



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

DEC 5 2007

OCD-ARTESIA

FORM APPROVED
OMB NO 1004-0137
Expires, March 31, 2007

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other										6. If Indian, Allottee or Tribe Name ---																													
b Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff Resvr, Other _____										7 Unit or CA Agreement Name and No ---																													
2 Name of Operator COG Operating LLC																				8. Lease Name and Well No Gold Star Federal #7																			
3 Address 550 W. Texas, Suite 1300, Midland, TX 79701										3a Phone No (include area code) 432-685-4332										9 AFI Well No 30-015-35691																			
4 Location of Well (Report location clearly and in accordance with Federal requirements)* At surface 638 FNL & 1950 FEL, Sec 30, T17S, R29E, Unit B At top prod interval reported below 336 1657 At total depth 360 FNL & 1950 FEL, Sec 30, T17S, R29E, Unit B																				10 Field and Pool, or Exploratory Empire; Glorieta-Yeso										11 Sec , T , R , M , on Block and Survey or Area Sec 30, T17S, R29E									
14 Date Spudded 10/05/2007										15 Date T D Reached 10/18/2007										16 Date Completed 11/01/2007 ☐ D & A ☒ Ready to Prod										17 Elevations (DF, RKB, RT, GL)* 3638' GL									
18. Total Depth MD 6019 TVD										19 Plug Back T D MD 5973 TVD										20 Depth Bridge Plug Set MD TVD																			
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) CN / HNGS, Micro CFL / HNGS										22 Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit report) Directional Survey? ☒ No ☐ Yes (Submit copy)																													
23. Casing and Liner Record (Report all strings set in well)																																							
Hole Size		Size/Grade		Wt (#/ft)		Top (MD)		Bottom (MD)		Stage Cementer Depth		No. of Sks & Type of Cement		Slurry Vol (BBL)		Cement Top*		Amount Pulled																					
17-1/2		13-3/8		48#				324				400C				Surface		Circ 145																					
12-1/4		8-5/8		32#				900				600 C				Surface		Circ 200																					
7-7/8		5-1/2		17#				6018				1200 C				Surface		Circ 286																					
24 Tubing Record																																							
Size		Depth Set (MD)		Packer Depth (MD)		Size		Depth Set (MD)		Packer Depth (MD)		Size		Depth Set (MD)		Packer Depth (MD)																							
2-7/8		5283																																					
25. Producing Intervals										26 Perforation Record																													
Formation				Top		Bottom		Perforated Interval				Size		No Holes		Perf Status																							
A) Yeso								4426 - 4626				2 SPF		36		Open																							
B) Yeso								4840 - 4940				2 SPF		36		Open																							
C) Yeso								5050 - 5250				2 SPF		48		Open																							
D)																																							
27 Acid, Fracture, Treatment, Cement Squeeze, etc																																							
Depth Interval										Amount and Type of Material																													
4426 - 4626										Acidize w/5,000 gals acid. Frac w/ 64,793# 16/30 sand.																													
4840 - 4940										Acidize w/5,000 gals acid. Frac w/ 41,336# 16/30 sand.																													
5050 - 5250										Acidize w/4,000 gals acid. Frac w/ 61,704# 16/30 sand.																													
28 Production - Interval A																																							
Date First Produced		Test Date		Hours Tested		Test Production		Oil BBL		Gas MCF		Water BBL		Oil Gravity Corr API		Gas Gravity		Production Method																					
11/01/2007		11/20/2007		24		→		88		124		250		38.4				Pumping																					
Choke Size		Tbg Press Flwg SI		Csg Press		24 Hr Rate		Oil BBL		Gas MCF		Water BBL		Gas/Oil Ratio		Well Status		Producing																					
						→																																	
28a Production - Interval B																																							
Date First Produced		Test Date		Hours Tested		Test Production		Oil BBL		Gas MCF		Water BBL		Oil Gravity Corr API		Gas Gravity		Production Method																					
						→																																	
Choke Size		Tbg Press Flwg SI		Csg Press		24 Hr Rate		Oil BBL		Gas MCF		Water BBL		Gas/Oil Ratio		Well Status																							
						→																																	

