

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-HOBBS

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 <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMLC-029509B
2. Name of Operator COG Operating LLC		6. If Indian, Allottee or Tribe Name N/A
3a. Address 550 W. Texas Ave., Suite 1300 Midland, TX 79701	3b. Phone No. (include area code) 432-685-4385	7. If Unit or CA/Agreement, Name and/or No. N/A
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SHL: 1585' FSL & 2095' FWL, SEC. 22, T17S, R32E, Unit K BHL: 1650' FSL & 2310' FWL, SEC. 22, T17S, R32E, Unit K		8. Well Name and No. J C FEDERAL #51
		9. API Well No. 30-025-39421 30-025-39481
		10. Field and Pool, or Exploratory Area Maljamar; Yeso, West 44500
		11. County or Parish, State LEA, 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"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal
			<input type="checkbox"/> Water Shut-Off
			<input type="checkbox"/> Well Integrity
			<input checked="" type="checkbox"/> Other
			MOVE
			LOCATION

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.)

The present location for this well is:

SHL: 1585' FSL & 2095' FWL, SEC. 22, T17S, R32E, Unit K
BHL: 1650' FSL & 2310' FWL, SEC. 22, T17S, R32E, Unit K

COG respectfully requests permission to move this location to:

* SHL: 1375' FSL & 2023' FWL, SEC. 22, T17S, R32E, Unit K *
BHL: 1650' FSL & 2310' FWL, SEC. 22, T17S, R32E, Unit K *

The V-Door will also be changed to the West.

This move is requested because the original location is too close to a buried pipeline.

A revised C-102, Directional Plan, Rig Layout, and Flowline are attached for your review.

RECEIVED

SEP 07 2010

HOBBSOCD

14. I hereby certify that the foregoing is true and correct	
Name (Printed/Typed) Robyn M. Odom	Title Regulatory Analyst
Signature 	Date 07/15/2010

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by /s/ Don Peterson	Title	Date SEP - 2 2010
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 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)

K. PETROLEUM ENGINEER

SEP 07 2010

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

OIL CONSERVATION DIVISION

11885 SOUTH ST. FRANCIS DR.

Santa Fe, New Mexico 87505

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410

DISTRICT IV
11885 S. ST. FRANCIS DR., SANTA FE, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-39421	Pool Code 44500	Pool Name MALJAMAR; YESO, WEST
Property Code 302508	Property Name JC FEDERAL	Well Number 51
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 4002'

Surface Location

UL or lot No. K	Section 22	Township 17-S	Range 32-E	Lot Idn	Feet from the 1375	North/South line SOUTH	Feet from the 2023	East/West line WEST	County LEA
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Bottom Hole Location If Different From Surface

UL or lot No. K	Section 22	Township 17-S	Range 32-E	Lot Idn	Feet from the 1650	North/South line SOUTH	Feet from the 2310	East/West line WEST	County LEA
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.						

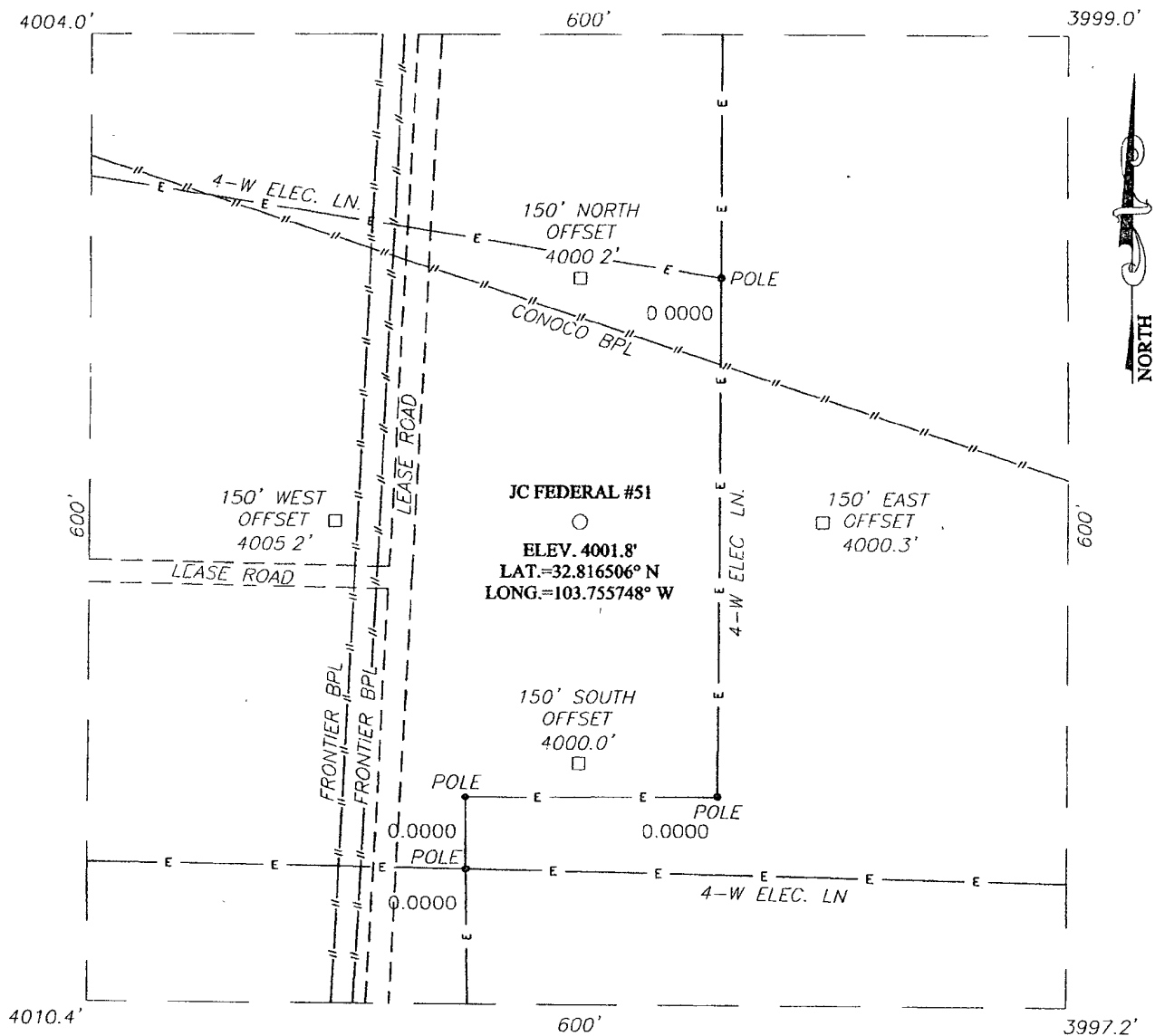
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>PENETRATION POINT 1661' FSL + 2298' FWL</p> <p>GRID AZ -45°56'41" HORZ DIST. -397.0'</p> <p>2310'</p> <p>2023'</p> <p>SEE DETAIL</p> <p>1375'</p> <p>1650'</p> <p>4004 0'</p> <p>3999 0'</p> <p>600'</p> <p>600'</p> <p>4010 4'</p> <p>3997.2'</p> <p>GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=661240.6 N X=677445.0 E LAT.=32.816506° N LONG.=103.755748° W BOTTOM HOLE LOCATION Y=661516.5 N X=677730.2 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 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.</p> <p><i>Robyn Odom</i> 7/14/2010 Signature Date Robyn Odom Printed Name</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><i>Ronald J. Eidson</i> 07/09/2010 Date Surveyed Signature & Seal of Professional Surveyor 10:13:0988</p> <p>Certificate No. GARY G. EIDSON 12641 RONALD J. EIDSON 3239</p>
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SECTION 22, TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M.

