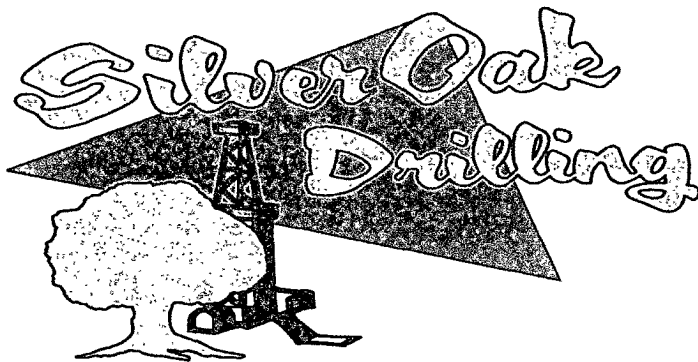




PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288

December 19, 2008

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

APL # 30-015-36588

RE: Skelly Unit #994
2150' FNL & 330' FWL
Sec, 15, T17S, R31E
Eddy, New Mexico

Dear Sir,

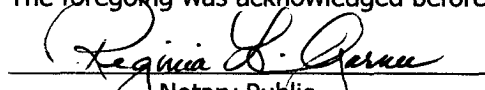
The attached is the Deviation Survey for the above captioned well.

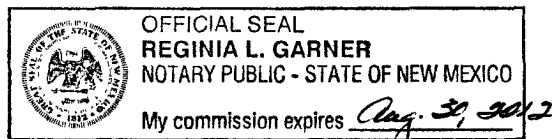
Very truly yours,


Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 17th day of December, 2008.


Regina L. Garner
Notary Public



Date	Depth	Dev	Dir	TVD
12/03/2008	204.00	0.25	0.00	0.00
12/04/2008	428.00	0.50	0.00	0.00
12/05/2008	490.00	1.25	0.00	530.00
12/05/2008	733.00	0.50	0.00	773.00
12/05/2008	1230.00	0.25	0.00	0.00
12/05/2008	1609.00	0.75	0.00	0.00
12/07/2008	1864.00	0.93	79.08	1863.00
12/07/2008	1959.00	2.38	26.54	1958.75
12/07/2008	2052.00	4.58	14.37	2051.57
12/07/2008	2147.00	5.59	6.03	2146.20
12/07/2008	2243.00	6.58	352.70	2239.67
12/07/2008	2432.00	4.55	354.90	2427.77
12/08/2008	2557.00	5.33	2.50	2554.30
12/08/2008	2682.00	6.28	3.30	2678.66
12/08/2008	2934.00	5.69	6.01	2424.56
12/08/2008	3062.00	7.12	13.58	3054.77
12/08/2008	3218.00	6.15	14.37	3211.71
12/08/2008	3378.00	7.84	1.06	3368.55
12/08/2008	3565.00	7.23	358.10	3555.91
12/09/2008	3758.00	6.45	19.43	3745.58
12/09/2008	3945.00	6.79	0.56	3933.36
12/09/2008	4134.00	6.50	357.40	4121.10
12/09/2008	4326.00	6.38	353.09	4309.90
12/09/2008	4513.00	5.35	11.03	4497.92
12/09/2008	4701.00	7.44	7.75	4682.75
12/10/2008	4882.00	7.18	9.08	4870.20
12/10/2008	5078.00	6.18	7.58	5059.00
12/10/2008	5456.00	8.16	360.00	5434.68
12/10/2008	5614.00	8.20	374.60	5591.00
12/10/2008	5269.00	5.67	1.73	5249.09
12/10/2008	5804.00	5.78	351.80	5777.68
12/11/2008	5998.00	5.70	352.00	5972.70
12/12/2008	6188.00	5.36	353.00	6127.92
12/12/2008	6407.00	5.45	0.11	6348.00
12/12/2008	6565.00	4.83	1.07	6537.22
12/12/2008	6640.00	6.02	1.09	6611.10
# EOF				

COG Operating

Eddy County, NM (NAN27 NME)

