

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED
OM B 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

NOV 12 2008

2. Name of Operator
COG Operating LLC3a Address
550 W. Texas Ave., Suite 1300 Midland, TX 797013b. Phone No (include area code)
432-685-4372

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

1500 FSL, 1310 FWL,
Sec 15, T17S, R31E, Unit LUNORTHODOX
LOCATION

orthodox below 3200'

5 Lease Serial No.

LC-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 #966

9. API Well No.

30-015-35969

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 Drill directionally
	☐ 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.)

This well was originally permitted at:

1500 FSL, 1310 FWL,
Sec 15, T17S, R31E, Unit L

COG Operating LLC respectfully requests permission to drill this well directionally at:

SHL:
1500 FSL, 1310 FWL,
Sec 15, T17S, R31E, Unit LBHL:
1650 FSL, 990 FWL,
Sec 15, T17S, R31E, Unit L

A revised C-102 and directional plan are attached for your review.

ACCEPTED FOR RECORD

NOV 13 2008

Gerry Guye, Deputy Field Inspector
NMOCD-District II ARTESIA

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

Phyllis A. Edwards

Title Regulatory Analyst

Signature

Date

10/28/2008

APPROVED

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

Date

NOV 11 2008

WESLEY W. INGRAM
PETROLEUM ENGINEER

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)

State of New Mexico

DISTRICT I

Energy, Minerals and Natural Resources Department

1825 N. FRENCH DR., HOBBS, NM 88240

Form C-102

DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

OIL CONSERVATION DIVISION

Revised October 12, 2005
Submit to Appropriate District Office1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505State Lease - 4 Copies
Fee Lease - 3 Copies

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 30-015-35969	Pool Code 26770	Pool Name FREN; GLORIFETA YESO
Property Code 305607	Property Name SKELLY UNIT	Well Number 966
OGRID No. 229137	Operator Name COG OPERATING, INC.	Elevation 3858'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	15	17-S	31-E		1500	SOUTH	1310	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
L	15	17-S	31-E		1650	SOUTH	990	WEST	EDDY

Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.
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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

BOTTOM HOLE LOCATION Y=666628.4 N X=644672.0 E GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=666481.6 N X=644992.7 E LAT.=32.831354° N LONG.=103.861300° W GRID AZ = 294°35'37" HORIZ DIST = 352.8' 1310' 990' 1650' 1500' DETAIL 3862.5' 3866.5' 3854.9' 3862.1'	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. <i>Phyllis A. Edwards</i> 10-28-08 Signature Date Phyllis A. Edwards Printed Name Regulatory Analyst
	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. JULY 27, 2007 Date Surveyed AR Signature & Seal of Professional Surveyor <i>Ronald J. Eidson</i> 10/17/08 08.13.1837
	Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239

COG Operating

Eddy County, NM (NAN27 NME)

Skelly Unit #966

Skelly Unit #966

OH

Plan: Plan #2 - 7-7/8" Hole

Standard Planning Report

10 November, 2008



Scientific Drilling Planning Report



Database: EDM 2003 16 Single User Db
Company: COG Operating
Project: Eddy County, NM (NAN27 NME)
Site: Skelly Unit #966
Well: Skelly Unit #966
Wellbore: OH
Design: Plan #2 - 7-7/8" Hole

Local Co-ordinate Reference: Well Skelly Unit #966
TVD Reference: Ground Elev @ 3858.00ft (Rig ?)
MD Reference: Ground Elev @ 3858.00ft (Rig ?)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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 #966				
Site Position:		Northing:	666,481.600 ft	Latitude:	32° 49' 52.875 N
From:	Map	Easting:	644,992.700 ft	Longitude:	103° 51' 40.682 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0 26 "

Well:	Skelly Unit #966					
Well Position	+N/-S	0.00 ft	Northing:	666,481.600 ft	Latitude:	32° 49' 52.875 N
	+E/-W	0.00 ft	Easting:	644,992.700 ft	Longitude:	103° 51' 40.682 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	3,858.00 ft

Wellbore:	OH				
Magnetics:	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF200510	11/10/2008	8.07	60.78	49,232

Design:	Plan #2 - 7-7/8" Hole				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	294.60	

