvature Db: Sybase	

Field: Eddy Co, NM New Mexico U S A		Map Zone: New Mexico, Eastern Zone
Map System: US State Plane Coordinate System 1927		Coordinate System: Site Centre
Geo Datum: NAD27 (Clarke 1866)		Geomagnetic Model: IGRF2010
Sys Datum: Mean Sea Level		

Site: Skelly Unit #750	
Eddy Co, NM	
Site Position:	Northing: 660975 60 ft Latitude: 32 48 58.218 N
From: Map	Easting: 648900 70 ft Longitude: 103 50 55 178 W
Position Uncertainty: 0 00 ft	North Reference: Grid
Ground Level: 3850 00 ft	Grid Convergence: 0.26 deg

Well: #750		Slot Name:	
Well Position:	+N/-S 0 00 ft Northing: 660975 60 ft Latitude: 32 48 58 218 N		
	+E/-W 0 00 ft Easting: 648900 70 ft Longitude: 103 50 55 178 W		
Position Uncertainty: 0.00 ft			

Wellpath: OH		Drilled From: Surface	
Current Datum: SITE	Height 3850 00 ft	Tie-on Depth: 0 00 ft	
Magnetic Data: 9/28/2011		Above System Datum: Mean Sea Level	
Field Strength: 48939 nT		Declination: 7 73 deg	
Vertical Section: Depth From (TVD)	+N/-S	Mag Dip Angle: 60.68 deg	
ft	ft	+E/-W	Direction
		ft	deg
0.00	0 00	0 00	328 58

Survey Program for Definitive Wellpath					
Date: 10/10/2011	Validated: No		Version: 0		
Actual From	To	Survey	Toolcode	Tool Name	
ft	ft				
100 00	1762 00	Survey #1 (100.00-1762 00)	Gyro	Gyro	
1866 00	6892 00	Survey #2 (1866 00-6892 00)	Ryan MWD	Ryan MWD	
6940 00	6940 00	Survey #3 (6940 00-6940.00)	Projection	Projection	

Survey										
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	Tool/Comment
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	TIE LINE
100 00	0.32	186.50	100 00	-0.28	-0.03	-0.22	0.32	0.32	0 00	Gyro
200 00	0.22	150.52	200 00	-0.72	0.03	-0.63	0.19	-0.10	-35.98	Gyro
300 00	0.23	169.01	300 00	-1.09	0.16	-1.01	0.07	0.01	18.49	Gyro
400 00	0.24	153.11	400 00	-1.47	0.30	-1.41	0.07	0.01	-15.90	Gyro
500 00	0.21	154.47	500.00	-1.82	0.47	-1.80	0.03	-0.03	1.36	Gyro
600 00	0.09	164.05	600 00	-2.06	0.57	-2.06	0.12	-0.12	9.58	Gyro
700 00	0.03	254.50	700 00	-2.15	0.57	-2.13	0.10	-0.06	90.45	Gyro
800 00	0.17	162.17	800 00	-2.29	0.59	-2.26	0.17	0.14	-92.33	Gyro
900 00	0.10	167.21	900 00	-2.52	0.65	-2.49	0.07	-0.07	5.04	Gyro
1000 00	0.09	166.64	1000 00	-2.68	0.69	-2.65	0.01	-0.01	-0.57	Gyro
1100 00	0.33	102.29	1099.99	-2.82	0.99	-2.92	0.30	0.24	-64.35	Gyro
1200 00	0.43	100.75	1199.99	-2.95	1.64	-3.37	0.10	0.10	-1.54	Gyro
1300 00	0.52	97.13	1299.99	-3.08	2.46	-3.91	0.09	0.09	-3.62	Gyro
1400 00	0.63	83.76	1399.98	-3.07	3.46	-4.42	0.17	0.11	-13.37	Gyro
1500 00	1.06	61.30	1499.97	-2.57	4.81	-4.70	0.53	0.43	-22.46	Gyro
1600 00	1.92	54.91	1599.94	-1.16	7.00	-4.64	0.87	0.86	-6.39	Gyro
1700 00	1.62	52.88	1699.89	0.65	9.49	-4.39	0.31	-0.30	-2.03	Gyro
1762 00	1.64	44.30	1761.87	1.82	10.81	-4.09	0.39	0.03	-13.84	Gyro
1866 00	1.40	52.40	1865.83	3.66	12.86	-3.58	0.31	-0.23	7.79	Ryan MWD
1928 00	1.70	47.30	1927.81	4.74	14.13	-3.32	0.53	0.48	-8.23	Ryan MWD



