

ATS-10-130 RM

Form 3160-3
(February 2005)

RECEIVED
FEB 22 2010
NMOCD ARTESIA

OCD-ARTESIA

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007 **EA 220**

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work. <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5 Lease Serial No. NMLC028731A
1b. Type of Well. <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6 If Indian, Allottee or Tribe Name
2 Name of Operator Marbob Energy Corporation		7 If Unit or CA Agreement, Name and No
3a Address P.O. Box 227, Artesia, NM 88211-0227	3b. Phone No. (include area code) 575-748-3303	8 Lease Name and Well No. Mary Federal #3
4 Location of Well (Report location clearly and in accordance with any State requirements *) At surface 345' FSL & 1550' FEL At proposed prod zone BHL: 345' FSL & 1680' FEL UNORTHODOX LOCATION		9 API Well No. 30-015-37642
14 Distance in miles and direction from nearest town or post office* About 5 miles from Loco Hills, NM		10 Field and Pool, or Exploratory Cedar Lake Abo
11 Sec, T R M. or Blk and Survey or Area Section 22, T17S - R29E		12 County or Parish Eddy County
13 State NM		
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg unit line, if any) 345'	16 No of acres in lease 600.00	17 Spacing Unit dedicated to this well 40
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19 Proposed Depth 6,350' TVD 6360 MD	20 BLM/BIA Bond No. on file NMB000412
21 Elevations (Show whether DF, KDB, RT, GL, etc) 3561' GL	22 Approximate date work will start* 01/02/2009	23 Estimated duration 15 Days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, must be attached to this form

- | | |
|--|---|
| 1 Well plat certified by a registered surveyor | 4 Bond to cover the operations unless covered by an existing bond on file (see Item 20 above) |
| 2 A Drilling Plan. | 5 Operator certification |
| 3 A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office) | 6 Such other site specific information and/or plans as may be required by the BLM |

25 Signature <i>Nancy T. Agnew</i>	Name (Printed/Typed) Nancy T. Agnew	Date 12/02/2009
Title Land Department		

Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed) FIELD MANAGER	Date FEB 18 2010
Office CARLSBAD FIELD OFFICE		

Application approval 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.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 USC Section 1001 and Title 43 USC 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) *well becomes orthodox @ approx 3700 MD*

Roswell Controlled Water Basin

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

**GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED**

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

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

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

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

State of New Mexico
Energy, Minerals and Natural Resources Department

NOV 19 2009

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

11885 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-37642	Pool Code 11620	Pool Name Cedar Lake; Abo
Property Code 37579	Property Name MARY FEDERAL	Well Number 3
OGRID No. 14049	Operator Name MARBOB ENERGY CORPORATION	Elevation 3561'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	22	17-S	29-E		345	SOUTH	1550	EAST	EDDY

Bottom Hole Location If Different From Surface

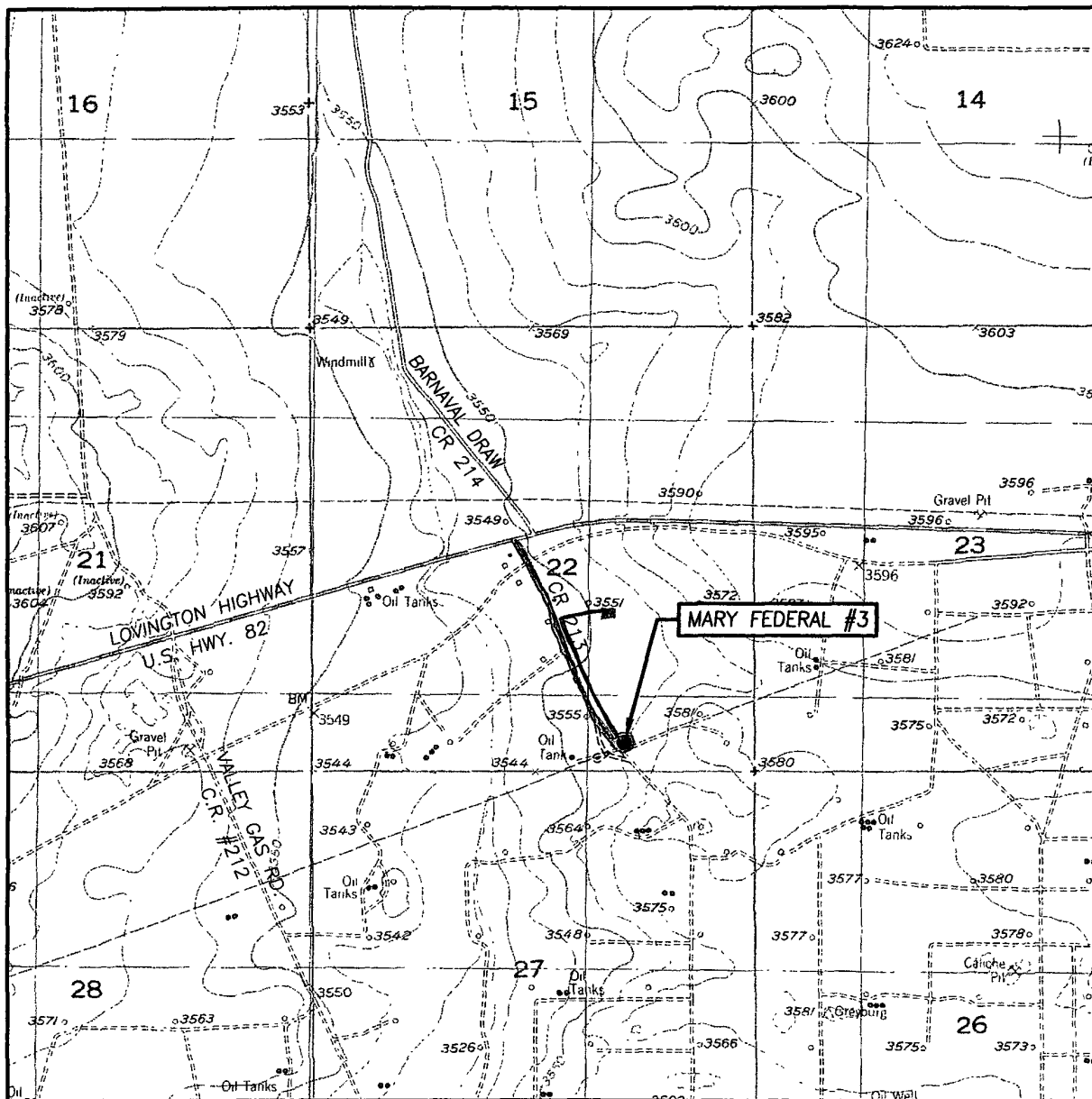
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	22	17-S	29-E		345	SOUTH	1680	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=659825.7 N X=584413.9 E</p> <p>LAT.=32.813647° N LONG.=104.058572° W</p> <p>BOTTOM HOLE LOCATION Y=659825.6 N X=584283.9 E</p> <p>GRID: AZ.=269°58'30" HORIZ. DIST.=130.0'</p> <p>B.H. SEE DETAIL</p> <p>1550'</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>Nancy T. Agnew</i> 11/23/09 Signature Date</p> <p>Nancy T. Agnew 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>NOVEMBER 10, 2009 Date Surveyed DSS</p> <p><i>Ronald J. Eidson</i> Signature & Seal of Professional Surveyor</p> <p>Certificate No. GARY G. EIDSON 12641 RONALD J. EIDSON 3239</p>
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LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
RED LAKE SE, N.M. - 10'