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(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	
1,950.00	0.00	0.00	1,950.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,296.33	6.93	294.60	2,295.49	8.70	-19.01	2.00	2.00	0.00	294.60	
4,874.17	6.93	294.60	4,854.51	138.10	-301.69	0.00	0.00	0.00	0.00	
5,220.50	0.00	0.00	5,200.00	146.80	-320.70	2.00	-2.00	0.00	180.00	PP-Skelly #966
6,520.50	0.00	0.00	6,500.00	146.80	-320.70	0.00	0.00	0.00	0.00	PBHL-Skelly #966

Scientific Drilling Planning Report



Database: EDM 2003.16 Single User Db
Company: COG Operating
Project: Eddy County, NM (NAN27 NME)
Site: Skelly Unit #966
Well: Skelly Unit #966
Wellbore: OH
Design: Plan #2 - 7-7/8" Hole

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well Skelly Unit #966
Ground Elev @ 3858.00ft (Rig ?)
Ground Elev @ 3858.00ft (Rig ?)
Gnd
Minimum Curvature

Planned 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	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,850.00	0.00	0.00	1,850.00	0.00	0.00	0.00	0.00	0.00	0.00
8 5/8" Intermediate Casing									
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,950.00	0.00	0.00	1,950.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 2.00°/100'									
2,000.00	1.00	294.60	2,000.00	0.18	-0.40	0.44	2.00	2.00	0.00
2,100.00	3.00	294.60	2,099.93	1.63	-3.57	3.93	2.00	2.00	0.00
2,200.00	5.00	294.60	2,199.68	4.54	-9.91	10.90	2.00	2.00	0.00
2,296.33	6.93	294.60	2,295.49	8.70	-19.01	20.91	2.00	2.00	0.00
EOC hold 6.93°									
2,300.00	6.93	294.60	2,299.13	8.89	-19.41	21.35	0.00	0.00	0.00
2,400.00	6.93	294.60	2,398.40	13.91	-30.38	33.41	0.00	0.00	0.00
2,500.00	6.93	294.60	2,497.67	18.93	-41.35	45.47	0.00	0.00	0.00
2,600.00	6.93	294.60	2,596.94	23.95	-52.31	57.53	0.00	0.00	0.00
2,700.00	6.93	294.60	2,696.21	28.98	-63.28	69.59	0.00	0.00	0.00
2,800.00	6.93	294.60	2,795.48	33.98	-74.24	81.65	0.00	0.00	0.00
2,900.00	6.93	294.60	2,894.75	39.00	-85.21	93.71	0.00	0.00	0.00
3,000.00	6.93	294.60	2,994.02	44.02	-96.17	105.77	0.00	0.00	0.00
3,100.00	6.93	294.60	3,093.29	49.04	-107.14	117.83	0.00	0.00	0.00
3,200.00	6.93	294.60	3,192.56	54.06	-118.10	129.89	0.00	0.00	0.00
3,300.00	6.93	294.60	3,291.83	59.08	-129.07	141.95	0.00	0.00	0.00
3,400.00	6.93	294.60	3,391.10	64.10	-140.04	154.01	0.00	0.00	0.00
3,500.00	6.93	294.60	3,490.37	69.12	-151.00	166.07	0.00	0.00	0.00
3,600.00	6.93	294.60	3,589.64	74.14	-161.97	178.13	0.00	0.00	0.00
3,700.00	6.93	294.60	3,688.91	79.16	-172.93	190.19	0.00	0.00	0.00
3,800.00	6.93	294.60	3,788.18	84.18	-183.90	202.25	0.00	0.00	0.00
3,900.00	6.93	294.60	3,887.45	89.20	-194.86	214.31	0.00	0.00	0.00
4,000.00	6.93	294.60	3,986.72	94.22	-205.83	226.37	0.00	0.00	0.00
4,100.00	6.93	294.60	4,085.99	99.24	-216.80	238.43	0.00	0.00	0.00
4,200.00	6.93	294.60	4,185.26	104.26	-227.76	250.49	0.00	0.00	0.00
4,300.00	6.93	294.60	4,284.53	109.28	-238.73	262.55	0.00	0.00	0.00
4,400.00	6.93	294.60	4,383.80	114.30	-249.69	274.61	0.00	0.00	0.00
4,500.00	6.93	294.60	4,483.07	119.32	-260.66	286.67	0.00	0.00	0.00
4,600.00	6.93	294.60	4,582.34	124.34	-271.62	298.73	0.00	0.00	0.00

Scientific Drilling Planning Report



Database: EDM 2003.16 Single User Db
Company: COG Operating
Project: Eddy County, NM (NAN27 NME)
Site: Skelly Unit #966
Well: Skelly Unit #966
Wellbore: OH
Design: Plan #2 - 7-7/8" Hole

