

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS
**Do not use this form for proposals to drill or to re-enter an
abandoned well. Use Form 3160-3 (APD) for such proposals.**

5. Lease Serial No.
NMLC029418A

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
CHEVRON USA INCORPORATED COG Operating LLC (Agent)

3a. Address
(Agent)
550 W. Texas Ave., Suite 100 Midland, TX 79701

3b. Phone No. (include area code)
432-818-2319

7. If Unit of CA/Agreement, Name and/or No.
NMNM71030

8. Well Name and No
Skelly Unit 646

9. API Well No
30-015-38362

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

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 14 T17S R31E 189 FSL 965 FEL, Unit P

11. Country or Parish, State
EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Drilling Operations
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

8/29/11 Test 5-1/2 csg 3500psi, ok.

8/31/11 Perf Lower Blinbry @ 6320 - 6520 w/ 1 SPF, 26 holes.

9/01/11 Acidize w/3500 gals 15% HCL acid. Frac w/111,968 gals gel, 147,254# 16/30 White sand, 27,851# 16/30 CRC. CPB @ 6285.

Perf Middle Blinbry @ 6050 - 6250 w/1 SPF, 26 holes. Acidize w/3500 gals 15% HCL acid. Frac w/114,697 gals gel, 148,311# 16/30 White sand, 29,399# 16/30 CRC. CBP @ 6005.

Perf Upper Blinbry @ 5780 - 5980 w/ 1 SPF, 26 holes. Acidize w/3500 gals 15% HCL acid. Frac w/114,850 gals gel, 147,584# 16/30 White sand, 29,070# 16/30 CRC. CBP @ 5420.

Perf Paddock @ 5240 - 5390 w/1 SPF, 26 holes. Acidize w/2500 gals 15% HCL acid. Frac w/111,619 gals gel, 129,689# 16/30 White sand, 27,169# 16/30 CRC.

9/08/11 Drill out plugs. Clean out to PBTD 6865.

9/10/11 RIH w/ 195 jts 2-7/8" 6 5# J55 tbg, EOT @ 6379.

9/12/11 RIH w/ 2-1/2" x 2" x 24' pump. Hang on well.

Well is shut-in waiting on facility.

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)

Netha Aaron

Title PREPARER

Signature

N. Aaron

Date 10/13/2011

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon

Office

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 any statement to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

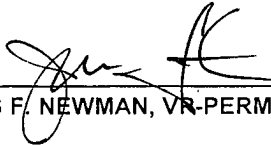
JES

OPERATOR COG Operating, LLC
WELL/LEASE Skelly Unit #646
COUNTY Eddy

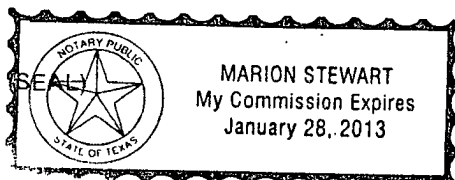
30-015-38362

STATE OF NEW MEXICO
DEVIATION REPORT

109	0.54
261	0.48
412	0.78
567	0.60
870	0.32
1346	0.65
1853	1.90
1907	1.67
1971	1.85
2226	5.45
2416	8.27
2543	8.62
2923	6.95
3113	6.42
3207	5.81
3493	6.02
3681	6.69
3871	6.33
4156	7.74
4440	6.68
4504	7.06
4789	7.12
4979	7.72
5075	7.30
5254	6.78
5548	7.39
5834	7.21
6023	6.84
6214	6.69
6404	6.48
6498	6.68
6689	6.24

SIGNED BY: 
JAMES F. NEWMAN, VR-PERMIAN BUSINESS UNIT
STATE OF TEXAS
COUNTY OF MIDLAND

ON THIS 25 DAY OF August, 2011, BEFORE ME, M STEWART, A NOTARY PUBLIC, PERSONALLY APPEARED JAMES F. NEWMAN, WHO ACKNOWLEDGED AND EXECUTED THIS DOCUMENT. WITNESS MY HAND AND OFFICIAL SEAL.