SEC. 22 TWP. 17-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 345' FSL & 1550' FEL

ELEVATION 3561'

OPERATOR MARBOB ENERGY CORPORATION

LEASE MARY FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
RED LAKE SE, N.M.

 **Existing Roads**
 **Proposed Flowline**

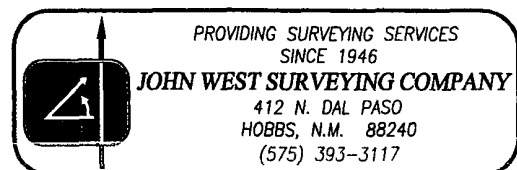


EXHIBIT #2

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

Mary Federal #3
Surf: 345' FSL & 1550' FEL
BHL: 345' FSL & 1680' FEL
Section 22, T17S, R29E
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Marbob Energy Corporation submits the following ten items of pertinent information in accordance with BLM requirements.

1. Geological surface formation: Permian
2. The estimated tops of geologic markers & estimated depths at which anticipated water, oil or gas formations are expected to be encountered are as follows:

Rustler	235'	
TOS	330'	
BOS	740'	
Yates	930'	
7 River	1200'	
Queen	1820'	Oil
San Andres	2510'	Oil
Glorieta	3985'	
Yeso	4050'	Oil
Tubb	5585'	
Abo	6140'	
TD	6350'	

No other formations are expected to give up oil, gas, or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 8 5/8" casing at 300' and circulating cement back to surface. All intervals will be isolated by setting 5 1/2" casing to total depth and circulating cement above the base of the 8 5/8" casing.

3. Proposed Casing Program:

Hole Size	Interval	OD Casing	New or Used	Wt	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
12 1/4"	0' - 300'	8 5/8"	New	24#	STC	J-55	1.125	1.125	1.6
7 7/8"	300' - 6350'	5 1/2"	New	17#	LTC	J-55	1.125	1.125	1.6

5. Proposed Cement Program:

- b. 8 5/8" Surf Cement to surface with 200 sk "c" wt 14.8 yield 1.34
- d. 5 1/2" Prod 1st stage with 450 sk "H" wt 13.0 yield 1.64
2nd stage with 200 sk "c" light wt 12.7 yield 1.91 Tail in
with 200 sk "H" wt 13.0 yield 1.64 DV @ 3250' TOC Surf

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach approximately 200' above the 8 5/8" casing shoe. For the surface casing: If cement does not circulate to the surface, the appropriate BLM office shall be notified and a tag with 1" will be performed at four positions 90 degrees apart to verify cement depth. If depth is greater than 100' or water is standing in the annulus, remedial cementing will be done. If no water and TOC tag is less than 100', when 100% excess cement of the annulus volume was run on the primary job, ready-mix can be used to bring cement to surface. **All casing is new and API approved.**

6. Minimum Specifications for Pressure Control:

Nipple up on 8 5/8" with 2m system and test to 2000# with independent tester (Hydril)

BOP will be operationally checked each 24 hour period. BOP will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A 2" kill line and a 3" choke line will be included in the drilling spool located below the BOP. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold with 2000 psi WP rating.

Marbob requests a variance if Teaco is used to drill this well to use a co-flex line between the BOP and choke manifold. Manufacturer: Midwest Hose & Specialty, Length: 7', Size: 3 1/2 ID, Ends flanges/clamps, WP rating: 5000, Anchors required by manufacturer-NO.

7. Estimated BHP: 2641.6 psi

8. Mud Program: The applicable depths and properties of this system are as follows:

Depth	Type System	Mud Weight	Viscosity (sec)	Waterloss (cc)
0' – 300'	F/W	8.4-8.6	29	N.C.
300' – 6350'	Brine	9.9-10.0	29	N.C.

The necessary mud products for weight addition and fluid loss control will be on location at all times.

9. Auxiliary Well Control and Monitoring Equipment:

- a. A Kelly cock will be in the drill string at all times.
- b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- c. Hydrogen Sulfide detection equipment will be in operation after drilling out the 8 5/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 8 5/8" shoe until total depth is reached.

10. Testing, Logging and Coring Program ~~See COA~~

- a. Drill stem tests will be based on geological sample shows.
- b. The open hole electrical logging program will be:
 - i. Total Depth to Intermediate Casing: Dual Laterolog-Micro Laterolog and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
 - ii. Total Depth to Surface: Compensated Neutron with Gamma Ray
 - iii. No coring program is planned
 - iv. Additional testing will be initiated subsequent to setting the 5 1/2" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

11. Potential Hazards:

- a. No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP: 2641.6 psi. No H2S is anticipated to be encountered.
- b. If H2S is encountered in quantities under 10 ppm fans will be placed in the substructure, rig floor and possum belly area of drilling rig to prevent accumulation of gas. If higher levels of H2S are detected the well will be shut in and a gas separator installed with a flare line.

12. Anticipated starting date and Duration of Operations:

- a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 15 days.



