



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

NM OIL CONSERVATION
ARTESIA DISTRICT

JUN 1 2015

RECEIVED

March 31, 2015

COG, LLC
One Concho Center
600 W. Illinois Ave.
Midland, TX 79701

30-015-41606

RRD 6/24/15
Accepted for record
NMCCD

RE: MYOX 28 State Com 4H
330' FNL & 2187' FEL
Sec. 28, T25S, R28E
Eddy County, New Mexico

Dear Sir,

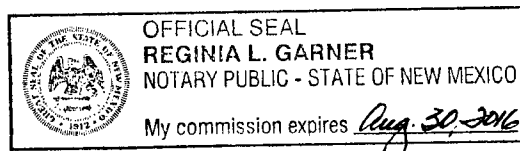
The attached is the Deviation Survey for the above captioned well.

Very truly yours,

Chris Graham
Drilling Superintendent

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 31st day of March, 2015.

Notary Public

MYOX 28 STATE COM 4H

Date	Depth	Deviation	Direction	TVD	Horiz
3/11/2015	175	0.30	0.00	0.00	0.00
3/12/2015	527	1.50	0.00	0.00	0.00
3/13/2015	771	2.00	0.00	0.00	0.00
3/13/2015	983	2.10	0.00	0.00	0.00
3/13/2015	1166	1.70	0.00	0.00	0.00
3/13/2015	1319	1.90	0.00	0.00	0.00
3/13/2015	1349	1.70	0.00	0.00	0.00
3/13/2015	1441	1.80	0.00	0.00	0.00
3/13/2015	1624	1.90	0.00	0.00	0.00
3/14/2015	1930	1.10	0.00	0.00	0.00
3/14/2015	2051	1.40	0.00	0.00	0.00
3/14/2015	2142	2.90	0.00	0.00	0.00
3/14/2015	2173	3.10	0.00	0.00	0.00
3/14/2015	2264	3.30	0.00	0.00	0.00
3/14/2015	2295	3.40	0.00	0.00	0.00
3/14/2015	2326	3.30	0.00	0.00	0.00
3/14/2015	2389	3.00	0.00	0.00	0.00
3/16/2015	2652	2.40	0.00	0.00	0.00
3/16/2015	2907	2.00	0.00	0.00	0.00
3/16/2015	3158	1.50	0.00	0.00	0.00
3/16/2015	3570	0.60	0.00	0.00	0.00
3/16/2015	3855	0.30	0.00	0.00	0.00
3/17/2015	4138	0.60	0.00	0.00	0.00
3/17/2015	4456	0.70	0.00	0.00	0.00
3/17/2015	4708	0.50	0.00	0.00	0.00
3/17/2015	4993	0.30	0.00	0.00	0.00
3/17/2015	5277	0.40	0.00	0.00	0.00
3/17/2015	5467	1.10	0.00	0.00	0.00
3/17/2015	5722	1.60	0.00	0.00	0.00
3/17/2015	6070	1.50	0.00	0.00	0.00
3/18/2015	6355	2.20	0.00	0.00	0.00
3/18/2015	6421	2.70	0.00	0.00	0.00
3/18/2015	6513	4.10	0.00	0.00	0.00
3/19/2015	6594	4.30	308.90	6590.00	0.00
3/19/2015	6624	3.60	305.00	6620.00	0.00
3/19/2015	6654	2.90	301.50	6650.00	82.00
3/19/2015	6806	1.80	307.90	6802.00	79.00
3/19/2015	6959	1.10	314.80	6955.00	77.00
3/20/2015	7050	1.50	324.30	7846.00	0.00
3/20/2015	7144	1.50	321.50	7140.00	0.00
3/20/2015	7176	1.60	319.20	7172.00	0.00
3/20/2015	7240	1.70	319.90	7236.00	0.00

Date	Depth	Deviation	Direction	TVD	Horiz
3/20/2015	7270	1.70	319.30	7266.00	0.00
3/20/2015	7302	1.70	321.40	7298.00	0.00
3/20/2015	7461	1.10	303.10	7457.00	66.00
3/20/2015	7524	0.70	230.20	7520.00	66.00
3/20/2015	7556	1.70	194.80	7552.00	67.00
3/21/2015	7588	3.40	190.30	7584.00	0.00
3/21/2015	7619	5.60	188.10	7615.00	0.00
3/21/2015	7651	8.20	184.90	7646.00	0.00
3/21/2015	7682	10.70	183.10	7677.00	0.00
3/21/2015	7714	13.10	193.10	7708.00	86.00
3/21/2015	7746	15.50	182.40	7740.00	94.00
3/22/2015	7840	22.50	180.00	7828.00	124.00
3/22/2015	7904	29.30	176.60	7886.00	166.00
3/22/2015	7967	37.30	175.00	7939.00	187.00
3/23/2015	8031	44.10	176.00	0.00	0.00
3/23/2015	8126	52.20	173.60	0.00	0.00
3/23/2015	8156	55.10	173.30	0.00	0.00
3/23/2015	8187	59.00	173.10	8085.00	0.00
3/23/2015	8280	67.30	172.60	8127.00	0.00
3/23/2015	8343	74.10	171.90	8148.00	0.00
3/23/2015	8407	79.00	172.30	8162.00	553.00
3/23/2015	8438	82.00	173.10	8167.00	584.00
3/23/2015	8565	91.60	173.80	8174.00	710.00
3/24/2015	8660	93.50	174.20	8170.00	0.00
3/24/2015	8756	91.60	173.00	8165.00	0.00
3/24/2015	9039	89.90	175.40	8164.00	0.00
3/24/2015	9225	89.80	175.00	8165.00	0.00
3/24/2015	9319	89.90	175.00	8165.00	0.00
3/25/2015	9412	89.30	174.70	8166.00	155.80
3/25/2015	9506	89.70	174.60	8176.00	1651.00
3/25/2015	9600	89.80	174.40	8167.00	1745.00
3/25/2015	9693	89.50	175.60	8168.00	1838.00
3/25/2015	9787	89.70	175.20	8168.00	1932.00
3/25/2015	9882	90.20	174.90	8169.00	0.00
3/25/2015	10070	91.40	174.20	8165.00	0.00
3/25/2015	10444	90.70	175.10	8160.00	0.00
3/25/2015	10727	90.70	174.70	8158.00	0.00
3/25/2015	10821	89.60	175.40	8158.00	0.00
3/26/2015	10915	90.10	175.10	8158.00	3060.00
3/26/2015	11008	90.50	174.60	8158.00	3153.00
3/26/2015	11102	89.10	175.00	8159.00	3247.00
3/26/2015	11196	89.40	174.80	8160.00	3341.00
3/26/2015	11384	89.20	175.80	8163.00	0.00
3/26/2015	11572	90.20	175.30	8164.00	0.00
3/26/2015	11759	90.40	175.00	8160.00	0.00