Skelly Unit #994

Skelly Unit #994

OH

Design: Actual

Standard Survey Report

13 December, 2008



Scientific Drilling Survey Report



Company:	COG Operating	Local Co-ordinate Reference:	Well Skelly Unit #994
Project:	Eddy County, NM (NAN27 NME)	TVD Reference:	Ground Elev @ 3869 00ft (Rig ?)
Site:	Skelly Unit #994	MD Reference:	Ground Elev @ 3869 00ft (Rig ?)
Well:	Skelly Unit #994	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 2003 16 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 #994			
Site Position:		Northing:	668,099 400 ft	Latitude:	32° 50' 8 927 N
From:	Map	Easting:	644,004 400 ft	Longitude:	103° 51' 52 181 W
Position Uncertainty:	0 00 ft	Slot Radius:	"	Grid Convergence:	0 25 °

Well	Skelly Unit #994					
Well Position	+N/-S	0 00 ft	Northing:	668,099 400 ft	Latitude:	32° 50' 8 927 N
	+E/-W	0 00 ft	Easting:	644,004 400 ft	Longitude:	103° 51' 52 181 W
Position Uncertainty		0 00 ft	Wellhead Elevation:	ft	Ground Level:	3,869 00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/13/2008	8 06	60 78	49,226

Design	Actual			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0 00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0 00	0 00	0 00	0 80

Survey Program	Date	12/13/2008			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100 00	1,740 00	GYRO (OH)	Keeper	Standard Wireline Keeper ver 1 0 2	
1,864 00	6,690 00	MWD (OH)	MWD	MWD - Standard	

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 36	297 82	100 00	0 15	-0 28	0 14	0 36	0 36	0 00	
200 00	0 30	284 24	200 00	0 36	-0 81	0 35	0 10	-0 06	-13 58	
300 00	1 02	253 90	299 99	0 18	-1 92	0 15	0 78	0 72	-30 34	
400 00	1 26	255 69	399 97	-0 34	-3 84	-0 40	0 24	0 24	1 79	
500 00	1 12	255 55	499 95	-0 86	-5 85	-0 94	0 14	-0 14	-0 14	
600 00	1 14	258 37	599 93	-1 30	-7 77	-1 41	0 06	0 02	2 82	
700 00	1 14	267 65	699 91	-1 54	-9 74	-1 68	0 18	0 00	9 28	
800 00	0 98	273 99	799 89	-1 53	-11 59	-1 69	0 20	-0 16	6 34	
900 00	0 86	266 84	899 88	-1 51	-13 19	-1 69	0 17	-0 12	-7 15	
1,000 00	0 72	274 30	999 87	-1 50	-14 57	-1 71	0 17	-0 14	7 46	
1,100 00	0 50	305.51	1,099.87	-1 20	-15.55	-1 42	0 39	-0 22	31 21	

