

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
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.
NMNM7752

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

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

1. Type of Well
 Oil Well Gas Well Other

8. Well Name and No.
RANDALL FEDERAL 2

2. Name of Operator
COG OPERATING LLC
Contact: KELLY J HOLLY
E-Mail: kholly@concho.com

9. API Well No.
30-015-40101

3a. Address
ONE CONCHO CENTER 600 W ILLINOIS AVE
MIDLAND, TX 79701

3b. Phone No. (include area code)
Ph: 432-685-4384

10. Field and Pool, or Exploratory
LOCO HILLS; GLORIETA YESO

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 7 T17S R30E Mer NMP SESE 400FSL 185FEL

11. County or Parish, and State
EDDY COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	PD

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 shall 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 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 TVD Depth:

FROM: 5900'
TO: 4990'

A revised Directional Plan, C-102 and Directional Plan Variance are attached for your review.

Accepted for record
NMOCD

JCH
4/11/2013

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Original COAs still stand

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #200210 verified by the BLM Well Information System
For COG OPERATING LLC, sent to the Carlsbad
Committed to AFMSS for processing by KURT SIMMONS on 03/04/2013 ()

Name (Printed/Typed) KELLY J HOLLY

Title PERMITTING TECH

Signature (Electronic Submission)

Date 02/28/2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____

Title _____

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 _____

APPROVED
APR 9 2013
Jenniffer T. Vaper
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.

DISTRICT I
1625 N. Fresno Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brakes Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

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Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-40101	Pool Code 9671.8	Pool Name Loco Hills; Glorieta Yeso
Property Code 302549	Property Name RANDALL FEDERAL	Well Number 2
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3665'

Surface Location


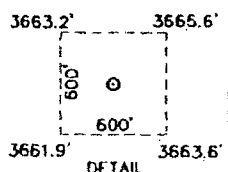
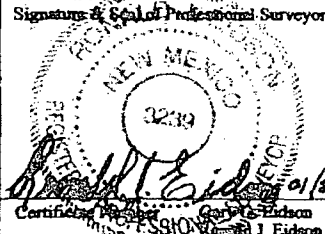
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	7	17-S	30-E		400	SOUTH	185	EAST	EDDY

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
P	7	17-S	30-E		330	SOUTH	330	EAST	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

<p>CORNER COORDINATES TABLE</p> <p>Ⓐ - Y=671389.9 N, X=600362.8 E</p> <p>Ⓑ - Y=671396.2 N, X=601682.8 E</p> <p>Ⓒ - Y=670070.6 N, X=600367.3 E</p> <p>Ⓓ - Y=670076.5 N, X=601687.3 E</p>	<p>GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=670475.6N X=601500.9 E</p> <p>LAT.=32.842786° N LONG.=104.002847° W</p> <p>BOTTOM HOLE LOCATION Y=670404.9 N X=601356.3 E</p>	<p>OPERATOR CERTIFICATION</p> <p>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 retained 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.</p> <p> Signature 2-28-13 Date</p> <p>Kelly J. Holly Printed Name</p> <p>kholly@concho.com E-mail Address</p>
<p>DETAIL</p>  <p>3663.2' 3665.6'</p> <p>600'</p> <p>600'</p> <p>3661.9' 3663.6'</p> <p>DETAIL</p>		<p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>SEPTEMBER 10, 2011 Date of Survey</p> <p> Signature & Seal of Professional Surveyor: Kelly J. Eidsen 12641 Certification No. 3239 DGS NMSOC W.O.: 12.13.0032</p>

Estimated Completed Interval:
330 FSL +
330 FEL

COG OPERATING LLC

One Concho Center
600 W Illinois Ave
Midland, TX 79701

DIRECTIONAL PLAN VARIANCE REQUEST

**Randall Federal #2
EDDY, NM**

SHL	400 FSL, 185 FEL	Sec 7, T17S, R30E, Unit P
BHL	330 FSL, 330 FEL	Sec 7, T17S, R30E, Unit P

COG Operating LLC, as Operator, desires that the APD reflect the footages as stated on the surveyor's plat. However, Operator also desires to avoid inadvertently drilling the well to a non-standard location. Therefore, due to the proximity of the plat bottom hole location to the pro-ration unit hard line(s), the attached directional plan is designed to avoid the hard lines by as much as fifty feet; said fifty feet being in either (or both) the north-south and/or east-west directions as applicable.