Date	Depth	Deviation	Direction	TVD	Horiz
3/26/2015	11948	90.30	175.80	8158.00	0.00
3/29/2015	12042	90.40	175.20	8158.00	0.00
3/29/2015	12323	91.10	175.60	8157.00	0.00
3/29/2015	12418	91.30	175.50	8154.00	0.00
3/29/2015	12512	91.70	175.30	8151.00	0.00

EOF



NM OIL CONSERVATION
ARTESIA DISTRICT

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March 26, 2015

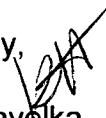
Concho Resources, Inc.
One Concho Center
600 W. Illinois Avenue
Midland, Texas 79701

Attn: Kanicia Castillo

RE: **Myox 28 State Com 4H**

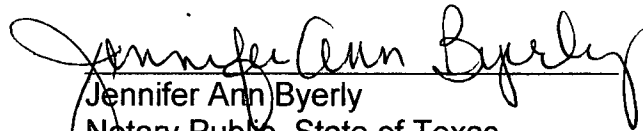
Please find enclosed a copy of the survey from 0' to 6488' ran on the above referenced well.

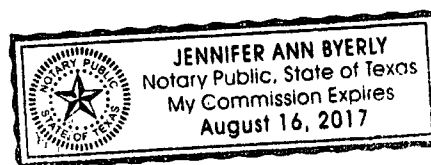
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 26 day of March
A.D., 2015, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: CONCHO
Lease/Well: MYOX 28 STATE COM/4H

Rig Name: SILVEROAK 1
State/County: NEW MEXICO/EDDY
Latitude: 32.11, Longitude: -104.07
GRID North is 0.14 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB: 17 FEET

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 3/26/2015 / 14:05

VES Survey International
West Texas
(432) 563-5444
Surveyor: Jordan Shelleby
Myox 28 State Com 4H / API 30-015-41606

NM OIL CONSERVATION
ARTESIA DISTRICT

JUN 1 2015

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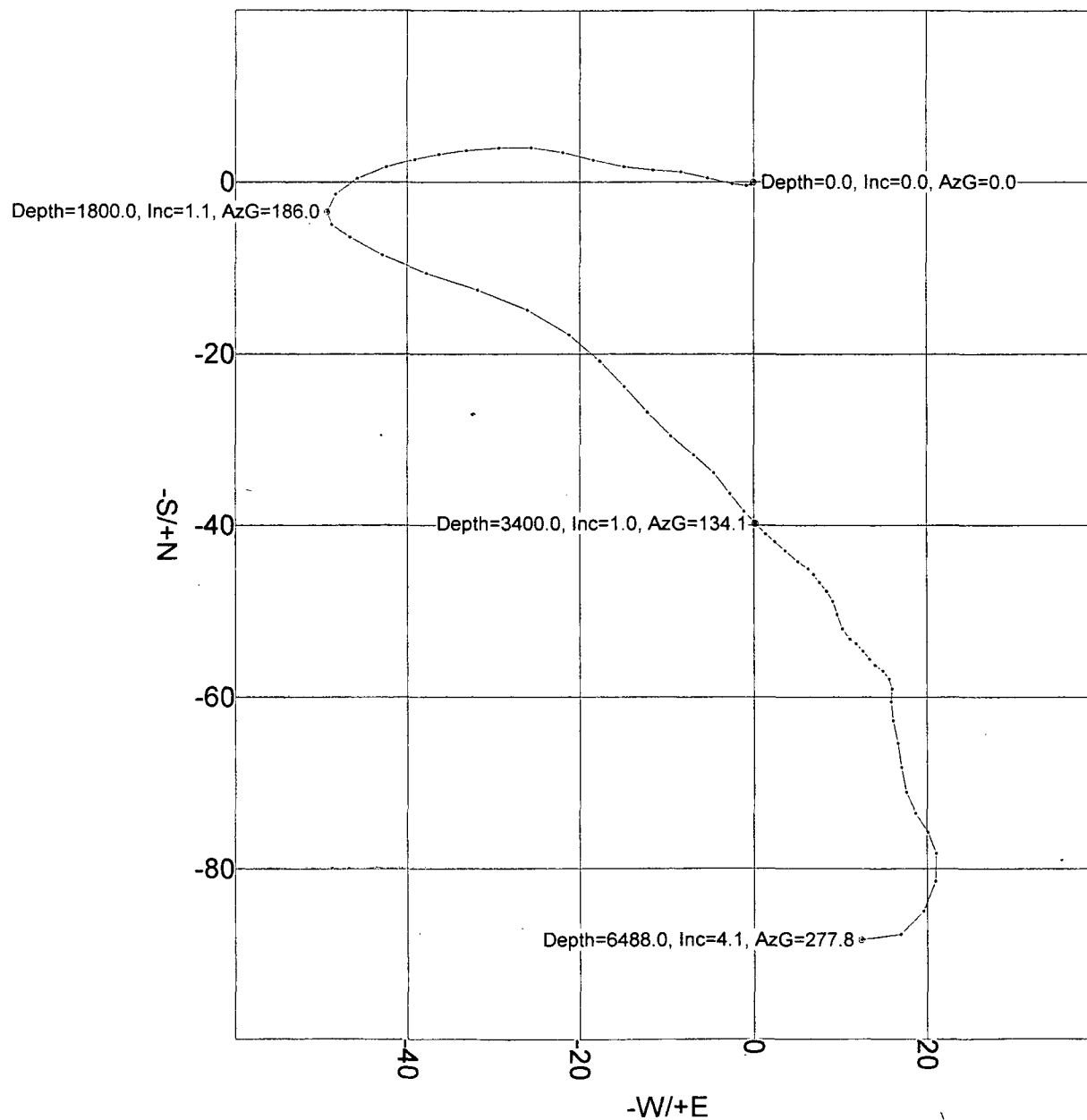
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.46	226.12	100.00	-0.28	-0.29	-0.28	0.40	226.12	0.46
200.00	0.32	302.29	200.00	-0.41	-0.81	-0.41	0.91	243.35	0.49
300.00	1.62	271.84	299.98	-0.21	-2.46	-0.21	2.47	265.02	1.35
400.00	1.83	294.04	399.94	0.48	-5.32	0.48	5.35	275.15	0.69
500.00	1.83	271.73	499.89	1.18	-8.38	1.18	8.46	278.00	0.71
600.00	1.84	276.28	599.84	1.40	-11.58	1.40	11.66	276.90	0.15
700.00	2.01	277.14	699.78	1.80	-14.92	1.80	15.03	276.86	0.17
800.00	2.11	287.27	799.71	2.56	-18.42	2.56	18.60	277.92	0.38
900.00	2.11	280.90	899.65	3.46	-21.99	3.46	22.26	278.93	0.23
1000.00	2.16	275.50	999.58	3.98	-25.67	3.98	25.97	278.82	0.21
1100.00	2.13	264.10	1099.51	3.97	-29.39	3.97	29.66	277.70	0.43
1200.00	2.18	267.05	1199.44	3.68	-33.14	3.68	33.34	276.35	0.12
1300.00	1.54	254.52	1299.38	3.23	-36.33	3.23	36.47	275.08	0.76
1400.00	1.72	261.76	1399.34	2.66	-39.11	2.66	39.20	273.89	0.28
1500.00	2.20	250.25	1499.29	1.79	-42.40	1.79	42.44	272.42	0.62
1600.00	1.95	245.17	1599.22	0.43	-45.76	0.43	45.76	270.53	0.31
1700.00	1.63	219.73	1699.17	-1.39	-48.22	-1.39	48.24	268.35	0.85
1800.00	1.10	185.96	1799.15	-3.44	-49.23	-3.44	49.35	266.00	0.94

