



Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APR 10 2008
OCD-ARTESIA

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
NMLC029419A

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other _____

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

2. Name of Operator
COG OPERATING LLC Contact: KANICIA CARRILLO
E-Mail: kcarrillo@conchoresources.com

8. Lease Name and Well No.
SKELLY UNIT 969

3 Address 550 WEST TEXAS AVE STE 1300
MIDLAND, TX 79701

3a. Phone No. (include area code)
Ph: 432-685-4332

9. API Well No.
30-015-35867

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

At surface Lot M 1290FSL 330FWL 32.83080 N Lat, 103 84730 W Lon

At top prod interval reported below Lot M 990FSL 333FWL

At total depth Lot M 990FSL 333FWL

10. Field and Pool, or Exploratory
FREN;GLORIETA-YESO

11. Sec., T., R., M., or Block and Survey
or Area Sec 14 T17S R31E Mer

12. County or Parish
EDDY

13. State
NM

14. Date Spudded
01/24/2008

15. Date T.D. Reached
01/24/2008

16. Date Completed
☐ D & A ☒ Ready to Prod.
02/19/2008

17. Elevations (DF, KB, RT, GL)*
3888 GL

18. Total Depth: MD 6517
TVD 6507

19. Plug Back T.D.: MD 6464
TVD 6454

20. Depth Bridge Plug Set: MD
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
COMPENSATED NEUTRON HNGS/CCL

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ☐ No ☒ Yes (Submit analysis)

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 Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17.500	13.375 H40	48.0		460		447		0	127
12.250	8.625 J55	32.0		1804		800		0	160
7.875	5.500 L80	17.0		6517		1100		0	192

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.875	5576							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) YESO	5665	5865	5665 TO 5865	0.410	36	OPEN
B) YESO	5948	6148	5948 TO 6148	0.410	36	OPEN
C) YESO	6218	6418	6218 TO 6418	0.410	48	OPEN
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
5665 TO 5865	ACIDIZED W/5,000 GALS ACID. FRAC W/75,843 GALS GEL, 92,905# 16/30 SAND, 14,925# SIBERPROP SAND.
5948 TO 6148	ACIDIZED W/5,000 GALS ACID. FRAC W/67,095 GALS GEL, 74,749# 16/30 SAND, 14,301# SIBERPROP SAND.
6218 TO 6418	ACIDIZED W/5,000 GALS ACID. FRAC W/67,162 GALS GEL, 79,238# 16/30 SAND, 14,730# SIBERPROP 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
02/24/2008	02/26/2008	24	→	57.0	43.0	473.0	34.1		ELECTRIC PUMPING UNIT
Choke Size	Tbg. Press Flwg SI	Csg. Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas Oil Ratio	Well Status	
			→					POW	

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 reverse side)

ELECTRONIC SUBMISSION #59459 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

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 7 RIVERS QUEEN GRAYBURG SAN ANDRES GLORIETA YESO	1845 2178 2796 5049 3540 5049 5101				

32. Additional remarks (include plugging procedure):
Logs will be mailed.

33. Circle enclosed attachments:

- | | | | |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.) | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis | 7 Other: | |

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

Electronic Submission #59459 Verified by the BLM Well Information System.
For COG OPERATING LLC, sent to the Carlsbad

Name (please print) KANICIA CARRILLO

Title PREPARER

Signature (Electronic Submission)

Date 04/04/2008

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.

** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL **

DISTRICT I
1625 N. FRANCE DR., HOBBBS, 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 30-015-35867	Pool Code 26770	Pool Name Fren; Glorieta-Yeso
Property Code 29742	Property Name SKELLY UNIT	Well Number 969
OGRID No. 4323	Operator Name CHEVRON U.S.A INC.	Elevation 3888'