Marbob

Eddy County

Mary Federal

#3

OH

Plan: Plan #1

Pathfinder X & Y Planning Report

03 December, 2009

BUREAU OF LAND MGMT
CARLSBAD OFFICE

2009 DEC -4 PM 1:44

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PATHFINDER



Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company:	Marbob	Local Co-ordinate Reference:	Well #3
Project:	Eddy County	TVD Reference:	WELL @ 3583 00ft (Original Well Elev)
Site:	Mary Federal	MD Reference:	WELL @ 3583 00ft (Original Well Elev)
Well:	#3	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Project		Eddy County	
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		Mary Federal			
Site Position:		Northing:	659,825.700 ft	Latitude:	32° 48' 49.131 N
From:	Map	Easting:	584,413.900 ft	Longitude:	104° 3' 30.860 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.15 °

Well		#3				
Well Position	+N/-S	0.00 ft	Northing:	659,825.700 ft	Latitude:	32° 48' 49.131 N
	+E/-W	0.00 ft	Easting:	584,413.900 ft	Longitude:	104° 3' 30.860 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	3,561 00ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	8 02	60 70	49,091

Design		Plan #1		
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	269.96

Survey Tool Program	Date	12/03/2009
From	To	
(ft)	(ft)	
0.00	6,360.15	Plan #1 (OH)
Survey (Wellbore)	Tool Name	Description
	MWD	MWD - Standard



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Well:	#3	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Planned Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
0 00	0 00	0 00	0.00	-3,583.00	0 00	0.00	0 00	0 00	659,825.70	584,413.90	
100 00	0.00	0 00	100.00	-3,483.00	0 00	0.00	0.00	0 00	659,825.70	584,413.90	
200.00	0.00	0 00	200.00	-3,383.00	0.00	0.00	0 00	0 00	659,825.70	584,413.90	
300.00	0 00	0.00	300.00	-3,283.00	0.00	0.00	0 00	0.00	659,825.70	584,413.90	
400.00	0 00	0.00	400.00	-3,183.00	0 00	0.00	0 00	0 00	659,825.70	584,413.90	
500.00	0.00	0.00	500.00	-3,083.00	0 00	0.00	0.00	0 00	659,825.70	584,413.90	
600 00	0.00	0.00	600.00	-2,983.00	0 00	0.00	0.00	0 00	659,825.70	584,413.90	
700 00	0.00	0.00	700.00	-2,883.00	0 00	0.00	0.00	0 00	659,825.70	584,413.90	
800.00	0.00	0.00	800.00	-2,783.00	0 00	0.00	0.00	0 00	659,825.70	584,413.90	
900.00	0.00	0.00	900.00	-2,683.00	0 00	0.00	0.00	0 00	659,825.70	584,413.90	
1,000.00	0.00	0.00	1,000.00	-2,583.00	0 00	0.00	0.00	0 00	659,825.70	584,413.90	
1,100.00	0 00	0 00	1,100.00	-2,483.00	0.00	0.00	0 00	0.00	659,825.70	584,413.90	
1,200.00	0.00	0.00	1,200.00	-2,383.00	0 00	0.00	0 00	0.00	659,825.70	584,413.90	
1,300.00	0 00	0.00	1,300.00	-2,283.00	0 00	0.00	0 00	0.00	659,825.70	584,413.90	
1,400.00	0 00	0.00	1,400.00	-2,183.00	0 00	0.00	0 00	0.00	659,825.70	584,413.90	
1,500 00	0.00	0.00	1,500.00	-2,083.00	0 00	0.00	0 00	0.00	659,825.70	584,413.90	
1,600 00	0 00	0.00	1,600.00	-1,983.00	0.00	0.00	0 00	0.00	659,825.70	584,413.90	
1,700.00	0.00	0.00	1,700.00	-1,883.00	0.00	0.00	0 00	0.00	659,825.70	584,413.90	
1,800 00	0.00	0.00	1,800.00	-1,783.00	0 00	0.00	0.00	0 00	659,825.70	584,413.90	
1,900 00	0 00	0.00	1,900.00	-1,683.00	0.00	0.00	0.00	0 00	659,825.70	584,413.90	
2,000.00	0 00	0.00	2,000.00	-1,583.00	0.00	0.00	0 00	0.00	659,825.70	584,413.90	
2,100.00	0 00	0.00	2,100.00	-1,483.00	0.00	0.00	0.00	0 00	659,825.70	584,413.90	
2,200.00	0 00	0.00	2,200.00	-1,383.00	0 00	0.00	0.00	0 00	659,825.70	584,413.90	
2,300.00	0 00	0.00	2,300.00	-1,283.00	0.00	0.00	0.00	0 00	659,825.70	584,413.90	
2,400.00	0 00	0.00	2,400.00	-1,183.00	0.00	0.00	0 00	0.00	659,825.70	584,413.90	
2,500 00	0.00	0.00	2,500.00	-1,083.00	0.00	0.00	0 00	0.00	659,825.70	584,413.90	
2,600.00	0.00	0.00	2,600.00	-983.00	0.00	0.00	0 00	0.00	659,825.70	584,413.90	



Pathfinder Energy Services

Pathfinder X & Y Planning Report



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Site:	Mary Federal	MD Reference:	WELL @ 3583 00ft (Original Well Elev)
Well:	#3	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Planned Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
2,700.00	0.00	0.00	2,700.00	-883.00	0.00	0.00	0.00	0.00	659,825.70	584,413.90	
2,800.00	0.00	0.00	2,800.00	-783.00	0.00	0.00	0.00	0.00	659,825.70	584,413.90	
2,907.00	0.00	0.00	2,907.00	-676.00	0.00	0.00	0.00	0.00	659,825.70	584,413.90	
3,000.00	2.33	269.96	2,999.97	-583.03	0.00	-1.89	1.89	2.50	659,825.70	584,412.01	
3,100.00	4.83	269.96	3,099.77	-483.23	-0.01	-8.12	8.12	2.50	659,825.69	584,405.78	
3,200.00	7.33	269.96	3,199.20	-383.80	-0.01	-18.70	18.70	2.50	659,825.69	584,395.20	
3,300.00	9.83	269.96	3,298.08	-284.92	-0.03	-33.61	33.61	2.50	659,825.67	584,380.29	
3,388.22	12.03	269.96	3,384.70	-198.30	-0.04	-50.34	50.34	2.50	659,825.66	584,363.56	
3,400.00	12.03	269.96	3,396.21	-186.79	-0.04	-52.79	52.79	0.00	659,825.66	584,361.11	
3,500.00	12.03	269.96	3,494.02	-88.98	-0.06	-73.63	73.63	0.00	659,825.64	584,340.27	
3,528.92	12.03	269.96	3,522.30	-60.70	-0.06	-79.66	79.66	0.00	659,825.64	584,334.24	
3,600.00	10.25	269.96	3,592.04	9.04	-0.07	-93.40	93.40	2.50	659,825.63	584,320.50	
3,700.00	7.75	269.96	3,690.80	107.80	-0.08	-109.05	109.05	2.50	659,825.62	584,304.85	
3,800.00	5.25	269.96	3,790.15	207.15	-0.09	-120.37	120.37	2.50	659,825.61	584,293.53	
3,900.00	2.75	269.96	3,889.90	306.90	-0.10	-127.35	127.35	2.50	659,825.60	584,286.55	
4,000.00	0.25	269.96	3,989.85	406.85	-0.10	-129.98	129.98	2.50	659,825.60	584,283.92	
4,010.15	0.00	0.00	4,000.00	417.00	-0.10	-130.00	130.00	2.50	659,825.60	584,283.90	
4,100.00	0.00	0.00	4,089.85	506.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90	
4,200.00	0.00	0.00	4,189.85	606.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90	
4,300.00	0.00	0.00	4,289.85	706.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90	
4,400.00	0.00	0.00	4,389.85	806.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90	
4,500.00	0.00	0.00	4,489.85	906.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90	
4,600.00	0.00	0.00	4,589.85	1,006.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90	
4,700.00	0.00	0.00	4,689.85	1,106.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90	
4,800.00	0.00	0.00	4,789.85	1,206.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90	
4,900.00	0.00	0.00	4,889.85	1,306.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90	
5,000.00	0.00	0.00	4,989.85	1,406.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90	