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COG Operating LLC
Eddy County, New Mexico (NAD 27 NME)
Randall Federal #2

Wellbore #1

Plan: Plan #1 02-27-13
Surface: 400' FSL, 185' FEL, Sec 7, T17S, R30E, Unit P
Top of Paddock: 380' FSL, 380' FEL, Sec 7, T17S, R30E, Unit P
BHL: 380' FSL, 380' FEL, Sec 7, T17S, R30E, Unit P

Standard Planning Report

27 February, 2013



PHOENIX
TECHNOLOGY SERVICES



Phoenix Technology Services
Planning Report



Database:	GCR/DB	Local Co-ordinate Reference:	Well #2:
Company:	COG Operating LLC	TVD Reference:	GL @ 3665.00usft
Project:	Eddy County, New Mexico (NAD:27/NME)	MD Reference:	GL @ 3665.00usft
Site:	Randall Federal	North Reference:	Grid
Well:	#2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 02-27-13		

Project:	Eddy County, New Mexico (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:	Randall Federal		
Site Position:	Map	Northing:	670,475.60 usft
From:		Easting:	601,500.90 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 50' 34.0306 N
		Longitude:	104° 0' 10.2517 W
		Grid Convergence:	0.18 °

Well:	#2		
Well Position	+N/S	0.00 usft	Northing:
	+E/W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level:
			3,665.00 usft
			670,475.60 usft
			601,500.90 usft
			32° 50' 34.0306 N
			104° 0' 10.2517 W

Wellbore:	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010_14	02/27/13	(°)	(°)	(nT)
			7.62	60.64	48,769

Design:	Plan #1 02-27-13			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	
			0.00	
Vertical Section:	Depth From (TVD)	+N/S	+E/W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	263.91

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Dogleg Rate (%/100usft)	Build Rate (%/100usft)	Turn Rate (%/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,450.00	0.00	0.00	1,450.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,662.52	4.25	263.91	1,662.32	-0.84	-7.83	2.00	2.00	0.00	263.91	
4,094.56	4.25	263.91	4,087.68	-19.96	-187.07	0.00	0.00	0.00	0.00	
4,307.08	0.00	0.00	4,300.00	-20.80	-194.90	2.00	-2.00	0.00	180.00	T1-Randall #2
4,997.08	0.00	0.00	4,990.00	-20.80	-194.90	0.00	0.00	0.00	0.00	PBHL-Randall #2



Phoenix Technology Services
Planning Report



Database:	GCR_DB	Local Co-ordinate Reference:	Well #2
Company:	COG Operating LLC	TVD Reference:	GL @ 3665.00usft
Project:	Eddy County New Mexico (NAD 27 NME)	MD Reference:	GL @ 3665.00usft
Site:	Randall Federal	North Reference:	Grid
Well:	#2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 02-27-13		

