

DISTRICT I
1625 N. FRENCH DR., BOBBS, NM 88240

DISTRICT II
1301 W GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-36847	Pool Code	Pool Name FREN; GLORIETA YESO, East
Property Code 37516	Property Name TEX-MACK 11 FEDERAL	Well Number 5
OCRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3948'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	11	17-S	31-E		800	SOUTH	600	EAST	EDDY

Bottom Hole Location If Different From Surface

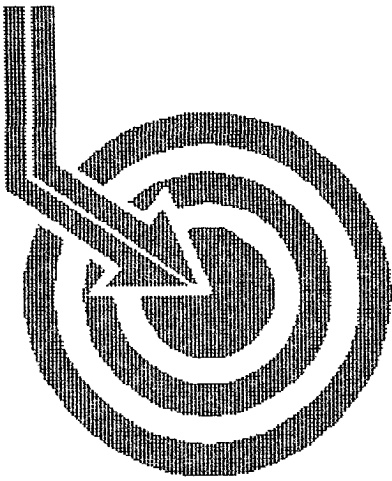
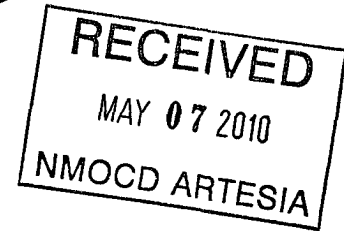
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	11	17-S	31-E		971	SOUTH	1041	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No
40			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=671119.3 N X=653616.6 E LAT.=32.843992' N LONG=103.833155' W BOTTOM HOLE LOCATION Y=671306.7 N X=653225.6 E GRID AZ. = 295°35'55" HORZ. DIST. = 433.7' DETAIL 3949.4' 3952.2' 600' OS.L. 3947.1' 3946.1' B.H.O. 1041' S.L.O. 600' SEE DETAIL	OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <u>Chasity Jackson</u> Signature Date Chasity Jackson Printed Name
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. OCTOBER 7 2008 Date Surveyed JC Signature & Seal of Professional Surveyor 3239 RONALD J EIDSON 10/15/08 Certificate No. GARY EIDSON 12641 RONALD J EIDSON 3239

30015 36847



Scientific Drilling

COG RESOURCES

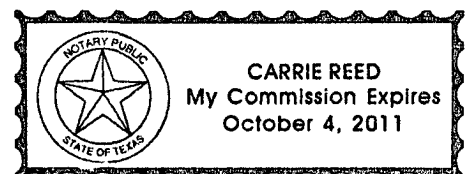
Field: Fren
Site: Eddy County, NM
Well: Tex Mack 11 Federal #5
Wellpath: DH - Job #32D0210088
Survey: 02/10/10-02/17/10

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

L. W. Hartman
Company Representative

Notarized this date 11th of March, 2010.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific Drilling International, Inc.

Survey Report

Company: COG RESOURCES	Date: 2/15/2010	Time: 11:23:40	Page: 1
Field: Fren	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Tex Mack 11 Federal #5	Section (VS) Reference:	Well (0.00N,0.00E,295.61Azi)	
Wellpath: VH - Job #32K0210095	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 02/10/10	Start Date:	2/10/2010
KSRG 0'-1837'		
Company: Scientific Drilling Internatio	Engineer:	Guebara/Garza/Renteria
Tool: Keeper, Keeper Gyro	Tied-to:	From Surface

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.0	0.00
100.0	0.50	36.15	100.0	-0.1	0.4	0.3	0.50	0.4	36.15
200.0	0.50	29.23	200.0	-0.2	1.1	0.7	0.06	1.3	33.84
300.0	0.29	24.92	300.0	-0.2	1.7	1.0	0.21	2.0	31.71
400.0	0.18	10.93	400.0	-0.2	2.1	1.2	0.12	2.4	29.66
500.0	0.23	328.56	500.0	0.0	2.4	1.1	0.16	2.6	24.76
600.0	0.23	0.35	600.0	0.3	2.8	1.0	0.13	3.0	19.91
700.0	0.38	325.91	700.0	0.7	3.3	0.8	0.23	3.4	14.17
800.0	0.10	0.34	800.0	1.0	3.6	0.6	0.30	3.7	9.97
900.0	0.25	327.80	900.0	1.2	3.9	0.5	0.17	3.9	7.62
1000.0	0.12	332.20	1000.0	1.5	4.2	0.4	0.13	4.2	4.87
1100.0	0.13	47.26	1100.0	1.5	4.3	0.4	0.15	4.4	5.13
1200.0	0.25	109.11	1200.0	1.3	4.3	0.7	0.22	4.4	8.89
1300.0	0.24	113.35	1300.0	0.8	4.2	1.1	0.02	4.3	14.44
1400.0	0.32	137.37	1400.0	0.4	3.9	1.5	0.14	4.2	20.53
1500.0	0.35	137.84	1500.0	-0.2	3.5	1.9	0.03	3.9	28.14
1600.0	0.48	133.94	1600.0	-0.9	2.9	2.4	0.13	3.8	38.68
1700.0	0.67	139.54	1700.0	-1.8	2.2	3.0	0.20	3.8	53.97
1800.0	0.88	114.76	1800.0	-3.1	1.4	4.1	0.39	4.4	70.67
1837.0	1.00	131.90	1837.0	-3.7	1.1	4.6	0.82	4.7	76.48



