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NMOCD ARTESIA

OCD Artesia

ATS-09-530 RM

Form 3160-3  
(February 2005)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**SECRETARY'S POTASH**

## APPLICATION FOR PERMIT TO DRILL OR REENTER

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

1a Type of work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5 Lease Serial No SHL: NM104684, BHL: NM167106
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 Seabiscuit Federal Com #1*
4 Location of Well (Report location clearly and in accordance with any State requirements*) At surface 330' FSL & 380' FWL At proposed prod zone 330' FNL & 380' FWL		9 API Well No 30-05-37605
10 Field and Pool, or Exploratory Sand Dunes; Bone Spring, South		11 Sec, T R M or Blk and Survey or Area Section 12, T24S - R31E
12 Distance in miles and direction from nearest town or post office* About 21 miles from Malaga, NM		12 County or Parish Eddy County
13 State NM		14 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg unit line, if any) 330'
15 No of acres in lease SHL: 160, BHL: 160		16 Spacing Unit dedicated to this well 160
17 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft		18 BLM/BIA Bond No on file NMB000412
19 Proposed Depth PH 9600, TVD Horz 8400		20 Estimated duration 35 Days
21 Elevations (Show whether DF, KDB, RT, GL, etc) 3561' GL		22 Approximate date work will start* 08/20/2009
23		

## 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 07/20/2009
Title Land Department		

Approved by (Signature) <i>/s/ Linda S.C. Rundell</i>	Name (Printed Typed)	Date FEB 5 2010
Title STATE DIRECTOR		Office NM STATE 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)

CARLSBAD CONTROLLED WATER BASIN

SEE ATTACHED FOR  
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

## STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Date: July 20, 2009

Lease #: SHL<sup>o</sup> NM 104684  
BAL<sup>o</sup> NM 067106  
Seabiscuit Federal Com #1

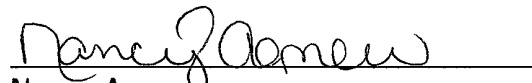
Legal Description: Sec. 12-T24S-R31E  
Eddy County, New Mexico

Formation(s): Permian

Bond Coverage: Statewide

BLM Bond File #: NMB000412

Marbob Energy Corporation

  
Nancy Agnew  
Land Department

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

CCD-ARTESIA

FORM APPROVED  
OMB No 1004-0137  
Expires July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

5 Lease Serial No  
SHL NM104684, BHL: NM067106  
6 If Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE – Other instructions on page 2**

1 Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2 Name of Operator  
Marbob Energy Corporation

3a Address

P O Box 227, Artesia, NM 88211-0227

3b Phone No (include area code)

575-748-3303

4 Location of Well (Footage, Sec., T, R, M., or Survey Description)  
SHL 330' FSL, 530' FWL, BHL 330' FNL, 380' FWL  
SEC 12, T24S-R31E

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

8 Well Name and No  
Seabiscuit Federal Com #1

9 API Well No

10 Field and Pool or Exploratory Area  
Sand Dunes, Bone Springs, South

11 Country or Parish, State  
Eddy county, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other SHL Change
	<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	

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 must 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 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Marbob Energy Corporation respectfully request the following change in suface location

From 330'FSL & 380'FWL Sec 12, T24S-R31E  
To. 330'FSL & 530'FWL Sec 12, T24S-R31E

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

Marissa Villa

Title Land Department

Signature

Date 09/22/2009

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

/s/ Linda S.C. Rundell

Title **STATE DIRECTOR**

Date **FEB 5 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

**NM STATE 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)

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  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico

Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

107-16000

Form C-102

Revised October 12, 2005  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number <b>30015-37605</b>	Prod. Code <b>13367</b>	Pool Name <b>Cotton Draw; Bone springs, NM</b>
Property Code <b>38040</b>	Property Name <b>SEABISCUIT FEDERAL COM</b>	Well Number <b>14</b>
OGRID No. <b>14049</b>	Operator Name <b>MARBOB ENERGY CORPORATION</b>	Elevation <b>3559'</b>