Scientific Drilling Survey Report



Company:	COG Operating	Local Co-ordinate Reference:	Well Skelly Unit #994
Project:	Eddy County, NM (NAN27 NME)	TVD Reference:	Ground Elev @ 3869 00ft (Rig ?)
Site:	Skelly Unit #994	MD Reference:	Ground Elev @ 3869 00ft (Rig ?)
Well:	Skelly Unit #994	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)
1,200 00	0 25	335 71	1,199 86	-0 75	-15 99	-0 97	0 31	-0 25	30 20
1,300 00	0 70	24 78	1,299 86	0 00	-15 83	-0 22	0 57	0 45	49 07
1,400 00	0 91	23 41	1,399 85	1 29	-15 25	1 07	0 21	0 21	-1 37
1,500 00	0 85	38 46	1,499 84	2 60	-14 48	2 39	0 24	-0 06	15 05
1,600 00	1 08	46 08	1,599 82	3 83	-13 34	3 64	0 26	0 23	7 62
1,700 00	0 82	57 97	1,699 81	4 86	-12 05	4 70	0 32	-0 26	11 89
1,740 00	0 79	57 31	1,739 81	5 17	-11 58	5 00	0 08	-0 07	-1 65
Last gyro survey									
1,864 00	0 93	79 08	1,863 79	5 82	-9 87	5 68	0 28	0 11	17 56
1,959 00	2 38	26 54	1,958 75	7 73	-8 23	7 61	2 06	1 53	-55 31
2,052 00	4 58	14 37	2,051 58	13 05	-6 45	12 96	2 48	2 37	-13 09
2,147 00	5 59	6 03	2,146 20	21 33	-5 02	21 26	1 31	1 06	-8 78
2,241 00	6 58	352 76	2,239 68	31 23	-5 22	31 15	1 82	1 05	-14 12
2,430 00	4 55	354 97	2,427 78	49 44	-7 24	49 33	1 08	-1 07	1 17
2,557 00	5 33	2 50	2,554 31	60 35	-7 42	60 24	0 80	0 61	5 93
2,682 00	6 28	3 30	2,678 66	72 98	-6 78	72 87	0 76	0 76	0 64
2,840 00	4 61	356 19	2,835 95	87 94	-6 70	87 84	1 14	-1 06	-4 50
2,934 00	5 69	6 81	2,929 57	96 34	-6 40	96 24	1 53	1 15	11 30
3,060 00	7 12	13 98	3,054 78	110 12	-3 77	110 05	1 30	1 13	5 69
3,218 00	6 15	14 37	3,211 72	127 82	0 69	127 81	0 61	-0 61	0 25
3,376 00	7 84	358 86	3,368 55	146 79	2 58	146 81	1 60	1 07	-9 82
3,565 00	7 23	358 18	3,555 92	171 57	1 95	171 58	0 33	-0 32	-0 36
3,756 00	6 45	19 43	3,745 59	193 70	5 13	193 76	1 38	-0 41	11 13
3,945 00	6 74	0 56	3,933 36	214 81	8 77	214 91	1 15	0 15	-9 98
4,134 00	6 50	357 42	4,121 10	236 58	8 40	236 68	0 23	-0 13	-1 66
4,324 00	6 38	353 09	4,309 90	257 81	6 65	257 87	0 26	-0 06	-2 28
4,513 00	5 35	11 03	4,497 93	276 88	7 07	276 95	1 11	-0 54	9 49
4,699 00	7 44	7 75	4,682 76	297 33	10 35	297 44	1 14	1 12	-1 76
5,078 00	6 18	7 58	5,059 08	341 87	16 35	342 06	0 33	-0 33	-0 04
5,269 00	5 67	1 73	5,249 06	361 49	17 99	361 70	0 41	-0 27	-3 06
5,456 00	8 16	3 60	5,434 69	383 97	19 11	384 20	1 34	1 33	1 00
5,614 00	8 20	347 64	5,591 10	406 17	17 40	406 37	1 43	0 03	-10 10
5,802 00	5 78	351 88	5,777 69	428 64	13 19	428 78	1 32	-1 29	2 26
5,998 00	5 70	352 08	5,972 71	448 05	10 46	448 16	0 04	-0 04	0 10
6,186 00	5 36	353 09	6,159 83	466 02	8 11	466 08	0 19	-0 18	0 54
6,376 00	5 45	0 11	6,348 99	483 85	7 06	483 90	0 35	0 05	3 69
6,565 00	4 83	1 07	6,537 23	500 78	7 23	500 83	0 33	-0 33	0 51
6,640 00	6 02	1 09	6,611 89	507 87	7 36	507 92	1 59	1 59	0 03
MWD Survey									
6,690 00	6 02	1 09	6,661 61	513 11	7 46	513 17	0 00	0 00	0 00
Projection to Bit									

Scientific Drilling
Survey Report



Company:	COG Operating	Local Co-ordinate Reference:	Well Skelly Unit #994
Project:	Eddy County, NM (NAN27 NME)	TVD Reference:	Ground Elev @ 3869 00ft (Rig ?)
Site:	Skelly Unit #994	MD Reference:	Ground Elev @ 3869 00ft (Rig ?)
Well:	Skelly Unit #994	North Reference:	Grnd
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	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
HLW-SU #994	0 00	0 00	0 00	499 80	-3 00	668,599 200	644,001 400	32° 50' 13 872 N	103° 51' 52 190 W
- actual wellpath misses by 499 81ft at 0 74ft MD (0 74 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W500 00 H0 00 D0 00)									
PBHL-SU #994	0 00	0 00	6,500 00	499 80	7 00	668,599 200	644,011 400	32° 50' 13 872 N	103° 51' 52 073 W
- actual wellpath misses by 2 20ft at 6527 83ft MD (6500 20 TVD, 497 61 N, 7 17 E)									
- Circle (radius 10 00)									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
1,740 00	1,739 81	5 17	-11 58	Last gyro survey
6,640 00	6,611 89	507 87	7 36	MWD Survey
6,690 00	6,661 61	513 11	7 46	Projection to Bit