Scientific
Drilling

Scientific Drilling International, Inc.

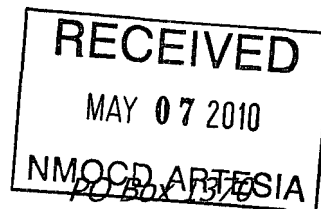
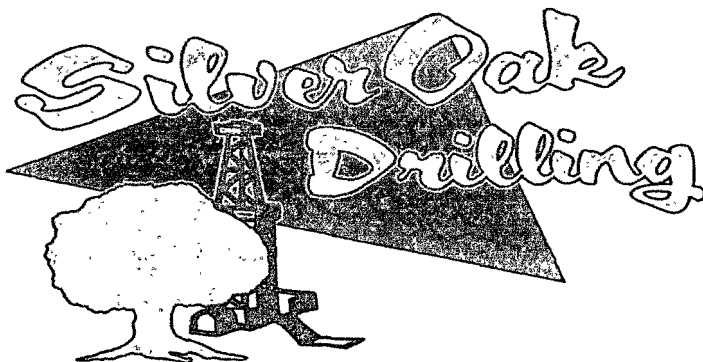
Survey Report

Company: COG RESOURCES	Date: 2/23/2010	Time: 16:40:22	Page: 1
Field: Fren	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0 0	
Well: Tex Mack 11 Federal #5	Section (VS) Reference:	Well (0.00N,0.00E,295.61Azi)	
Wellpath: DH - Job #32D0210088	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 02/10/10-02/17/10	Start Date: 2/10/2010
MWD 1934'-6795'	
Company: Scientific Drilling Internatio	Engineer: Calvert/Baldwin
Tool: MWD,MWD	Tied-to: From Definitive Path