Pathfinder Energy Services
Pathfinder X & Y Planning Report



Company: Marbob
Project: Eddy County
Site: Mary Federal
Well: #3
Wellbore: OH
Design: Plan #1

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

Well #3
WELL @ 3583.00ft (Original Well Elev)
WELL @ 3583.00ft (Original Well Elev)
Grid
Minimum Curvature
Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V: Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
5,100.00	0.00	0.00	5,089.85	1,506.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90
5,200.00	0.00	0.00	5,189.85	1,606.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90
5,300.00	0.00	0.00	5,289.85	1,706.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90
5,400.00	0.00	0.00	5,389.85	1,806.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90
5,500.00	0.00	0.00	5,489.85	1,906.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90
5,600.00	0.00	0.00	5,589.85	2,006.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90
5,700.00	0.00	0.00	5,689.85	2,106.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90
5,800.00	0.00	0.00	5,789.85	2,206.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90
5,900.00	0.00	0.00	5,889.85	2,306.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90
6,000.00	0.00	0.00	5,989.85	2,406.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90
6,100.00	0.00	0.00	6,089.85	2,506.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90
6,200.00	0.00	0.00	6,189.85	2,606.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90
6,300.00	0.00	0.00	6,289.85	2,706.85	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90
6,360.15	0.00	0.00	6,350.00	2,767.00	-0.10	-130.00	130.00	0.00	659,825.60	584,283.90

Targets

Target Name

hit/miss: target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
BHL(Mary#3)	0.00	0.00	4,000.00	-0.10	-130.00	659,825.600	584,283.900	32° 48' 49.133 N	104° 3' 32.384 W
- plan hits target									
- Point									

Checked By: _____

Approved By: _____

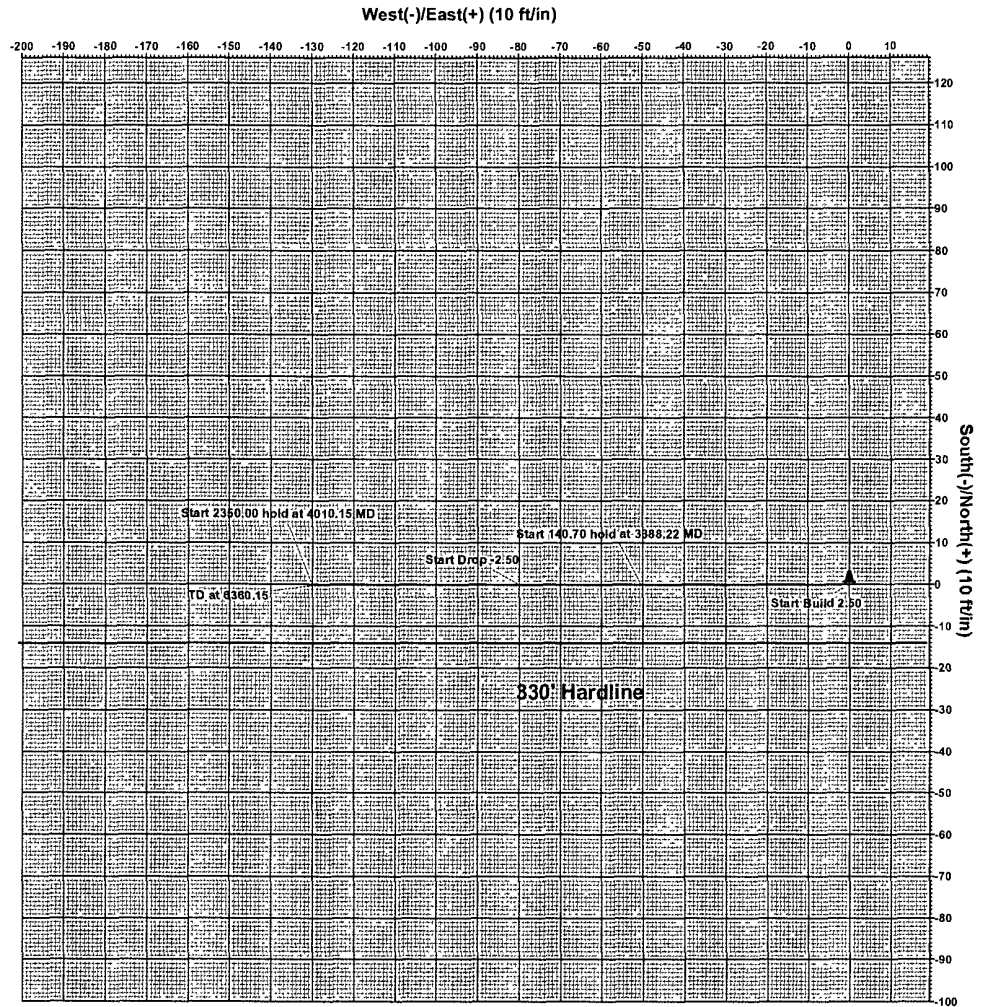
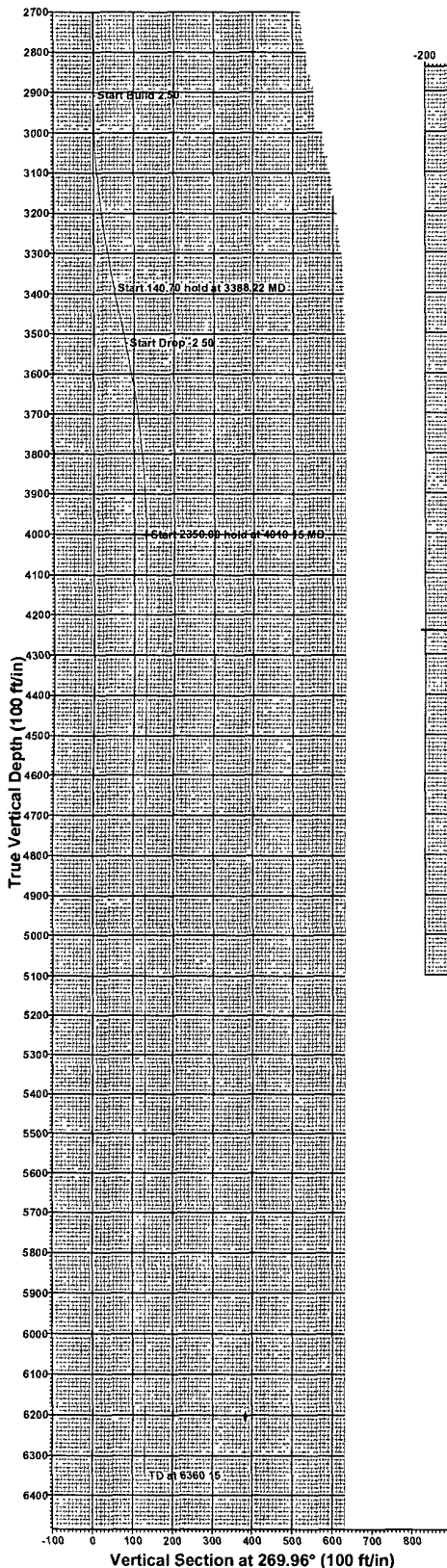
Date: _____