NOTARY PUBLIC



30-015-38362

COG Operating LLC

Eddy County, NM (NAN27 NME)

Skelly Unit #646

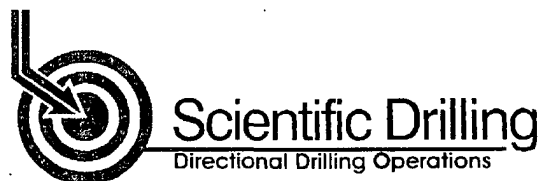
Skelly Unit #646

OH

Design: Actual

Standard Survey Report

15 August, 2011





Scientific Drilling

Survey Report



Company: COG Operating LLC
Project: Eddy County, NM (NAN27 NME)
Site: Skelly Unit #646
Well: Skelly Unit #646
Wellbore: OH
Design: Actual

Local Co-ordinate Reference: Site Skelly Unit #646
TVD Reference: KB Elev (12') @ 3913 00usft (Basic #35)
MD Reference: KB Elev (12') @ 3913 00usft (Basic #35)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM-Julio

Project	Eddy County, NM (NAN27 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 #646		
Site Position:		Northing:	665,225 60 usft
From:	Map	Easting:	653,284 80 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 49' 40 070 N
		Longitude:	103° 50' 3 571 W
		Grid Convergence:	0 27 °

Well	Skelly Unit #646		
Well Position	+N/-S	0 00 usft	Northing:
	+E/-W	0 00 usft	Easting:
Position Uncertainty	0 00 usft	Wellhead Elevation:	usft
		Latitude:	32° 49' 40 070 N
		Longitude:	103° 50' 3 571 W
		Ground Level:	3,901 00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	2011/08/10	(°)
			7 73
			Dip Angle
			(°)
			60.70
			Field Strength
			(nT)
			48,932

Design	Actual		
Audit Notes:			
Version:	1 0	Phase:	ACTUAL
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0 00	0.00	0 00
			Direction
			(°)
			75 11

Survey Program	Date 2011/08/15		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
300 00	1,808 00	Gyro Survey (OH)	Keeper
1,907 00	6,923 00	MWD Survey (OH)	MWD
			Description
			Standard Wireline Keeper ver 1 0 2
			MWD - Standard

Survey	Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
	Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
	(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)
	0 00	0 33	29 81	0 00	0 00	0 00	0 00	0 00	0 00	0.00
	300 00	0 37	31 69	299 99	1 57	0 94	1 31	0 01	0 01	0 63
	400 00	0 45	19 93	399 99	2 22	1 24	1 77	0 12	0 08	-11.76
	500 00	0 04	147 09	499 99	2 56	1 39	2 01	0 48	-0 41	127 16
	600 00	0 06	261.43	599 99	2 52	1 36	1 96	0.08	0 02	114 34
	700 00	0 20	244 84	699 99	2 44	1 15	1 74	0 14	0 14	-16 59
	800 00	0 29	274 31	799 99	2 38	0 74	1 33	0 15	0 09	29 47
	900 00	0 37	239 04	899 99	2 24	0 21	0 78	0 21	0.08	-35 27
	1,000 00	0 29	206 36	999 99	1 84	-0 18	0 30	0 20	-0 08	-32 68
	1,100 00	0 14	154 54	1,099 99	1 51	-0 24	0 16	0 23	-0 15	-51 82



Scientific Drilling
Survey Report



Company: COG Operating LLC
Project: Eddy County, NM (NAN27 NME)
Site: Skelly Unit #646
Well: Skelly Unit #646
Wellbore: OH
Design: Actual

Local Co-ordinate Reference: Site Skelly Unit #646
TVD Reference: KB Elev (12') @ 3913 00usft (Basic #35)
MD Reference: KB Elev (12') @ 3913 00usft (Basic #35)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM-Julio