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
1837.0	1.00	131.90	1837.0	-3.7	1.1	4.6	0.00	4.7	76.48
1934.0	0.78	121.48	1933.9	-5.2	0.2	5.8	0.28	5.8	88.03
1998.0	0.17	310.10	1997.9	-5.5	0.0	6.1	1.48	6.1	89.69
2060.0	1.50	302.02	2059.9	-4.6	0.5	5.3	2.15	5.4	84.41
2122.0	3.30	302.49	2121.9	-2.0	1.9	3.2	2.90	3.7	58.79
2185.0	4.42	303.84	2184.7	2.2	4.2	-0.4	1.78	4.3	354.74
2247.0	5.27	297.82	2246.5	7.4	6.9	-4.9	1.60	8.5	324.65
2310.0	6.45	296.50	2309.2	13.8	9.8	-10.6	1.89	14.5	312.78
2406.0	6.54	295.67	2404.6	24.7	14.6	-20.4	0.14	25.1	305.63
2592.0	5.52	297.82	2589.5	44.2	23.4	-37.8	0.56	44.5	301.70
2748.0	6.06	301.77	2744.7	59.9	31.2	-51.5	0.43	60.2	301.23
2905.0	5.81	289.42	2900.9	76.0	38.2	-66.0	0.83	76.3	300.06
3061.0	6.72	287.62	3056.0	92.9	43.6	-82.2	0.60	93.0	297.95
3217.0	5.48	289.56	3211.1	109.4	48.9	-97.9	0.81	109.4	296.53
3374.0	6.09	289.56	3367.3	125.1	54.2	-112.8	0.39	125.1	295.65
3530.0	7.72	293.67	3522.2	143.8	61.1	-130.2	1.09	143.8	295.15
3687.0	7.19	293.39	3677.8	164.2	69.3	-148.9	0.34	164.2	294.95
3844.0	6.68	290.50	3833.7	183.1	76.4	-166.4	0.39	183.1	294.65
4001.0	6.92	302.11	3989.6	201.6	84.6	-183.0	0.89	201.6	294.81
4157.0	6.75	303.99	4144.5	220.0	94.7	-198.6	0.18	220.0	295.50
4315.0	6.48	291.60	4301.4	238.1	103.2	-214.5	0.92	238.1	295.68
4470.0	6.17	291.61	4455.5	255.1	109.5	-230.4	0.20	255.1	295.41
4627.0	5.40	297.02	4611.7	270.9	115.9	-244.8	0.60	270.9	295.34
4784.0	5.29	295.31	4768.0	285.5	122.4	-258.0	0.12	285.5	295.38
4971.0	5.09	295.82	4954.2	302.4	129.7	-273.2	0.11	302.4	295.39
5098.0	4.01	292.00	5080.8	312.5	133.8	-282.4	0.88	312.5	295.35
5254.0	3.84	293.11	5236.5	323.2	137.9	-292.3	0.12	323.2	295.26
5411.0	4.09	297.10	5393.1	334.0	142.5	-302.1	0.24	334.0	295.25
5567.0	4.32	301.38	5548.7	345.4	148.1	-312.1	0.25	345.4	295.39
5724.0	4.15	289.52	5705.2	357.0	153.1	-322.5	0.57	357.0	295.39
5818.0	2.76	295.27	5799.1	362.6	155.2	-327.7	1.52	362.6	295.34
5981.0	2.74	290.61	5961.9	370.4	158.2	-334.9	0.14	370.4	295.29
6137.0	2.64	291.06	6117.7	377.7	160.8	-341.8	0.07	377.7	295.20
6293.0	2.42	295.39	6273.6	384.6	163.5	-348.1	0.19	384.6	295.16
6387.0	3.26	283.60	6367.4	389.2	165.0	-352.5	1.08	389.2	295.09
6481.0	4.28	281.42	6461.2	395.2	166.3	-358.5	1.10	395.2	294.89
6670.0	4.14	283.05	6649.7	408.7	169.3	-372.1	0.10	408.8	294.46
6795.0	3.77	283.28	6774.4	417.1	171.2	-380.5	0.30	417.2	294.23



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

30 015 36847

February 19, 2010

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

RE: Tex Mack 11 Federal #5
800' FSL & 600' FEL
Sec. 11, T17S, R31E
Eddy County, New Mexico

Dear Sir,

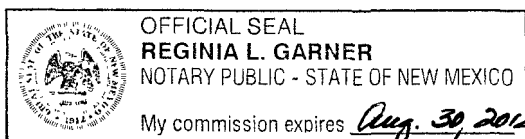
The attached is the Deviation Survey for the above captioned well.

Very truly yours,

Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 19th day of February, 2010.

Regina L. Garner
Notary Public

Date	Depth	Dev/Inc	Dir/AZ	TVD	Horiz Disp
2/8/2010	615	0.30			
2/10/2010	1042	0.40			
2/10/2010	1514	0.20			
2/12/2010	1934	0.78	121.40		
2/12/2010	1997	0.17	310.10		
2/12/2010	2060	1.50	302.30		
2/12/2010	2122	3.30	302.40		
2/12/2010	2186	4.42	303.80		
2/12/2010	2247	5.27	297.80		
2/12/2010	2310	6.45	296.50		
2/12/2010	2406	6.54	295.60		
2/12/2010	2592	5.52	297.80		
2/12/2010	2748	6.06	301.70		
2/13/2010	2905	5.81	289.40		
2/13/2010	3061	6.72	287.60		
2/13/2010	3217	5.48	289.50		
2/13/2010	3374	6.09	389.50		
2/13/2010	3530	7.72	293.60		
2/13/2010	3687	7.19	293.30		
2/13/2010	3844	6.68	290.50		
2/13/2010	4001	6.92	302.10		
2/14/2010	4157	6.75	303.90		
2/14/2010	4315	6.48	291.60		
2/14/2010	4470	6.17	291.60		
2/14/2010	4627	5.40	297.00		
2/14/2010	4784	5.29	295.80		
2/14/2010	4971	5.09	295.80		
2/14/2010	5098	4.01	292.00		
2/14/2010	5254	3.84	293.10		
2/14/2010	5411	4.09	297.10		
2/15/2010	5567	4.32	301.30		
2/15/2010	5724	4.15	289.50		
2/15/2010	5818	2.78	295.20		
2/16/2010	5981	2.74	290.60		
2/16/2010	6137	2.64	291.00		
2/16/2010	6294	2.42	295.30		
2/16/2010	6388	3.26	283.60		
2/16/2010	6482	4.28	281.40		
2/17/2010	6670	4.14	283.00		