Surface Location

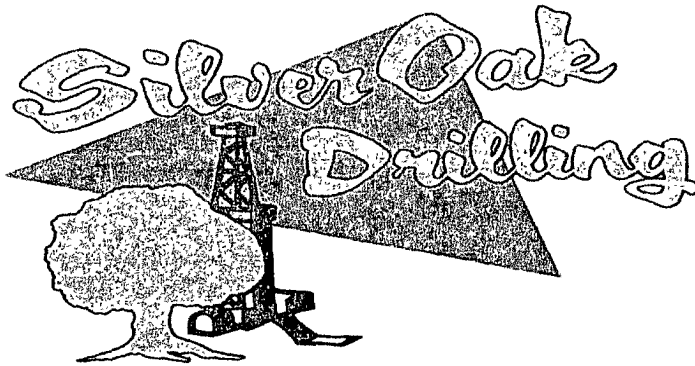
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	14	17-S	31-E		1290	SOUTH	330	WEST	EDDY

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
M	14	17-S	31-E		990	SOUTH	333	WEST	EDDY
Dedicated Acres		Joint or Infill		Consolidation Code		Order No.			

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=666298.2 N X=649294.7 E LAT.=32.830796° N LONG.=103.847298° W				BOTTOM HOLE LOCATION Y=665998.3 N X=649296.4 E			
DETAIL 3885.0' 3893.3' 600' 600' 3886.9' 3892.1'				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. Signature <u>Kanicia Carrillo</u> Date <u>04/02/08</u> Printed Name			
330' S.L. 330' B.H. 990' 1290' GRID AZ. = 179°40'33" HORIZ. DIST. = 300.0'				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. DATE SURVEYED <u>3/06/07</u> AR Signature & Seal of Professional Surveyor <u>Ronald J. Eidson</u> Certificate No. GARY EIDSON 12641 DONALD J. EIDSON 3228			



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

February 12, 2008

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

RE: Skelly Unit #969
990' FSL & 330' FWL
Sec. 14, T17S, R31E
Eddy County, New Mexico

Dear Sir,

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

Very truly yours,

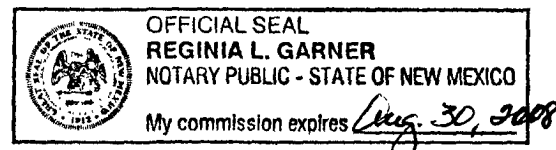
A handwritten signature in cursive script, appearing to read "Eddie LaRue".

Eddie LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 12th day of February, 2008.

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

Notary Public

Date	Depth	Dev	Dir
01/25/2008	230.00	0.25	0.00
01/25/2008	402.00	1.75	0.00
01/27/2008	575.00	2.25	0.00
01/27/2008	688.00	2.00	0.00
01/27/2008	871.00	1.50	0.00
01/27/2008	994.00	1.00	0.00
01/27/2008	1180.00	1.25	0.00
01/27/2008	1399.00	1.00	0.00
01/28/2008	1584.00	1.00	0.00
01/29/2008	1962.00	0.75	32.84
01/29/2008	2025.00	0.24	60.15
01/29/2008	2088.00	1.55	201.80
01/29/2008	2202.00	2.74	210.66
01/29/2008	2264.00	3.25	212.30
01/29/2008	2326.00	3.38	275.30
01/30/2008	2224.00	3.12	0.00
01/30/2008	2455.00	3.31	0.00
01/30/2008	2518.00	3.30	0.00
01/30/2008	2652.00	3.46	176.21
01/30/2008	2715.00	3.48	172.83
01/30/2008	2891.00	3.74	182.07
01/30/2008	2954.00	3.74	0.00
01/31/2008	2963.00	3.46	174.32
01/31/2008	3392.00	4.28	0.00
01/31/2008	3452.00	4.26	0.00
01/31/2008	3515.00	4.16	0.00
02/01/2008	3526.00	4.00	174.84
02/01/2008	3587.00	3.88	173.46
02/01/2008	3649.00	3.79	177.81
02/01/2008	3828.00	3.71	178.20
02/01/2008	3891.00	3.83	175.10
02/01/2008	3954.00	3.79	174.50
02/03/2008	4527.00	3.48	181.30
02/03/2008	4712.00	3.58	178.98
02/03/2008	4899.00	3.46	184.90
02/03/2008	5050.00	3.58	179.10
02/04/2008	5702.00	3.48	179.60
02/05/2008	5739.00	3.34	177.57
02/04/2008	5795.00	3.34	177.50
02/05/2008	5986.00	3.09	178.24
02/05/2008	6174.00	3.61	177.83
02/05/2008	6294.00	3.87	181.10
02/05/2008	6356.00	3.97	183.90
02/05/2008	6418.00	3.76	180.30