Local Co-ordinate Reference: Well Skelly Unit #966
TVD Reference: Ground Elev @ 3858.00ft (Rig ?)
MWD Reference: Ground Elev @ 3858.00ft (Rig ?)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Bulld Rate (°/100ft)	Turn Rate (°/100ft)
4,700.00	6.93	294.60	4,681.61	129.35	-282.59	310.79	0.00	0.00	0.00
4,800.00	6.93	294.60	4,780.88	134.37	-293.56	322.85	0.00	0.00	0.00
4,874.17	6.93	294.60	4,854.51	138.10	-301.69	331.79	0.00	0.00	0.00
Start Drop 2.00°/100'									
4,900.00	6.41	294.60	4,880.17	139.35	-304.42	334.79	2.00	-2.00	0.00
5,000.00	4.41	294.60	4,979.72	143.27	-312.99	344.22	2.00	-2.00	0.00
5,100.00	2.41	294.60	5,079.53	145.75	-318.40	350.17	2.00	-2.00	0.00
5,200.00	0.41	294.60	5,179.50	146.77	-320.63	352.63	2.00	-2.00	0.00
5,220.50	0.00	0.00	5,200.00	146.80	-320.70	352.70	2.00	-2.00	0.00
EOC hold 0.00° - PP-Skelly #966									
5,300.00	0.00	0.00	5,279.50	146.80	-320.70	352.70	0.00	0.00	0.00
5,400.00	0.00	0.00	5,379.50	146.80	-320.70	352.70	0.00	0.00	0.00
5,500.00	0.00	0.00	5,479.50	146.80	-320.70	352.70	0.00	0.00	0.00
5,600.00	0.00	0.00	5,579.50	146.80	-320.70	352.70	0.00	0.00	0.00
5,700.00	0.00	0.00	5,679.50	146.80	-320.70	352.70	0.00	0.00	0.00
5,800.00	0.00	0.00	5,779.50	146.80	-320.70	352.70	0.00	0.00	0.00
5,900.00	0.00	0.00	5,879.50	146.80	-320.70	352.70	0.00	0.00	0.00
6,000.00	0.00	0.00	5,979.50	146.80	-320.70	352.70	0.00	0.00	0.00
6,100.00	0.00	0.00	6,079.50	146.80	-320.70	352.70	0.00	0.00	0.00
6,200.00	0.00	0.00	6,179.50	146.80	-320.70	352.70	0.00	0.00	0.00
6,300.00	0.00	0.00	6,279.50	146.80	-320.70	352.70	0.00	0.00	0.00
6,400.00	0.00	0.00	6,379.50	146.80	-320.70	352.70	0.00	0.00	0.00
6,500.00	0.00	0.00	6,479.50	146.80	-320.70	352.70	0.00	0.00	0.00
6,520.50	0.00	0.00	6,500.00	146.80	-320.70	352.70	0.00	0.00	0.00
PBHL-Skelly #966									

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL-Skelly #966 - plan hits target - Point	0.00	0.00	6,500.00	146.80	-320.70	666,628.400	644,672.000	32° 49' 54.342 N	103° 51' 44.433 W
PP-Skelly #966 - plan hits target - Point	0.00	0.00	5,200.00	146.80	-320.70	666,628.400	644,672.000	32° 49' 54.342 N	103° 51' 44.433 W

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
1,850.00	1,850.00	8 5/8" Intermediate Casing	8-5/8	10-5/8

Scientific Drilling Planning Report



Database: EDM 2003 16 Single User Db
Company: COG Operating
Project: Eddy County, NM (NAN27 NME)
Site: Skelly Unit #966
Well: Skelly Unit #966
Wellbore: OH
Design: Plan #2 - 7-7/8" Hole