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,200 00	0 20	51 92	1,199 99	1.50	-0 05	0 34	0 27	0 06	-102 62
1,300 00	0 51	74 45	1,299 98	1 73	0 52	0 95	0 33	0 31	22 53
1,400 00	0 91	43 12	1,399 98	2.43	1 49	2 07	0 54	0 40	-31 33
1,500 00	1 40	27 75	1,499 96	4 09	2 60	3 57	0 58	0 49	-15 37
1,600 00	1 91	40 54	1,599 91	6 44	4 25	5 77	0 63	0 51	12 79
1,700 00	2 01	50 43	1,699 86	8.82	6 69	8 73	0 35	0 10	9 89
1,800 00	1.88	66 25	1,799 80	10.60	9 54	11 95	0.55	-0 13	15 82
1,808.00	1 88	68 58	1,807 79	10 70	9 79	12 21	0 96	0 00	29 13
Gyro Tie-in									
1,907 00	1.67	45 87	1,906 75	12.30	12 33	15 08	0 74	-0 21	-22 94
1,971 00	1.85	61 34	1,970 72	13 44	13 91	16 90	0 79	0 28	24 17
2,034 00	2 36	84 12	2,033 68	14.06	16 09	19 16	1 54	0 81	36 16
2,098 00	3 59	82 73	2,097 59	14 45	19 39	22 45	1 93	1.92	-2 17
2,162 00	4 35	80 01	2,161 44	15 13	23 77	26 86	1 22	1 19	-4 25
2,226 00	5 45	75 05	2,225 20	16 33	29 09	32 31	1 84	1 72	-7 75
2,290 00	6 56	74 44	2,288 85	18 10	35 55	39 01	1 74	1 73	-0 95
2,353 00	7 56	75 31	2,351 37	20 11	43 03	46 75	1 60	1.59	1 38
2,416 00	8 27	74 08	2,413 77	22 41	51.39	55 43	1 16	1 13	-1 95
2,480 00	8 23	72 13	2,477 11	25 07	60 18	64 60	0 44	-0 06	-3.05
2,543.00	8 62	71 36	2,539 43	27 97	68 95	73 82	0 64	0 62	-1 22
2,638 00	8 79	71 80	2,633 33	32 51	82 59	88 17	0 19	0 18	0 46
2,733 00	8 44	75 49	2,727 26	36.52	96 23	102 39	0 69	-0 37	3 88
2,828 00	8 50	71 87	2,821 23	40 46	109 65	116 37	0 56	0 06	-3 81
2,923 00	6 95	72 32	2,915 36	44 39	121 80	129 12	1 63	-1 63	0 47
3,018 00	6 42	71 18	3,009 72	47 84	132 31	140 16	0 58	-0 56	-1 20
3,113 00	6 42	68 90	3,104 12	51.47	142 29	150 74	0 27	0 00	-2 40
3,207 00	5 81	70 42	3,197 58	54 96	151 68	160 70	0 67	-0.65	1 62
3,302 00	6 66	75 01	3,292 02	57 99	161 53	171 01	1 04	0 89	4 83
3,398 00	6 45	73 23	3,387 39	60.99	172 07	181 96	0 30	-0 22	-1 85
3,493 00	6 02	74 94	3,481 83	63 82	181 99	192 28	0 49	-0 45	1 80
3,586 00	7 06	77 15	3,574 23	66 36	192 27	202 86	1 15	1 12	2 38
3,681 00	6 69	75 15	3,668 54	69 08	203 31	214 23	0 46	-0 39	-2 11
3,776 00	6 49	73 80	3,762 92	71 99	213 81	225 13	0 27	-0 21	-1 42
3,871 00	6 33	72 06	3,857 32	75.10	223 95	235 73	0 26	-0 17	-1 83
3,966 00	6 95	73 64	3,951 68	78 34	234 45	246 71	0 68	0.65	1 66
4,061 00	6 33	73 73	4,046 05	81 42	244 99	257 69	0 65	-0 65	0 09
4,156 00	7 74.	77 68	4,140 33	84 26	256 27	269 32	1 57	1 48	4 16
4,251 00	7 56	76 81	4,234 48	87 05	268 60	281 95	0 23	-0 19	-0 92
4,346 00	7 03	77 33	4,328 71	89 75	280.36	294 01	0 56	-0 56	0 55
4,439 00	6 68	76 10	4,421 05	92 29	291 16	305 10	0 41	-0 38	-1 32
4,503 00	7 06	79.12	4,484 59	93 93	298 64	312 75	0 82	0 59	4 72
4,598 00	6.70	80 24	4,578 91	95 97	309 83	324 09	0 40	-0 38	1 18
4,692 00	7 30	78 65	4,672 20	98 08	321 09	335 51	0 67	0 64	-1 69