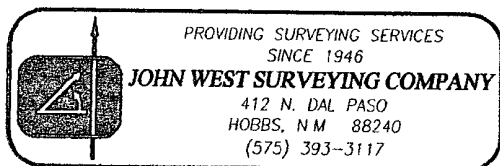
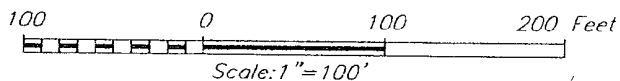
LEA COUNTY

NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CO RD. #L126 (MALJAMAR ROAD) AND CO. RD. #L126 (CONOCO ROAD), GO EAST ON LEASE ROAD APPROX. 0.4 MILES. THE LOCATION STAKE IS APPROX. 110 FEET EAST OF LEASE ROAD.



JOHN WEST SURVEYING COMPANY

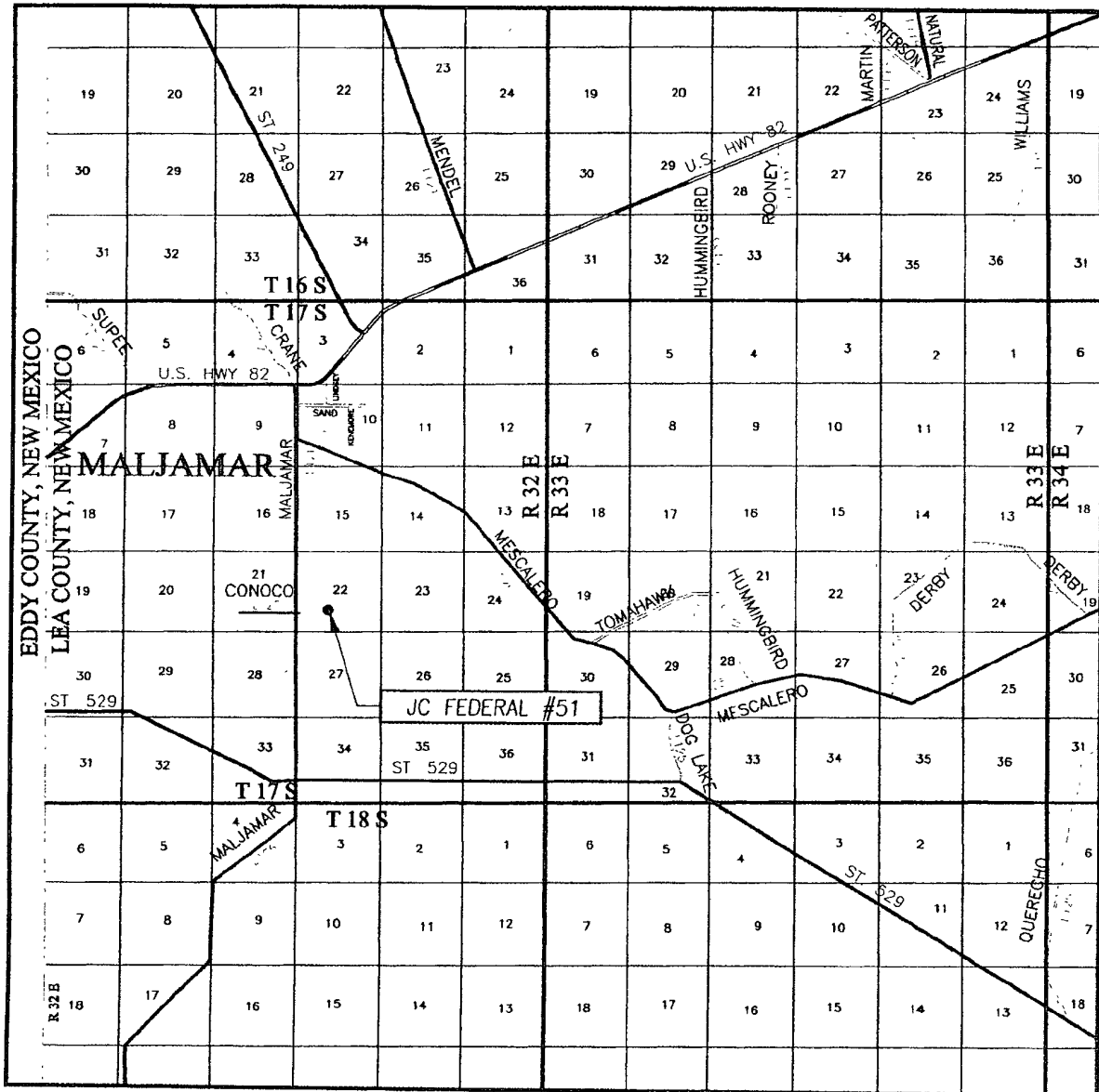
412 N. DAL PASO
HOBBS, N M 88240
(575) 393-3117

COG OPERATING, LLC

JC FEDERAL #51 WELL
LOCATED 1375 FEET FROM THE SOUTH LINE
AND 2023 FEET FROM THE WEST LINE OF SECTION 22,
TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO

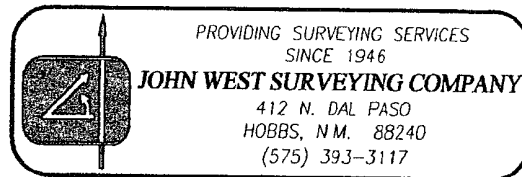
Survey Date: 6/23/10	Sheet 1 of 1 Sheets
W.O. Number 10.13.0988	Dr By: LA Rev 1.
Date: 7/9/10	10130988 Scale: 1"=100'

VICINITY MAP

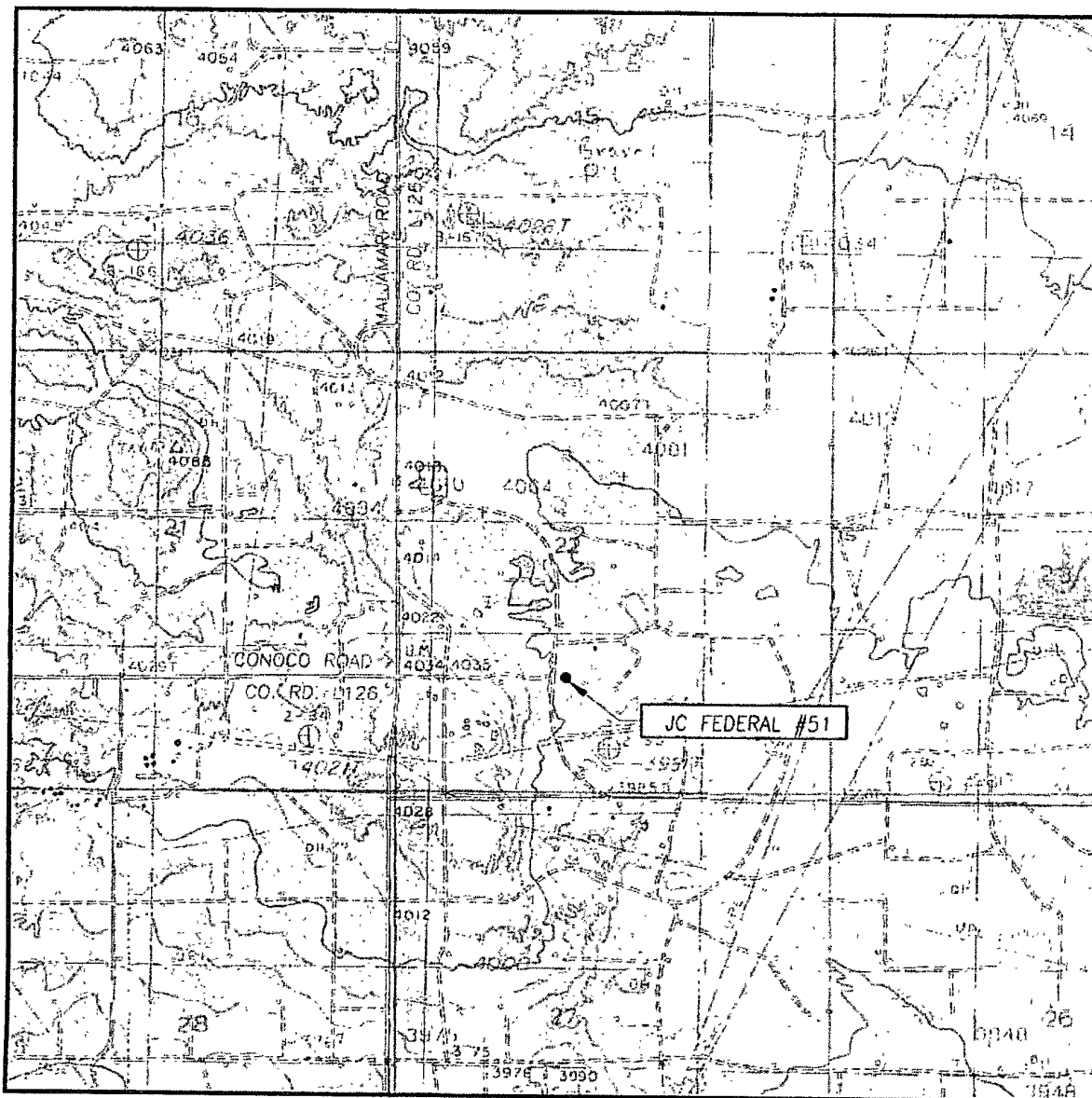


SCALE: 1" = 2 MILES

SEC. 22 TWP. 17-S RGE. 32-E
 SURVEY N.M.P.M.
 COUNTY LEA STATE NEW MEXICO
 DESCRIPTION 1375' FSL & 2023' FWL
 ELEVATION 4002'
 OPERATOR COG OPERATING, LLC
 LEASE JC FEDERAL



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
MALJAMAR, N.M. - 10'
DOG LAKE, N.M. - 10'

SEC. 22 TWP. 17-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

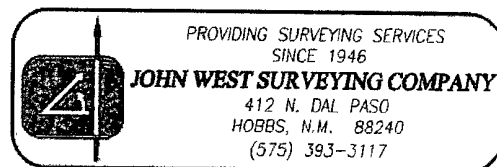
DESCRIPTION 1375' FSL & 2023' FWL

ELEVATION 4002'

OPERATOR COG OPERATING, INC.

LEASE JC FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
MALJAMAR, N.M.