Ryan Energy Technologies

Survey Report



Company: COG Operating LLC Date: 10/10/2011 Time: 12:50:10 Page: 2
Field: Eddy Co, NM Co-ordinate(NE) Reference: Site: Skelly Unit #750, Grid North
Site: Skelly Unit #750 Vertical (TYD) Reference: SITE: 3850.0
Well: #750 Section (V.S.) Reference: Well (0.00N, 0.00E, 328.58Azi)
Wellpath: OH Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TYD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
2022.00	1.40	19.70	2021.77	6.77	15.55	-2.33	0.85	-0.32	-29.36	Ryan MWD
2115.00	1.50	358.90	2114.74	9.06	15.90	-0.56	0.57	0.11	-22.37	Ryan MWD
2208.00	2.20	349.90	2207.69	12.03	15.57	2.15	0.81	0.75	-9.68	Ryan MWD
2301.00	3.30	347.30	2300.59	16.40	14.67	6.35	1.19	1.18	-2.80	Ryan MWD
2395.00	4.50	335.00	2394.37	22.38	12.51	12.58	1.55	1.28	-13.09	Ryan MWD
2488.00	5.20	334.00	2487.04	29.48	9.12	20.40	0.76	0.75	-1.08	Ryan MWD
2582.00	6.90	333.10	2580.51	38.34	4.70	30.27	1.81	1.81	-0.96	Ryan MWD
2675.00	6.20	327.30	2672.90	47.55	-0.54	40.86	1.03	-0.75	-6.24	Ryan MWD
2769.00	6.60	323.30	2766.32	56.15	-6.51	51.31	0.64	0.43	-4.26	Ryan MWD
2862.00	6.50	322.50	2858.71	64.61	-12.91	61.87	0.15	-0.11	-0.86	Ryan MWD
2955.00	5.90	323.80	2951.16	72.65	-18.94	71.87	0.66	-0.65	1.40	Ryan MWD
3049.00	6.70	320.30	3044.60	80.76	-25.29	82.11	0.94	0.85	-3.72	Ryan MWD
3142.00	6.20	320.90	3137.01	88.84	-31.92	92.45	0.54	-0.54	0.65	Ryan MWD
3236.00	6.20	320.10	3230.46	96.67	-38.38	102.50	0.09	0.00	-0.85	Ryan MWD
3329.00	6.00	322.20	3322.93	104.36	-44.58	112.30	0.32	-0.22	2.26	Ryan MWD
3423.00	6.70	324.30	3416.35	112.70	-50.79	122.65	0.78	0.74	2.23	Ryan MWD
3516.00	6.50	323.50	3508.74	121.33	-57.09	133.30	0.24	-0.22	-0.86	Ryan MWD
3610.00	6.10	324.20	3602.17	129.66	-63.18	143.58	0.43	-0.43	0.74	Ryan MWD
3703.00	7.20	319.90	3694.54	138.13	-69.82	154.27	1.30	1.18	-4.62	Ryan MWD
3796.00	6.60	321.80	3786.87	146.79	-76.88	165.34	0.69	-0.65	2.04	Ryan MWD
3889.00	6.60	323.20	3879.25	155.27	-83.39	175.97	0.17	0.00	1.51	Ryan MWD
3983.00	6.60	320.40	3972.63	163.75	-90.07	186.70	0.34	0.00	-2.98	Ryan MWD
4076.00	6.70	320.70	4065.00	172.07	-96.91	197.36	0.11	0.11	0.32	Ryan MWD
4170.00	6.00	326.50	4158.43	180.41	-103.09	207.70	1.01	-0.74	6.17	Ryan MWD