**(See instructions and spaces for additional data on page 2)*

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg Press Flwg. SI	Csg Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg Press Flwg. SI	Csg Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
Yates	1210				
7 Rivers	1500				
Queen	3000				
Grayburg	2500				
San Andres	2810				
Glorieta	4250				
Yeso	4310				

32. Additional remarks (include plugging procedure):

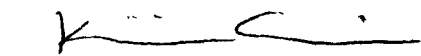
33. Indicate which items have been attached by placing a check in the appropriate boxes:

- ☐ Electrical/Mechanical Logs (1 full set req'd.)
 ☐ Geologic Report
 ☐ DST Report
 ☐ Directional Survey
☐ Sundry Notice for plugging and cement verification
☐ Core Analysis
☒ Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) **Kanicia Carrillo**Title **Regulatory Analyst**

Signature



Date

12/04/2007

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

DISTRICT I
1625 N. FRENCH DR., HOBBS, 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 87506

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 30-015-35691	Pool Code 96210	Pool Name Empire; Glorieta-Yeso
Property Code 302500	Property Name GOLD STAR FEDERAL	Well Number 7
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3638'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	30	17-S	29-E		638	NORTH	1950	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
B	30	17-S	29-E		336	NORTH	1657	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

LOT 1 27.71 AC	LOT 2 27.94 AC	LOT 3 28.17 AC	LOT 4 28.40 AC
GEODETIC COORDINATES NAD 27 NME Y=658820.5 N X=568175.0 E LAT.=32.810989° N LONG.=104.111435° W			
GRID AZ.= 44°04'14" HORZ. DIST.=430.0'			
DETAIL 3639.1' 3631.2' 600' 3641.3' 3635.7'			
SEE DETAIL SURF. B.H. 1657' 1950'			
BOTTOM HOLE LOCATION Y=659129.3 N X=568473.8 E			

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.

Jerry W. Sherrell 5/18/07
Signature Date
Jerry W. Sherrell
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.

JANUARY 4, 2007

Date Surveyed AR
Signature & Seal of Professional Surveyor
Gary A. Eidsen 1/16/07
07.11.0015
Certificate No. GARY EIDSON 12841

Scientific Drilling Survey Report



Company: COG Operating LLC
Project: Eddy County, NM (NAD 27 NME)
Site: Gold Star Federal #7
Well: Gold Star Federal #7
Wellbore: OH
Design: Actual

Local Co-ordinate Reference: Well Gold Star Federal #7
TVD Reference: WELL @ 3638.00ft (Ground Elev)
MD Reference: WELL @ 3638.00ft (Ground Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003 16 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,471.00	4.82	43.76	4,457.83	202.48	197.20	282.64	0.32	-0.23	2.62
4,534.00	4.52	40.41	4,520.62	206.29	200.64	287.77	0.64	-0.48	-5.32
4,595.00	4.81	44.24	4,581.42	209.95	203.98	292.73	0.70	0.48	6.28
4,659.00	5.06	45.45	4,645.18	213.85	207.87	298.23	0.42	0.39	1.89
4,722.00	4.91	43.07	4,707.95	217.77	211.69	303.70	0.41	-0.24	-3.78
4,784.00	5.90	50.19	4,769.67	221.75	215.95	309.52	1.93	1.60	11.48
4,847.00	6.10	46.87	4,832.32	226.11	220.88	316.09	0.64	0.32	-5.27
4,910.00	5.98	46.96	4,894.98	230.64	225.72	322.71	0.19	-0.19	0.14
4,971.00	6.08	42.40	4,955.64	235.19	230.22	329.11	0.80	0.16	-7.48
5,034.00	6.11	41.01	5,018.28	240.19	234.67	335.79	0.24	0.05	-2.21
5,097.00	6.09	41.17	5,080.93	245.23	239.07	342.48	0.04	-0.03	0.25
5,159.00	6.01	40.43	5,142.58	250.18	243.34	349.00	0.18	-0.13	-1.19
5,222.00	5.67	40.00	5,205.25	255.07	247.48	355.40	0.54	-0.54	-0.68
5,284.00	5.54	40.99	5,266.96	259.68	251.41	361.44	0.26	-0.21	1.60
5,346.00	5.26	40.40	5,328.68	264.10	255.22	367.27	0.46	-0.45	-0.95
5,407.00	4.92	44.88	5,389.44	268.08	258.88	372.67	0.86	-0.56	7.34
5,467.00	4.79	44.89	5,449.23	271.68	262.46	377.75	0.22	-0.22	0.02
5,530.00	4.79	44.18	5,512.01	275.43	266.15	383.01	0.09	0.00	-1.13
5,592.00	4.61	49.73	5,573.80	278.90	269.85	388.08	0.79	-0.29	8.95
5,655.00	4.49	47.76	5,636.60	282.19	273.61	393.06	0.31	-0.19	-3.13
5,717.00	4.52	41.37	5,698.41	285.66	277.02	397.92	0.81	0.05	-10.31
5,778.00	4.52	43.72	5,759.22	289.20	280.27	402.73	0.30	0.00	3.85
5,840.00	4.22	43.97	5,821.04	292.61	283.54	407.45	0.48	-0.48	0.40
5,903.00	4.28	44.47	5,883.86	295.95	286.80	412.12	0.11	0.10	0.79
5,965.00	4.22	44.29	5,945.69	299.24	290.01	416.71	0.10	-0.10	-0.29
5,974.00	3.89	42.50	5,954.67	299.70	290.45	417.35	3.93	-3.67	-19.89
Last MWD Survey									
6,019.00	3.89	42.50	5,999.57	301.95	292.51	420.40	0.00	0.00	0.00
Projection to Bit - TD-GSF #7									

