

Form 3160-5
(April 2010)

OCD-ARTESIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
COG Operating LLC

3a. Address
550 W. Texas Ave., Suite 1300 Midland, TX 79701

3b. Phone No. (include area code)
432-685-4340

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

SHL: 990 FSL & 860 FWL, Section 15, T17S, R-31E, UL M
BHL: 990 FSL & 330 FWL, Section 15, T17S, R-31E, UL M

5. Lease Serial No.

NMLC-029420A

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
Skelly Unit #995

9. API Well No.
30-015-36473

10. Field and Pool, or Exploratory Area
Fren; Glorieta-Yeso

11. County or Parish, State
Eddy County, NM

12. CHECK 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 TD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ 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 recompleat 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 shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

COG Operating LLC respectfully requests permission to change the TD from 6450' to 7000'.

A revised directional plan is attached for your review.

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

Phyllis A. Edwards

Title Permitting Tech

Signature

Phyllis A. Edwards

Date

06/04/2010

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

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.

Title

Office

APPROVED

/s/ Roger Hall
JUN - 8 2010

Petroleum Engineer

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD 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 to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)



COG Operating LLC

Eddy County, NM (NAN27 NME)

Skelly Unit #995

Skelly Unit #995

OH

Design: Actual

Plan vs. Survey Report

04 June, 2010



Scientific Drilling
Directional Drilling Operations



Scientific Drilling
Plan vs Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Site Skelly Unit #995
Project:	Eddy County, NM (NAN27 NME)	TVD Reference:	RKB Elev (12') @ 3864 40ft (Basic #35)
Site:	Skelly Unit #995	MD Reference:	RKB Elev (12') @ 3864 40ft (Basic #35)
Well:	Skelly Unit #995	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 5000 1 Single User Db

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 #995			
Site Position:		Northing:	665,964 50 ft	Latitude:	32° 49' 47 778 N
From:	Map	Easting:	644,545 10 ft	Longitude:	103° 51' 45 955 W
Position Uncertainty:	0 00 ft	Slot Radius:	0 "	Grid Convergence:	0 26 °

Well	Skelly Unit #995					
Well Position	+N/-S	0 00 ft	Northing:	665,964 50 ft	Latitude:	32° 49' 47 778 N
	+E/-W	0 00 ft	Easting:	644,545 10 ft	Longitude:	103° 51' 45 955 W
Position Uncertainty		0 00 ft	Wellhead Elevation:		Ground Level:	3,852.40 ft

Wellbore		OH			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2010/06/01	7 88	60 74	49,082

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	268 35	

Survey Program:		Date	2010/06/04		
From	To				
(ft)	(ft)	Survey (Wellbore)	Tool Name	Description	
100 00	1,787 00	Gyro Survey (OH)	Keeper	Standard Wireline Keeper ver 1 0 2	
1,848 00	3,495 00	MWD Survey (OH)	MWD	MWD - Standard	

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Measured Depth on Plan (ft)	Distance to Plan (ft)	Toolface to Plan (°)
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
100 00	0 38	295 32	100 00	0 14	-0 30	0 30	100 00	0 00	0 00
200 00	0 41	281 06	200 00	0 35	-0 95	0 94	200 00	0 00	0 00
300 00	0 47	290 36	299 99	0 56	-1 69	1 67	300 00	0 00	0 00
400 00	0 44	292 24	399 99	0 85	-2 43	2 40	400 00	0 00	0 00
500 00	0 42	287 01	499 99	1 10	-3 13	3 10	500 00	0 00	0 00
600 00	0 41	279 56	599 99	1 27	-3 84	3 80	600 00	0 00	0 00
700 00	0 27	281 05	699 98	1 38	-4 42	4 38	700 00	0 00	0 00
800 00	0 44	288.12	799.98	1 54	-5 02	4 97	800 00	0 00	0 00
900 00	0 38	293 70	899 98	1 79	-5 68	5 63	900 00	0 00	0 00



Scientific Drilling
Plan vs Survey Report



Company: COG Operating LLC
Project: Eddy County, NM (NAN27 NME)
Site: Skelly Unit #995
Well: Skelly Unit #995
Wellbore: OH
Design: Actual