PROVIDING SURVEYING SERVICES
SINCE 1946

JOHN WEST SURVEYING COMPANY

412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117



COG Operating LLC

Lea County, NM (NAD27 NME)

JC Federal #51

JC Federal #51

OH

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

SHL = 1375' FSL & 2023' FWL

BHL = 1660' FSL & 2300' FWL

Top of Paddock = 1660' FSL & 2300' FWL @ 5500' TVD

Standard Planning Report

14 July, 2010





Scientific Drilling
Planning Report



Database:	EDM-Julio	Local Co-ordinate Reference:	Well JC Federal #51
Company:	COG Operating LLC	TVD Reference:	Ground Elev @ 3999.00usft (Rig ?)
Project:	Lea County, NM (NAD27 NME)	MD Reference:	Ground Elev @ 3999.00usft (Rig ?)
Site:	JC Federal #51	North Reference:	Grid
Well:	JC Federal #51	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 - 7-7/8" Hole		

Project:	Lea County, NM (NAD27 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:	JC Federal #51		
Site Position:		Northing:	661,240.60 usft
From:	Map	Easting:	677,445.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Grid Convergence:	0.31°

Well:	JC Federal #51		
Well Position	+N/-S	0.00 usft	Latitude: 32° 48' 59.421 N
	+E/-W	0.00 usft	Longitude: 103° 45' 20.691 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level: 3,999.00 usft

Wellbore:	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF200510	2010/07/14	7.81
			Dip Angle: 60.75
			Field Strength: 49,073 nT

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
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction: 43.90

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,588.18	7.76	43.90	2,586.99	18.92	18.21	2.00	2.00	0.00	43.90	
5,137.56	7.76	43.90	5,113.01	267.08	256.99	0.00	0.00	0.00	0.00	
5,525.74	0.00	0.01	5,500.00	286.00	275.20	2.00	-2.00	-11.31	-180.00	PP-JCF #51
7,175.74	0.00	0.01	7,150.00	286.00	275.20	0.00	0.00	0.00	0.01	PBHL-JCF #51



Scientific Drilling
Planning Report



Database: EDM-Julio
Company: COG Operating LLC
Project: Lea County, NM (NAD27 NME)
Site: JC Federal #51
Well: JC Federal #51
Wellbore: OH
Design: Plan #2 - 7-7/8" Hole

Local Co-ordinate Reference: Well JC Federal #51
TVD Reference: Ground Elev @ 3999.00usft (Rig ?)
MD Reference: Ground Elev @ 3999.00usft (Rig ?)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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
South HL-JCF #51 - West HL-JCF #51									
2,100 00	0 00	0 00	2,100 00	0 00	0 00	0 00	0 00	0 00	0 00
8 5/8" Casing									
2,200 00	0 00	0 00	2,200.00	0 00	0 00	0 00	0 00	0 00	0 00
KOP Start Build 2.00°/100'									
2,300 00	2.00	43 90	2,299.98	1 26	1 21	1.75	2.00	2 00	0 00
2,400 00	4.00	43 90	2,399.84	5 03	4 84	6.98	2 00	2.00	0.00
2,500 00	6.00	43 90	2,499.45	11 31	10 88	15.69	2.00	2.00	0 00
2,588 18	7.76	43 90	2,586.99	18 92	18 21	26.26	2 00	2.00	0.00
EOC hold 7.76°									
2,600 00	7 76	43 90	2,598.70	20 07	19 31	27.86	0 00	0 00	0 00
2,700 00	7 76	43 90	2,697.79	29 81	28 68	41.36	0 00	0 00	0 00
2,800 00	7 76	43 90	2,796.87	39 54	38 05	54.87	0 00	0 00	0 00
2,900 00	7.76	43 90	2,895.96	49 27	47 41	68.38	0.00	0 00	0 00
3,000 00	7 76	43 90	2,995.04	59 01	56 78	81.89	0 00	0 00	0 00
3,100 00	7 76	43 90	3,094.12	68 74	66 15	95.40	0 00	0 00	0 00
3,200 00	7 76	43 90	3,193.21	78 48	75 51	108.91	0 00	0 00	0 00
3,300 00	7 76	43 90	3,292.29	88 21	84 88	122.42	0 00	0 00	0 00
3,400 00	7 76	43 90	3,391.37	97.94	94 25	135.92	0 00	0 00	0 00
3,500 00	7 76	43 90	3,490.46	107.68	103 61	149.43	0 00	0 00	0 00
3,600 00	7 76	43 90	3,589.54	117.41	112.98	162.94	0 00	0 00	0 00
3,700 00	7 76	43 90	3,688.62	127 15	122 34	176.45	0 00	0 00	0 00
3,800 00	7 76	43.90	3,787.71	136 88	131 71	189.96	0 00	0 00	0 00
3,900.00	7 76	43 90	3,886.79	146 61	141 08	203.47	0.00	0 00	0 00
4,000 00	7 76	43 90	3,985.87	156 35	150 44	216.98	0 00	0 00	0 00
4,100 00	7 76	43 90	4,084.96	166 08	159 81	230.48	0 00	0 00	0 00
4,200 00	7 76	43.90	4,184.04	175 82	169 18	243.99	0 00	0 00	0 00
4,300 00	7.76	43 90	4,283.12	185 55	178 54	257.50	0 00	0 00	0 00
4,400.00	7 76	43 90	4,382.21	195 28	187 91	271.01	0 00	0 00	0 00
4,500 00	7.76	43 90	4,481.29	205 02	197 28	284.52	0 00	0 00	0 00
4,600 00	7 76	43 90	4,580.37	214 75	206 64	298.03	0 00	0 00	0 00
4,700 00	7 76	43 90	4,679.46	224 49	216.01	311.53	0 00	0 00	0 00
4,800 00	7 76	43 90	4,778.54	234 22	225 38	325.04	0 00	0 00	0.00
4,900.00	7 76	43 90	4,877.62	243 95	234 74	338.55	0 00	0 00	0 00
5,000 00	7 76	43 90	4,976.71	253 69	244 11	352.06	0 00	0 00	0 00
5,100 00	7 76	43 90	5,075.79	263 42	253 47	365.57	0 00	0 00	0 00
5,137 56	7 76	43 90	5,113.01	267 08	256 99	370.64	0 00	0 00	0 00
Start drop 2.00°/100'									
5,200 00	6 51	43.90	5,174.96	272 67	262 37	378.40	2 00	-2 00	0 00
5,300 00	4 51	43 90	5,274.49	279 59	269 04	388.01	2 00	-2 00	0 00
5,400 00	2 51	43 90	5,374.30	284 01	273 29	394.14	2 00	-2 00	0 00
5,500 00	0.51	43 90	5,474.26	285 92	275 12	396.79	2 00	-2.00	0 00
5,525 74	0 00	0 00	5,500 00	286.00	275 20	396 90	2.00	-2 00	-170 54
EOC hold 0.00° - PP-JCF #51									
7,175 74	0.00	0 01	7,150 00	286 00	275 20	396 90	0 00	0 00	0 00
PBHL-JCF #51									



Scientific Drilling Planning Report



Database: EDM-Julio
Company: COG Operating LLC
Project: Lea County, NM (NAD27 NME)
Site: JC Federal #51
Well: JC Federal #51
Wellbore: OH
Design: Plan #2 - 7-7/8" Hole