Scientific Drilling Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well Gold Star Federal #7
Project:	Eddy County, NM (NAD 27 NME)	TVD Reference:	WELL @ 3638 00ft (Ground Elev)
Site:	Gold Star Federal #7	MD Reference:	WELL @ 3638 00ft (Ground Elev)
Well:	Gold Star Federal #7	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 2003.16 Single User Db

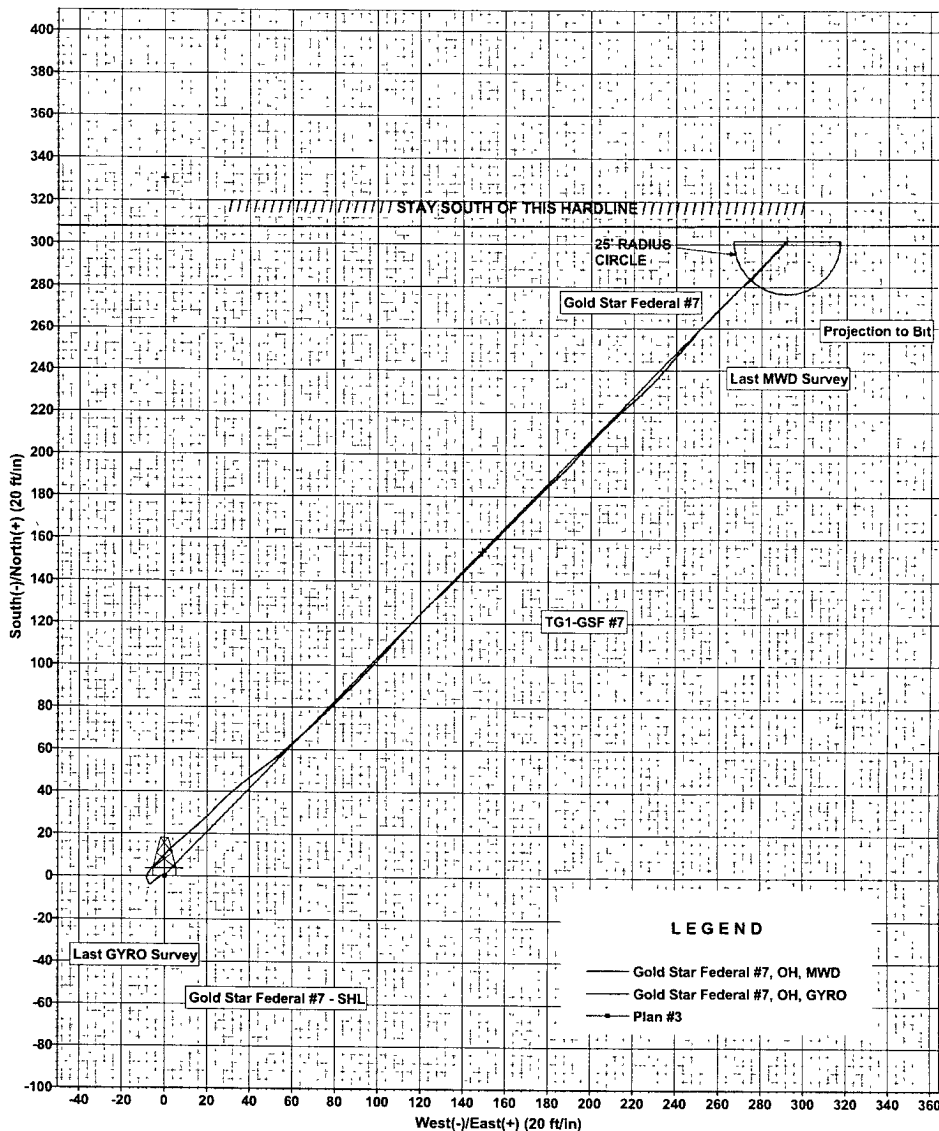
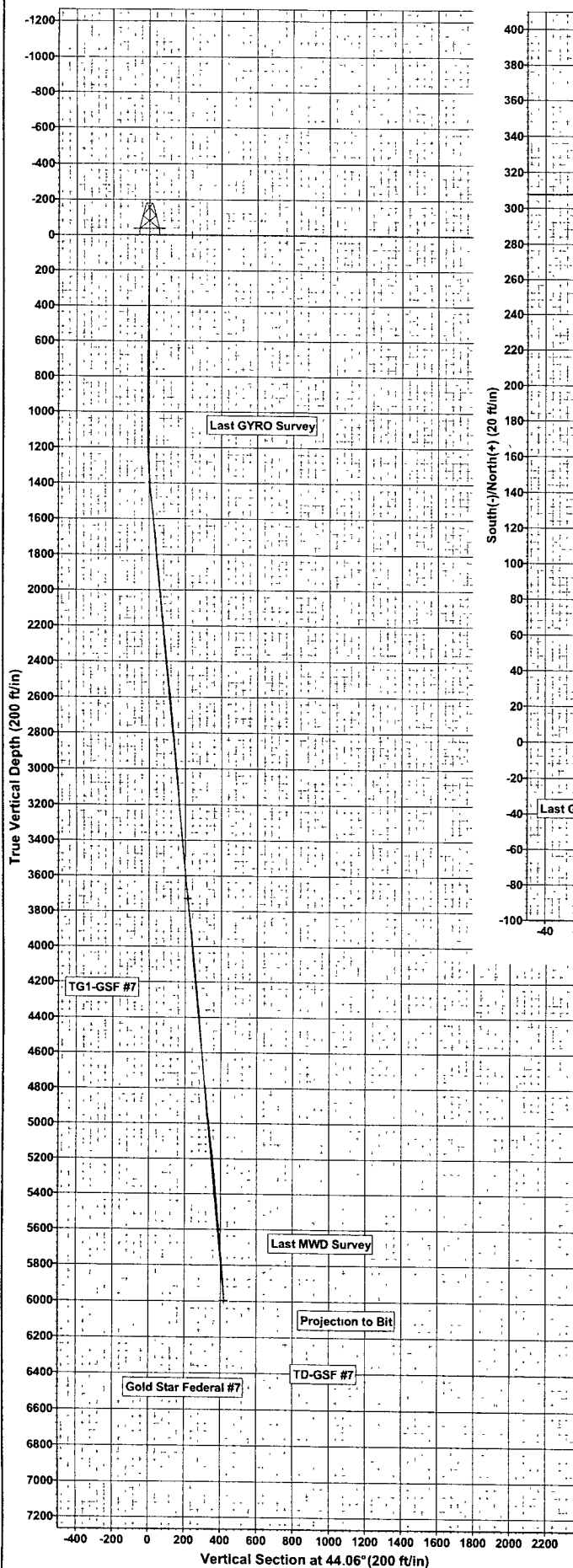
Targets										
Target Name	hit/miss target	Dip Angle	Dip Dir	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Shape		(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
PBHL-GSF #7		0 00	0 00	6,000 00	308 80	298 80	659,129 30	568,473 80	32° 48' 42 611 N	104° 6' 37 658 W
- actual wellpath misses by 9.31ft at 6019 00ft MD (5999.57 TVD, 301 95 N, 292.51 E)										
- Point										
North SL-GSF #7		0 00	0 00	0 00	330 00	0 00	659,150 50	568,175 00	32° 48' 42 827 N	104° 6' 41 159 W
- actual wellpath misses by 330 00ft at 0 35ft MD (0 35 TVD, 0 00 N, 0 00 E)										
- Polygon										
Point 1				0 00	635 67	-692 93	659,456 17	567,482 07		
Point 2				0 00	643 84	1,947 54	659,464 34	570,122 54		
TD-GSF #7		0 00	0 00	6,000 00	301 62	291.85	659,122 12	568,466 85	32° 48' 42 540 N	104° 6' 37 740 W
- actual wellpath hits target										
- Circle (radius 25 00)										
TG1-GSF #7		0 00	0 00	3,730 00	153 97	149.00	658,974 47	568,324 00	32° 48' 41 082 N	104° 6' 39 417 W
- actual wellpath hits target										
- Point										
Hard Line-GSF #7		0 00	0 00	0 00	330 00	0 00	659,150 50	568,175 00	32° 48' 42 827 N	104° 6' 41 159 W
- actual wellpath misses by 330 00ft at 0 35ft MD (0 35 TVD, 0 00 N, 0 00 E)										
- Polygon										
Point 1				0 00	305 67	-692 93	659,126 17	567,482 07		
Point 2				0 00	313.84	1,947 54	659,134 34	570,122 54		