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:
Site Skelly Unit #995
RKB Elev (12') @ 3864 40ft (Basic #35)
RKB Elev (12') @ 3864 40ft (Basic #35)
Grd
Minimum Curvature
EDM 5000.1 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Measured Depth on Plan (ft)	Distance to Plan (ft)	Toolface to Plan (°)
1,000.00	0.45	281.54	999.98	2.00	-6.37	6.31	1,000.00	0.00	0.00
1,100.00	0.28	284.74	1,099.97	2.15	-6.99	6.93	1,100.00	0.00	0.00
1,200.00	0.22	30.73	1,199.97	2.37	-7.13	7.06	1,200.00	0.00	0.00
1,300.00	0.37	10.94	1,299.97	2.85	-6.97	6.89	1,300.00	0.00	0.00
1,400.00	0.75	17.88	1,399.97	3.79	-6.71	6.60	1,400.00	0.00	0.00
1,500.00	1.00	25.34	1,499.96	5.21	-6.14	5.98	1,500.00	0.00	0.00
1,600.00	1.11	34.47	1,599.94	6.79	-5.21	5.02	1,600.00	0.00	0.00
1,700.00	1.15	24.57	1,699.92	8.50	-4.25	4.00	1,700.00	0.00	0.00
1,787.00	0.94	33.43	1,786.91	9.89	-3.49	3.21	1,787.00	0.00	0.00
Gyro tie-in									
1,848.00	0.71	30.55	1,847.90	10.64	-3.02	2.72	1,848.00	0.12	11.66
1,911.00	0.59	276.42	1,910.90	11.01	-3.15	2.83	1,910.99	0.97	136.73
1,975.00	1.31	271.04	1,974.89	11.06	-4.21	3.89	1,974.97	2.79	148.69
2,039.00	1.93	274.50	2,038.86	11.16	-6.01	5.69	2,038.98	5.02	150.18
2,102.00	2.29	271.08	2,101.82	11.26	-8.33	8.00	2,102.09	6.46	154.61
2,165.00	2.11	261.86	2,164.77	11.12	-10.74	10.41	2,165.23	6.77	159.88
2,229.00	2.52	262.93	2,228.72	10.78	-13.30	12.98	2,229.35	6.04	148.89
2,292.00	3.71	268.56	2,291.63	10.56	-16.71	16.40	2,292.42	4.98	129.47
2,355.00	3.72	258.30	2,354.49	10.10	-20.75	20.45	2,355.43	4.18	110.50
2,418.00	5.13	255.97	2,417.31	9.00	-25.48	25.21	2,418.35	5.36	76.77
2,481.00	6.31	258.00	2,479.99	7.60	-31.60	31.37	2,481.27	7.54	59.33
2,545.00	7.50	262.16	2,543.53	6.30	-39.18	38.98	2,545.26	8.96	51.69
2,608.00	8.40	262.08	2,605.92	5.10	-47.81	47.65	2,608.25	9.48	53.60
2,672.00	8.33	263.11	2,669.24	3.90	-57.05	56.91	2,672.25	9.69	56.24
2,736.00	8.67	263.88	2,732.54	2.83	-66.44	66.33	2,736.25	9.73	59.30
2,799.00	8.87	267.37	2,794.80	2.10	-76.02	75.93	2,799.24	9.37	60.14
2,863.00	8.80	270.13	2,858.04	1.89	-85.84	85.75	2,863.23	8.54	61.04
2,927.00	8.40	267.86	2,921.32	1.72	-95.41	95.32	2,927.23	7.83	65.78
3,022.00	9.30	272.08	3,015.19	1.74	-110.01	109.92	3,022.21	6.41	68.82
3,116.00	8.70	271.39	3,108.03	2.19	-124.71	124.60	3,116.19	4.70	82.56
3,211.00	8.45	272.32	3,201.97	2.65	-138.87	138.74	3,211.17	3.31	95.00
3,306.00	8.09	270.11	3,295.98	2.94	-152.53	152.38	3,306.16	2.21	112.03
3,400.00	7.89	269.46	3,389.07	2.89	-165.59	165.44	3,400.16	1.41	124.60
3,495.00	8.91	269.88	3,483.05	2.82	-179.47	179.32	3,495.15	1.45	168.14
MWD Survey									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
1,787.00	1,786.91	9.89	-3.49	Gyro tie-in
3,495.00	3,483.05	2.82	-179.47	MWD Survey