Scientific Drilling

Survey Report



Company: COG Operating LLC
Project: Eddy County, NM (NAN27 NME)
Site: Skelly Unit #646
Well: Skelly Unit #646
Wellbore: OH
Design: Actual

Local Co-ordinate Reference: Site Skelly Unit #646
TVD Reference: KB Elev (12') @ 3913.00usft (Basic #35)
MD Reference: KB Elev (12') @ 3913.00usft (Basic #35)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM-Julio

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,787.00	7.12	79.27	4,766.45	100.36	332.80	347.41	0.21	-0.19	0.65
4,882.00	6.81	79.56	4,860.75	102.48	344.12	358.90	0.33	-0.33	0.31
4,977.00	7.72	77.71	4,954.99	104.86	355.89	370.89	0.99	0.96	-1.95
5,075.00	7.30	76.72	5,052.15	107.69	368.39	383.69	0.45	-0.43	-1.01
5,170.00	7.03	76.45	5,146.41	110.44	379.91	395.53	0.29	-0.28	-0.28
5,264.00	6.78	77.16	5,239.72	113.02	390.91	406.83	0.28	-0.27	0.76
5,360.00	7.69	76.55	5,334.96	115.77	402.69	418.91	0.95	0.95	-0.64
5,455.00	7.62	76.69	5,429.11	118.70	415.00	431.56	0.08	-0.07	0.15
5,548.00	7.39	76.63	5,521.32	121.50	426.82	443.71	0.25	-0.25	-0.06
5,643.00	7.30	76.54	5,615.54	124.32	438.63	455.85	0.10	-0.09	-0.09
5,739.00	7.30	76.19	5,710.76	127.20	450.48	468.04	0.05	0.00	-0.36
5,834.00	7.21	74.61	5,805.00	130.22	462.09	480.04	0.23	-0.09	-1.66
5,928.00	7.12	74.87	5,898.26	133.30	473.40	491.76	0.10	-0.10	0.28
6,022.00	6.84	74.18	5,991.57	136.35	484.41	503.18	0.31	-0.30	-0.73
6,118.00	6.81	73.37	6,086.89	139.54	495.37	514.59	0.11	-0.03	-0.84
6,213.00	6.69	73.41	6,181.23	142.73	506.07	525.75	0.13	-0.13	0.04
6,308.00	6.62	73.46	6,275.59	145.87	516.62	536.76	0.07	-0.07	0.05
6,404.00	6.48	71.51	6,370.96	149.16	527.06	547.69	0.27	-0.15	-2.03
6,498.00	6.68	73.64	6,464.34	152.38	537.34	558.45	0.34	0.21	2.27
6,594.00	6.60	74.08	6,559.70	155.47	548.00	569.55	0.10	-0.08	0.46
6,689.00	6.24	74.34	6,654.10	158.36	558.22	580.17	0.38	-0.38	0.27
6,784.00	5.81	72.55	6,748.58	161.20	567.78	590.14	0.49	-0.45	-1.88
Last MWD Survey									
6,923.00	5.81	72.55	6,886.86	165.42	581.20	604.19	0.00	0.00	0.00
Projection to Bit									