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

Well JC Federal #51
Ground Elev @ 3999.00usft (Rig ?)
Ground Elev @ 3999.00usft (Rig ?)
Grid
Minimum Curvature

Design Targets

Target Name hit/miss target Shape	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
South HL-JCF #51 - plan misses target center by 396.88usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Rectangle (sides W100.00 H0.00 D0.00)	0.00	0.00	0.00	276.00	285.20	661,516.60	677,730.20	32° 49' 2.136 N	103° 45' 17.332 W
West HL-JCF #51 - plan misses target center by 396.88usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Rectangle (sides W0.00 H100.00 D0.00)	0.00	0.00	0.00	276.00	285.20	661,516.60	677,730.20	32° 49' 2.136 N	103° 45' 17.332 W
PP-JCF #51 - plan hits target center - Point	0.00	0.00	5,500.00	286.00	275.20	661,526.60	677,720.20	32° 49' 2.236 N	103° 45' 17.448 W
PBHL-JCF #51 - plan hits target center - Circle (radius 10.00)	0.00	0.00	7,150.00	286.00	275.20	661,526.60	677,720.20	32° 49' 2.236 N	103° 45' 17.448 W

Casing Points

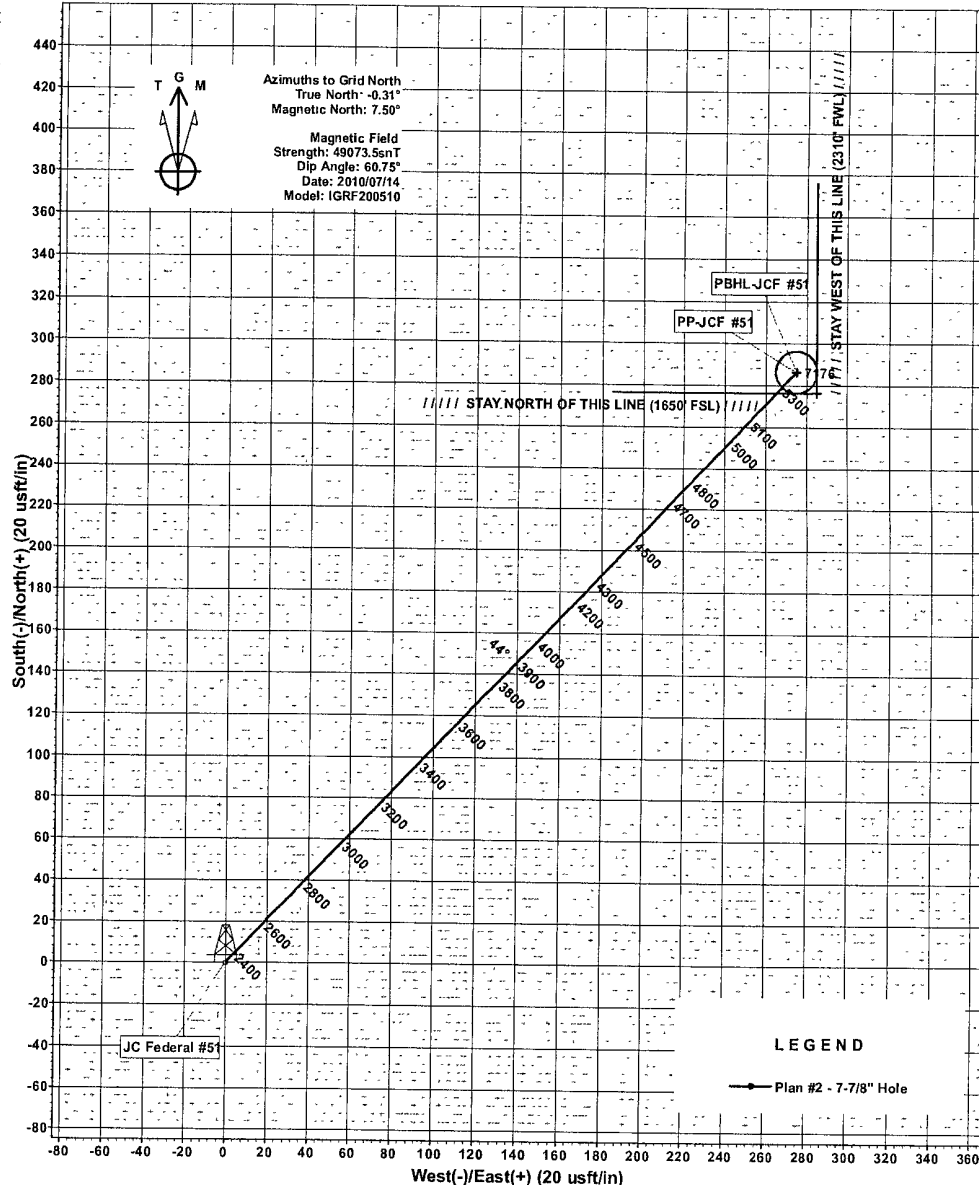
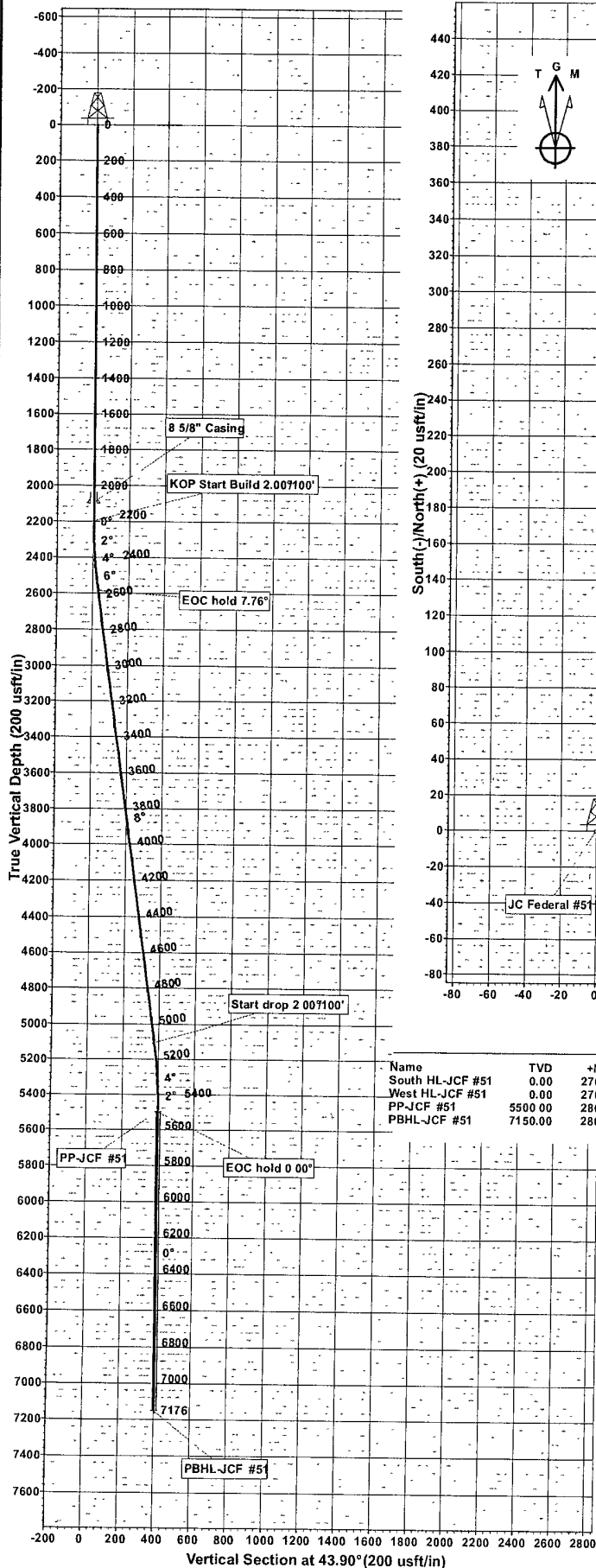
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
2,100.00	2,100.00	8 5/8" Casing	8-5/8	10-5/8