Surface Location

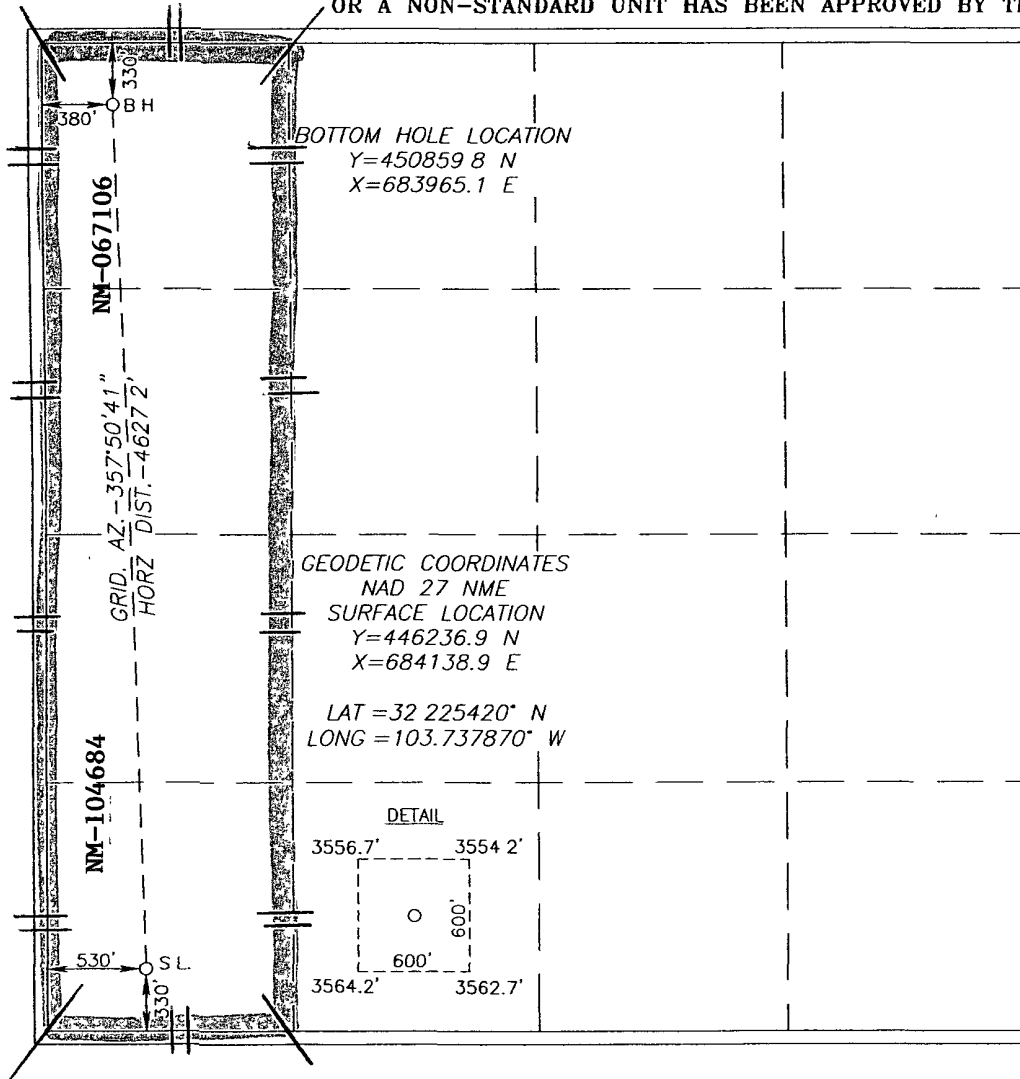
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	12	24-S	31-E		330	SOUTH	530	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	12	24-S	31-E		330	NORTH	380	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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



OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature *Marissa Villa* Date **9/22/09**

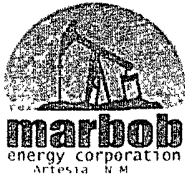
Printed Name **Marissa Villa**

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Surveyed **SEPTEMBER 10, 2009**  
Signature & Seal of Professional Surveyor *Ronald J. Eidson*  
**SEP 17 2009**

Certificate No. **RONALD EIDSON 3239**



**Marbob**

**Eddy County**

**Seabiscuit Federal Com**

**#1H**

**OH**

**Plan: Plan #1**

## **Pathfinder X & Y Planning Report**

**01 October, 2009**

# **PATHFINDER**



# Pathfinder Energy Services

## Pathfinder X & Y Planning Report



Company: Marbob  
Project: Eddy County  
Site: Seabiscuit Federal Com  
Well: #1H  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference: Well #1H  
TVD Reference: WELL @ 3583 00ft (22' KB)  
MD Reference: WELL @ 3583 00ft (22' KB)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: Midland Database

Project: Eddy County

Map System: US State Plane 1927 (Exact solution)  
Geo Datum: NAD 1927 (NADCON CONUS)  
Map Zone: New Mexico East 3001

System Datum: Mean Sea Level

Site: Seabiscuit Federal Com

Site Position:	From	Map	Position Uncertainty	0 00 ft	Northing:	446,236 900 ft	Latitude:	32° 13' 31 511 N
					Easting:	684,138 900 ft	Longitude:	103° 44' 16 332 W
					Slot Radius	"	Grid Convergence:	0 32 °