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	
900 00	899 95	-3 86	-6 94	Last GYRO Survey
5,974 00	5,954 67	299 70	290 45	Last MWD Survey
6,019 00	5,999 57	301 95	292.51	Projection to Bit

Checked By: _____ Approved By: _____ Date: _____

COG Operating LLC

Scientific Drilling for COG Operating LLC
Site: Eddy County, NM (NAD 27 NME)
Well: Gold Star Federal #7
Wellbore: OH
Design: Plan #3 vs Actual



LEGEND

- Gold Star Federal #7, OH, MWD
- Gold Star Federal #7, OH, GYRO
- Plan #3

AZIMUTH CORRECTIONS
ALL AZIMUTHS MUST BE CORRECTED TO GRID
GRID CORRECTIONS MUST BE APPLIED BEFORE PLOTTING
To convert a Magnetic Direction to a Grid Direction, Add 8.12°
To convert a True Direction to a Grid Direction, Subtract 0.12°



Azimuths to Grid North
True North: -0.12°
Magnetic North: 8.18°
Magnetic Field
Strength: 49293.4 nT
Dip Angle: 60.73°
Date: 10/24/2007
Model: IGRF200510

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1231.00	0.00	0.00	1231.00	0.00	0.00	0.00	0.00	0.00	
3	1489.32	5.17	44.06	1488.97	8.36	8.09	2.00	44.06	11.64	
4	3739.25	5.17	44.06	3729.76	153.96	148.99	0.00	0.00	214.24	
5	3739.49	5.17	44.06	3730.00	153.97	149.00	2.00	0.00	214.26	TG1-GSF #7
6	6018.77	5.17	44.06	6000.00	301.60	291.86	0.00	0.00	419.70	TD-GSF #7

WELL DETAILS: Gold Star Federal #7

+N/-S	+E/-W	Ground Level:	3638.00
0.00	0.00	Northings	658820.50
		Eastings	568175.00
		Latitude	32° 48' 39.562 N
		Longitude	104° 6' 41.167 W