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
2,200.00	2,200.00	0.00	0.00	KOP Start Build 2.00°/100'
2,588.18	2,586.99	18.92	18.21	EOC hold 7.76°
5,137.56	5,113.01	267.08	256.99	Start drop 2.00°/100'
5,525.74	5,500.00	286.00	275.20	EOC hold 0.00°



Scientific Drilling for COG Operating LLC
Site: Lea County, NM (NAD27 NME)
Well: JC Federal #51
Wellbore: OH
Design: Plan #2 - 7-7/8" Hole



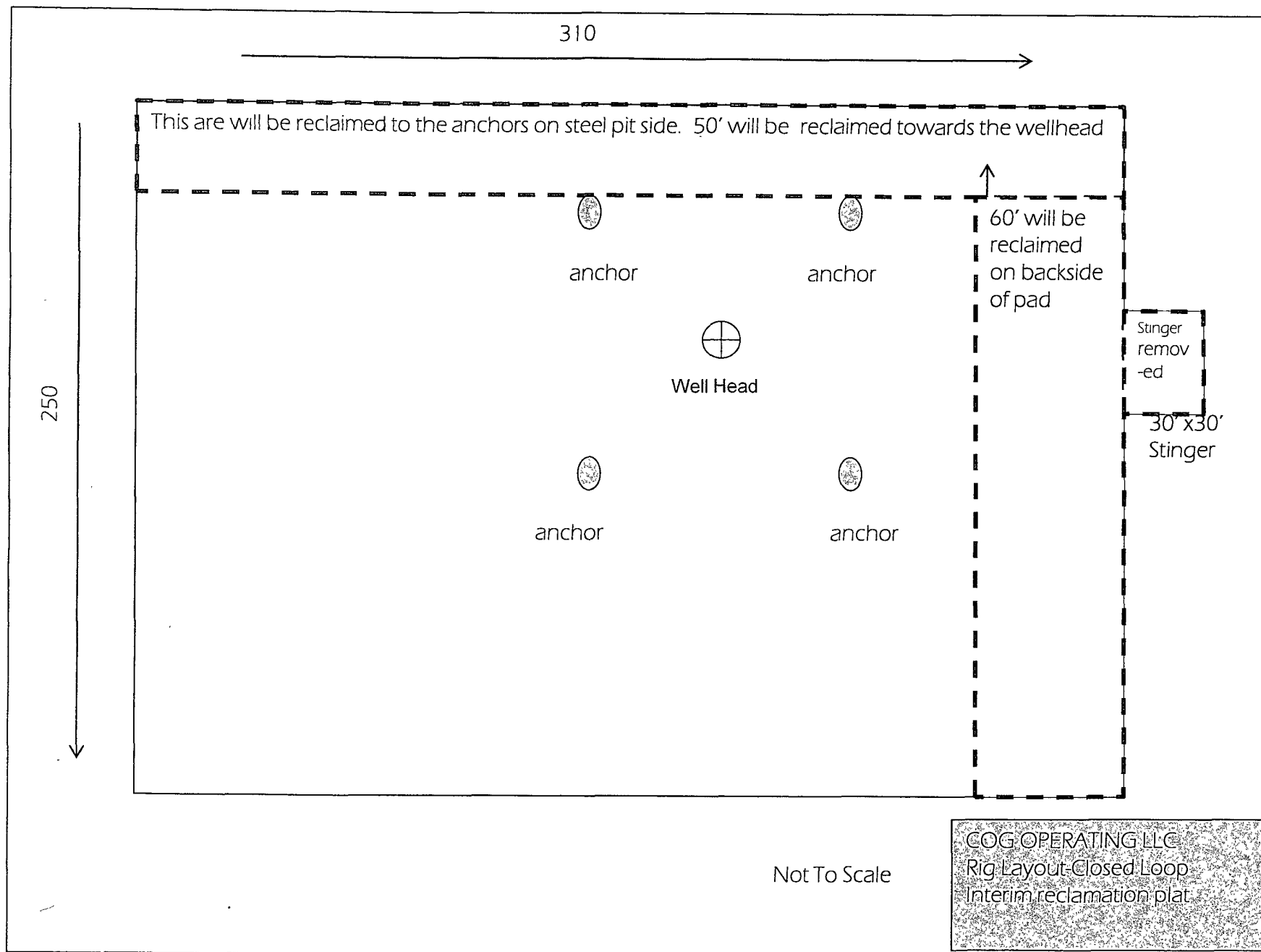
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
South HL-JCF #51	0.00	276.00	285.20	661516.60	677730.20	32°49' 2.136 N	103°45' 17.332 W	Rectangle (Sides: L:0.00 W:100.00)	
West HL-JCF #51	0.00	276.00	285.20	661516.60	677730.20	32°49' 2.136 N	103°45' 17.332 W	Rectangle (Sides: L:10.00 W:0.00)	
PP-JCF #51	5500.00	286.00	275.20	661526.60	677720.20	32°49' 2.236 N	103°45' 17.448 W	Point	
PBHL-JCF #51	7150.00	286.00	275.20	661526.60	677720.20	32°49' 2.236 N	103°45' 17.448 W	Circle (Radius: 10.00)	