Azimuths to Grid North
True North: -0.15°
Magnetic North: 7.87°

Magnetic Field
Strength: 49091.1snT
Dip Angle: 60.70°
Date: 12/31/2009
Model: IGRF200510

PATHFINDER



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	2907.00	0.00	0.00	2907.00	0.00	0.00	0.00	0.00	0.00
3	3388.22	12.03	269.96	3384.70	-0.04	-50.34	2.50	269.96	50.34
4	3528.92	12.03	269.96	3522.30	-0.08	-79.66	0.00	0.00	79.66
5	4010.15	0.00	0.00	4000.00	-0.10	-130.00	2.50	180.00	130.00
6	6360.15	0.00	0.00	6350.00	-0.10	-130.00	0.00	0.00	130.00

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)					
Name	TVD	+N-S	+E-W	Northing	Easting
BHL(Mary#3)	4000.00	-0.10	-130.00	659825.600	584283.900

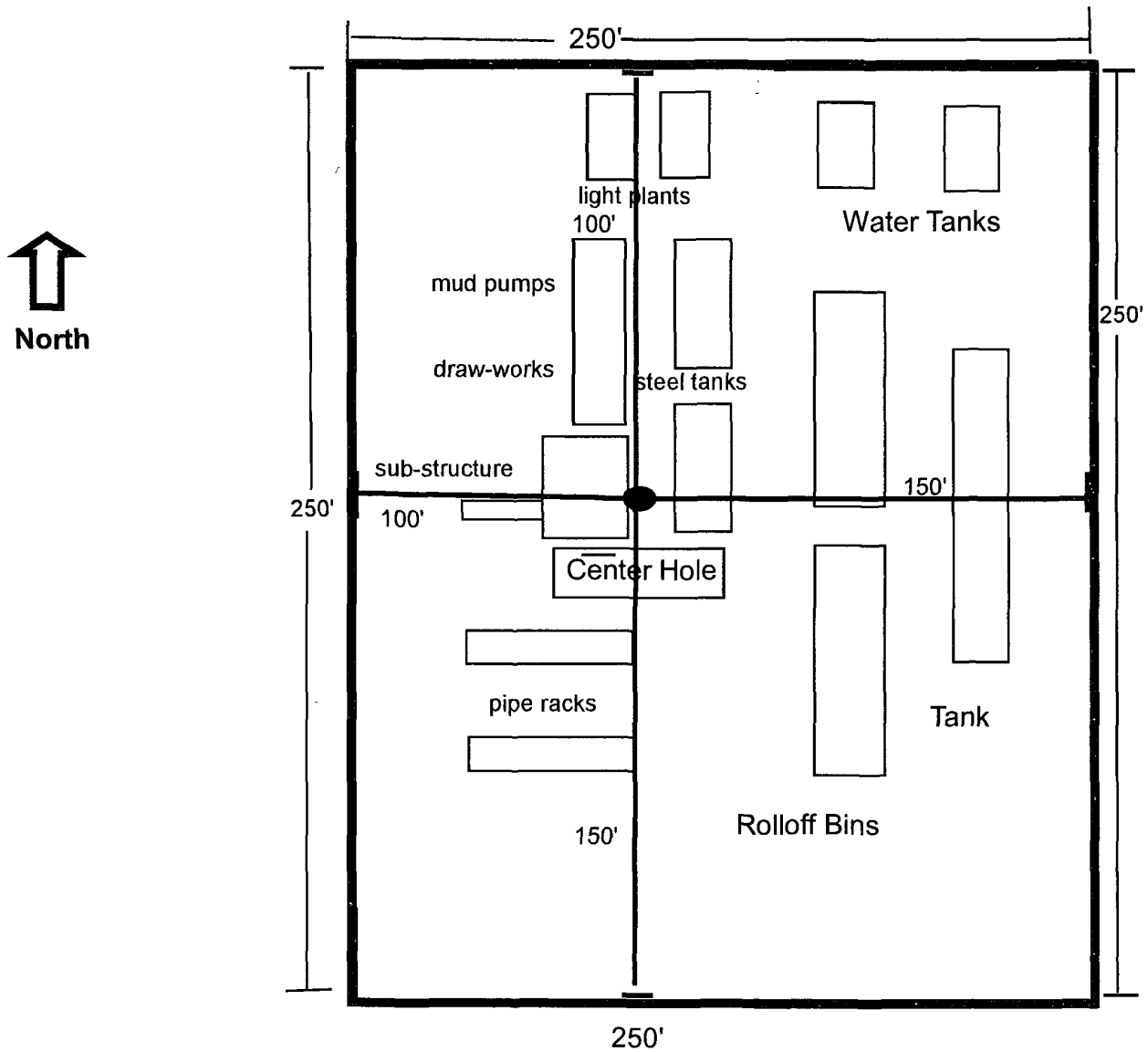
WELL DETAILS #3						
Ground Elevation		3561.00				
RKB Elevation		WELL @ 3583.00ft (Original Well Elev)				
Rig Name		Original Well Elev				
+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	659825.700	584413.900	32° 48' 49" 131 N	104° 3' 30 860 W	

PROJECT DETAILS: Eddy County
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
Local North: Grid