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	0.96	129.09	1899.13	-4.93	-48.68	-4.93	48.93	264.22	0.99
2000.00	1.92	124.11	1999.10	-6.40	-46.64	-6.40	47.07	262.19	0.97
2100.00	2.98	116.01	2099.01	-8.48	-42.91	-8.48	43.74	258.82	1.11
2200.00	3.46	108.95	2198.85	-10.60	-37.72	-10.60	39.18	254.31	0.62
2300.00	3.66	107.93	2298.66	-12.56	-31.84	-12.56	34.22	248.47	0.21
2400.00	3.49	116.01	2398.46	-14.88	-26.07	-14.88	30.01	240.29	0.53
2500.00	2.99	127.12	2498.30	-17.79	-21.25	-17.79	27.71	230.07	0.80
2600.00	2.40	135.16	2598.19	-20.85	-17.69	-20.85	27.34	220.32	0.70
2700.00	2.26	138.31	2698.11	-23.81	-14.90	-23.81	28.09	212.04	0.19
2800.00	2.31	139.06	2798.03	-26.80	-12.27	-26.80	29.47	204.61	0.05
2900.00	2.14	132.30	2897.95	-29.57	-9.58	-29.57	31.08	197.95	0.31
3000.00	1.83	125.39	2997.89	-31.75	-6.90	-31.75	32.49	192.26	0.39
3100.00	1.77	139.53	3097.85	-33.85	-4.59	-33.85	34.16	187.73	0.45
3200.00	1.74	145.08	3197.80	-36.27	-2.72	-36.27	36.37	184.29	0.17
3300.00	1.26	138.59	3297.76	-38.34	-1.12	-38.34	38.36	181.68	0.51
3400.00	0.98	134.09	3397.75	-39.76	0.22	-39.76	39.76	179.69	0.30
3500.00	0.94	141.42	3497.73	-41.00	1.34	-41.00	41.02	178.12	0.13
3600.00	0.71	114.78	3597.72	-41.90	2.42	-41.90	41.97	176.70	0.44
3700.00	1.15	139.45	3697.71	-42.92	3.63	-42.92	43.07	175.17	0.59
3800.00	1.09	123.62	3797.69	-44.21	5.08	-44.21	44.50	173.45	0.31
3900.00	0.57	128.13	3897.68	-45.05	6.26	-45.05	45.48	172.08	0.52
4000.00	0.50	147.23	3997.67	-45.73	6.89	-45.73	46.24	171.43	0.19
4100.00	0.77	143.21	4097.67	-46.63	7.53	-46.63	47.24	170.82	0.27
4200.00	0.76	137.55	4197.66	-47.66	8.38	-47.66	48.39	170.02	0.08
4300.00	0.85	159.43	4297.65	-48.84	9.09	-48.84	49.68	169.45	0.32
4400.00	0.98	163.57	4397.64	-50.36	9.59	-50.36	51.26	169.21	0.15
4500.00	1.09	157.04	4497.62	-52.05	10.21	-52.05	53.04	168.91	0.16
4600.00	0.66	120.06	4597.61	-53.22	11.08	-53.22	54.36	168.24	0.69
4700.00	0.41	138.55	4697.60	-53.77	11.81	-53.77	55.06	167.61	0.30
4800.00	0.90	135.51	4797.60	-54.61	12.60	-54.61	56.04	167.00	0.49
4900.00	0.54	152.76	4897.59	-55.58	13.37	-55.58	57.17	166.48	0.42
5000.00	0.63	124.46	4997.58	-56.31	14.04	-56.31	58.03	166.00	0.30
5100.00	0.64	128.36	5097.58	-56.96	14.92	-56.96	58.89	165.32	0.04
5200.00	0.75	153.19	5197.57	-57.89	15.66	-57.89	59.97	164.87	0.32
5300.00	0.65	177.75	5297.56	-59.05	15.97	-59.05	61.17	164.86	0.31
5400.00	1.09	186.60	5397.55	-60.56	15.89	-60.56	62.61	165.30	0.46
5500.00	1.48	165.81	5497.53	-62.76	16.09	-62.76	64.79	165.62	0.61
5600.00	1.58	170.03	5597.49	-65.37	16.65	-65.37	67.46	165.71	0.15
5700.00	1.70	173.71	5697.45	-68.21	17.05	-68.21	70.30	165.96	0.16