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

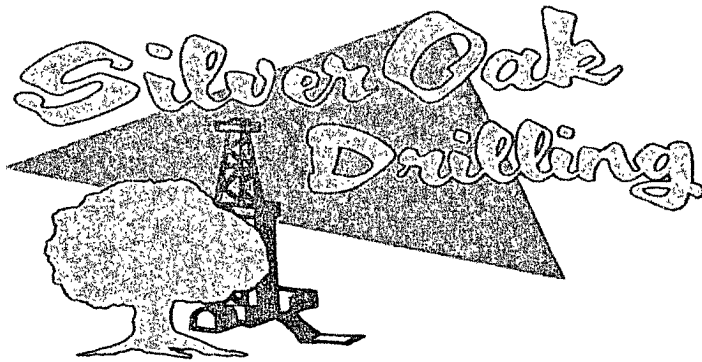
Name	TVD	+N/-S	+E/-W	Northings	Eastings	Latitude	Longitude	Shape
Hard Line-GSF #7	0.00	330.00	0.00	659150.50	568175.00	32° 48' 42.827 N	104° 6' 41.159 W	Polygon
North SL-GSF #7	0.00	330.00	0.00	659150.50	568175.00	32° 48' 42.827 N	104° 6' 41.159 W	Polygon
TG1-GSF #7	3730.00	153.97	149.00	658974.47	568324.00	32° 48' 41.082 N	104° 6' 39.417 W	Point
PBHL-GSF #7	6000.00	308.80	298.80	659129.30	568473.80	32° 48' 42.511 N	104° 6' 37.658 W	Point
TD-GSF #7	6000.00	301.62	291.85	659122.12	568466.85	32° 48' 42.540 N	104° 6' 37.740 W	Circle (Radius: 25.00)

PROJECT DETAILS: Eddy County, NM (NAD 27 NME)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

Plan: Plan #3 (Gold Star Federal #7/OH)

Created By: Julio Pina Date: 24-Oct-07
Checked: Date:
Reviewed: Date:
Approved: Date:



PO Box 1370
Artesia, NM 88211-1370
(505) 748-1288

October 29, 2007

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

RE: Gold Star Federal #7
638' FNL & 1950' FEL
Sec. 30, T17S, R29E
Eddy County, New Mexico

Dear Sir,

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

<u>DEPTH</u>	<u>DEVIATION</u>	<u>DEPTH</u>	<u>DEVIATION</u>
447.00	1.00	830.00	0.75

After this point, well was drilled directionally and survey will be supplied by the contracted directional drilling company.

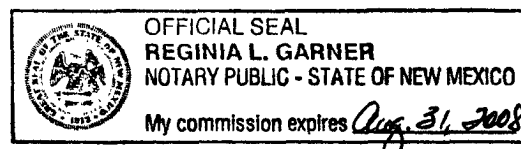
Very truly yours,

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

Eddie LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 29th day of October, 2007.

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

COG Operating LLC

Eddy County, NM (NAD 27 NME)

Gold Star Federal #7

Gold Star Federal #7

OH

Design: Actual

Standard Survey Report

24 October, 2007



Scientific Drilling Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well Gold Star Federal #7
Project:	Eddy County, NM (NAD 27 NME)	TVD Reference:	WELL @ 3638 00ft (Ground Elev)
Site:	Gold Star Federal #7	MD Reference:	WELL @ 3638 00ft (Ground Elev)
Well:	Gold Star Federal #7	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 2003 16 Single User Db

Project:	Eddy County, NM (NAD 27 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:	Gold Star Federal #7			
Site Position:		Northing:	658,820 50 ft	Latitude: 32° 48' 39 562 N
From:	Map	Easting:	568,175 00 ft	Longitude: 104° 6' 41 167 W
Position Uncertainty:	0 00 ft	Slot Radius:	ft	Grid Convergence: 0 12 °

Well:	Gold Star Federal #7			
Well Position	+N/-S	0 00 ft	Northing:	658,820 50 ft
	+E/-W	0 00 ft	Easting:	568,175 00 ft
			Latitude:	32° 48' 39 562 N
			Longitude:	104° 6' 41 167 W
Position Uncertainty	0 00 ft	Wellhead Elevation:	ft	Ground Level: 3,638 00 ft

Wellbore:	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF200510	10/24/2007	8 30	60 73	49,293

Design:	Actual			
Audit Notes:				
Version:	1 0	Phase:	ACTUAL	Tie On Depth: 0 00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0 00	0 00	0 00	44 06