COG Operating LLC

Eddy County, NM (NAD 27 NME)

Skelly Unit #969

Skelly Unit #969

Wellbore #1

Design: Actual

Standard Survey Report

06 February, 2008



Scientific Drilling
Directional Drilling Operations

Scientific Drilling Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well Skelly Unit #969
Project:	Eddy County, NM (NAD 27 NME)	TVD Reference:	WELL @ 3888 00ft (Original Well Elev)
Site:	Skelly Unit #969	MD Reference:	WELL @ 3888 00ft (Original Well Elev)
Well:	Skelly Unit #969	North Reference:	Grid
Wellbore:	Wellbore #1	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		Skelly Unit #969			
Site Position:		Northing:	666,298 20 ft	Latitude:	32° 49' 50.867 N
From:	Map	Easting:	649,294 70 ft	Longitude:	103° 50' 50.274 W
Position Uncertainty:	0 00 ft	Slot Radius:	"	Grid Convergence:	0 26 °

Well:	Skelly Unit #969				
Well Position	+N/-S	0 00 ft	Northing:	666,298 20 ft	Latitude: 32° 49' 50.867 N
	+E/-W	0 00 ft	Easting:	649,294 70 ft	Longitude: 103° 50' 50.274 W
Position Uncertainty		0 00 ft	Wellhead Elevation:	ft	Ground Level: 3,888 00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2/6/2008	8 15	60 79	49.307

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	179 68

Survey Program		Date	2/6/2008		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.00	1,773 00	GYRO (Wellbore #1)	Keeper	Keeper Standard Rate Gyro	
1,962 00	6,517 00	MWD (Wellbore #1)	MWD	MWD - Standard ISCWSA	

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)
0 00	0 00	0 00	0 00	0 00	0.00	0 00	0 00	0 00	0 00
100 00	0 89	171.30	100 00	-0 77	0 12	0 77	0 89	0.89	0 00
200 00	0 37	227 51	199 99	-1 75	0 00	1 75	0 75	-0.52	56 21
300 00	1 05	200 84	299 98	-2 83	-0 57	2 82	0 74	0.68	-26 67
400 00	2.19	188 07	399.94	-5 58	-1 16	5 57	1.19	1 14	-12 77
500 00	2 25	188 36	499 87	-9 41	-1.72	9 40	0 06	0 06	0 29
600 00	2 02	191 53	599 80	-13 08	-2.35	13 07	0 26	-0 23	3 17
700 00	1 61	195 22	699 75	-16 16	-3.07	16 14	0.43	-0 41	3 69
800 00	1 46	195 90	799 71	-18 74	-3 79	18 72	0 15	-0 15	0 68
900 00	1 43	193 49	899.68	-21 18	-4 43	21 16	0 07	-0 03	-2.41
1,000 00	0 93	187 90	999 66	-23 20	-4 83	23 17	0 51	-0 50	-5 59
1,100 00	0 75	185 94	1,099 65	-24 65	-5 01	24 62	0 18	-0 18	-1 96