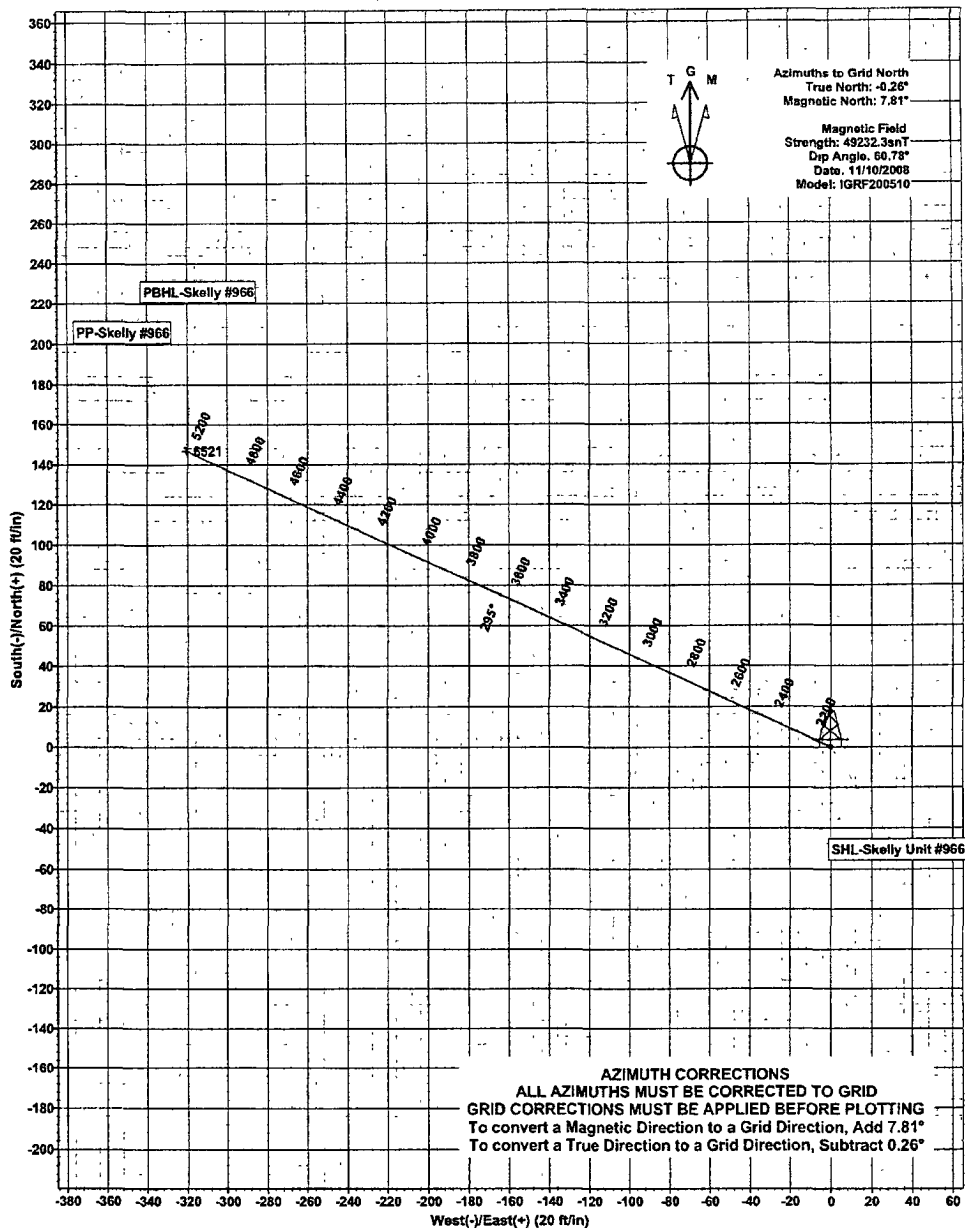
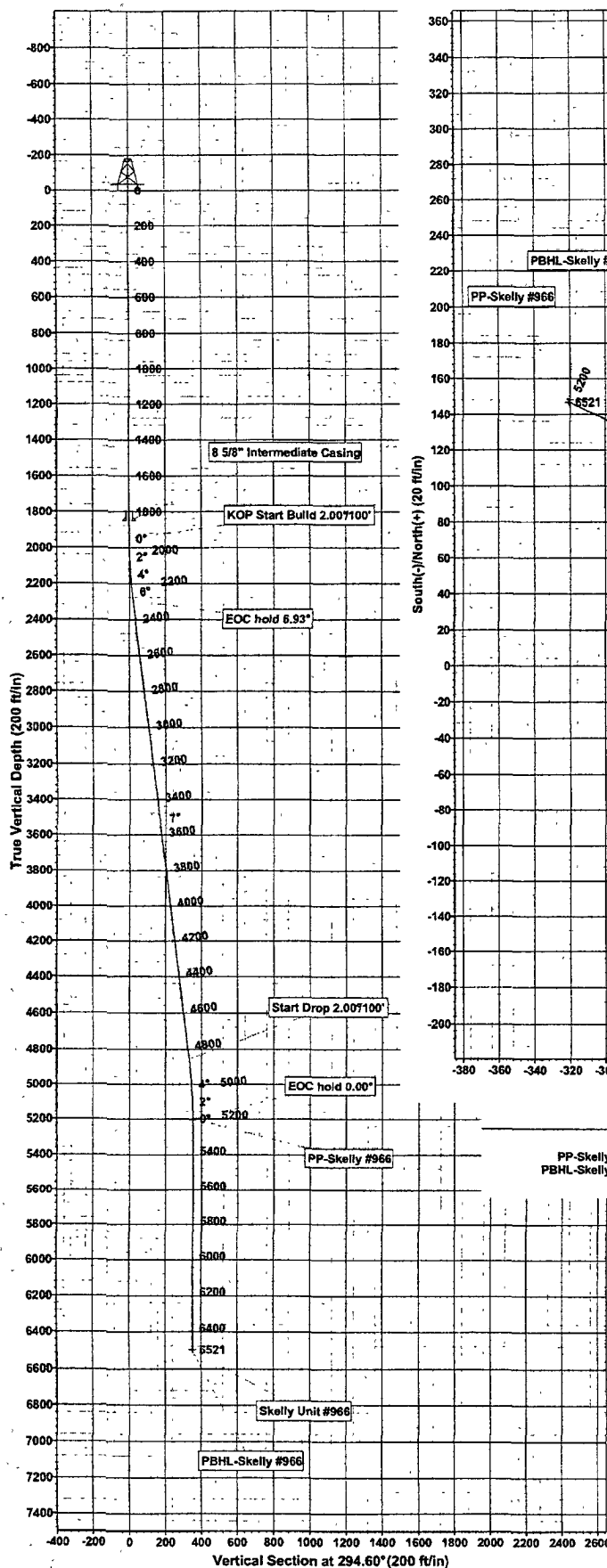
Local Co-ordinate Reference: Well Skelly Unit #966
TVD Reference: Ground Elev @ 3858.00ft (Rig ?)
BD Reference: Ground Elev @ 3858.00ft (Rig ?)
North Reference: Gnd
Survey Calculation Method: Minimum Curvature