Survey Program	Date: 10/24/2007				
From	To	Survey (Wellbore)	Tool Name	Description	
(ft)	(ft)				
100 00	900 00	GYRO (OH)	Keeper	Keeper Standard Rate Gyro	
927 00	6,019 00	MWD (OH)	MWD	MWD - Standard ISCWSA	

Survey:										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(ft)	(ft)	Section	Rate	Rate	Rate	
(ft)			(ft)			(ft)	(°/100ft)	(°/100ft)	(°/100ft)	
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
100 00	0 26	297 63	100 00	0 11	-0 20	-0 06	0 26	0 26	0 00	
200 00	0 53	255 55	200 00	0 10	-0 85	-0 52	0 38	0 27	-42 08	
300 62	0 62	234 65	300 61	-0 34	-1 74	-1 45	0 23	0 09	-20 77	
400 00	1 02	230 82	399 98	-1 21	-2 87	-2 86	0 41	0 40	-3 85	
500 00	0 97	232 20	499 97	-2 29	-4 23	-4 58	0 06	-0 05	1 38	
600 00	0 85	227 59	599 95	-3 31	-5 44	-6 16	0 14	-0 12	-4 61	
700 00	0 36	234 28	699 95	-3 99	-6 25	-7 21	0 49	-0 49	6 69	
800 00	0 15	303 81	799 95	-4 10	-6 61	-7 54	0 34	-0 21	69 53	
900 00	0 32	307 46	899 95	-3 86	-6 94	-7 60	0 17	0 17	3 65	
Last GYRO Survey										
927 00	0 68	327 52	926 95	-3 68	-7 09	-7 57	1 46	1 33	74 30	

Scientific Drilling Survey Report



Company: COG Operating LLC
Project: Eddy County, NM (NAD 27 NME)
Site: Gold Star Federal #7
Well: Gold Star Federal #7
Wellbore: OH
Design: Actual