Scientific Drilling Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well Skelly Unit #969
Project:	Eddy County, NM (NAD 27 NME)	TVD Reference:	WELL @ 3888 00ft (Original Well Elev)
Site:	Skelly Unit #969	MD Reference:	WELL @ 3888 00ft (Original Well Elev)
Well:	Skelly Unit #969	North Reference:	Grid
Wellbore:	Wellbore #1	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)	
1,200.00	0.63	180.99	1,199.64	-25.85	-5.09	25.82	0.13	-0.12	-4.95	
1,300.00	0.31	195.56	1,299.64	-26.66	-5.17	26.63	0.34	-0.32	14.57	
1,400.00	0.05	29.77	1,399.63	-26.89	-5.22	26.86	0.36	-0.26	-165.79	
1,500.00	0.29	41.31	1,499.63	-26.66	-5.04	26.63	0.24	0.24	11.54	
1,600.00	0.73	33.54	1,599.63	-25.94	-4.52	25.91	0.44	0.44	-7.77	
1,700.00	0.82	49.85	1,699.62	-24.95	-3.62	24.92	0.24	0.09	16.31	
1,773.00	0.83	44.47	1,772.61	-24.23	-2.85	24.21	0.11	0.01	-7.37	
Last GYRO Survey										
1,962.00	0.75	32.84	1,961.60	-22.21	-1.22	22.21	0.09	-0.04	-6.15	
2,025.00	0.24	60.15	2,024.59	-21.80	-0.88	21.80	0.87	-0.81	43.35	
2,088.00	1.55	201.80	2,087.59	-22.53	-1.08	22.52	2.77	2.08	224.84	
2,150.00	2.74	210.66	2,149.54	-24.58	-2.15	24.57	1.99	1.92	14.29	
2,212.00	3.25	197.92	2,211.46	-27.53	-3.45	27.51	1.35	0.82	-20.55	
2,275.00	3.38	192.38	2,274.35	-31.04	-4.39	31.02	0.55	0.21	-8.79	
2,338.00	3.12	186.85	2,337.25	-34.56	-5.00	34.53	0.65	-0.41	-8.78	
2,400.00	3.31	181.36	2,399.15	-38.02	-5.24	37.99	0.58	0.31	-8.85	
2,463.00	3.30	176.76	2,462.05	-41.65	-5.18	41.62	0.42	-0.02	-7.30	
2,526.00	3.55	180.31	2,524.94	-45.41	-5.09	45.38	0.52	0.40	5.63	
2,589.00	3.51	184.33	2,587.82	-49.29	-5.24	49.26	0.40	-0.06	6.38	
2,652.00	3.46	176.21	2,650.70	-53.11	-5.26	53.08	0.79	-0.08	-12.89	
2,715.00	3.48	172.83	2,713.59	-56.90	-4.90	56.87	0.33	0.03	-5.37	
2,778.00	3.66	177.81	2,776.46	-60.81	-4.58	60.78	0.57	0.29	7.90	
2,838.00	3.74	182.07	2,836.34	-64.68	-4.58	64.65	0.48	0.13	7.10	
2,902.00	3.55	177.32	2,900.21	-68.74	-4.56	68.71	0.56	-0.30	-7.42	
2,963.00	3.46	174.32	2,961.10	-72.46	-4.29	72.43	0.33	-0.15	-4.92	
3,026.00	3.75	172.46	3,023.97	-76.39	-3.84	76.37	0.50	0.46	-2.95	
3,088.00	4.00	172.68	3,085.83	-80.55	-3.29	80.53	0.40	0.40	0.35	
3,150.00	3.55	172.94	3,147.69	-84.60	-2.78	84.58	0.73	-0.73	0.42	
3,213.00	3.51	171.84	3,210.57	-88.44	-2.27	88.43	0.12	-0.06	-1.75	
3,277.00	4.18	174.70	3,274.43	-92.70	-1.78	92.69	1.09	1.05	4.47	
3,339.00	4.28	175.24	3,336.26	-97.26	-1.37	97.25	0.17	0.16	0.87	
3,400.00	4.26	174.73	3,397.09	-101.78	-0.98	101.78	0.07	-0.03	-0.84	
3,462.00	4.16	173.82	3,458.92	-106.31	-0.52	106.31	0.19	-0.16	-1.47	
3,526.00	4.00	174.84	3,522.76	-110.84	-0.07	110.84	0.27	-0.25	1.59	
3,587.00	3.88	173.46	3,583.62	-115.01	0.35	115.01	0.25	-0.20	-2.26	
3,649.00	3.79	177.81	3,645.48	-119.14	0.67	119.15	0.49	-0.15	7.02	
3,711.00	3.62	179.87	3,707.35	-123.15	0.75	123.15	0.35	-0.27	3.32	
3,774.00	3.71	178.24	3,770.22	-127.18	0.82	127.18	0.22	0.14	-2.59	
3,837.00	3.83	175.17	3,833.08	-131.31	1.06	131.31	0.37	0.19	-4.87	
3,900.00	3.79	174.55	3,895.95	-135.48	1.43	135.48	0.09	-0.06	-0.98	
3,962.00	3.80	173.30	3,957.81	-139.56	1.87	139.57	0.13	0.02	-2.02	
4,024.00	3.68	179.77	4,019.68	-143.59	2.12	143.60	0.71	-0.19	10.44	
4,087.00	3.61	181.63	4,082.55	-147.59	2.07	147.60	0.22	-0.11	2.95	
4,150.00	3.66	181.39	4,145.42	-151.59	1.96	151.60	0.08	0.08	-0.38	
4,245.00	3.69	180.03	4,240.23	-157.67	1.89	157.68	0.10	0.03	-1.43	
4,339.00	3.60	179.96	4,334.04	-163.65	1.89	163.66	0.10	-0.10	-0.07	
4,434.00	3.68	179.62	4,428.85	-169.68	1.91	169.69	0.09	0.08	-0.36	
4,527.00	3.48	181.30	4,521.67	-175.49	1.87	175.50	0.24	-0.22	1.81	
4,619.00	3.47	180.98	4,613.50	-181.06	1.76	181.07	0.02	-0.01	-0.35	
4,712.00	3.58	178.98	4,706.32	-186.78	1.76	186.79	0.18	0.12	-2.15	
4,805.00	3.38	180.51	4,799.15	-192.43	1.79	192.43	0.24	-0.22	1.65	
4,899.00	3.46	184.90	4,892.98	-198.02	1.52	198.03	0.29	0.09	4.67	
4,994.00	3.74	179.85	4,987.79	-203.98	1.28	203.98	0.45	0.29	-5.32	
5,087.00	4.02	172.24	5,080.58	-210.24	1.73	210.25	0.63	0.30	-8.18	

