



OCD-ARTESIA

Form 3160-4
(April 2004)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

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

1a Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other b Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr, Other _____						5. Lease Serial No. NM NM-29267 6. If Indian, Allottee or Tribe Name --- 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 0051			
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 336 FNL & 1650 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			
						12. County or Parish Eddy 13. State NM			
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)

ACCEPTED FOR RECORD
 /S/ DAVID R. GLASS
 DEC 7 2007
 DAVID R. GLASS
 PETROLEUM ENGINEER

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.

State of New Mexico

DISTRICT I

1625 N. FRENCH DR., HOBBS, NM 88240

Energy, Minerals and Natural Resources Department

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.

Santa Fe, New Mexico 87505

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

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

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	BOTTOM HOLE LOCATION Y=659129.3 N X=568473.8 E GRID AZ. = 44°04'14" HORZ. DIST. = 430.0' SEE DETAIL SURF. B.H. 1657' 1950' 638' 336' DETAIL 3639.1' 3631.2' 3641.3' 3635.7' 600' 600' GEODETIC COORDINATES NAD 27 NME Y=658820.5 N X=568175.0 E LAT.=32.810989° N LONG.=104.111435° W	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. <i>Jerry W. Sherrell</i> 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 <i>Gary Kidson</i> 1/16/07 07.11.0015 Certificate No. GARY KIDSON 12841
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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:	Grnd
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
Position Uncertainty	0 00 ft	Wellhead Elevation: ft	Ground Level: 3,638 00 ft

Wellbore:	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF200510	10/24/2007	(°) 8 30
			Dip Angle (°) 60 73
			Field Strength (nT) 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
	(ft)	(ft)	(ft)
	0 00	0 00	0 00
			Direction (°) 44 06

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

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)
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