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	1.70	164.67	5797.41	-71.12	17.61	-71.12	73.26	166.09	0.27
5900.00	1.40	145.27	5897.37	-73.55	18.70	-73.55	75.89	165.74	0.60
6000.00	1.57	148.65	5997.34	-75.73	20.11	-75.73	78.35	165.13	0.19
6100.00	1.55	169.91	6097.30	-78.23	21.05	-78.23	81.01	164.94	0.58
6200.00	2.24	189.37	6197.25	-81.49	20.97	-81.49	84.15	165.57	0.93
6300.00	2.16	214.31	6297.18	-84.98	19.59	-84.98	87.21	167.02	0.95
6400.00	2.27	233.70	6397.10	-87.71	16.93	-87.71	89.33	169.07	0.75
6488.00	4.10	277.77	6484.97	-88.32	12.41	-88.32	89.19	172.00	3.33



VES Survey International
West Texas
(432) 563-5444
Surveyor: Jordan Shelleby
Myox 28 State Com 4H / API 30-015-41606



V.E.S. Survey Date: 3/18/2015



Survey Report - Geographic



C&J Energy Services

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well Myox 28 State Com Well No. 4H
Project:	Eddy County, New Mexico	TVD Reference:	RKB2964.6+17 @ 2982.00usft (Silver Oaks 1)
Site:	Myox 28 State Com	MD Reference:	RKB2964.6+17 @ 2982.00usft (Silver Oaks 1)
Well:	Myox 28 State Com Well No. 4H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	Dbase Nov0914

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	Myox 28 State Com		
Site Position:		Northing:	402,788.90 usft
From:	Map	Easting:	575,230.40 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.10714981
		Longitude:	-104.09036781
		Grid Convergence:	0.13 °

Well	Myox 28 State Com Well No. 4H, Surf Loc: 330 FNL 2187 FEL Sect 28			
Well Position	+N/-S	0.00 usft	Northing:	402,788.90 usft
	+E/-W	0.00 usft	Easting:	575,230.40 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft
			Ground Level:	2,964.60 usft

Wellbore	Original Hole					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)	
	IGRF2010	2/26/2015	7.36	59.90	48,123	
	IGRF2010	3/19/2015	7.35	59.90	48,118	

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	175.16

Survey Program	Date	4/2/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	6,488.00	Gyro (Original Hole)	NS-GYRO-MS	North sensing gyrocompassing m/s
6,563.00	12,578.00	MWD (Original Hole)	MWD	MWD - Standard

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	402,788.90	575,230.40	32.10714981	-104.09036781
100.00	0.46	226.12	100.00	-0.28	-0.29	402,788.62	575,230.11	32.10714905	-104.09036875
Gyro									
200.00	0.32	302.29	200.00	-0.41	-0.81	402,788.49	575,229.59	32.10714870	-104.09037045
300.00	1.62	271.84	299.98	-0.21	-2.46	402,788.69	575,227.94	32.10714924	-104.09037577
400.00	1.83	294.04	399.94	0.48	-5.33	402,789.38	575,225.07	32.10715117	-104.09038504
500.00	1.83	271.73	499.89	1.18	-8.39	402,790.08	575,222.01	32.10715311	-104.09039490
600.00	1.84	276.28	599.84	1.41	-11.58	402,790.30	575,218.82	32.10715375	-104.09040521
700.00	2.01	277.14	699.78	1.80	-14.92	402,790.70	575,215.49	32.10715485	-104.09041598
800.00	2.11	287.27	799.72	2.56	-18.41	402,791.46	575,211.99	32.10715697	-104.09042727



Survey Report - Geographic



C&J Energy Services

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well Myox 28 State Com Well No. 4H
Project:	Eddy County, New Mexico	TVD Reference:	RKB2964.6+17 @ 2982.00usft (Silver Oaks 1)
Site:	Myox 28 State Com	MD Reference:	RKB2964.6+17 @ 2982.00usft (Silver Oaks 1)
Well:	Myox 28 State Com Well No. 4H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	Dbase Nov0914