Scientific Drilling
Plan vs. Survey Report



Company: COG Operating LLC
Project: Eddy County, NM (NAN27 NME)
Site: Skelly Unit #995
Well: Skelly Unit #995
Wellbore: OH
Design: Actual

Local Co-ordinate Reference: Site Skelly Unit #995
TVD Reference: RKB Elev (12') @ 3864 40ft (Basic #35)
MD Reference: RKB Elev (12') @ 3864 40ft (Basic #35)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Checked By: _____ Approved By: _____ Date: _____

skelly Unit #995 - Survey Report.txt

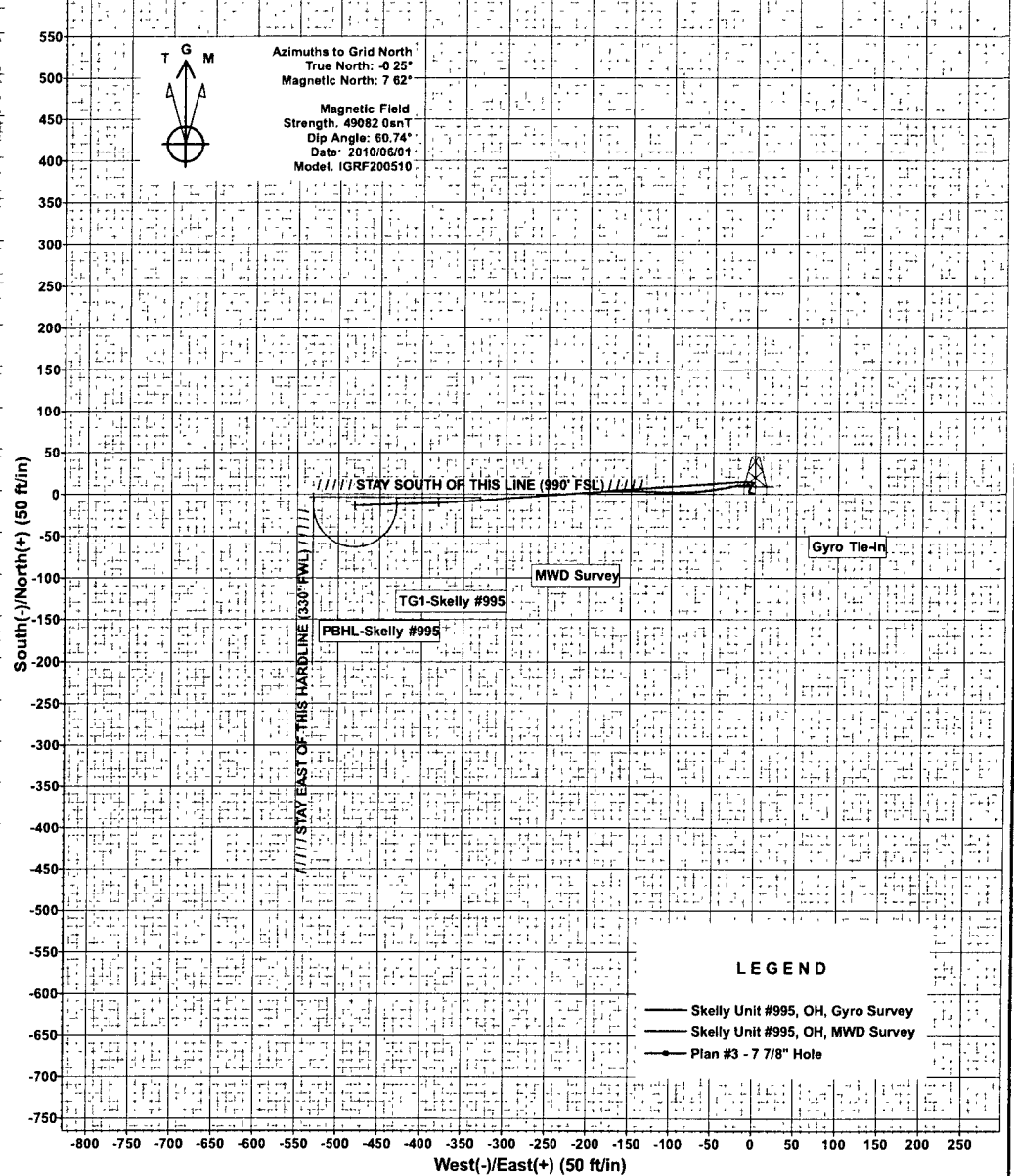
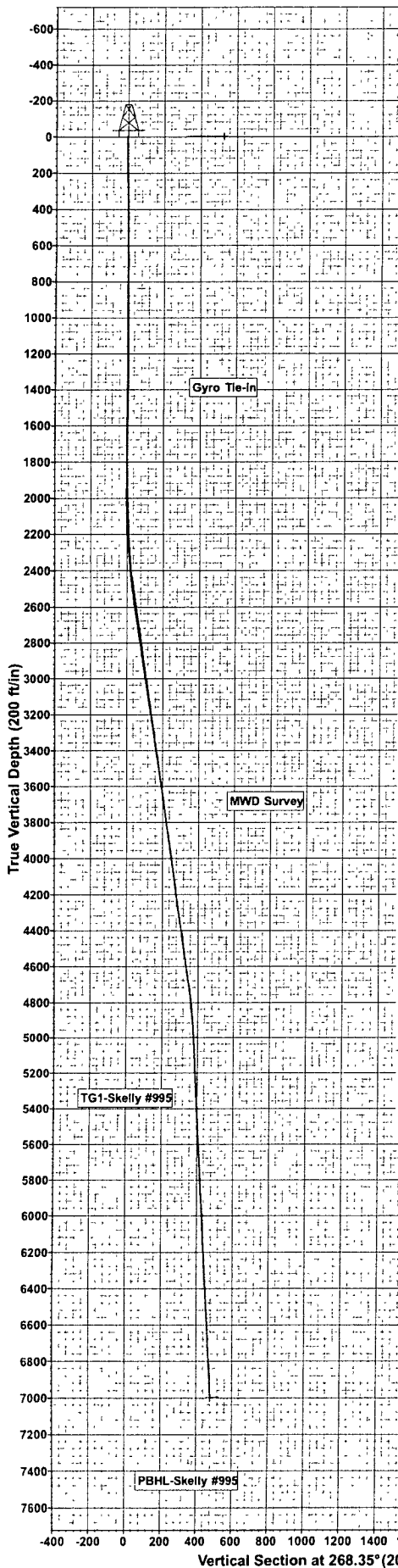
COG Operating LLC
Skelly Unit #995 - Actual

