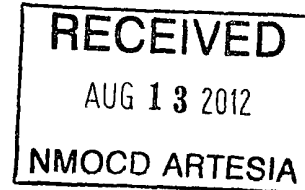




PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288

30-015-39755



May 10, 2012

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

RE: Burch Keely Unit #554
260' FNL & 1108' FEL
Sec. 18, T17S, R30E
Eddy County, New Mexico

Dear Sir,

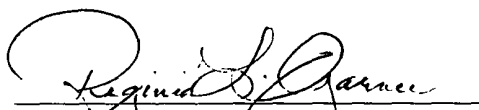
The attached is the Deviation Survey for the above captioned well.

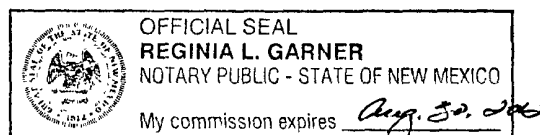
Very truly yours,


Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

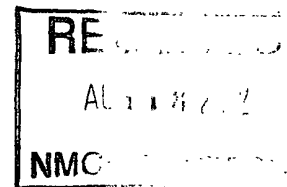
The foregoing was acknowledged before me this 10th day of May, 2012.

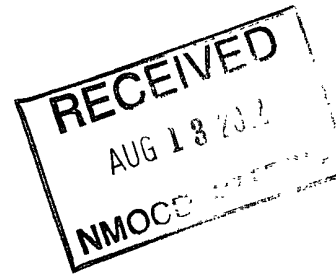

Regina L. Garner
Notary Public



Burch Keely Unit #554

Date	Depth	Dev/Inc	Dir/AZ
5/2/2012	160	0.80	
5/3/2012	250	0.90	
5/4/2012	342	0.60	
5/4/2012	807	0.70	
5/4/2012	1286	1.40	
5/6/2012	1571	2.52	
5/6/2012	1634	2.67	
5/6/2012	1730	2.47	
5/6/2012	2055	3.34	202.50
5/6/2012	2215	2.81	125.73
5/6/2012	2310	2.46	131.45
5/6/2012	2406	3.43	126.79
5/7/2012	2788	3.17	126.53
5/7/2012	2884	3.17	129.20
5/7/2012	2979	3.25	128.37
5/7/2012	3457	2.64	129.20
5/7/2012	3840	2.81	117.03
5/7/2012	3935	2.81	117.03
5/7/2012	4030	2.69	108.55
5/8/2012	4636	0.34	220.70





COG Operating LLC

Eddy County, NM (NAD27 NME)

Burch Keely Unit #554

Burch Keely Unit #554

OH - Job #32D0512515

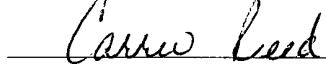
Design: Actual

SDI Standard Survey Report

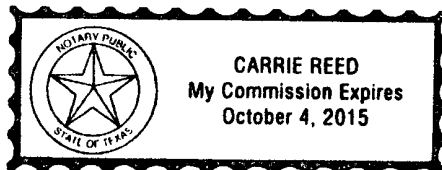
This survey is correct to the best of my knowledge and is supported by actual field data.



Notarized this date 15th of June, 2012.



Notary Signature
County of Midland
State of Texas





Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Site Burch Keely Unit #554
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 3676 00usft (Silver Oak #4)
Site:	Burch Keely Unit #554	MD Reference:	RKB @ 3676 00usft (Silver Oak #4)
Well:	Burch Keely Unit #554	North Reference:	Grid
Wellbore:	OH - Job #32D0512515	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM-Regulatory

Project	Eddy County, NM (NAD27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Burch Keely Unit #554		
Site Position:		Northing:	669,811 60 usft
From:	Map	Easting:	600,580 50 usft
Position Uncertainty:	0 00 usft	Slot Radius:	13-3/16"
		Latitude:	32° 50' 27 489 N
		Longitude:	104° 0' 21 064 W
		Grid Convergence:	0 18 °

Well	Burch Keely Unit #554		
Well Position	+N/-S	0 00 usft	Northing:
	+E/-W	0 00 usft	Easting:
Position Uncertainty	0 00 usft	Wellhead Elevation:	usft
		Latitude:	32° 50' 27 489 N
		Longitude:	104° 0' 21 064 W
		Ground Level:	3,658 00 usft