4263.00	6.00	324.60	4250.92	188.43	-108.59	217.41	0.21	0.00	-2.04	Ryan MWD
4357.00	5.80	326.00	4344.42	196.37	-114.09	227.05	0.26	-0.21	1.49	Ryan MWD
4450.00	5.80	320.50	4436.95	203.89	-119.71	236.40	0.60	0.00	-5.91	Ryan MWD
4543.00	5.70	337.00	4529.48	211.77	-124.51	245.62	1.77	-0.11	17.74	Ryan MWD
4637.00	5.80	334.90	4623.01	220.37	-128.34	254.96	0.25	0.11	-2.23	Ryan MWD
4698.00	5.80	334.30	4683.70	225.93	-130.99	261.09	0.10	0.00	-0.98	Ryan MWD
4791.00	5.80	334.60	4776.22	234.41	-135.04	270.44	0.03	0.00	0.32	Ryan MWD
4885.00	5.50	335.00	4869.77	242.79	-138.98	279.64	0.32	-0.32	0.43	Ryan MWD
4978.00	5.30	334.10	4962.35	250.69	-142.74	288.34	0.23	-0.22	-0.97	Ryan MWD
5072.00	5.10	335.50	5055.97	258.40	-146.37	296.81	0.25	-0.21	1.49	Ryan MWD
5166.00	4.80	330.20	5149.62	265.61	-150.06	304.89	0.58	-0.32	-5.64	Ryan MWD
5259.00	4.80	328.40	5242.29	272.30	-154.03	312.67	0.16	0.00	-1.94	Ryan MWD
5352.00	5.10	327.00	5334.94	279.08	-158.32	320.69	0.35	0.32	-1.51	Ryan MWD
5446.00	5.00	325.50	5428.58	285.96	-162.92	328.96	0.18	-0.11	-1.60	Ryan MWD
5539.00	4.50	328.20	5521.26	292.40	-167.13	336.66	0.59	-0.54	2.90	Ryan MWD
5633.00	5.40	326.90	5614.91	299.24	-171.49	344.77	0.96	0.96	-1.38	Ryan MWD
5726.00	5.20	328.20	5707.51	306.49	-176.10	353.35	0.25	-0.22	1.40	Ryan MWD
5820.00	5.70	317.30	5801.09	313.54	-181.51	362.19	1.22	0.53	-11.60	Ryan MWD
5913.00	5.40	319.10	5893.65	320.24	-187.51	371.04	0.37	-0.32	1.94	Ryan MWD
6007.00	5.50	319.70	5987.23	327.02	-193.32	379.85	0.12	0.11	0.64	Ryan MWD
6099.00	5.70	321.40	6078.79	333.96	-199.02	388.74	0.28	0.22	1.85	Ryan MWD
6192.00	6.00	324.10	6171.30	341.50	-204.75	398.17	0.44	0.32	2.90	Ryan MWD
6286.00	6.00	324.60	6264.79	349.49	-210.48	407.97	0.06	0.00	0.53	Ryan MWD
6379.00	5.80	325.40	6357.30	357.32	-215.97	417.51	0.23	-0.22	0.86	Ryan MWD
6474.00	5.80	324.00	6451.81	365.15	-221.51	427.09	0.15	0.00	-1.47	Ryan MWD
6567.00	5.80	324.80	6544.33	372.79	-226.98	436.46	0.09	0.00	0.86	Ryan MWD
6660.00	5.80	326.40	6636.86	380.55	-232.29	445.84	0.17	0.00	1.72	Ryan MWD
6754.00	5.80	326.90	6730.38	388.48	-237.51	455.34	0.05	0.00	0.53	Ryan MWD
6847.00	5.80	326.40	6822.90	396.33	-242.68	464.73	0.05	0.00	-0.54	Ryan MWD
6892.00	5.70	327.60	6867.67	400.11	-245.14	469.24	0.35	-0.22	2.67	Ryan MWD