Planned 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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,350.00	0.00	0.00	1,350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8 5/8" Surface										
1,450.00	0.00	0.00	1,450.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 2:00										
1,500.00	1.00	263.91	1,500.00	-0.05	-0.43	0.44	2.00	2.00	0.00	0.00
1,600.00	3.00	263.91	1,599.93	-0.42	-3.90	3.93	2.00	2.00	0.00	0.00
1,662.52	4.25	263.91	1,662.32	-0.84	-7.83	7.88	2.00	2.00	0.00	0.00
Start 2432:05 hold at 1662:52 MD										
1,700.00	4.25	263.91	1,699.70	-1.13	-10.60	10.66	0.00	0.00	0.00	0.00
1,800.00	4.25	263.91	1,799.43	-1.92	-17.97	18.07	0.00	0.00	0.00	0.00
1,900.00	4.25	263.91	1,899.15	-2.70	-25.34	25.48	0.00	0.00	0.00	0.00
2,000.00	4.25	263.91	1,998.88	-3.49	-32.71	32.89	0.00	0.00	0.00	0.00
2,100.00	4.25	263.91	2,098.60	-4.28	-40.08	40.30	0.00	0.00	0.00	0.00
2,200.00	4.25	263.91	2,198.33	-5.06	-47.44	47.71	0.00	0.00	0.00	0.00
2,300.00	4.25	263.91	2,298.05	-5.85	-54.81	55.13	0.00	0.00	0.00	0.00
2,400.00	4.25	263.91	2,397.78	-6.64	-62.18	62.54	0.00	0.00	0.00	0.00
2,500.00	4.25	263.91	2,497.50	-7.42	-69.55	69.95	0.00	0.00	0.00	0.00
2,600.00	4.25	263.91	2,597.23	-8.21	-76.92	77.36	0.00	0.00	0.00	0.00
2,700.00	4.25	263.91	2,696.95	-9.00	-84.29	84.77	0.00	0.00	0.00	0.00
2,800.00	4.25	263.91	2,796.68	-9.78	-91.66	92.18	0.00	0.00	0.00	0.00
2,900.00	4.25	263.91	2,896.40	-10.57	-99.03	99.59	0.00	0.00	0.00	0.00
3,000.00	4.25	263.91	2,996.13	-11.36	-106.40	107.01	0.00	0.00	0.00	0.00
3,100.00	4.25	263.91	3,095.85	-12.14	-113.77	114.42	0.00	0.00	0.00	0.00
3,200.00	4.25	263.91	3,195.58	-12.93	-121.14	121.83	0.00	0.00	0.00	0.00
3,300.00	4.25	263.91	3,295.30	-13.71	-128.51	129.24	0.00	0.00	0.00	0.00
3,400.00	4.25	263.91	3,395.03	-14.50	-135.88	136.65	0.00	0.00	0.00	0.00
3,500.00	4.25	263.91	3,494.75	-15.29	-143.25	144.06	0.00	0.00	0.00	0.00
3,600.00	4.25	263.91	3,594.48	-16.07	-150.62	151.47	0.00	0.00	0.00	0.00
3,700.00	4.25	263.91	3,694.20	-16.86	-157.99	158.89	0.00	0.00	0.00	0.00
3,800.00	4.25	263.91	3,793.93	-17.65	-165.36	166.30	0.00	0.00	0.00	0.00
3,900.00	4.25	263.91	3,893.65	-18.43	-172.73	173.71	0.00	0.00	0.00	0.00
4,000.00	4.25	263.91	3,993.38	-19.22	-180.10	181.12	0.00	0.00	0.00	0.00
4,094.56	4.25	263.91	4,087.68	-19.96	-187.07	188.13	0.00	0.00	0.00	0.00
Start Drop -2.00										
4,100.00	4.14	263.91	4,093.10	-20.01	-187.46	188.53	2.00	-2.00	0.00	0.00
4,200.00	2.14	263.91	4,192.95	-20.59	-192.91	194.01	2.00	-2.00	0.00	0.00
4,300.00	0.14	263.91	4,292.92	-20.80	-194.89	196.00	2.00	-2.00	0.00	0.00
4,307.08	0.00	0.00	4,300.00	-20.80	-194.90	196.01	2.00	-2.00	0.00	0.00
Start 690:00 hold at 4307:08 MD Top of Paddock T1-Randall #2										
4,997.08	0.00	0.00	4,990.00	-20.80	-194.90	196.01	0.00	0.00	0.00	0.00
TD at 4997.08 PBHL-Randall #2										



Phoenix Technology Services
Planning Report



Database:	GCR.DB	Local Co-ordinate Reference:	Well #2
Company:	COG Operating LLC	TVD Reference:	GL @ 3665.00usft
Project:	Eddy County, New Mexico, (NAD 27, NME)	MD Reference:	GL @ 3665.00usft
Site:	Randall Federal	North Reference:	Grid
Well:	#2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 02-27-13		

Design Targets									
Target Name	Dip Angle	Dip Dir	TVD	+N/S	+E/W	Northing	Easting	Latitude	Longitude
hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Shape									
T1-Randall #2	0.00	0.00	4,300.00	-20.80	-194.90	670,454.80	601,306.00	32° 50' 33.8308 N	104° 0' 12.5370 W
- plan hits target center									
- Point									
PBHL-Randall #2	0.00	0.00	4,990.00	-20.80	-194.90	670,454.80	601,306.00	32° 50' 33.8308 N	104° 0' 12.5370 W
- plan hits target center									
- Circle (radius 50.00)									

Casing Points				
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter
(usft)	(usft)		(")	(")
1,350.00	1,350.00	8 5/8" Surface	8-5/8	12-1/4

Formations				
Measured Depth	Vertical Depth	Name	Lithology	Dip Direction
(usft)	(usft)			(°)
4,307.08	4,300.00	Top of Paddock		0.00

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/S (usft)	+E/W (usft)	
1,450.00	1,450.00	0.00	0.00	KOP Start Build 2.00
1,662.52	1,662.32	-0.84	-7.83	Start 2432.05 hold at 1662.52 MD
4,094.56	4,087.68	-19.96	-187.07	Start Drop -2.00
4,307.08	4,300.00	-20.80	-194.90	Start 690.00 hold at 4307.08 MD
4,997.08	4,990.00	-20.80	-194.90	TD at 4997.08