Wellbore	OH - Job #32D0512515				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	2011/10/12	7 79	60 67	48,905

Design	Actual			
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	121 77

Survey Program	Date	2012/05/08		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
100 00	1,235 00	Gyro (OH - Job #32D0512515)	Keeper	Standard Wireline Keeper ver 1 0 2
1,411 00	4,678 00	MWD (OH - Job #32D0512515)	MWD	MWD - Standard

Survey							
Measured Depth	Inclination	Azimuth	True Vertical	North/South	East/West	Closure Azimuth	Closure Distance
(usft)	(°)	(°)	Depth	(usft)	(usft)	(°)	(usft)
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
West HL-BK #554 - North HL-BK #554							
100 00	0 33	4 07	100 00	0 29	0 02	4 07	0 29
200 00	1 15	302 91	199 99	1 12	-0 80	324 40	1 38
300 00	0 79	261 03	299 98	1 56	-2 33	303 82	2 80
400 00	0 83	220 74	399 97	0 90	-3 48	284 52	3 59
500 00	0 17	322 40	499 97	0 47	-4 04	276 63	4 07
600 00	0 17	46 08	599 96	0 69	-4 03	279 73	4 08
700 00	0 38	71 55	699 96	0 90	-3 60	283 99	3 71
800 00	1 32	103 24	799 95	0 74	-2 17	288 83	2 29
900 00	1 60	79 56	899 92	0 73	0 33	24 10	0 80



Company:	COG Operating LLC	Local Co-ordinate Reference:	Site Burch Keely Unit #554
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 3676 00usft (Silver Oak #4)
Site:	Burch Keely Unit #554	MD Reference:	RKB @ 3676 00usft (Silver Oak #4)
Well:	Burch Keely Unit #554	North Reference:	Grid
Wellbore:	OH - Job #32D0512515	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM-Regulatory

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
1,000 00	2 20	92 07	999 87	0 91	3 62	75 84	3 73
1,100 00	1 86	85 45	1,099 80	0 97	7 15	82 26	7 22
1,200 00	1 63	111 38	1,199 76	0 58	10 10	86 70	10 11
1,235 00	1 45	98 48	1,234 75	0 34	11 00	88 25	11 00
Gryo Tie-in							
1,411 00	1 11	121 17	1,410 70	-0 88	14 66	93 42	14 68
1,443 00	1 32	119 93	1,442 69	-1 22	15 24	94 58	15 29
1,507 00	2 06	109 90	1,506 67	-1 98	16 96	96 66	17 08
1,570 00	2 52	121 83	1,569 62	-3 10	19 20	99 16	19 45
1,634 00	2 67	118 28	1,633 55	-4 54	21 71	101 82	22 18
1,730 00	2 47	125 31	1,729 45	-6 80	25 37	105 00	26 26
1,825 00	2 90	123 80	1,824 35	-9 32	29 04	107 79	30 50
1,921 00	2 77	122 90	1,920 23	-11 93	33 00	109 87	35 09
2,023 00	3 34	118 35	2,022 09	-14 68	37 69	111 28	40 45
2,119 00	3 08	121 43	2,117 94	-17 35	42 35	112 28	45 77
2,215 00	2 81	125 73	2,213 81	-20 07	46 46	113 36	50 61
2,310 00	2 46	131 45	2,308 71	-22 78	49 88	114 55	54 83
2,406 00	3 43	126 79	2,404 58	-25 86	53 72	115 71	59 62
2,502 00	3 30	127 64	2,500 42	-29 27	58 21	116 70	65 16
2,597 00	3 24	127 70	2,595 26	-32 58	62 50	117 53	70 48
2,693 00	3 17	124 77	2,691 11	-35 76	66 83	118 15	75 79
2,788 00	3 17	126 53	2,785 97	-38 82	71 09	118 63	81 00
2,884 00	3 17	128 20	2,881 82	-42 04	75 31	119 17	86 25
2,979 00	3 25	128 37	2,976 67	-45 33	79 49	119 70	91 51
3,075 00	2 55	134 08	3,072 55	-48 51	83 16	120 26	96 27
3,171 00	2 73	130 83	3,168 44	-51 49	86 42	120 79	100 60
3,266 00	2 55	131 36	3,263 34	-54 37	89 72	121 21	104 91
3,361 00	2 73	132 33	3,358 24	-57 29	92 98	121 64	109 21
3,457 00	2 64	129 25	3,454 14	-60 22	96 38	122 00	113 65
3,552 00	2 65	129 69	3,549 04	-63 01	99 76	122 28	118 00
3,648 00	2 53	131 11	3,644 94	-65 82	103 07	122 56	122 29
3,743 00	2 99	116 77	3,739 83	-68 32	106 86	122 59	126 83
3,840 00	2 81	117 03	3,836 71	-70 54	111 24	122 38	131 72
3,935 00	2 81	117 03	3,931 59	-72 65	115 39	122 20	136 35
4,030 00	2 69	108 55	4,026 48	-74 42	119 57	121 90	140 84
4,126 00	2 90	116 42	4,122 37	-76 22	123 88	121 60	145 45
4,190 00	2 55	113 87	4,186 30	-77 51	126 64	121 47	148 48
4,285 00	1 14	136 28	4,281 24	-79 05	129 22	121 46	151 48
4,303 75	0 82	143 45	4,299 99	-79 29	129 43	121 49	151 79
TG1-BK #554							
4,349 00	0 35	222 24	4,345 24	-79 66	129 53	121 59	152 06
4,445 00	0 26	191 57	4,441 24	-80 09	129 29	121 78	152 08
4,540 00	0 26	191 21	4,536 24	-80 51	129 20	121 93	152 24
4,628 00	0 34	220 70	4,624 24	-80 90	129 00	122 10	152 27
Last MWD Survey							