Ryan Energy Technologies Survey Report



Company:	COG Operating LLC	Date:	10/10/2011	Time:	12:50:10	Page:	3
Field:	Eddy Co, NM	Co-ordinate(NE) Reference:	Site: Skelly Unit #750, Grid North				
Site:	Skelly Unit #750	Vertical (TYD) Reference:	SITE 3850.0				
Well:	#750	Section (VS) Reference:	Well (0.00N, 0.00E: 328.58Azi)				
Wellpath:	OH	Survey Calculation Method:	Minimum Curvature				
						Db:	Sybase

Survey

MD ft	Incl deg	Azim deg	TYD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6940.00	5.70	327.60	6915.44	404.14	-247.69	474.00	0.00	0.00	0.00	Projection

Company: COG Operating, LLC	Date: 10/10/2011	Time: 12:57:54	Page: 1
Field: Eddy Co, NM	Co-ordinate(NE) Reference:	Site: Skelly Unit #750, Grid North	
Site: Skelly Unit #750	Vertical (TVD) Reference:	SITE 3850 0	
Well: #750	Section (VS) Reference:	Well: (0.00N, 0.00E, 328.58Azi)	
Wellpath: OH	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Field: Eddy Co, NM New Mexico U S A	Map Zone: New Mexico, Eastern Zone
Map System: US State Plane Coordinate System 1927	Coordinate System: Site Centre
Geo Datum: NAD27 (Clarke 1866)	Geomagnetic Model: IGRF2010
Sys Datum: Mean Sea Level	

Site: Skelly Unit #750

Eddy Co, NM

Site Position:	Northing: 660975 60 ft	Latitude: 32 48 58 218 N	
From: Map	Easting: 648900 70 ft	Longitude: 103 50 55 178 W	
Position Uncertainty: 0 00 ft		North Reference: Grid	
Ground Level: 3850 00 ft		Grid Convergence: 0 26 deg	

Well: #750	Slot Name:
Well Position: +N/-S 0.00 ft	Northing: 660975 60 ft
+E/-W 0.00 ft	Easting: 648900 70 ft
Position Uncertainty: 0 00 ft	

Wellpath: OH	Drilled From: Surface
Current Datum: SITE	Tie-on Depth: 0 00 ft
Magnetic Data: 9/28/2011	Above System Datum: Mean Sea Level
Field Strength: 48939 nT	Declination: 7 73 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 60 68 deg
ft	+N/-S ft
	+E/-W ft
	Direction deg
0 00	0 00
0 00	328.58