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
900.00	2.11	280.90	899.65	3.46	-21.98	402,792.36	575,208.42	32.10715946	-104.09043878
1,000.00	2.16	275.50	999.58	3.99	-25.66	402,792.89	575,204.74	32.10716093	-104.09045067
1,100.00	2.13	264.10	1,099.51	3.98	-29.39	402,792.88	575,201.01	32.10716093	-104.09046270
1,200.00	2.18	267.05	1,199.44	3.69	-33.14	402,792.59	575,197.27	32.10716016	-104.09047480
1,300.00	1.54	254.52	1,299.38	3.23	-36.33	402,792.13	575,194.07	32.10715892	-104.09048512
1,400.00	1.72	261.76	1,399.34	2.66	-39.11	402,791.56	575,191.29	32.10715736	-104.09049411
1,500.00	2.20	250.25	1,499.29	1.79	-42.40	402,790.69	575,188.00	32.10715501	-104.09050474
1,600.00	1.95	245.17	1,599.22	0.43	-45.75	402,789.33	575,184.65	32.10715128	-104.09051558
1,671.00	1.69	228.02	1,670.19	-0.78	-47.63	402,788.12	575,182.78	32.10714798	-104.09052163
330 Hard line intercept @ 1671 MD									
1,700.00	1.63	219.73	1,699.17	-1.38	-48.21	402,787.52	575,182.20	32.10714632	-104.09052351
1,800.00	1.10	185.96	1,799.15	-3.43	-49.22	402,785.47	575,181.19	32.10714070	-104.09052678
1,900.00	0.96	129.09	1,899.13	-4.91	-48.66	402,783.99	575,181.74	32.10713662	-104.09052502
2,000.00	1.92	124.11	1,999.10	-6.38	-46.63	402,782.52	575,183.78	32.10713257	-104.09051845
2,100.00	2.98	116.01	2,099.01	-8.46	-42.90	402,780.44	575,187.50	32.10712683	-104.09050644
2,200.00	3.46	108.95	2,198.85	-10.58	-37.71	402,778.32	575,192.69	32.10712097	-104.09048969
2,300.00	3.66	107.93	2,298.66	-12.54	-31.82	402,776.36	575,198.58	32.10711554	-104.09047068
2,400.00	3.49	116.01	2,398.46	-14.86	-26.05	402,774.04	575,204.35	32.10710913	-104.09045206
2,500.00	2.99	127.12	2,498.30	-17.76	-21.24	402,771.13	575,209.17	32.10710111	-104.09043653
2,600.00	2.40	135.16	2,598.19	-20.82	-17.68	402,768.08	575,212.72	32.10709268	-104.09042506
2,700.00	2.26	138.31	2,698.11	-23.78	-14.89	402,765.12	575,215.51	32.10708453	-104.09041608
2,800.00	2.31	139.06	2,798.03	-26.78	-12.26	402,762.12	575,218.14	32.10707628	-104.09040760
2,900.00	2.14	132.30	2,897.96	-29.55	-9.56	402,759.35	575,220.84	32.10706863	-104.09039890
3,000.00	1.83	125.39	2,997.90	-31.74	-6.88	402,757.16	575,223.53	32.10706261	-104.09039025
3,100.00	1.77	139.53	3,097.85	-33.83	-4.57	402,755.06	575,225.83	32.10705683	-104.09038283
3,200.00	1.74	145.08	3,197.80	-36.25	-2.70	402,752.64	575,227.70	32.10705016	-104.09037680
3,300.00	1.26	138.59	3,297.76	-38.32	-1.10	402,750.57	575,229.30	32.10704447	-104.09037166
3,400.00	0.98	134.09	3,397.75	-39.74	0.24	402,749.16	575,230.64	32.10704055	-104.09036734
3,500.00	0.94	141.42	3,497.73	-40.98	1.36	402,747.92	575,231.77	32.10703715	-104.09036371
3,600.00	0.71	114.78	3,597.72	-41.88	2.44	402,747.02	575,232.84	32.10703467	-104.09036025
3,700.00	1.15	139.45	3,697.71	-42.90	3.65	402,746.00	575,234.06	32.10703185	-104.09035633
3,800.00	1.09	123.62	3,797.69	-44.19	5.10	402,744.71	575,235.50	32.10702830	-104.09035168
3,900.00	0.57	128.13	3,897.68	-45.03	6.28	402,743.87	575,236.68	32.10702600	-104.09034786
4,000.00	0.50	147.23	3,997.67	-45.70	6.91	402,743.20	575,237.31	32.10702414	-104.09034584
4,100.00	0.77	143.21	4,097.67	-46.60	7.55	402,742.29	575,237.95	32.10702165	-104.09034378
4,200.00	0.76	137.55	4,197.66	-47.63	8.40	402,741.27	575,238.80	32.10701882	-104.09034105
4,300.00	0.85	159.43	4,297.65	-48.82	9.10	402,740.08	575,239.51	32.10701556	-104.09033877
4,400.00	0.98	163.57	4,397.64	-50.33	9.61	402,738.57	575,240.01	32.10701139	-104.09033715
4,500.00	1.09	157.04	4,497.62	-52.03	10.22	402,736.87	575,240.62	32.10700673	-104.09033519
4,600.00	0.66	120.06	4,597.61	-53.19	11.09	402,735.71	575,241.49	32.10700352	-104.09033239
4,700.00	0.41	138.55	4,697.61	-53.75	11.82	402,735.15	575,242.23	32.10700198	-104.09033002
4,800.00	0.90	135.51	4,797.60	-54.58	12.61	402,734.32	575,243.01	32.10699970	-104.09032748
4,900.00	0.54	152.76	4,897.59	-55.56	13.38	402,733.34	575,243.78	32.10699701	-104.09032501
5,000.00	0.63	124.46	4,997.59	-56.29	14.05	402,732.61	575,244.45	32.10699499	-104.09032286
5,100.00	0.64	128.36	5,097.58	-56.94	14.94	402,731.96	575,245.34	32.10699318	-104.09031999
5,200.00	0.75	153.19	5,197.57	-57.87	15.67	402,731.02	575,246.07	32.10699062	-104.09031762
5,300.00	0.65	177.75	5,297.56	-59.02	15.99	402,729.87	575,246.39	32.10698745	-104.09031661
5,400.00	1.09	186.60	5,397.55	-60.54	15.90	402,728.36	575,246.30	32.10698330	-104.09031690
5,500.00	1.48	165.81	5,497.53	-62.73	16.11	402,726.17	575,246.51	32.10697726	-104.09031625
5,600.00	1.58	170.03	5,597.49	-65.34	16.66	402,723.56	575,247.07	32.10697008	-104.09031447
5,700.00	1.70	173.71	5,697.45	-68.18	17.07	402,720.72	575,247.47	32.10696229	-104.09031320
5,800.00	1.70	164.67	5,797.41	-71.08	17.62	402,717.82	575,248.02	32.10695430	-104.09031143
5,900.00	1.40	145.27	5,897.37	-73.51	18.71	402,715.38	575,249.11	32.10694760	-104.09030793
6,000.00	1.57	148.65	5,997.34	-75.69	20.12	402,713.21	575,250.52	32.10694162	-104.09030340
6,100.00	1.55	169.91	6,097.30	-78.19	21.07	402,710.71	575,251.47	32.10693474	-104.09030035