Eddy County, NM (NAN27 NME)
Skelly Unit #995
Your Ref:

Measured UTM Coordinates			Sub-Sea	Vertical	Local Coordinates	
Depth	Incl.	Azim.	Vertical	Dogleg	Northings	Eastings
Northings	Eastings		Section	Depth	(ft)	(ft)
(ft)	(ft)		(ft)	Rate	(ft)	(ft)
(ft)	(ft)		(ft)	(°/100ft)	(ft)	(ft)
0.00	0.00	0.00	-3864.40	0.00	0.00 N	0.00 E
665964.50 N	644545.10 E		0.00	0.00		
100.00	0.38	295.32	-3764.40	100.00	0.14 N	0.30 W
665964.64 N	644544.80 E		0.30	0.38	Keeper (1)	
200.00	0.41	281.06	-3664.40	200.00	0.35 N	0.95 W
665964.85 N	644544.15 E		0.94	0.10		
300.00	0.47	290.36	-3564.41	299.99	0.56 N	1.69 W
665965.06 N	644543.41 E		1.67	0.09		
400.00	0.44	292.24	-3464.41	399.99	0.85 N	2.43 W
665965.35 N	644542.67 E		2.40	0.03		
500.00	0.42	287.01	-3364.41	499.99	1.10 N	3.13 W
665965.60 N	644541.97 E		3.10	0.04		
600.00	0.41	279.56	-3264.41	599.99	1.27 N	3.84 W
665965.77 N	644541.26 E		3.80	0.05		
700.00	0.27	281.05	-3164.42	699.98	1.38 N	4.42 W
665965.88 N	644540.68 E		4.38	0.14		
800.00	0.44	288.12	-3064.42	799.98	1.54 N	5.02 W
665966.04 N	644540.08 E		4.97	0.18		
900.00	0.38	293.70	-2964.42	899.98	1.79 N	5.68 W
665966.29 N	644539.42 E		5.63	0.07		
1000.00	0.45	281.54	-2864.42	999.98	2.00 N	6.37 W
665966.50 N	644538.73 E		6.31	0.11		
1100.00	0.28	284.74	-2764.43	1099.97	2.15 N	6.99 W
665966.65 N	644538.11 E		6.93	0.17		
1200.00	0.22	30.73	-2664.43	1199.97	2.37 N	7.13 W
665966.87 N	644537.97 E		7.06	0.40		
1300.00	0.37	10.94	-2564.43	1299.97	2.85 N	6.97 W
665967.35 N	644538.13 E		6.89	0.18		
1400.00	0.75	17.88	-2464.43	1399.97	3.79 N	6.71 W
665968.29 N	644538.39 E		6.60	0.39		
1500.00	1.00	25.34	-2364.44	1499.96	5.21 N	6.14 W
665969.71 N	644538.96 E		5.98	0.27		
1600.00	1.11	34.47	-2264.46	1599.94	6.79 N	5.21 W
665971.29 N	644539.89 E		5.02	0.20		
1700.00	1.15	24.57	-2164.48	1699.92	8.50 N	4.25 W
665973.00 N	644540.85 E		4.00	0.20		
1787.00	0.94	33.43	-2077.49	1786.91	9.89 N	3.49 W
665974.39 N	644541.61 E		3.21	0.30	Gyro tie-in	
1848.00	0.71	30.55	-2016.50	1847.90	10.64 N	3.02 W
665975.14 N	644542.08 E		2.72	0.38	MWD (2)	
1911.00	0.59	276.42	-1953.50	1910.90	11.01 N	3.15 W
665975.51 N	644541.95 E		2.83	1.73		
1975.00	1.31	271.04	-1889.51	1974.89	11.06 N	4.21 W
665975.56 N	644540.89 E		3.89	1.13		
2039.00	1.93	274.50	-1825.54	2038.86	11.16 N	6.01 W
665975.66 N	644539.09 E		5.69	0.98		
2102.00	2.29	271.08	-1762.58	2101.82	11.26 N	8.33 W



Scientific Drilling for COG Operating LLC
Site: Eddy County, NM (NAN27 NME)
Well: Skelly Unit #995
Wellbore: OH
Design: Plan #3 vs Actual - 7 7/8" Hole



WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
South HL-Skelly #995	0.00	-3.80	-529.90	665960.70	644015.20	32°49' 47.764 N	103°51' 52.165 W	Rectangle (Side s: L0.00 W200.00)
West HL-Skelly #995	0.00	-3.80	-529.90	665960.70	644015.20	32°49' 47.764 N	103°51' 52.165 W	Rectangle (Sides: L200.00 W0.00)
TG1-Skelly #995	5000.00	-10.93	-379.94	665953.57	644165.16	32°49' 47.687 N	103°51' 50.408 W	Point
PBHL-Skelly #995	7000.00	-13.80	-479.90	665950.70	644065.20	32°49' 47.663 N	103°51' 51.580 W	Circle (Radius: 50.00)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Diag	TFace	Vsect	Target
1	1787.00	0.94	33.43	1786.91	9.89	-3.49	0.00	0.00	3.21	
2	2000.00	0.94	33.43	1999.88	12.81	-1.57	0.00	0.00	1.20	
3	2432.07	8.04	265.94	2430.61	13.63	-29.80	2.00	-132.40	29.39	
4	4766.70	8.04	265.94	4742.31	-9.46	-355.41	0.00	0.00	355.53	
5	5025.65	2.86	268.35	5000.00	-10.93	-379.94	2.00	178.67	380.10	TG1-Skelly #995
6	7028.15	2.86	268.35	7000.00	-13.80	-479.90	0.00	0.00	480.10	PBHL-Skelly #995