Project: Eddy County
Site: Mary Federal
Well: #3
Wellbore: OH
Plan: Plan #1 (#3 /OH)

Plan: Plan #1 (#3 /OH)	
Created By	Nate Bingham
Date:	11 22, December 03 2009
Checked	
Date:	

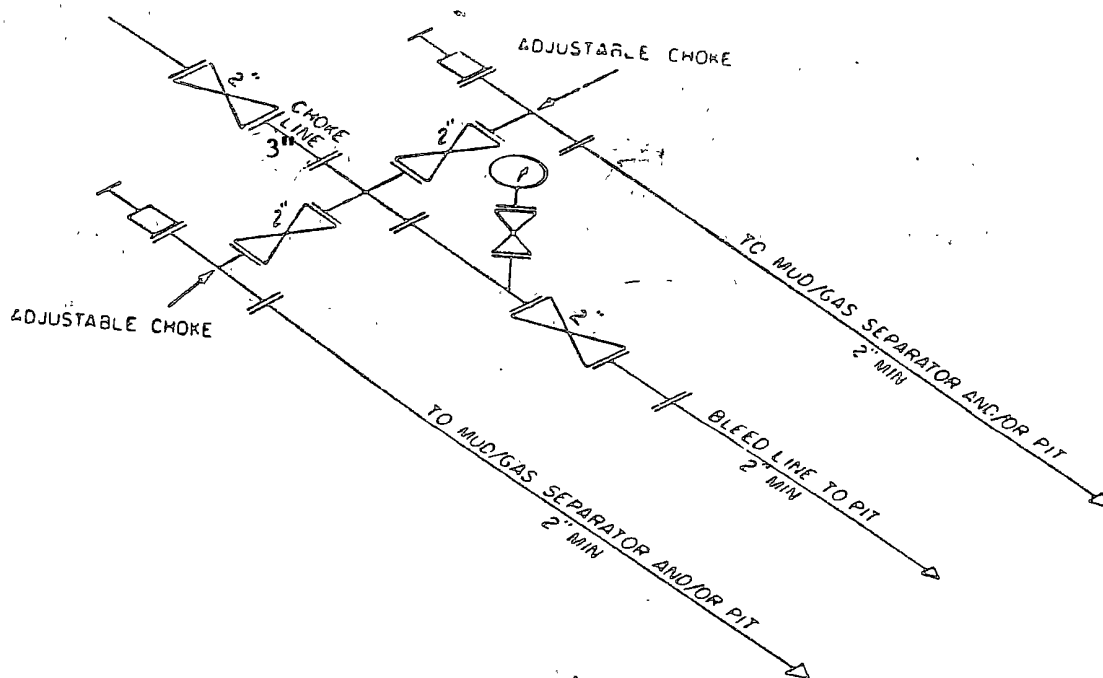
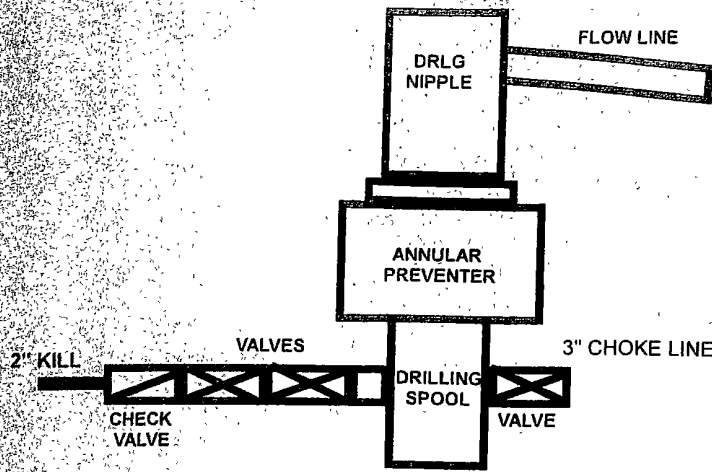
Well Site Lay-Out Plat



Mary Federal #3
Surf: 345' FSL & 1550' FEL
BHL: 345' FSL & 1680' FEL
Section 22, T17S, R29E
Eddy County, New Mexico