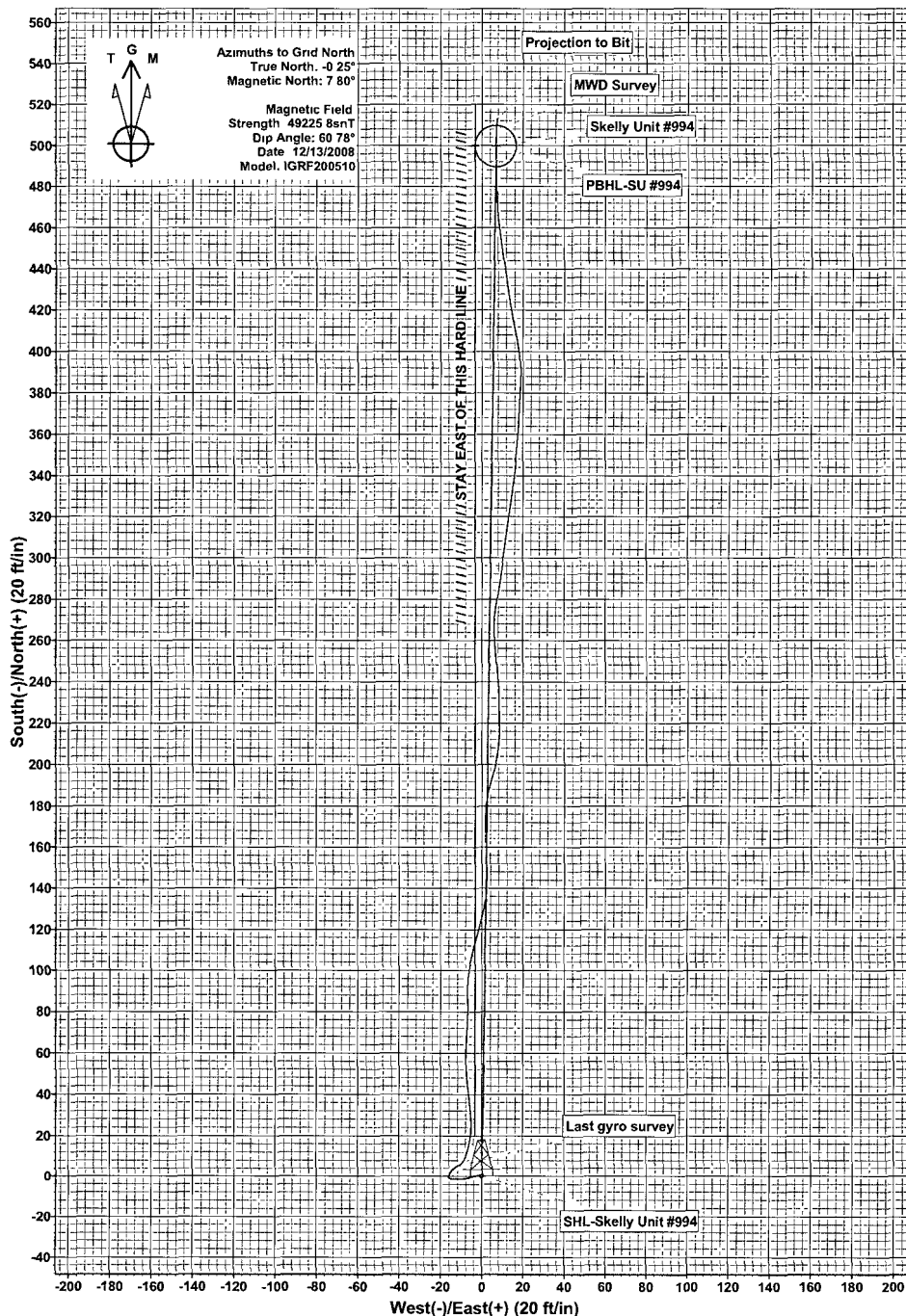
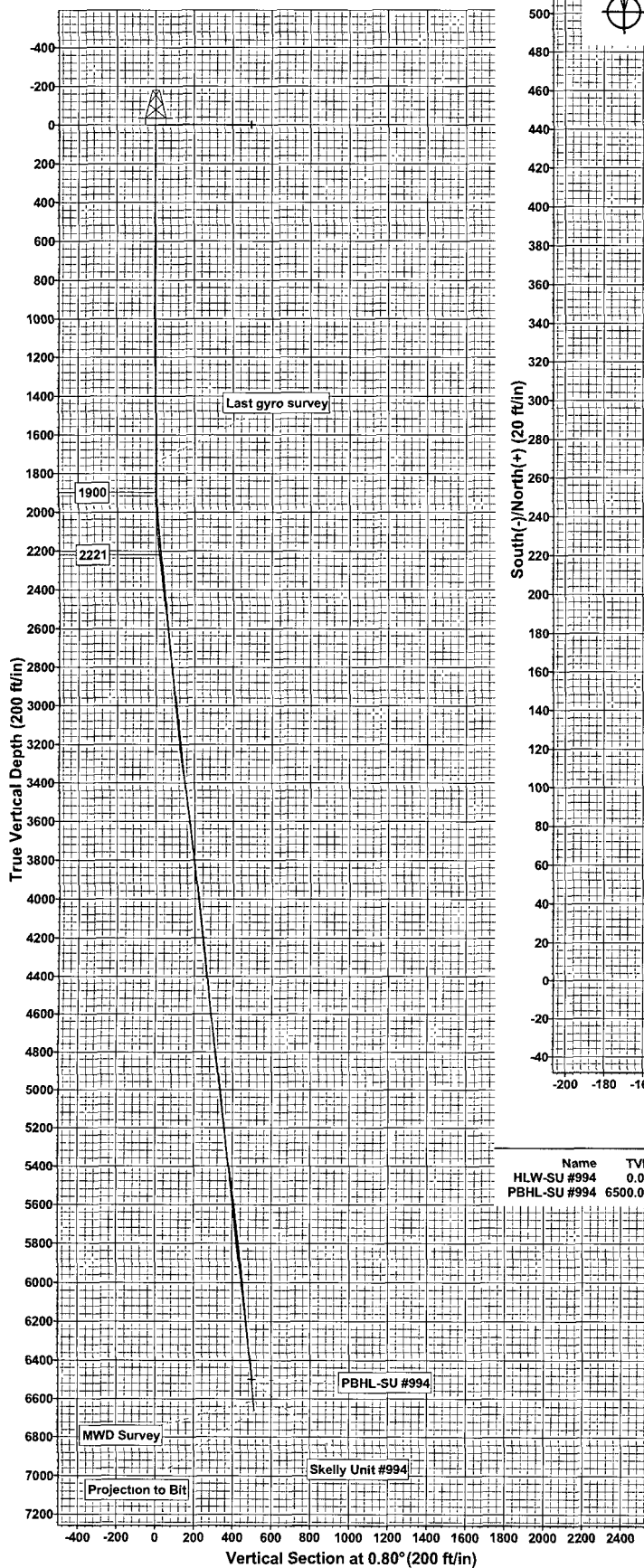
Checked By. _____ Approved By. _____ Date. _____