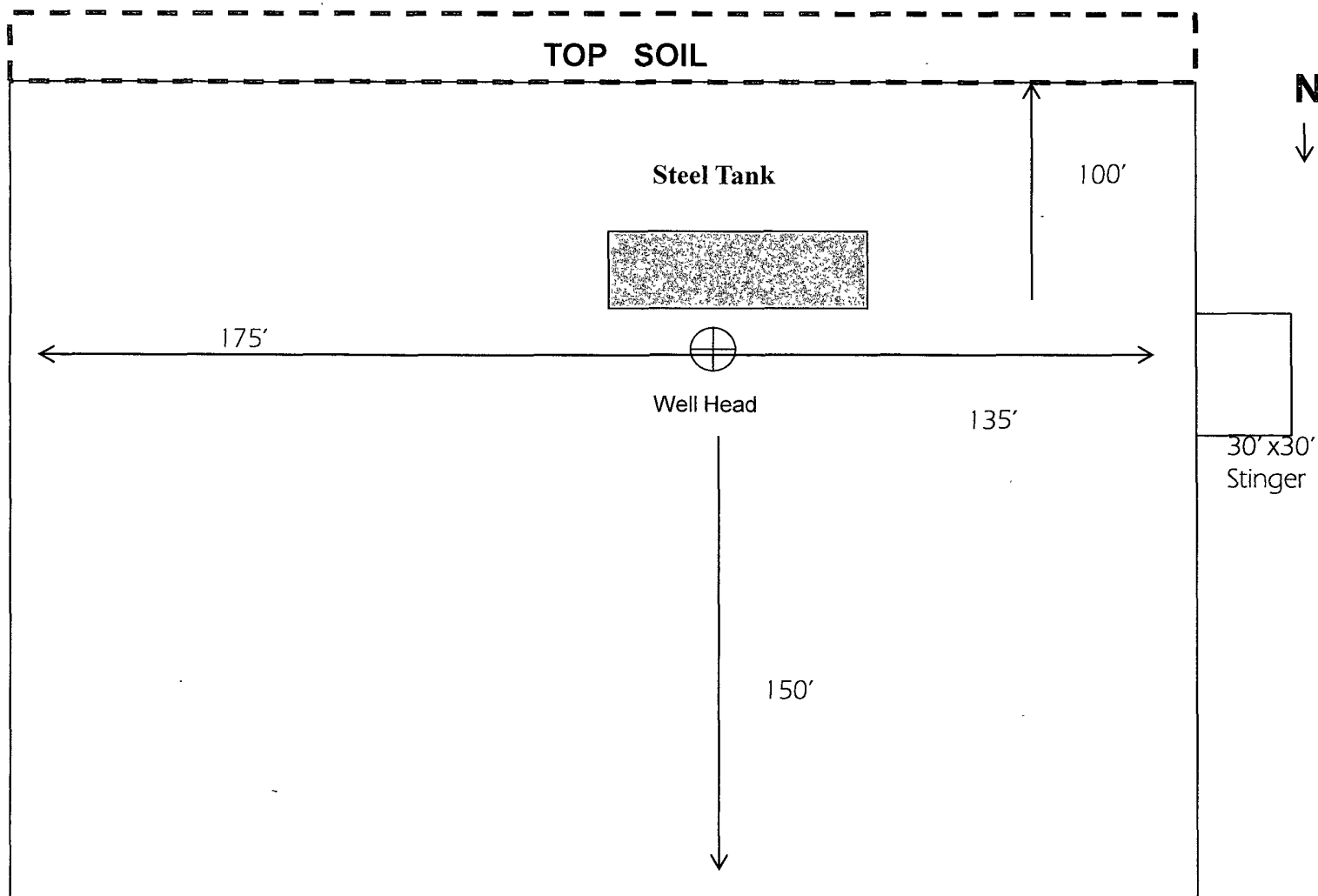
SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target	
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00		
3	2588.18	7.76	43.90	2586.99	18.92	18.21	2.00	43.90	26.26		
4	5137.56	7.76	43.90	5113.01	267.08	256.99	0.00	0.00	370.64		
5	5525.74	0.00	0.00	5500.00	286.00	275.20	2.00	-180.00	396.90	PP-JCF #51	
6	7175.74	0.00	0.00	7150.00	286.00	275.20	0.00	0.00	396.90	PBHL-JCF #51	

WELL DETAILS: JC Federal #51					
Ground Level: 3999.00					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	661240.60	677445.00	32°48' 59.421 N	103°45' 20.691 W

PROJECT DETAILS: Lea County, NM (NAD27 NME) Plan Plan #2 - 7-7/8" Hole (JC Federal #51/OH)