Survey Report - Geographic



Cal Energy Services

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well Myox 28 State Com Well No. 4H
Project:	Eddy County, New Mexico	TVD Reference:	RKB2964.6+17 @ 2982.00usft (Silver Oaks 1)
Site:	Myox 28 State Com	MD Reference:	RKB2964.6+17 @ 2982.00usft (Silver Oaks 1)
Well:	Myox 28 State Com Well No. 4H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	Dbase Nov0914

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,200.00	2.24	189.37	6,197.25	-81.45	20.99	402,707.45	575,251.39	32.10692577	-104.09030063
6,300.00	2.16	214.31	6,297.18	-84.94	19.60	402,703.96	575,250.01	32.10691620	-104.09030512
6,400.00	2.27	233.70	6,397.10	-87.66	16.95	402,701.23	575,247.35	32.10690872	-104.09031372
6,488.00	4.10	277.77	6,484.98	-88.27	12.42	402,700.63	575,242.83	32.10690708	-104.09032833
6,563.00	4.50	307.10	6,559.77	-86.13	7.42	402,702.77	575,237.82	32.10691298	-104.09034448
MWD surveys									
6,594.00	4.30	305.90	6,590.68	-84.72	5.51	402,704.18	575,235.91	32.10691689	-104.09035064
6,624.00	3.60	305.00	6,620.61	-83.52	3.83	402,705.38	575,234.23	32.10692019	-104.09035607
6,654.00	2.90	301.50	6,650.56	-82.58	2.41	402,706.32	575,232.81	32.10692278	-104.09036064
6,684.00	2.20	299.90	6,680.53	-81.90	1.26	402,707.00	575,231.66	32.10692467	-104.09036434
6,714.00	1.60	299.50	6,710.52	-81.40	0.40	402,707.49	575,230.80	32.10692603	-104.09036712
6,745.00	1.50	303.90	6,741.50	-80.97	-0.32	402,707.93	575,230.09	32.10692724	-104.09036942
6,776.00	1.70	305.00	6,772.49	-80.48	-1.03	402,708.42	575,229.37	32.10692859	-104.09037172
6,806.00	1.80	307.90	6,802.48	-79.93	-1.77	402,708.97	575,228.64	32.10693009	-104.09037410
6,837.00	1.30	308.60	6,833.47	-79.41	-2.42	402,709.49	575,227.98	32.10693152	-104.09037622
6,867.00	0.90	312.20	6,863.46	-79.04	-2.87	402,709.86	575,227.54	32.10693254	-104.09037764
6,897.00	0.90	316.00	6,893.46	-78.71	-3.20	402,710.19	575,227.20	32.10693345	-104.09037873
6,928.00	1.00	315.70	6,924.45	-78.35	-3.56	402,710.55	575,226.84	32.10693446	-104.09037989
6,959.00	1.10	314.80	6,955.45	-77.94	-3.96	402,710.96	575,226.44	32.10693557	-104.09038118
6,989.00	1.30	321.70	6,985.44	-77.47	-4.38	402,711.43	575,226.03	32.10693687	-104.09038251
7,020.00	1.30	324.30	7,016.43	-76.91	-4.80	402,711.99	575,225.60	32.10693841	-104.09038388
7,050.00	1.50	324.30	7,046.42	-76.32	-5.23	402,712.58	575,225.18	32.10694005	-104.09038525
7,081.00	1.50	322.10	7,077.41	-75.67	-5.71	402,713.23	575,224.69	32.10694184	-104.09038682
7,112.00	1.50	320.50	7,108.40	-75.03	-6.22	402,713.87	575,224.18	32.10694359	-104.09038845
7,144.00	1.50	321.50	7,140.39	-74.38	-6.75	402,714.52	575,223.65	32.10694538	-104.09039015
7,176.00	1.60	319.20	7,172.38	-73.72	-7.30	402,715.18	575,223.10	32.10694721	-104.09039193
7,208.00	1.50	320.50	7,204.37	-73.05	-7.86	402,715.85	575,222.54	32.10694903	-104.09039373
7,240.00	1.70	319.90	7,236.36	-72.37	-8.43	402,716.53	575,221.97	32.10695092	-104.09039557
7,270.00	1.70	319.30	7,266.34	-71.69	-9.01	402,717.21	575,221.39	32.10695279	-104.09039743
7,302.00	1.70	321.40	7,298.33	-70.96	-9.61	402,717.94	575,220.79	32.10695480	-104.09039938
7,334.00	1.70	318.40	7,330.31	-70.23	-10.22	402,718.67	575,220.18	32.10695680	-104.09040135
7,365.00	1.70	316.20	7,361.30	-69.56	-10.85	402,719.34	575,219.55	32.10695866	-104.09040336
7,397.00	1.70	311.10	7,393.29	-68.90	-11.53	402,720.00	575,218.87	32.10696047	-104.09040557
7,429.00	1.30	307.80	7,425.28	-68.37	-12.18	402,720.53	575,218.22	32.10696194	-104.09040765
7,461.00	1.10	303.10	7,457.27	-67.98	-12.72	402,720.92	575,217.68	32.10696302	-104.09040940
7,492.00	0.70	278.80	7,488.26	-67.79	-13.16	402,721.11	575,217.24	32.10696355	-104.09041081
7,524.00	0.70	230.20	7,520.26	-67.88	-13.50	402,721.02	575,216.90	32.10696329	-104.09041192
7,556.00	1.70	194.80	7,552.26	-68.47	-13.77	402,720.43	575,216.63	32.10696168	-104.09041280
7,588.00	3.40	190.30	7,584.22	-69.86	-14.07	402,719.04	575,216.34	32.10695786	-104.09041375
7,619.00	5.60	188.10	7,615.13	-72.26	-14.44	402,716.64	575,215.96	32.10695126	-104.09041499
7,651.00	8.20	184.90	7,646.89	-76.08	-14.86	402,712.82	575,215.54	32.10694076	-104.09041635
7,682.00	10.70	183.10	7,677.47	-81.16	-15.20	402,707.74	575,215.20	32.10692680	-104.09041750
7,714.00	13.10	183.10	7,708.78	-87.75	-15.56	402,701.15	575,214.84	32.10690869	-104.09041870
7,746.00	15.50	182.40	7,739.78	-95.64	-15.93	402,693.26	575,214.47	32.10688699	-104.09041997
7,777.00	17.80	181.90	7,769.48	-104.52	-16.27	402,684.38	575,214.14	32.10686260	-104.09042111
7,809.00	20.10	181.10	7,799.75	-114.90	-16.53	402,674.00	575,213.87	32.10683404	-104.09042205
7,840.00	22.50	180.00	7,828.63	-126.16	-16.64	402,662.74	575,213.77	32.10680309	-104.09042246
7,872.00	25.60	177.80	7,857.85	-139.20	-16.37	402,649.70	575,214.03	32.10676726	-104.09042170
7,904.00	29.30	176.60	7,886.24	-153.93	-15.64	402,634.97	575,214.76	32.10672676	-104.09041944
7,936.00	33.30	175.60	7,913.58	-170.51	-14.50	402,618.39	575,215.90	32.10668117	-104.09041589
7,967.00	37.30	175.00	7,938.87	-188.36	-13.03	402,600.54	575,217.37	32.10663209	-104.09041126
7,999.00	41.10	175.10	7,963.66	-208.50	-11.28	402,580.40	575,219.12	32.10657670	-104.09040578
8,031.00	44.10	176.00	7,987.22	-230.10	-9.61	402,558.80	575,220.79	32.10651733	-104.09040052
8,063.00	46.70	175.20	8,009.68	-252.81	-7.86	402,536.09	575,222.54	32.10645488	-104.09039503
8,094.00	49.30	174.40	8,030.43	-275.75	-5.77	402,513.15	575,224.64	32.10639180	-104.09038845