Survey

MD ft	Incl deg	TVD ft	VS ft	Azim deg	N/S ft	E/W ft	Csr Dist ft	Csr Azi deg	DLS deg/100ft	Tool
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	TIE LINE
100 00	0 32	100.00	-0 22	186 50	-0 28	-0 03	0 28	186 50	0 32	Gyro
200 00	0 22	200 00	-0 63	150 52	-0 72	0 03	0 72	177 52	0 19	Gyro
300 00	0 23	300 00	-1 01	169 01	-1 09	0 16	1 10	171 41	0 07	Gyro
400 00	0 24	400.00	-1 41	153 11	-1 47	0 30	1 50	168 58	0 07	Gyro
500 00	0 21	500.00	-1 80	154 47	-1 82	0 47	1 88	165 52	0 03	Gyro
600 00	0 09	600 00	-2 06	164 05	-2 06	0 57	2 14	164 52	0 12	Gyro
700 00	0 03	700 00	-2 13	254 50	-2 15	0 57	2 22	165.18	0 10	Gyro
800 00	0 17	800.00	-2 26	162 17	-2 29	0 59	2 37	165 63	0 17	Gyro
900 00	0 10	900 00	-2 49	167 21	-2 52	0 65	2 60	165 48	0 07	Gyro
1000 00	0 09	1000 00	-2 65	166 64	-2 68	0 69	2 77	165 57	0 01	Gyro
1100 00	0 33	1099 99	-2 92	102 29	-2 82	0 99	2 99	160 66	0 30	Gyro
1200 00	0 43	1199.99	-3 37	100 75	-2 95	1 64	3 38	150 94	0 10	Gyro
1300.00	0 52	1299.99	-3 91	97 13	-3 08	2 46	3 94	141 38	0 09	Gyro
1400 00	0 63	1399 98	-4 42	83 76	-3 07	3 46	4 62	131 65	0 17	Gyro
1500 00	1 06	1499.97	-4 70	61 30	-2 57	4.81	5 46	118.10	0 53	Gyro
1600 00	1 92	1599 94	-4 64	54 91	-1 16	7 00	7 09	99 43	0 87	Gyro
1700 00	1 62	1699 89	-4 39	52 88	0 65	9.49	9 52	86 06	0 31	Gyro
1762 00	1 64	1761.87	-4 09	44.30	1 82	10 81	10 96	80 46	0 39	Gyro
1866 00	1 40	1865.83	-3.58	52 40	3 66	12 86	13 37	74 12	0 31	Ryan MWD
1928 00	1 70	1927.81	-3 32	47 30	4 74	14 13	14 91	71 45	0 53	Ryan MWD
2022 00	1 40	2021 77	-2 33	19 70	6 77	15 55	16 96	66 47	0 85	Ryan MWD
2115 00	1 50	2114 74	-0 56	358 90	9 06	15 90	18 30	60 34	0 57	Ryan MWD
2208 00	2 20	2207 69	2 15	349 90	12 03	15 57	19 68	52 30	0 81	Ryan MWD
2301 00	3 30	2300.59	6 35	347 30	16 40	14 67	22 00	41.81	1 19	Ryan MWD
2395 00	4 50	2394 37	12 58	335 00	22 38	12 51	25 64	29.21	1 55	Ryan MWD
2488 00	5 20	2487 04	20 40	334 00	29 48	9 12	30 86	17.20	0 76	Ryan MWD
2582 00	6 90	2580 51	30.27	333 10	38 34	4.70	38 63	6.99	1 81	Ryan MWD