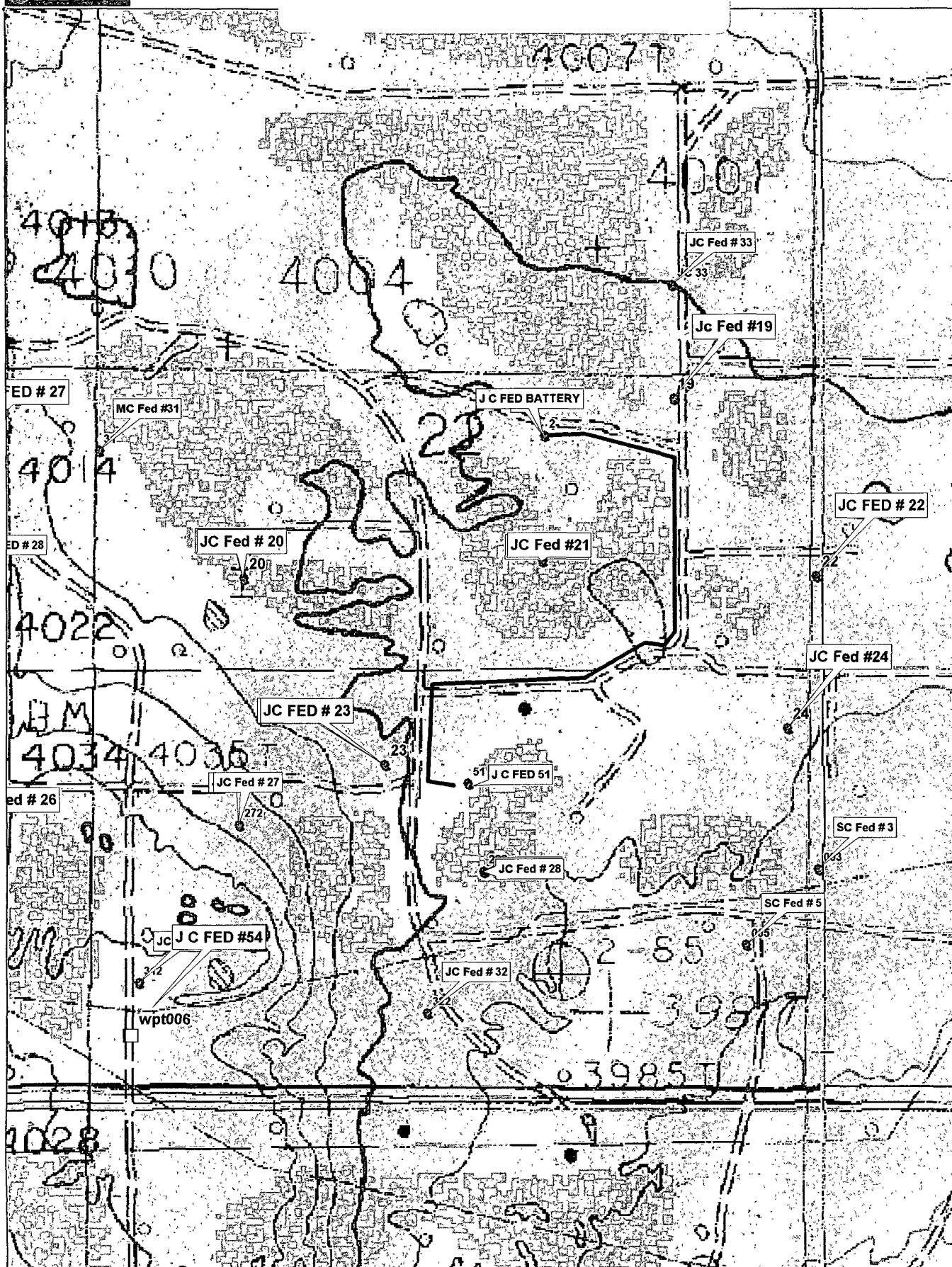
Geodetic System: US State Plane 1927 (Exact solution) Created By: Julio Pina Date: 14-Jul-10
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866 Checked: Date:
Zone: New Mexico East 3001
System Datum: Mean Sea Level Reviewed: Date:
Approved: Date:





Not To Scale

COG OPERATING LLC
Rig Layout-Closed Loop
System



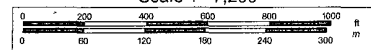
Data use subject to license.

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www.delorme.com

TN
★
MN (7 8°E)

Scale 1 7,200


$$1'' = 600.0 \text{ ft}$$

Data Zoom 14-7

**PECOS DISTRICT
CONDITIONS OF APPROVAL**

RECEIVED
SEP 07 2010
HOBBSOC

OPERATOR'S NAME:	COG Operating
LEASE NO.:	LC029509B
WELL NAME & NO.:	51 JC Federal
SURFACE HOLE FOOTAGE:	1375' FSL & 2023' FWL
BOTTOM HOLE FOOTAGE:	1650' FSL & 2310' FWL
LOCATION:	Section 22, T. 17 S., R 32 E., NMPM
COUNTY:	Lea County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - Lesser Prairie Chicken
 - Low Profile Well Marker
- ☒ **Construction**
 - Notification
 - Topsoil
 - Reserve Pit – Closed-loop mud system
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - Surface casing depth
 - Onshore Order 6 – H2S requirements
 - BOP/BOPE test
- ☒ **Production (Post Drilling)**
 - Pipelines
- ☐ **Reserve Pit Closure/Interim Reclamation**
- ☐ **Final Abandonment/Reclamation**

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Lesser Prairie-Chicken Timing Stipulation

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, power line, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Low Profile Well Marker

The well marker will be approximately 2 inches above ground level and contain the following information: operator name, lease name, and well number and location, including unit letter, section, township, and range. The previous listed information will be welded, stamped, or otherwise permanently engraved into the metal of the marker.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Hobbs Field Station at (575) 393-3612 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. RESERVE PITS

The operator has applied for a closed-loop system. The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Lea County**

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. A Hydrogen Sulfide (H₂S) Drilling Plan should be activated 500 feet prior to drilling into the Grayburg formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment (well control, etc.) and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
3. Rustler and Salt formation to be listed on Completion Report.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

**Possible lost circulation in the Grayburg and San Andres formations.
Possible water and brine flows in the Salado and Artesia Group.**

1. The 13-3/8 inch surface casing shall be set **a minimum of 25 feet into the Rustler Anhydrite at approximately 875 feet** and cemented to the surface. **Fresh water mud to be used to setting depth.**
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
 - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 8-5/8 inch intermediate casing is:
☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.
This casing is to be set in the Tansill formation at approximately 1900 feet.
3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.
4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) psi.**

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. The tests shall be done by an independent service company. **Operator to submit copies of test done for each casing string with the subsequent sundry detailing the casing/cementing details.**
 - b. The results of the test shall be reported to the appropriate BLM office.
 - c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
 - d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
 - e. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

WWI 071509

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color Shale Green, Munsell Soil Color Chart # 5Y 4/2

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the

Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
 - (1) Land clearing.
 - (2) Earth-disturbing and earth-moving work.
 - (3) Blasting.
 - (4) Vandalism and sabotage.
- c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of 25 feet.
7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.
8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.
9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.
10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.
12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.
13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.
14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.
15. Any cultural and/or paleontological resource (historic or prehistoric site or object)

discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

(March 1989)

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

**Four-winged Saltbush 5lbs/A

* This can be used around well pads and other areas where caliche cannot be removed.

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.

Seed Mixture for LPC Sand/Shinnery Sites

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