Local Co-ordinate Reference: Well Gold Star Federal #7
TVD Reference: WELL @ 3638 00ft (Ground Elev)
MD Reference: WELL @ 3638 00ft (Ground Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003 16 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,081.00	0.58	331.40	1,080.94	-2.22	-7.95	-7.13	0.07	-0.06	2.52
1,173.00	0.70	345.13	1,172.93	-1.27	-8.32	-6.70	0.21	0.13	14.92
1,234.00	1.93	21.36	1,233.91	0.05	-8.04	-5.56	2.34	2.02	59.39
1,297.00	3.06	38.01	1,296.85	2.36	-6.62	-2.91	2.11	1.79	26.43
1,360.00	3.46	45.13	1,359.75	5.03	-4.23	0.67	0.90	0.63	11.30
1,422.00	5.01	41.64	1,421.58	8.37	-1.11	5.24	2.53	2.50	-5.63
1,484.00	5.86	44.52	1,483.30	12.65	2.91	11.11	1.44	1.37	4.65
1,547.00	5.75	51.71	1,545.98	16.90	7.64	17.46	1.17	-0.17	11.41
1,609.00	5.69	48.23	1,607.67	20.87	12.37	23.60	0.57	-0.10	-5.61
1,672.00	5.43	46.86	1,670.38	24.99	16.87	29.69	0.46	-0.41	-2.17
1,733.00	5.30	45.25	1,731.11	28.95	20.98	35.39	0.33	-0.21	-2.64
1,795.00	5.07	41.29	1,792.85	33.02	24.82	40.99	0.69	-0.37	-6.39
1,857.00	5.31	48.98	1,854.60	36.96	28.80	46.59	1.19	0.39	12.40
1,918.00	5.06	48.44	1,915.35	40.60	32.94	52.08	0.42	-0.41	-0.89
1,979.00	4.85	51.33	1,976.12	43.99	36.96	57.32	0.53	-0.34	4.74
2,042.00	5.32	52.22	2,038.88	47.45	41.35	62.85	0.76	0.75	1.41
2,134.00	4.96	52.04	2,130.51	52.51	47.86	71.01	0.39	-0.39	-0.20
2,196.00	5.34	53.26	2,192.25	55.88	52.28	76.52	0.64	0.61	1.97
2,259.00	5.67	47.00	2,254.96	59.76	56.91	82.52	1.09	0.52	-9.94
2,322.00	5.59	47.26	2,317.66	63.96	61.44	88.69	0.13	-0.13	0.41
2,385.00	5.65	49.60	2,380.36	68.06	66.05	94.84	0.38	0.10	3.71
2,447.00	5.43	46.25	2,442.07	72.06	70.50	100.81	0.63	-0.35	-5.40
2,510.00	5.41	45.62	2,504.79	76.20	74.77	106.76	0.10	-0.03	-1.00
2,573.00	5.45	42.92	2,567.50	80.47	78.93	112.72	0.41	0.06	-4.29
2,635.00	5.25	47.79	2,629.23	84.53	83.04	118.49	0.80	-0.32	7.85
2,696.00	5.03	44.66	2,689.99	88.31	86.99	123.95	0.58	-0.36	-5.13
2,758.00	5.06	43.72	2,751.75	92.22	90.79	129.40	0.14	0.05	-1.52
2,822.00	4.82	43.73	2,815.51	96.20	94.60	134.91	0.38	-0.37	0.02
2,884.00	4.95	41.98	2,877.29	100.07	98.19	140.19	0.32	0.21	-2.82
2,946.00	4.55	43.39	2,939.07	103.85	101.66	145.32	0.67	-0.65	2.27
3,008.00	4.70	41.60	3,000.87	107.53	105.04	150.32	0.34	0.24	-2.89
3,070.00	4.59	41.71	3,062.67	111.28	108.38	155.34	0.18	-0.18	0.18
3,131.00	4.27	41.96	3,123.49	114.79	111.52	160.04	0.53	-0.52	0.41
3,194.00	4.72	41.18	3,186.29	118.49	114.79	164.98	0.72	0.71	-1.24
3,257.00	4.38	44.26	3,249.09	122.16	118.18	169.97	0.66	-0.54	4.89
3,320.00	4.90	41.31	3,311.89	125.91	121.63	175.06	0.91	0.83	-4.68
3,384.00	5.37	48.29	3,375.63	129.95	125.67	180.78	1.22	0.73	10.91
3,446.00	5.01	47.94	3,437.38	133.70	129.85	186.38	0.58	-0.58	-0.56
3,509.00	5.68	44.46	3,500.10	137.77	134.08	192.24	1.18	1.06	-5.52
3,572.00	5.65	45.18	3,562.79	142.18	138.46	198.46	0.12	-0.05	1.14
3,633.00	5.26	43.31	3,623.52	146.33	142.51	204.25	0.70	-0.64	-3.07
3,696.00	5.48	43.58	3,686.24	150.61	146.56	210.15	0.35	0.35	0.43
3,739.95	5.51	43.95	3,729.99	153.65	149.47	214.36	0.10	0.06	0.84
TG1-GSF #7									
3,788.00	5.54	44.35	3,777.82	156.97	152.70	218.98	0.10	0.07	0.83
3,848.00	5.27	44.20	3,837.55	161.01	156.64	224.64	0.45	-0.45	-0.25
3,911.00	5.72	44.86	3,900.26	165.31	160.87	230.67	0.72	0.71	1.05
3,975.00	5.77	45.04	3,963.94	169.85	165.40	237.07	0.08	0.08	0.28
4,038.00	5.58	44.24	4,026.63	174.28	169.78	243.30	0.33	-0.30	-1.27
4,100.00	5.57	43.30	4,088.34	178.63	173.94	249.33	0.15	-0.02	-1.52
4,162.00	5.30	45.62	4,150.06	182.82	178.05	255.20	0.56	-0.44	3.74
4,224.00	5.35	46.32	4,211.79	186.82	182.19	260.95	0.13	0.08	1.13
4,286.00	5.21	46.76	4,273.53	190.74	186.33	266.65	0.24	-0.23	0.71
4,347.00	4.92	40.91	4,334.29	194.62	190.06	272.03	0.97	-0.48	-9.59
4,411.00	4.96	42.19	4,398.05	198.74	193.72	277.53	0.18	0.06	2.00