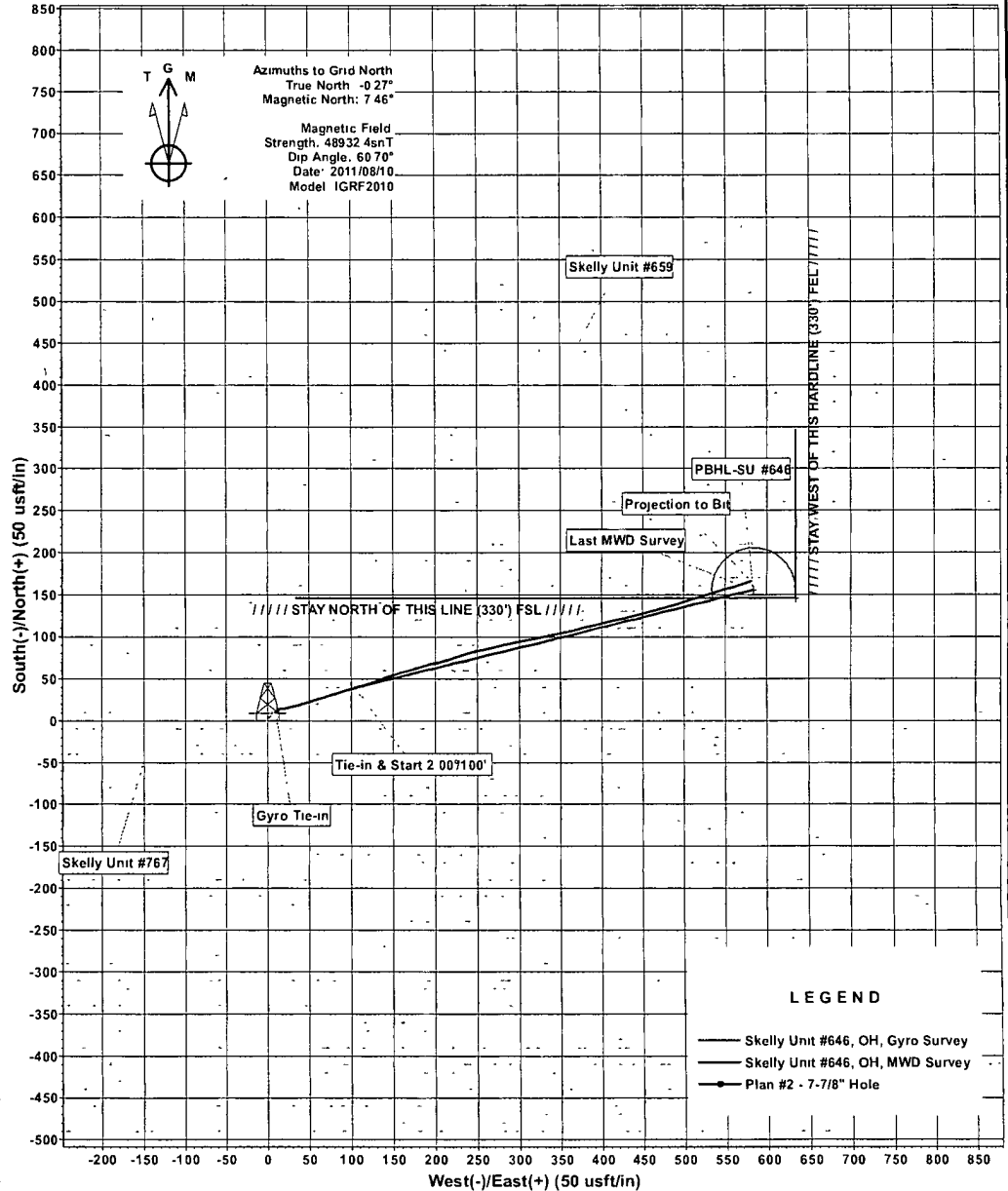
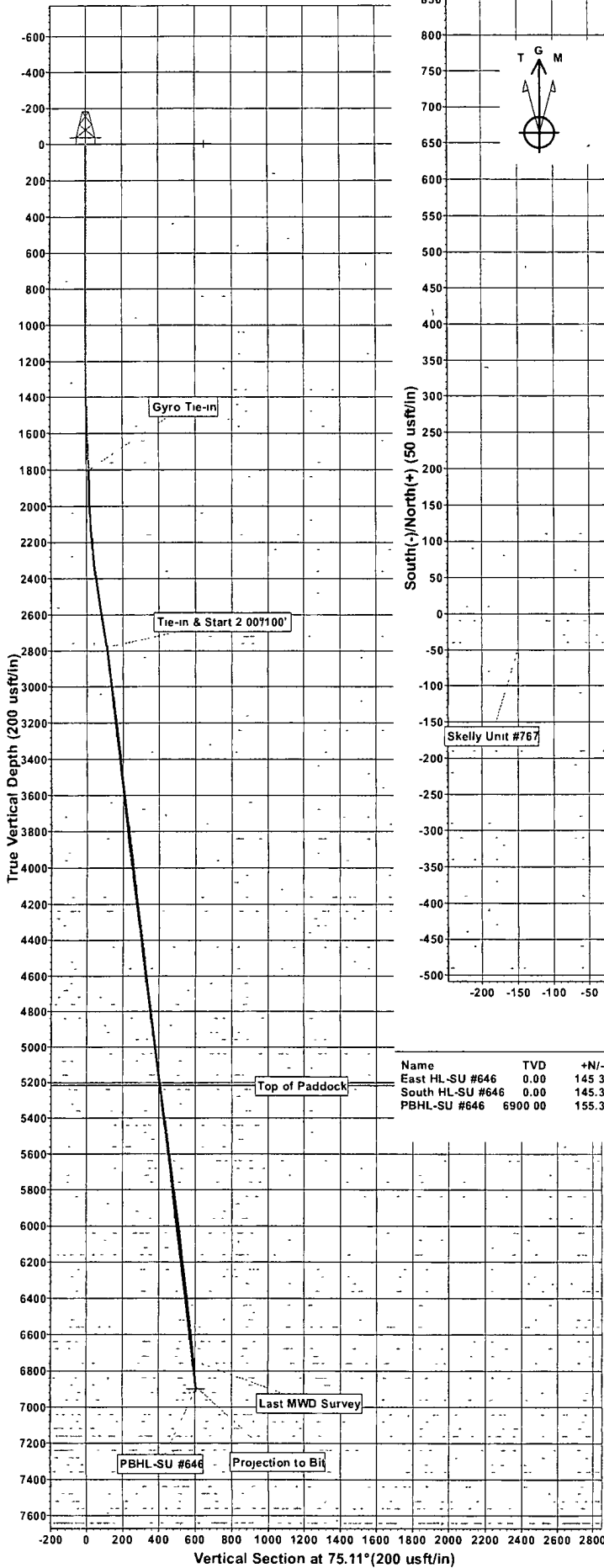
Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,808.00	1,807.79	10.70	9.79	Gyro Tie-in
6,784.00	6,748.58	161.20	567.78	Last MWD Survey
6,923.00	6,886.86	165.42	581.20	Projection to Bit