Ryan Energy Technologies COMPLETION REPORT



Company: COG Operating, LLC Date: 10/10/2011 Time: 12:57:54 Page: 2
Field: Eddy Co, NM Co-ordinate(NE) Reference: Site: Skelly Unit #750, Grid North
Site: Skelly Unit #750 Vertical (TV-D) Reference: SITE 3850 0
Well: #750 Section (VS) Reference: Well (0.00N, 0.00E, 328.58Azi)
Wellpath: OH Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	TV-D ft	VS ft	Azim deg	N/S ft	E/W ft	Clsr Dist ft	Clsr Azi deg	DLS deg/100ft	Tool
2675.00	6.20	2672.90	40.86	327.30	47.55	-0.54	47.55	359.35	1.03	Ryan MWD
2769.00	6.60	2766.32	51.31	323.30	56.15	-6.51	56.53	353.39	0.64	Ryan MWD
2862.00	6.50	2858.71	61.87	322.50	64.61	-12.91	65.89	348.70	0.15	Ryan MWD
2955.00	5.90	2951.16	71.87	323.80	72.65	-18.94	75.07	345.39	0.66	Ryan MWD
3049.00	6.70	3044.60	82.11	320.30	80.76	-25.29	84.63	342.61	0.94	Ryan MWD
3142.00	6.20	3137.01	92.45	320.90	88.84	-31.92	94.40	340.23	0.54	Ryan MWD
3236.00	6.20	3230.46	102.50	320.10	96.67	-38.38	104.01	338.34	0.09	Ryan MWD
3329.00	6.00	3322.93	112.30	322.20	104.36	-44.58	113.49	336.87	0.32	Ryan MWD
3423.00	6.70	3416.35	122.65	324.30	112.70	-50.79	123.62	335.74	0.78	Ryan MWD
3516.00	6.50	3508.74	133.30	323.50	121.33	-57.09	134.09	334.80	0.24	Ryan MWD
3610.00	6.10	3602.17	143.58	324.20	129.66	-63.18	144.23	334.02	0.43	Ryan MWD
3703.00	7.20	3694.54	154.27	319.90	138.13	-69.82	154.77	333.18	1.30	Ryan MWD
3796.00	6.60	3786.87	165.34	321.80	146.79	-76.88	165.70	332.36	0.69	Ryan MWD
3889.00	6.60	3879.25	175.97	323.20	155.27	-83.39	176.24	331.76	0.17	Ryan MWD
3983.00	6.60	3972.63	186.70	320.40	163.75	-90.07	186.89	331.19	0.34	Ryan MWD
4076.00	6.70	4065.00	197.36	320.70	172.07	-96.91	197.48	330.61	0.11	Ryan MWD
4170.00	6.00	4158.43	207.70	326.50	180.41	-103.09	207.79	330.25	1.01	Ryan MWD
4263.00	6.00	4250.92	217.41	324.60	188.43	-108.59	217.48	330.04	0.21	Ryan MWD
4357.00	5.80	4344.42	227.05	326.00	196.37	-114.09	227.11	329.84	0.26	Ryan MWD
4450.00	5.80	4436.95	236.40	320.50	203.89	-119.71	236.44	329.58	0.60	Ryan MWD
4543.00	5.70	4529.48	245.62	337.00	211.77	-124.51	245.66	329.55	1.77	Ryan MWD
4637.00	5.80	4623.01	254.96	334.90	220.37	-128.34	255.02	329.78	0.25	Ryan MWD
4698.00	5.80	4683.70	261.09	334.30	225.93	-130.99	261.16	329.90	0.10	Ryan MWD
4791.00	5.80	4776.22	270.44	334.60	234.41	-135.04	270.53	330.05	0.03	Ryan MWD
4885.00	5.50	4869.77	279.64	335.00	242.79	-138.98	279.75	330.21	0.32	Ryan MWD
4978.00	5.30	4962.35	288.34	334.10	250.69	-142.74	288.48	330.34	0.23	Ryan MWD
5072.00	5.10	5055.97	296.81	335.50	258.40	-146.37	296.97	330.47	0.25	Ryan MWD
5166.00	4.80	5149.62	304.89	330.20	265.61	-150.06	305.07	330.54	0.58	Ryan MWD
5259.00	4.80	5242.29	312.67	328.40	272.30	-154.03	312.85	330.50	0.16	Ryan MWD
5352.00	5.10	5334.94	320.69	327.00	279.08	-158.32	320.86	330.43	0.35	Ryan MWD
5446.00	5.00	5428.58	328.96	325.50	285.96	-162.92	329.12	330.33	0.18	Ryan MWD
5539.00	4.50	5521.26	336.66	328.20	292.40	-167.13	336.80	330.25	0.59	Ryan MWD
5633.00	5.40	5614.91	344.77	326.90	299.24	-171.49	344.90	330.18	0.96	Ryan MWD
5726.00	5.20	5707.51	353.35	328.20	306.49	-176.10	353.48	330.12	0.25	Ryan MWD
5820.00	5.70	5801.09	362.19	317.30	313.54	-181.51	362.29	329.93	1.22	Ryan MWD
5913.00	5.40	5893.65	371.04	319.10	320.24	-187.51	371.10	329.65	0.37	Ryan MWD
6007.00	5.50	5987.23	379.85	319.70	327.02	-193.32	379.89	329.41	0.12	Ryan MWD
6099.00	5.70	6078.79	388.74	321.40	333.96	-199.02	388.76	329.21	0.28	Ryan MWD
6192.00	6.00	6171.30	398.17	324.10	341.50	-204.75	398.18	329.05	0.44	Ryan MWD
6286.00	6.00	6264.79	407.97	324.60	349.49	-210.48	407.97	328.94	0.06	Ryan MWD
6379.00	5.80	6357.30	417.51	325.40	357.32	-215.97	417.51	328.85	0.23	Ryan MWD
6474.00	5.80	6451.81	427.09	324.00	365.15	-221.51	427.09	328.76	0.15	Ryan MWD
6567.00	5.80	6544.33	436.46	324.80	372.79	-226.98	436.46	328.66	0.09	Ryan MWD
6660.00	5.80	6636.86	445.84	326.40	380.55	-232.29	445.84	328.60	0.17	Ryan MWD
6754.00	5.80	6730.38	455.34	326.90	388.48	-237.51	455.34	328.56	0.05	Ryan MWD
6847.00	5.80	6822.90	464.73	326.40	396.33	-242.68	464.73	328.52	0.05	Ryan MWD
6892.00	5.70	6867.67	469.24	327.60	400.11	-245.14	469.24	328.51	0.35	Ryan MWD
6940.00	5.70	6915.44	474.00	327.60	404.14	-247.69	474.00	328.50	0.00	Projection