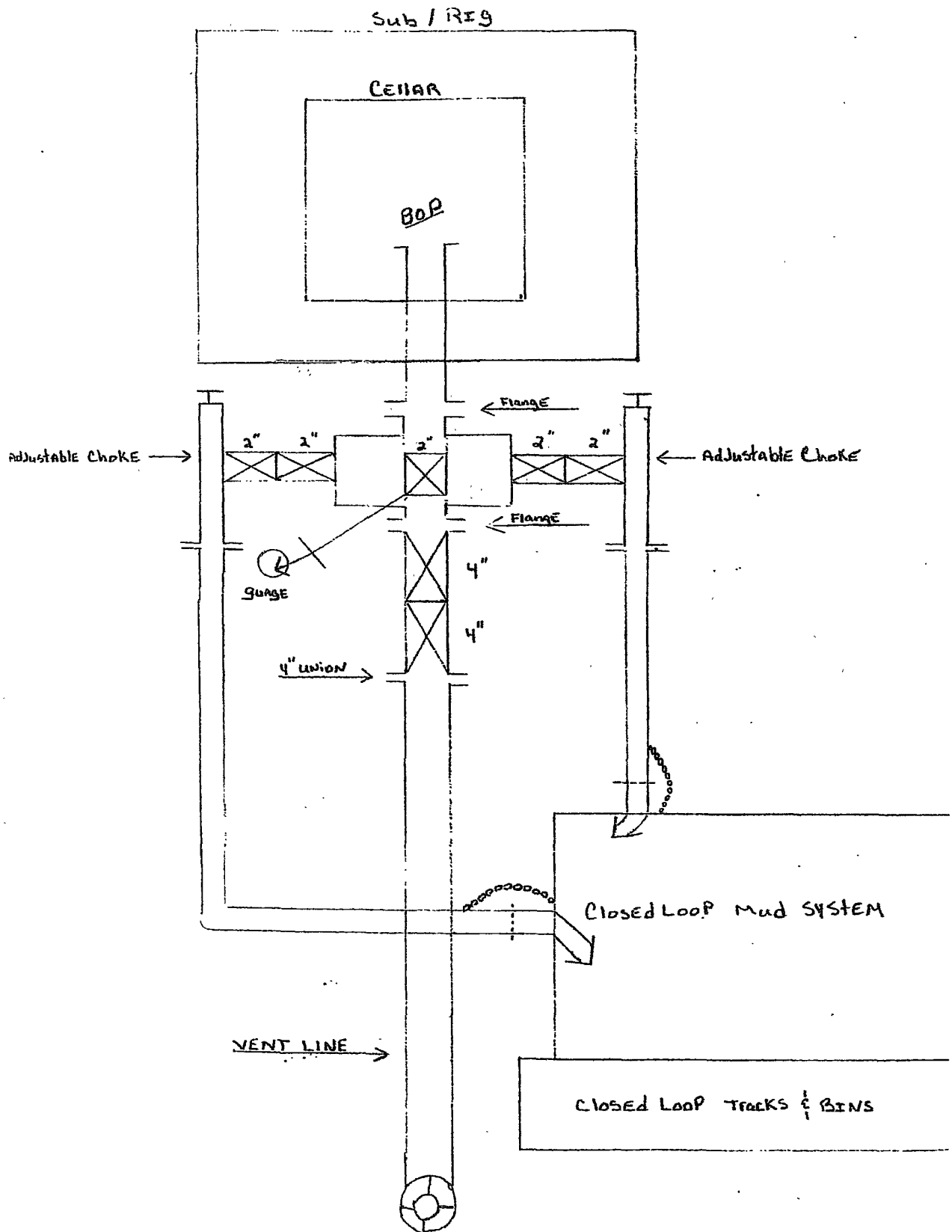
EXHIBIT THREE

2M SYSTEM



2M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES
MAY VARY

2M Choke Manifold Equipment



MARBOB ENERGY CORPORATION

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- A. The hazards and characteristics of hydrogen sulfide (H₂S).
- B. The proper use and maintenance of personal protective equipment and life support systems.
- C. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- D. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- A. The effects of H₂S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- B. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- C. The contents and requirements of the H₂S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

II. H₂S SAFETY EQUIPMENT AND SYSTEMS

Note: All H₂S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H₂S.

A. Well Control Equipment:

Flare line.

Choke manifold.

Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head.

B. Protective equipment for essential personnel:

Mark II Surviveair 30-minute units located in the dog house and at briefing areas.

C. H₂S detection and monitoring equipment:

2 - portable H₂S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H₂S levels of 20 ppm are reached.

D. Visual warning systems:

Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

E. Mud Program:

The mud program has been designed to minimize the volume of H₂S circulated to the surface.

F. Metallurgy:

All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.

G. Communication:

Company vehicles equipped with cellular telephone and 2-way radio.

If H₂S is encountered in quantities under 10 ppm fans will be placed in the substructure, rig floor and possum belly area of drilling rig to prevent accumulation of gas. If higher levels of H₂S are detected the well will be shut in and a gas separator installed with a flare line.

Marbob Energy has conducted a review to determine if an H₂S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal. H₂S concentrations of wells in this area from surface to TD are low enough; therefore we do not believe that an H₂S Contingency Plan would be necessary.

W A R N I N G

**YOU ARE ENTERING AN H₂S AREA
AUTHORIZED PERSONNEL ONLY**

- 1. BEARDS OR CONTACT LENSES NOT ALLOWED***
- 2. HARD HATS REQUIRED***
- 3. SMOKING IN DESIGNATED AREAS ONLY***
- 4. BE WIND CONSCIOUS AT ALL TIMES***
- 5. CK WITH MARBOB FOREMAN AT MAIN OFFICE***

MARBOB ENERGY CORPORATION

1-505-748-3303

EMERGENCY CALL LIST

	<u>Office</u>	<u>Mobile</u>	<u>Home</u>
Marbob Energy Corp.	575-748-3303		
Sheryl Baker	575-748-3303	575-748-5489	575-748-2396
Johnny C. Gray	575-748-3303	575-748-5983	575-885-3879
Raye Miller	575-748-3303	575-513-0176	575-746-9577
Dean Chumbley	575-748-3303	575-748-5988	575-748-2426

EMERGENCY RESPONSE NUMBERS **Eddy County, New Mexico**

State Police	575-748-9718
Eddy County Sheriff	575-746-2701
Emergency Medical Services (Ambulance)	911 or 575-746-2701
Eddy County Emergency Management (Harry Burgess)	575-887-9511
State Emergency Response Center (SERC)	575-476-9620
Carlsbad Police Department	575-885-2111
Carlsbad Fire Department	575-885-3125
New Mexico Oil Conservation Division	575-748-1283
Indian Fire & Safety	800-530-8693
Halliburton Services	800-844-8451

MARBOB ENERGY CORPORATION
MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Mary Federal #3
Surf: 345' FSL & 1550' FEL
BHL: 345' FSL & 1680' FEL
Section 22, T17S, R29E
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

- a. The well site and elevation plat for the proposed well are reflected on the well site layout; Form C-102. The well was staked by John West Surveying Company.
- b. Exhibit 2 is a portion of a topo map showing the well and roads in the vicinity of the proposed location. The proposed wellsite and the access route to the location are indicated in red on Exhibit 2. Right of way using this proposed route is being requested if necessary.
- c. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

DIRECTIONS:

From the intersection of U.S. Highway #82 and County Road #213, go southeast on county road #213 approx. 0.5 miles to the Dodd Federal Unit #92. This location stake is approx. 100 feet east of the Dodd Federal unit #92 well.

2. PLANNED ACCESS ROAD:

Marbob will be using an existing access road. See directions above.

3. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. In the event the well is found productive, the south tank battery (NWSE sec 22, T17S-R29E) would be utilized and the necessary production equipment will be installed at the well site. A Site Facilities Diagram will be submitted upon completion of facility.
- B. All flowlines will adhere to API standards
- C. If electricity is needed, power will be obtained from Central Valley Electric. Central Valley Electric will apply for ROW for their power lines.
- D. If the well is productive, rehabilitation plans are as follows:

- i. The original topsoil from the well site will be returned to the location. The drill site will then be contoured as close as possible to the original state.

4. LOCATION AND TYPES OF WATER SUPPLY:

This location will be drilled using a combination of water mud systems (outlined in the Drilling Program). The water will be obtained from commercial water stations in the area and hauled to location by transport truck using the existing and proposed roads shown in Exhibit #2. On occasion, water will be obtained from a pre-existing water well, running a pump directly to the drill rig. In these cases where a poly pipeline is used to transport water for drilling purposes, the existing and proposed road shown in Exhibit "2" will be utilized.

5. CONSTRUCTION MATERIALS:

All Caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM approved pit or from prevailing deposits found under the location. All roads will be constructed of 6" rolled and compacted caliche. Will use BLM recommended use of extra caliche from other locations close by for roads, if available.