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well Myox 28 State Com Well No. 4H
Project:	Eddy County, New Mexico	TVD Reference:	RKB2964.6+17 @ 2982.00usft (Silver Oaks 1)
Site:	Myox 28 State Com	MD Reference:	RKB2964.6+17 @ 2982.00usft (Silver Oaks 1)
Well:	Myox 28 State Com Well No. 4H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	Dbase Nov0914

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,126.00	52.20	173.60	8,050.67	-300.39	-3.17	402,488.51	575,227.23	32.10632405	-104.09038025
8,156.00	55.10	173.30	8,068.45	-324.39	-0.42	402,464.50	575,229.99	32.10625805	-104.09037152
8,187.00	59.00	173.10	8,085.31	-350.22	2.66	402,438.68	575,233.07	32.10618703	-104.09036176
8,218.00	61.50	172.90	8,100.69	-376.93	5.94	402,411.97	575,236.35	32.10611358	-104.09035136
8,248.00	64.70	172.60	8,114.26	-403.47	9.32	402,385.43	575,239.72	32.10604061	-104.09034065
8,280.00	67.30	172.60	8,127.28	-432.45	13.09	402,356.44	575,243.49	32.10596090	-104.09032870
8,312.00	70.90	172.50	8,138.69	-462.09	16.96	402,326.81	575,247.36	32.10587941	-104.09031640
8,343.00	74.10	171.90	8,148.01	-491.38	20.98	402,297.52	575,251.38	32.10579887	-104.09030365
8,375.00	77.10	171.80	8,155.97	-522.06	25.37	402,266.84	575,255.77	32.10571451	-104.09028968
8,407.00	79.00	172.30	8,162.59	-553.06	29.70	402,235.84	575,260.10	32.10562925	-104.09027593
8,438.00	82.00	173.10	8,167.71	-583.39	33.58	402,205.51	575,263.98	32.10554586	-104.09026361
8,470.00	85.30	173.50	8,171.25	-614.97	37.29	402,173.93	575,267.69	32.10545902	-104.09025186
8,502.00	87.10	173.80	8,173.37	-646.70	40.82	402,142.20	575,271.23	32.10537177	-104.09024068
8,534.00	89.10	173.90	8,174.43	-678.50	44.25	402,110.40	575,274.65	32.10528434	-104.09022985
8,565.00	91.60	173.80	8,174.24	-709.32	47.57	402,079.58	575,277.97	32.10519959	-104.09021935
8,660.00	93.50	174.20	8,170.01	-803.70	57.49	401,985.20	575,287.89	32.10494008	-104.09018800
8,756.00	91.60	173.30	8,165.74	-899.03	67.93	401,889.87	575,298.33	32.10467795	-104.09015498
8,851.00	90.20	174.30	8,164.25	-993.46	78.19	401,795.44	575,308.59	32.10441830	-104.09012253
8,945.00	89.50	175.60	8,164.50	-1,087.09	86.46	401,701.81	575,316.87	32.10416085	-104.09009650
9,039.00	89.90	175.40	8,164.99	-1,180.80	93.84	401,608.10	575,324.24	32.10390319	-104.09007336
9,132.00	89.60	175.10	8,165.39	-1,273.48	101.54	401,515.42	575,331.94	32.10364837	-104.09004917
9,225.00	89.80	175.00	8,165.88	-1,366.13	109.56	401,422.77	575,339.97	32.10339362	-104.09002393
9,319.00	90.40	174.90	8,165.72	-1,459.76	117.84	401,329.14	575,348.24	32.10313616	-104.08999789
9,412.00	89.30	174.70	8,165.96	-1,552.38	126.27	401,236.52	575,356.67	32.10288151	-104.08997134
9,506.00	89.70	174.60	8,166.78	-1,645.96	135.03	401,142.93	575,365.43	32.10262418	-104.08994372
9,600.00	89.80	174.40	8,167.19	-1,739.53	144.04	401,049.37	575,374.44	32.10236691	-104.08991531
9,693.00	89.50	175.60	8,167.76	-1,832.17	152.15	400,956.73	575,382.55	32.10211218	-104.08988981
9,787.00	89.70	175.20	8,168.41	-1,925.87	159.68	400,863.03	575,390.09	32.10185457	-104.08986615
9,882.00	90.20	174.90	8,168.50	-2,020.51	167.88	400,768.39	575,398.28	32.10159433	-104.08984037
9,976.00	90.90	174.70	8,167.60	-2,114.12	176.40	400,674.78	575,406.80	32.10133695	-104.08981354
10,070.00	91.40	174.20	8,165.71	-2,207.66	185.49	400,581.24	575,415.89	32.10107975	-104.08978487