WELL DETAILS: Skelly Unit #995

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	665964.50	644545.10	32°49' 47.778 N	103°51' 45.955 W

PROJECT DETAILS: Eddy County, NM (NAN27 NME)

Plan: Plan #3 - 7 7/8" Hole (Skelly Unit #995/OH)

Geodetic System: US State Plane 1927 (Exact solution)	Created By: Julio Pina	Date: 01-Jun-10
Datum: NAD 1927 (NADCON CONUS)	Checked: _____	Date: _____
Ellipsoid: Clarke 1866	Reviewed: _____	Date: _____
Zone: New Mexico East 3001	Approved: _____	Date: _____
System Datum: Mean Sea Level		

skelly Unit #995 - Survey Report.txt

665975.76 N	644536.77 E	8.00	0.61		
2165.00	2.11	261.86	-1699.63	2164.77	11.12 N 10.74 W
665975.62 N	644534.36 E	10.41	0.63		
2229.00	2.52	262.93	-1635.68	2228.72	10.78 N 13.30 W
665975.28 N	644531.80 E	12.98	0.64		
2292.00	3.71	268.56	-1572.77	2291.63	10.56 N 16.71 W
665975.06 N	644528.39 E	16.40	1.95		
2355.00	3.72	258.30	-1509.91	2354.49	10.10 N 20.75 W
665974.60 N	644524.35 E	20.45	1.05		
2418.00	5.13	255.97	-1447.09	2417.31	9.00 N 25.48 W
665973.50 N	644519.62 E	25.21	2.26		
2481.00	6.31	258.00	-1384.41	2479.99	7.60 N 31.60 W
665972.10 N	644513.50 E	31.37	1.90		
2545.00	7.50	262.16	-1320.87	2543.53	6.30 N 39.18 W
665970.80 N	644505.92 E	38.98	2.02		
2608.00	8.40	262.08	-1258.48	2605.92	5.10 N 47.81 W
665969.60 N	644497.29 E	47.65	1.43		
2672.00	8.33	263.11	-1195.16	2669.24	3.90 N 57.05 W
665968.40 N	644488.05 E	56.91	0.26		
2736.00	8.67	263.88	-1131.86	2732.54	2.83 N 66.44 W
665967.33 N	644478.66 E	66.33	0.56		
2799.00	8.87	267.37	-1069.60	2794.80	2.10 N 76.02 W
665966.60 N	644469.08 E	75.93	0.90		
2863.00	8.80	270.13	-1006.36	2858.04	1.89 N 85.84 W
665966.39 N	644459.26 E	85.75	0.67		
2927.00	8.40	267.86	-943.08	2921.32	1.72 N 95.41 W
665966.22 N	644449.69 E	95.32	0.82		
3022.00	9.30	272.08	-849.21	3015.19	1.74 N 110.01 W
665966.24 N	644435.09 E	109.92	1.17		
3116.00	8.70	271.39	-756.37	3108.03	2.19 N 124.71 W
665966.69 N	644420.39 E	124.60	0.65		
3211.00	8.45	272.32	-662.43	3201.97	2.65 N 138.87 W
665967.15 N	644406.23 E	138.74	0.30		
3306.00	8.09	270.11	-568.42	3295.98	2.94 N 152.53 W
665967.44 N	644392.57 E	152.38	0.51		
3400.00	7.89	269.46	-475.33	3389.07	2.89 N 165.59 W
665967.39 N	644379.51 E	165.44	0.23		
3495.00	8.91	269.88	-381.35	3483.05	2.82 N 179.47 W
665967.32 N	644365.63 E	179.32	1.08		MWD Survey

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to RKB Elev (12'). Northings and Eastings are relative to Site.

The Dogleg Severity is in Degrees per 100 feet.
Vertical Section is from Slot and calculated along an Azimuth of 268.350° (Grid).

Coordinate System is NAD 1927 (NADCON CONUS) US State Plane 1927 (Exact solution), New Mexico East 3001.
Grid Convergence at Surface is 0.255°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 3495.00ft., the Bottom Hole Displacement is 179.49ft., in the Direction of 268.350° (Grid).