Scientific Drilling International, Inc.
SDI Standard Survey Report



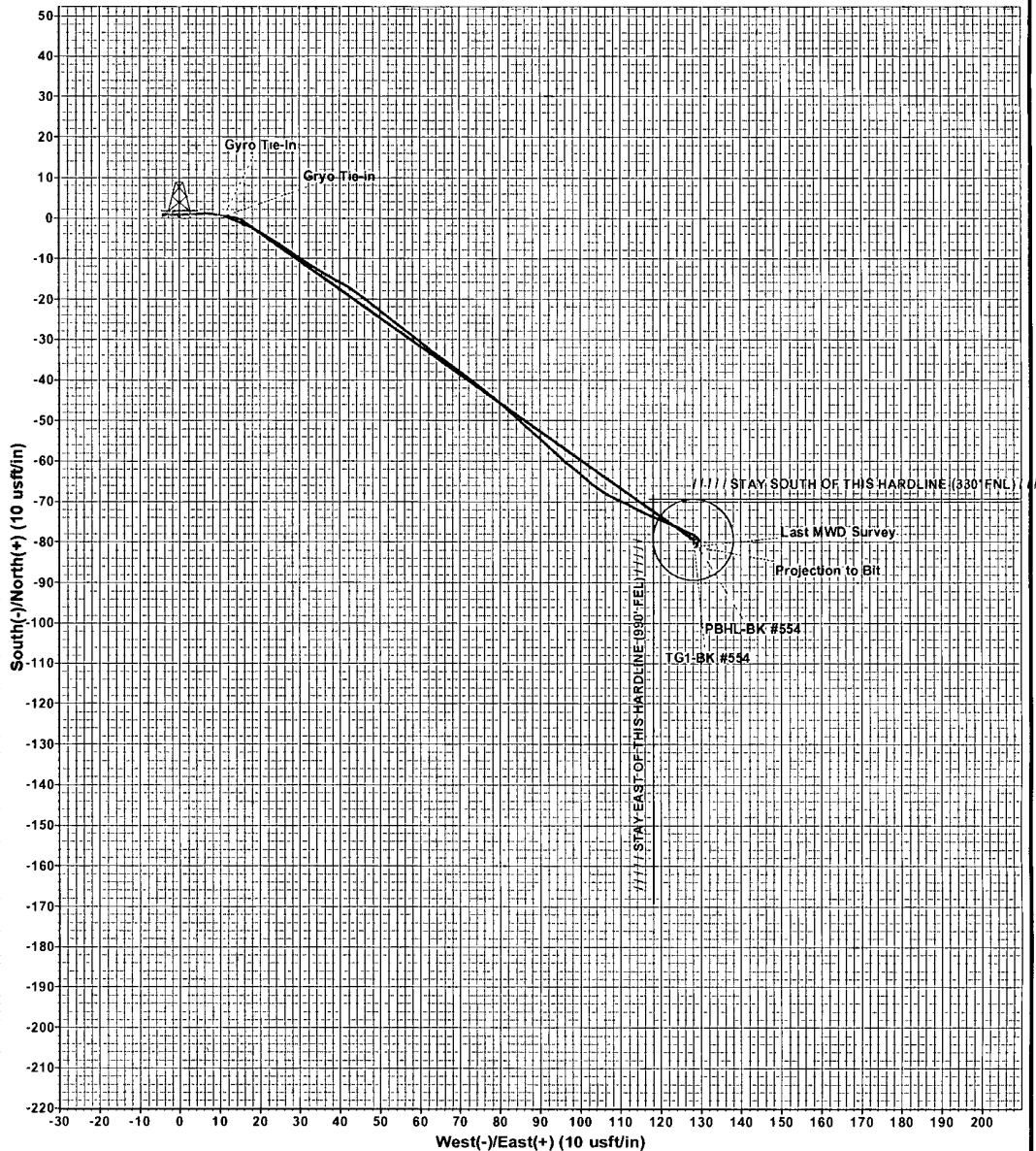
Company:	COG Operating LLC	Local Co-ordinate Reference:	Site Burch Keely Unit #554
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 3676 00usft (Silver Oak #4)
Site:	Burch Keely Unit #554	MD Reference:	RKB @ 3676 00usft (Silver Oak #4)
Well:	Burch Keely Unit #554	North Reference:	Grid
Wellbore:	OH - Job #32D0512515	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM-Regulatory