6. METHODS OF HANDLING WASTE MATERIAL:

- a. All trash, junk and other waste material will be removed from the wellsite within 30 days after finishing drilling and/or completion operations. All waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed, all contents will be removed and disposed of in an approved sanitary landfill.
- b. The supplier, including broken sacks, will pick up slats remaining after completion of well.
- c. A porto-john will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- d. Disposal of fluids to be transported by an approved disposal company.

7. ANCILLARY FACILITIES:

No campsite or other facilities will be constructed as a result of this well.

8. WELLSITE LAYOUT:

- a. Exhibit 3 shows the proposed well site layout with dimensions of the pad layout.
- b. This exhibit indicates proposed location of fresh water sump pits if utilized and living facilities.
- c. Mud pits in the active circulating system will be steel pits and a closed loop system will be utilized.

9. PLANS FOR SURFACE RECLAMATION:

- a. After finishing drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The original top soil will again be returned to the pad and contoured, as close as possible, to the original state.
- b. The location and road will be rehabilitated as recommended by the BLM.
- c. If the well is deemed commercially productive, the reserve pit will be restored as described in 10(A) within 120 days subsequent to the completion date. Caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography.

10. SURFACE OWNERSHIP:

The surface is owned by the US Government and is administered by the Bureau of Land Management. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas. The proposed road routes and the surface location will be restored as directed by the BLM.

11. OTHER INFORMATION:

- a. The area surrounding the well site is grassland. The topsoil is very sandy in nature. The vegetation is moderately sparse with native prairie grass, some mesquite bushes and shinnery oak. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.
- b. There is no permanent or live water in the general proximity of the location.
- c. There are no dwellings within 2 miles of location.
- d. A Cultural Resources Examination will be completed by Boone Archeological and forwarded to the BLM office in Carlsbad, New Mexico.

12. OPERATOR'S REPRESENTATIVE:

A. Through A.P.D. Approval:
Dean Chumbley, Landman
Marbob Energy Corporation
P. O. Box 227
Artesia, NM 88211-0227
Phone (575)748-3303
Cell (575) 748-5988

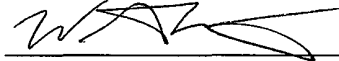
B. Through Drilling Operations
Sheryl Baker, Drilling Supervisor
Marbob Energy Corporation
P. O. Box 227
Artesia, NM 88211-0227
Phone (575)748-3303
Cell (575)748-5489

CERTIFICATION:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Marbob Energy Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

12/2/2009
Date

Marbob Energy Corporation



William Miller
Land Department

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MARBOB ENERGY CORPORATION
LEASE NO.:	LC028731A
WELL NAME & NO.:	MARY FEDERAL #3
SURFACE HOLE FOOTAGE:	345' FSL & 1550' FEL
BOTTOM HOLE FOOTAGE	345' FSL & 1680' FEL
LOCATION:	Section 22, T. 17 S., R 29 E., NMPM
COUNTY:	Eddy 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**

- ☐ **Construction**
 - Notification
 - V-Door Direction – Not Stipulated
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - H2S Requirements-Onshore Order #6
 - Logging Requirements
- ☐ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines
- ☐ **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)

A site monitor will be necessary for all ground disturbing activities to protect sites in the area.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 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. V-DOOR DIRECTION: Not Stipulated

C. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately inches in depth. The topsoil will be used for interim and final reclamation.

D. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

E. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

F. 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

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

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 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. **The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the 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 water and brine flows in the Salado and Artesia Groups.

Possible lost circulation in the Grayburg and San Andres Formations.

1. The 8-5/8 inch surface casing shall be set at **approximately 300 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface.
 - 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. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - 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.
 - e. For the surface casing: If cement does not circulate to the surface, the appropriate BLM office shall be notified and a tag with 1" will be performed at four positions 90 degrees apart to verify cement depth. BLM Petroleum Engineer Technician to witness tags. If depth is greater than 100' or water is standing in the annulus, remedial cementing will be done. If no water and TOC tag is less than 100', when 100% excess cement of the annulus volume was run on the primary job, ready-mix can be used to bring cement to surface.
2. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - a. First stage to DV tool, cement shall:
 - ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job.
 - b. Second stage above DV tool, cement shall:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

3. 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. **Variance approved to use flex line from BOP to choke manifold. Check condition of 3-1/2" flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends.**
3. 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**.
4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. Casing cut-off and BOP installation will not be initiated until the cement has had 4-6 hours of setup time in a water basin and 12 hours in the potash areas. This time will start after the cement plug is bumped.
 - b. **Prior to testing a BOP/BOPE system against the casing; the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Testing the BOP/BOPE against a plug can commence after meeting the conditions in (a.) plus the BOP installation time.**
 - c. The tests shall be done by an independent service company.
 - d. The results of the test shall be reported to the appropriate BLM office.
 - e. 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.**
 - f. 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.

D. DRILL STEM TEST

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

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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 - Not Requested in APD

C. ELECTRIC LINES - Not Requested in APD

IX. 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.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation 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 that is free of contaminants 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.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 2, for Sandy 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>
Sand dropseed (<i>Sporobolus cryptandrus</i>)	1.0

Sand love grass (<i>Eragrostis trichodes</i>)	1.0
Plains bristlegrass (<i>Setaria macrostachya</i>)	2.0

*Pounds of pure live seed:

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

**Bureau of Land Management, Carlsbad Field Office
620 E. Greene Street Carlsbad, NM 88220**

Cultural and Archaeological Resources

Conditions of Approval

Historic properties in the vicinity of this project are protected by federal law. In order to ensure that they are not damaged or destroyed by construction activities, the project proponent and construction supervisors shall ensure that the following stipulations are implemented.

Date of Issue: 2/8/2010

Project Name: Marbob's Mary Fed #3 well Pad

1. Professional archaeological monitoring. Contact your project archaeologist, or BLM's Cultural Resources Section at (575) 234-2228, 5917, 2236, or 5967, for

These stipulations must be given to your monitor at least 5 days prior to the start of construction.

No construction, including vegetation removal or other site prep may begin prior to the arrival of the monitor.

2. The archaeological monitor

Observe all ground-disturbing activities within 100 feet of cultural site no. LA: 137127 and 137128

Other: Site Protection and Employee Education: It is the responsibility of the project proponent and his construction supervisor to inform all employees and subcontractors that cultural and archaeological sites are to be avoided by all personnel, vehicles, and equipment; and that it is illegal to collect, damage, or disturb cultural resources on Public Lands.

For assistance, contact BLM Cultural Resources:

Bruce Boeke	(575) 234-5917	Martin Stein	(575) 234-5967
George MacDonell	(575) 234-2228	Lynn Robinson	(575) 234-2236
Jeremy Iliff	(575) 234-6231		