10,164.00	91.00	175.10	8,163.74	-2,301.23	194.25	400,487.67	575,424.65	32.10082247	-104.08975725
10,258.00	91.40	175.20	8,161.77	-2,394.87	202.20	400,394.03	575,432.60	32.10056500	-104.08973228
10,351.00	90.00	175.40	8,160.64	-2,487.55	209.82	400,301.35	575,440.22	32.10031018	-104.08970835
10,444.00	90.70	175.10	8,160.07	-2,580.23	217.52	400,208.67	575,447.92	32.10005535	-104.08968415
10,539.00	90.00	175.40	8,159.49	-2,674.90	225.38	400,114.00	575,455.79	32.09979505	-104.08965944
10,633.00	90.10	174.80	8,159.41	-2,768.56	233.41	400,020.34	575,463.82	32.09953754	-104.08963420
10,727.00	90.70	174.70	8,158.75	-2,862.16	242.01	399,926.74	575,472.42	32.09928017	-104.08960710
10,821.00	89.60	175.40	8,158.50	-2,955.81	250.13	399,833.09	575,480.53	32.09902268	-104.08958159
10,915.00	90.10	175.10	8,158.75	-3,049.48	257.91	399,739.42	575,488.31	32.09876511	-104.08955714
11,008.00	90.50	174.60	8,158.26	-3,142.11	266.26	399,646.79	575,496.66	32.09851044	-104.08953086
11,102.00	89.10	175.00	8,158.59	-3,235.72	274.78	399,553.18	575,505.18	32.09825305	-104.08950403
11,196.00	89.40	174.80	8,159.82	-3,329.34	283.13	399,459.56	575,513.53	32.09799563	-104.08947774
11,290.00	88.80	176.00	8,161.30	-3,423.02	290.67	399,365.88	575,521.07	32.09773805	-104.08945408
11,384.00	89.20	175.80	8,162.94	-3,516.76	297.39	399,272.14	575,527.79	32.09748030	-104.08943306
11,478.00	89.40	175.30	8,164.09	-3,610.47	304.68	399,178.43	575,535.08	32.09722264	-104.08941020
11,572.00	90.70	175.30	8,164.00	-3,704.15	312.38	399,084.74	575,542.79	32.09696506	-104.08938601
11,666.00	91.60	175.30	8,162.12	-3,797.82	320.08	398,991.08	575,550.49	32.09670753	-104.08936183
11,759.00	90.40	175.00	8,160.49	-3,890.47	327.95	398,898.43	575,558.35	32.09645278	-104.08933712
11,854.00	91.00	175.10	8,159.33	-3,985.11	336.14	398,803.79	575,566.55	32.09619257	-104.08931134
11,948.00	90.30	175.80	8,158.27	-4,078.80	343.60	398,710.09	575,574.00	32.09593495	-104.08928795
12,042.00	90.40	175.20	8,157.69	-4,172.51	350.97	398,616.39	575,581.38	32.09567729	-104.08926482
12,135.00	90.40	174.40	8,157.04	-4,265.13	359.40	398,523.77	575,589.81	32.09542264	-104.08923828
12,230.00	90.00	174.30	8,156.71	-4,359.66	368.75	398,429.23	575,599.16	32.09516270	-104.08920877
12,323.00	91.10	175.60	8,155.82	-4,452.30	376.94	398,336.60	575,607.34	32.09490800	-104.08918301



Survey Report - Geographic



C&J Energy Services

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well Myox 28 State Com Well No. 4H
Project:	Eddy County, New Mexico	TVD Reference:	RKB2964.6+17 @ 2982.00usft (Silver Oaks 1)
Site:	Myox 28 State Com	MD Reference:	RKB2964.6+17 @ 2982.00usft (Silver Oaks 1)
Well:	Myox 28 State Com Well No. 4H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	Dbase Nov0914

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
12,418.00	91.30	175.50	8,153.83	-4,546.99	384.31	398,241.91	575,614.71	32.09464764	-104.08915991
12,512.00	91.70	175.30	8,151.37	-4,640.65	391.85	398,148.25	575,622.25	32.09439011	-104.08913626
12,578.00	91.70	175.30	8,149.41	-4,706.40	397.25	398,082.50	575,627.65	32.09420933	-104.08911928
Survey projected to 12578.00 MD									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
100.00	100.00	-0.28	-0.29	Gyro
1,671.00	1,670.19	-0.78	-47.63	330 Hard line intercept @ 1671 MD
6,563.00	6,559.77	-86.13	7.42	MWD surveys
12,578.00	8,149.41	-4,706.40	397.25	Survey projected to 12578.00 MD