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
4,678 00	0 34	220 70	4,674 24	-81 13	128 80	122 21	152 22
Projection to Bit - PBHL-BK #554							

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,235 00	1,234 75	0 34	11 00	Gryo Tie-in
4,628 00	4,624 24	-80 90	129 00	Last MWD Survey
4,678 00	4,674 24	-81 13	128 80	Projection to Bit



WELLBORE TARGET DETAILS (MAP CO-ORDINATES)								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
North HL-BK #554	18 00	-69 40	118 20	669742 20	600698 70 32	50' 26 798 N	104° 0' 19 681 W	Rectangle (Sides: L:0.00 W:100 00)
West HL-BK #554	18 00	-69 40	118 20	669742 20	600698 70 32	50' 26 798 N	104° 0' 19 681 W	Rectangle (Sides: L:100.00 W:00)
TG1-BK #554	4318.00	-79 40	128 20	669732 20	600708 70 32	50' 26 699 N	104° 0' 19 564 W	Circle (Radius: 0.00)
PBHL-BK #554	4818.00	-79 40	128 20	669732 20	600708 70 32	50' 26 699 N	104° 0' 19 564 W	Circle (Radius: 10.00)

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	TFace	VSec	Target
11235.00	1.45	98.48	1234.75	0.34	11.00	0.00	0.00	0.00	9.17	
21350.00	1.45	98.48	1349.71	-0.09	13.87	0.00	0.00	0.00	11.85	
3140.27	7.77	124.93	119.93	-1.35	16.47	0.00	50.17	0.00	14.76	
44183.21	2.77	124.93	4179.55	-77.49	125.46	0.00	0.00	0.00	147.46	
54321.61	0.00	0.00	4318.00	-79.40	128.20	2.00	180.00	150.80		TG1-BK #554
64821.61	0.00	0.00	4818.00	-79.40	128.20	0.00	0.00	150.80		PBHL-BK #554

WELL DETAILS: Burch Keely Unit #554						
		Ground Level.		3658.00		
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	669811 60	600580 50	32° 50' 27.489 N	104° 0' 21.064 W	

PROJECT DETAILS		Eddy County, NM (NAN27 NME)		Plan, Plan #2 - 7-7/8" Hole (Burch Keely Unit #554/OH)	
Geodetic System	US State Plane 1927 (Exact solution)	Created By	Julio Pina	Date	05-May-12
Datum	NAD 1927 (NADCONUS)				
Ellipsoid	Clarke 1886	Checked	_____	Date	_____
Zone	New Mexico East 3001				
System Datum	Mean Sea Level	Reviewed	_____	Date	_____
		Approved:	_____	Date	_____