Scientific Drilling Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well Skelly Unit #969
Project:	Eddy County, NM (NAD 27 NME)	TVD Reference:	WELL @ 3888 00ft (Original Well Elev)
Site:	Skelly Unit #969	MD Reference:	WELL @ 3888 00ft (Original Well Elev)
Well:	Skelly Unit #969	North Reference:	Grid
Wellbore:	Wellbore #1	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)	
5,180.00	3.78	184.09	5,173.37	-216.53	1.95	216.54	0.90	-0.26	12.74	
5,275.00	3.89	180.15	5,268.15	-222.87	1.72	222.88	0.30	0.12	-4.15	
5,369.00	3.58	178.12	5,361.96	-229.00	1.81	229.00	0.36	-0.33	-2.16	
5,460.00	3.72	177.17	5,452.77	-234.78	2.05	234.79	0.17	0.15	-1.04	
5,552.00	3.45	179.75	5,544.59	-240.53	2.21	240.54	0.34	-0.29	2.80	
5,645.00	3.48	179.60	5,637.42	-246.15	2.24	246.16	0.03	0.03	-0.16	
5,739.00	3.34	177.57	5,731.25	-251.74	2.37	251.75	0.20	-0.15	-2.16	
5,830.00	3.31	177.36	5,822.10	-257.02	2.61	257.03	0.04	-0.03	-0.23	
5,923.00	3.25	179.20	5,914.95	-262.33	2.77	262.34	0.13	-0.06	1.98	
5,986.00	3.09	178.24	5,977.85	-265.82	2.85	265.83	0.27	-0.25	-1.52	
6,080.00	3.91	179.25	6,071.68	-271.55	2.97	271.57	0.87	0.87	1.07	
6,174.00	3.61	177.83	6,165.47	-277.71	3.12	277.73	0.33	-0.32	-1.51	
6,237.00	3.87	181.14	6,228.34	-281.82	3.15	281.84	0.54	0.41	5.25	
6,299.00	3.97	183.92	6,290.19	-286.06	2.96	286.07	0.35	0.16	4.48	
6,362.00	3.76	180.36	6,353.05	-290.30	2.80	290.31	0.51	-0.33	-5.65	
6,460.00	3.45	178.67	6,450.86	-296.46	2.85	296.47	0.33	-0.32	-1.72	
MWD Survey										
6,517.00	3.45	178.67	6,507.75	-299.89	2.93	299.90	0.00	0.00	0.00	
Projection to Bit										