COG Operating

Scientific Drilling for COG Operating
Site: Eddy County, NM (NAN27 NME)
Well: Skelly Unit #994
Wellbore: OH
Design: Plan #1 vs Actual - 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 7.80°
To convert a True Direction to a Grid Direction, Subtract 0.25°



WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northring	Easting	Latitude	Longitude	Shape
HLW-SU #994	0.00	499.80	-3.00	668599.200	644001.400	32°5'0" 13.872 N	103°51' 52.190 W	Rectangle (Sides: L500.00 W0.00)
PBHL-SU #994	6500.00	499.80	7.00	668599.200	644011.400	32°50' 13.872 N	103°51' 52.073 W	Circle (Radius: 10.0 0)

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	1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	0.00	
3	2221.22	6.42	0.80	2220.54	17.99	0.25	2.00	0.80	17.99	
4	6527.72	6.42	0.80	6500.00	499.80	7.00	0.00	0.00	499.85	PBHL-SU #994

WELL DETAILS: Skelly Unit #994

+N/-S	+E/-W	Northring	Easting	Latitude	Longitude
0.00	0.00	668099.400	644004.400	32°50' 8.927 N	103°51' 52.181 W

PROJECT DETAILS: Eddy County, NM (NAN27 NME) Plan: Plan #1 - 7-7/8" Hole (Skelly Unit #994/OH)

Geodetic System: US State Plane 1927 (Exact solution)	Created By: Julio Pina	Date: 13-Dec-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		