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N-S (ft)	+E-W (ft)	
1,950.00	1,950.00	0.00	0.00	KOP Start Build 2.00°/100'
2,296.33	2,295.49	8.70	-19.01	EOC hold 6.93°
4,874.17	4,854.51	138.10	-301.69	Start Drop 2.00°/100'
5,220.50	5,200.00	146.80	-320.70	EOC hold 0.00°

COG Operating

Scientific Drilling for COG Operating
Site: Eddy County, NM (NAN27 NME)
Well: Skelly Unit #966
Wellbore: OH
Design: Plan #2 - 7-7/8" Hole



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 7.81°
To convert a True Direction to a Grid Direction, Subtract 0.26°

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PP-Skelly #966	5200.00	146.80	-320.70	666628.400	644672.000	32°49' 54.342 N	103°51' 44.433 W	Point
PBHL-Skelly #966	6500.00	146.80	-320.70	666628.400	644672.000	32°49' 54.342 N	103°51' 44.433 W	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1950.00	0.00	0.00	1950.00	0.00	0.00	0.00	0.00	0.00	
3	2296.33	6.93	294.60	2295.49	0.00	-19.01	2.00	294.60	20.91	
4	4874.17	6.93	294.60	4854.51	138.10	-301.69	0.00	0.00	331.79	
5	5220.50	0.00	0.00	5200.00	146.80	-320.70	2.00	180.00	352.70	PP-Skelly #966
6	6520.50	0.00	0.00	6500.00	146.80	-320.70	0.00	0.00	352.70	PBHL-Skelly #966

WELL DETAILS: Skelly Unit #966

+N/-S	+E/-W	Northing	Ground Level:	3858.00	Latitude	Longitude	Slot
0.00	0.00	666481.600	Easting	644992.700	32°49' 52.875 N	103°51' 40.682 W	

PROJECT DETAILS: Eddy County, NM (NAN27 NME)

Plan: Plan #2 - 7-7/8" Hole (Skelly Unit #966/OH)

Geodetic System: US State Plane 1927 (Exact solution)	Created By: Julio Pina	Date: 10-Nov-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		