Company: Concho Operating

Lease/Well: Skelly Unit/#750

Location: 9 Miles E Of Loco Hills

Rig Name: Silver Oak #6

State/County: New Mexico/Eddy

Latitude: 32.82

GRID North is 0.26 Degrees East of True North

VS-Azi: 0.00 Degrees



Depth Reference : RKB = 17 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: skelly unit #750_ed.ut

Minimum Curvature Method

Report Date/Time: 10/14/2011 / 14:11

Vaughn Energy Services

Midland, TX

432-563-5444

Surveyor: Glen McCandless

Skelly Unit #750

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W 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	****
100.00	0.32	186.50	100.00	-0.27	-0.03	0.28	186.50	0.32
200.00	0.22	150.52	200.00	-0.72	0.03	0.72	177.43	0.19
300.00	0.23	169.01	300.00	-1.08	0.16	1.09	171.31	0.07
400.00	0.24	153.11	400.00	-1.46	0.30	1.49	168.46	0.07
500.00	0.21	154.47	500.00	-1.82	0.47	1.88	165.40	0.03
600.00	0.09	164.05	600.00	-2.06	0.57	2.14	164.42	0.12
700.00	0.03	254.50	700.00	-2.15	0.57	2.22	165.15	0.10
800.00	0.17	162.17	800.00	-2.29	0.59	2.37	165.66	0.17
900.00	0.10	167.21	900.00	-2.52	0.65	2.60	165.52	0.07
1000.00	0.09	166.64	1000.00	-2.68	0.69	2.76	165.61	0.02
1100.00	0.33	102.29	1099.99	-2.81	0.98	2.98	160.74	0.30
1200.00	0.43	100.75	1199.99	-2.94	1.63	3.36	151.04	0.10
1300.00	0.52	97.13	1299.99	-3.07	2.45	3.92	141.39	0.10
1400.00	0.63	83.76	1399.98	-3.06	3.45	4.61	131.64	0.17
1500.00	1.06	61.30	1499.97	-2.56	4.80	5.44	118.03	0.54
1600.00	1.92	54.91	1599.94	-1.15	6.99	7.09	99.31	0.87
1700.00	1.62	52.88	1699.89	0.67	9.49	9.52	85.95	0.31
1762.00	1.64	44.30	1761.87	1.84	10.81	10.97	80.36	0.40



Vaughn Energy Services
Midland, TX
432-563-5444
Surveyor: Glen McCandless
Skelly Unit #750