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

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

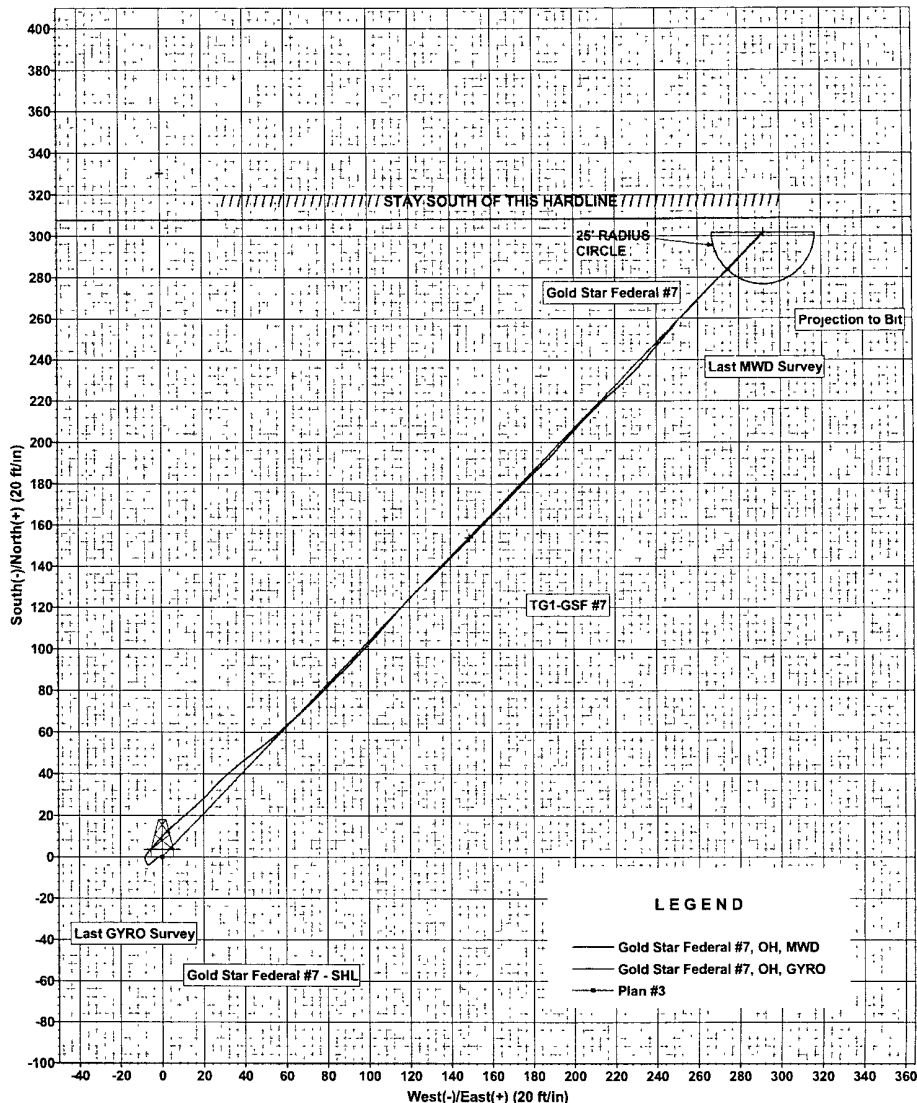
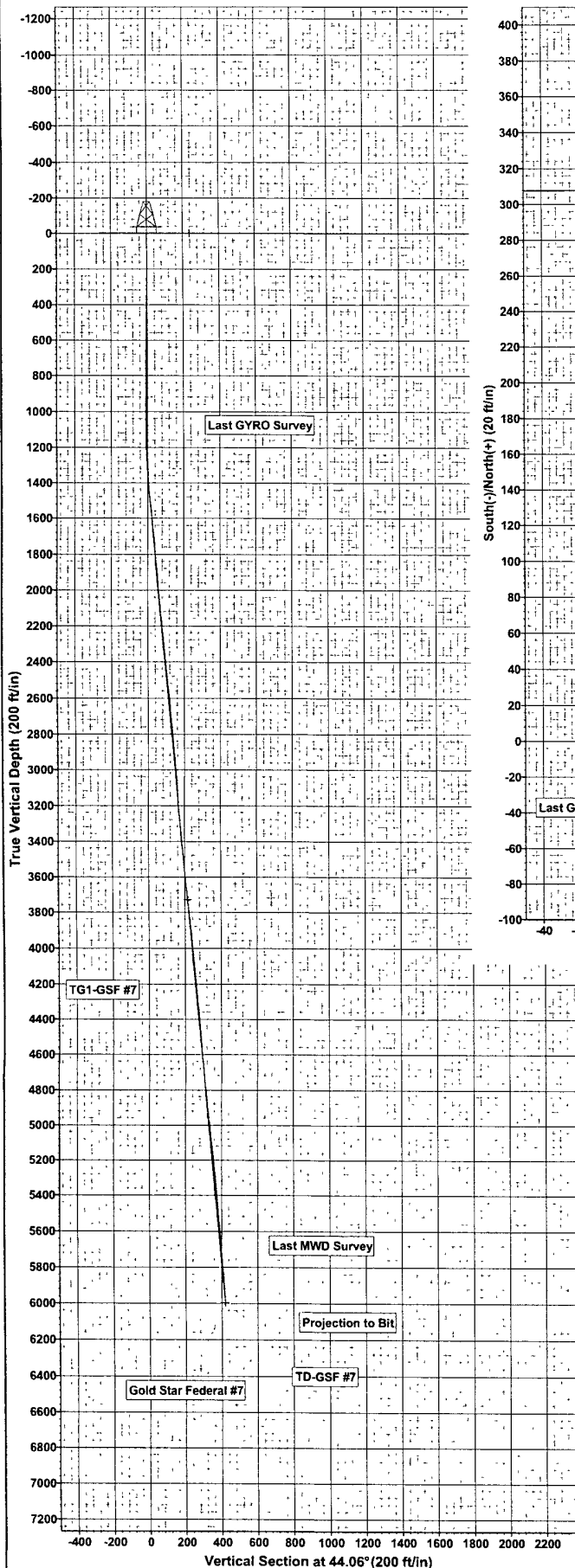
Targets									
Target Name	hit/miss:target	Dip Angle	Dip Dir	TVD	+N/-S	+E/-W	Northing	Easting	Latitude
Shape		(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	Longitude
PBHL-GSF #7		0 00	0 00	6,000.00	308.80	298.80	659,129.30	568,473.80	32° 48' 42.611 N
- actual wellpath misses by 9.31ft at 6019.00ft MD (5999.57 TVD, 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
- 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
- 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
- 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
- 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 (ft)	+E/-W (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: _____
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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 8.18°
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	Northing	658820.50
		Easting	568175.00
		Latitude	32° 48' 39.562 N
		Longitude	104° 6' 4 1.167 W

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

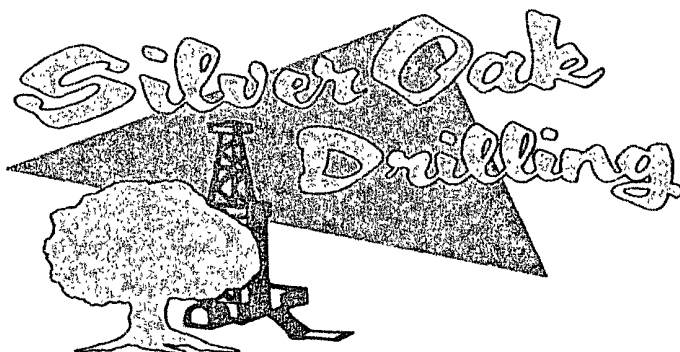
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Hard Line-GSF #7	0.00	330.00	0.00	659150.50	568175.00	32° 48' 42.827 N	104° 6' 41.159 W	Polygon
North SL-GSF #7	0.00	330.00	0.00	659150.50	568175.00	32° 48' 42.827 N	104° 6' 41.159 W	Polygon
TG1-GSF #7	3730.00	153.97	149.00	658974.47	568324.00	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' 42.611 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