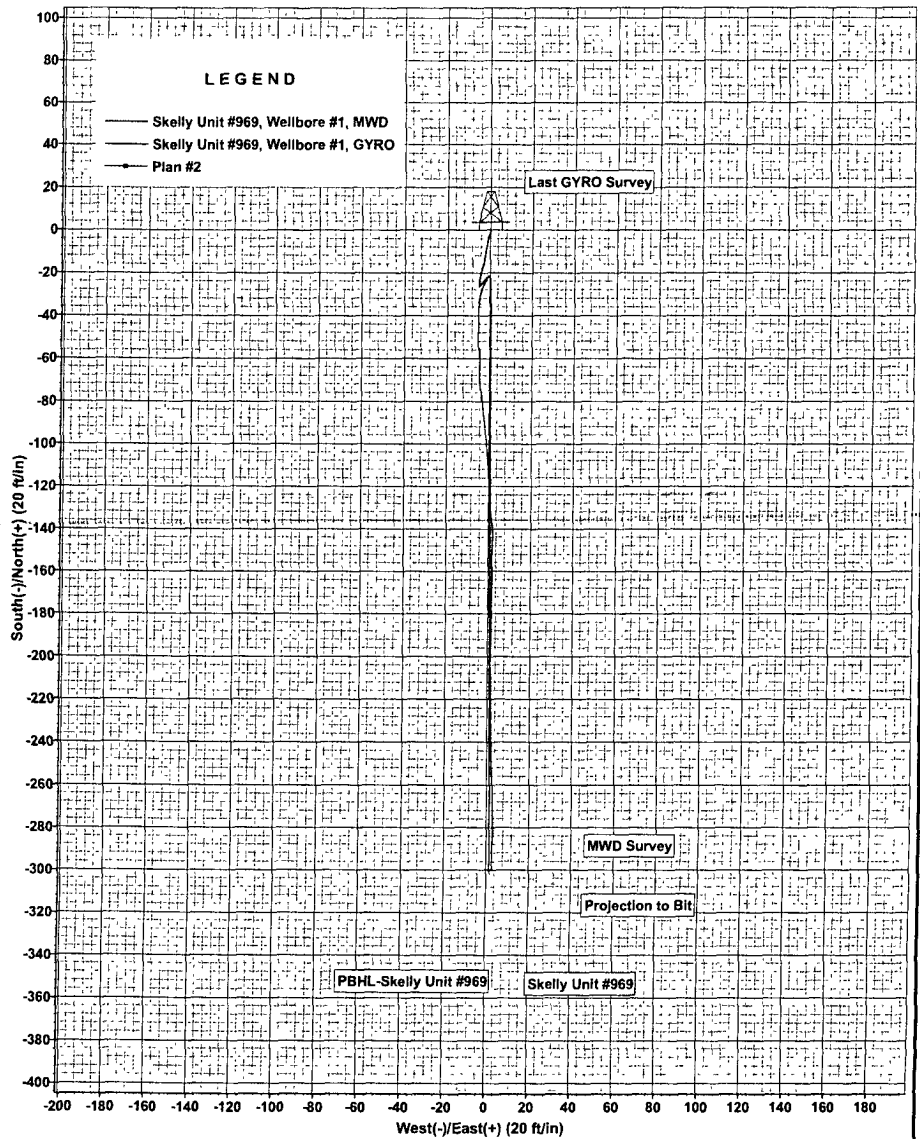
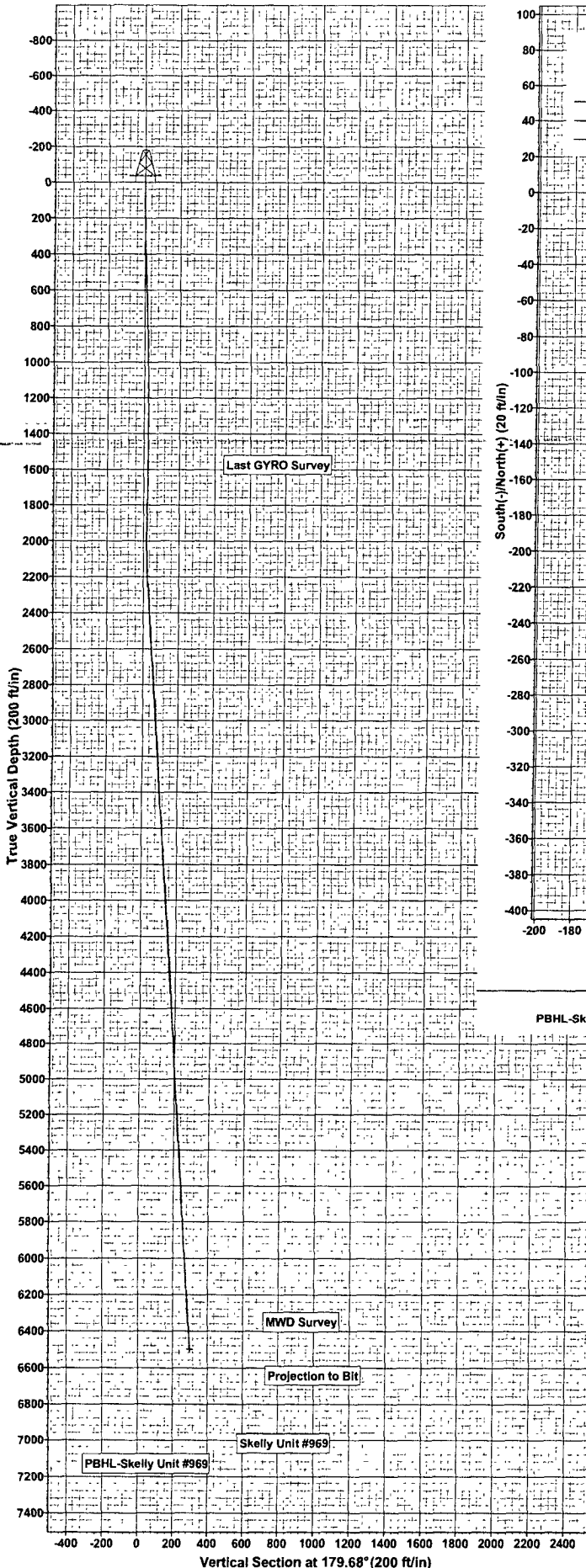
Targets									
Target Name	Dip Angle	Dip Dir	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
PBHL-Skelly Unit #969	0.00	0.00	6,500.00	-299.90	1.70	665,998.30	649,296.40	32° 49' 47.900 N	103° 50' 50.270 W
- actual wellpath misses by 1.31ft at 6509.26ft MD (6500.03 TVD, -299.42 N, 2.92 E)									
- Point									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N-S (ft)	+E-W (ft)	
1,773.00	1,772.61	-24.23	-2.85	Last GYRO Survey
6,460.00	6,450.86	-296.46	2.85	MWD Survey
6,517.00	6,507.75	-299.89	2.93	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: Skelly Unit #969
Wellbore: Wellbore #1
Design: Plan #2 vs Actual



WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL-Skelly Unit #969	6500.00	-299.90	1.70	665998.30	649296.40	32° 49' 50.270 W	103° 50' 50.270 W	Point

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 7.89°
To convert a True Direction to a Grid Direction, Subtract 0.26°



Azimuths to Grid North
True North: -0.26°
Magnetic North: 7.89°
Magnetic Field
Strength: 49306.9nT
Dip Angle: 60.79°
Date: 2/6/2008
Model: IGRF200510

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	1773.00	0.83	44.47	1772.61	-24.23	-2.85	0.00	0.00	24.21	
2	2000.00	0.83	44.47	1999.59	-21.88	-0.54	0.00	0.00	21.88	
3	2213.25	3.63	179.76	2212.71	-27.54	0.57	2.00	143.15	27.55	
4	6509.18	3.63	179.76	6500.00	-299.90	1.70	0.00	0.00	299.90	PBHL-Skelly Unit #969

WELL DETAILS: Skelly Unit #969

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	666298.20	649294.70	32° 49' 50.867 N	103° 50' 50.274 W

PROJECT DETAILS: Eddy County, NM (NAD 27 NME) Plan: Plan #2 (Skelly Unit #969/Wellbore #1)

Geodetic System: US State Plane 1927 (Exact solution)	Created By: Julio Pina	Date: 06-Feb-08
Datum: NAD 1927 (NADCON CONUS)	Checked: _____	Date: _____
Ellipsoid: Clarke 1866	Reviewed: _____	Date: _____
Zone: New Mexico East 3001	Approved: _____	Date: _____
System Datum: Mean Sea Level		