Checked By _____ Approved By _____ Date _____



Scientific Drilling for COG Operating LLC
Site: Eddy County, NM (NAN27 NME)
Well: Skelly Unit #646
Wellbore: OH
Design: Plan #2 vs Actual - 7-7/8" Hole



WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
East HL-SU #646	0.00	145.30	634.10	665370.90	653918.90	32°49' 41.478 N	103°49' 56.132 W	Rectangle (Sides L2 00 00 W0 00)
South HL-SU #646	0.00	145.30	634.10	665370.90	653918.90	32°49' 41.478 N	103°49' 56.132 W	Rectangle (Sides L 0 00 W600 00)
PBHL-SU #646	6900.00	155.30	584.10	665380.90	653868.90	32°49' 41.579 N	103°49' 56.717 W	Circle (Radius 50.0 0)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	2790.00	8.70	72.00	2763.63	38.90	104.38	0.00	0.00	110.87	
2	2888.75	6.82	76.43	2881.47	42.59	117.18	2.00	164.58	124.19	
3	6935.89	6.82	76.43	6900.00	155.30	584.10	0.00	0.00	604.39	PBHL-SU #646

WELL DETAILS: Skelly Unit #646

+N/-S	+E/-W	Ground Level	3901.00	Latitude	Longitude	Slot
0.00	0.00	665225.60	653284.80	32°49' 40.070 N	103°50' 3.571 W	

PROJECT DETAILS: Eddy County, NM (NAN27 NME) Plan: Plan #2 - 7-7/8" Hole (Skelly Unit #646/OH)

Geodetic System	US State Plane 1927 (Exact solution)	Created By:	Julio Pina	Date	10-Aug-11
Datum	NAD 1927 (NADCON CONUS)	Checked		Date	
Ellipsoid	Clarke 1866	Reviewed		Date	
Zone	New Mexico East 3001	Approved		Date	
System Datum	Mean Sea Level				