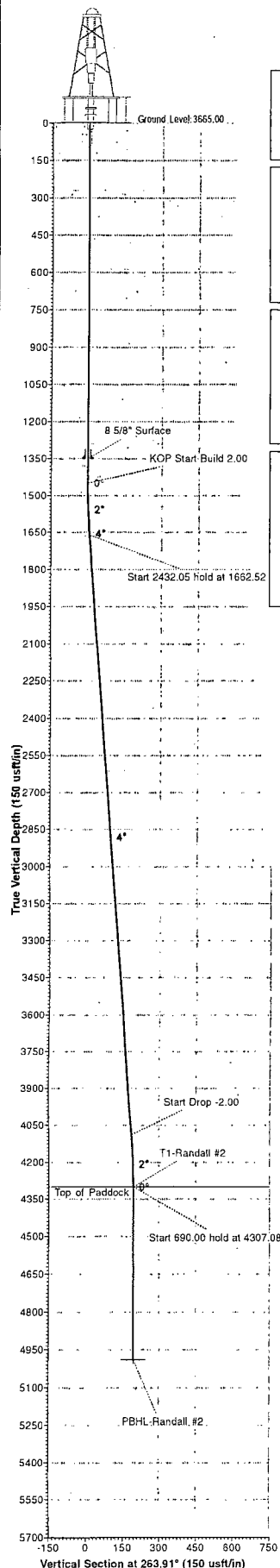
Project: Eddy County, New Mexico (NAD 27 NME)
 Site: Randall Federal
 Well: #2
 Wellbore: Wellbore #1
 Design: Plan #1 02-27-13



PHOENIX
 TECHNOLOGY SERVICES



Azimuths to Grid North
 True North: -0.18°
 Magnetic North: 7.44°
 Magnetic Field
 Strength: 48768.75nT
 Dip Angle: 60.64°
 Date: 02/27/2013
 Model: IGRF2010_14



WELL DETAILS						
+N/-S	+E/-W	Northing	Ground Level	Easting	Latitude	Longitude
0.00	0.00	670475.60	3665.00	601500.90	32° 50' 34.0306 N	104° 0' 10.2517 W

SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1450.00	0.00	0.00	1450.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP Start Build 2.00
3	1662.52	4.25	263.91	1662.32	-0.84	-7.83	2.00	263.91	7.88		Start 2432.05 hold at 1662.52 MD
4	4094.56	4.25	263.91	4097.68	-19.96	-187.07	0.00	0.00	188.13		Start Drop -2.00
5	4307.08	0.00	0.00	4300.00	-20.80	-194.90	2.00	180.00	196.01		Start 690.00 hold at 4307.08 MD
6	4997.08	0.00	0.00	4990.00	-20.80	-194.90	0.00	0.00	196.01		TD at 4997.08

DESIGN TARGET DETAILS										
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape		
T1-Randall #2	4300.00	-20.80	-194.90	670454.80	601306.00	32° 50' 33.8308 N	104° 0' 12.5370 W	Point		
PBHL-Randall #2	4990.00	-20.80	-194.90	670454.80	601306.00	32° 50' 33.8308 N	104° 0' 12.5370 W	Circle (Radius: 50.00)		

SITE DETAILS: Randall Federal	
Site Centre Northing:	670475.60
Easting:	601500.90
Positional Uncertainty:	0.00
Convergence:	0.18
Local North:	Grid

PROJECT DETAILS: Eddy County, New Mexico (NAD 27 NME)	
Geodetic System:	US State Plane 1927 (Exact solution)
Datum:	NAD 1927 (NADCON CONUS)
Ellipsoid:	Clarke 1866
Zone:	New Mexico East 3001
System Datum:	Mean Sea Level

Map System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone Name: New Mexico East 3001
 Local Origin: Well #2, Grid North
 Latitude: 32° 50' 34.0306 N
 Longitude: 104° 0' 10.2517 W
 Grid East: 601500.90
 Grid North: 670475.60
 Scale Factor: 1.000
 Geomagnetic Model: IGRF2010_14
 Sample Date: 27-Feb-13
 Magnetic Declination: 7.62°
 Dip Angle from Horizontal: 60.64°
 Magnetic Field Strength: 48769
 To convert a Magnetic Direction to a Grid Direction, Add 7.44°
 To convert a Magnetic Direction to a True Direction, Add 7.62° East
 To convert a True Direction to a Grid Direction, Subtract 0.18°

FORMATION TOP DETAILS				
TVDPath	MDPath	Formation	DipAngle	DipDir
4300.00	4307.08	Top of Paddock	0.00	

CASING DETAILS			
TVD	MD	Name	Size
1350.00	1350.00	8 5/8" Surface	8-5/8

LEGEND
 —●— Plan #1 02-27-13