Well:	#1H							
Well Position	+N/-S	0 00 ft	Northing	446,236 900 ft	Latitude:	32° 13' 31 511 N		
	+E/-W	0 00 ft	Easting	684,138 900 ft	Longitude:	103° 44' 16 332 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	07/16/2009	7 88	60 22	48,844

Design: Plan #1

Audit Notes

Version: Phase: PLAN Tie On Depth: 0 00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0 00	0 00	0 00	357 85

Survey Tool Program: Date 10/01/2009

From: (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0 00	12,821 21	Plan #1 (OH)	MWD	MWD - Standard



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Survey Calculation Method: Minimum Curvature  
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	446,236 90	684,138 90
100 00	0 00	0 00	100 00	-3,483 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
200 00	0 00	0 00	200 00	-3,383 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
300 00	0 00	0 00	300 00	-3,283 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
400 00	0 00	0 00	400 00	-3,183 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
500 00	0 00	0 00	500 00	-3,083 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
600 00	0 00	0 00	600 00	-2,983 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
700 00	0 00	0 00	700 00	-2,883 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
800 00	0 00	0 00	800 00	-2,783 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
900 00	0 00	0 00	900 00	-2,683 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
1,000 00	0 00	0 00	1,000 00	-2,583 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
1,100 00	0 00	0 00	1,100 00	-2,483 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
1,200 00	0 00	0 00	1,200 00	-2,383 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
1,300 00	0 00	0 00	1,300 00	-2,283 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
1,400 00	0 00	0 00	1,400 00	-2,183 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
1,500 00	0 00	0 00	1,500 00	-2,083 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
1,600 00	0 00	0 00	1,600 00	-1,983 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
1,700 00	0 00	0 00	1,700 00	-1,883 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
1,800 00	0 00	0 00	1,800 00	-1,783 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
1,900 00	0 00	0 00	1,900 00	-1,683 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
2,000 00	0 00	0 00	2,000 00	-1,583 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
2,100 00	0 00	0 00	2,100 00	-1,483 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
2,200 00	0 00	0 00	2,200 00	-1,383 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
2,300 00	0 00	0 00	2,300 00	-1,283 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
2,400 00	0 00	0 00	2,400 00	-1,183 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
2,500 00	0 00	0 00	2,500 00	-1,083 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
2,600 00	0 00	0 00	2,600 00	-983 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90



Pathfinder Energy Services  
Pathfinder X & Y Planning Report



Company: Marbob  
Project: Eddy County  
Site: Seabiscuit Federal Com  
Well: #1H  
Wellbore: OH  
Design: Plan #1

Local/Co-ordinate Reference: Well #1H  
TVD Reference: WELL @ 3583 00ft (22' KB)  
MD Reference: WELL @ 3583 00ft (22' KB)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
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	446,236 90	684,138 90
2,800 00	0 00	0 00	2,800 00	-783 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
2,900 00	0 00	0 00	2,900 00	-683 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
3,000 00	0 00	0 00	3,000 00	-583 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
3,100 00	0 00	0 00	3,100 00	-483 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
3,200 00	0 00	0 00	3,200 00	-383 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
3,300 00	0 00	0 00	3,300 00	-283 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
3,400 00	0 00	0 00	3,400 00	-183 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
3,500 00	0 00	0 00	3,500 00	-83 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
3,600 00	0 00	0 00	3,600 00	17 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
3,700 00	0 00	0 00	3,700 00	117 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
3,800 00	0 00	0 00	3,800 00	217 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
3,900 00	0 00	0 00	3,900 00	317 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
4,000 00	0 00	0 00	4,000 00	417 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
4,100 00	0 00	0 00	4,100 00	517 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
4,200 00	0 00	0 00	4,200 00	617 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
4,300 00	0 00	0 00	4,300 00	717 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
4,400 00	0 00	0 00	4,400 00	817 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
4,500 00	0 00	0 00	4,500 00	917 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
4,600 00	0 00	0 00	4,600 00	1,017 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
4,700 00	0 00	0 00	4,700 00	1,117 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
4,800 00	0 00	0 00	4,800 00	1,217 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
4,900 00	0 00	0 00	4,900 00	1,317 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
5,000 00	0 00	0 00	5,000 00	1,417 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
5,100 00	0 00	0 00	5,100 00	1,517 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
5,200 00	0 00	0 00	5,200 00	1,617 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
5,300 00	0 00	0 00	5,300 00	1,717 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90





# Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: Marbob  
Project: Eddy County  
Site: Seabiscuit Federal Com  
Well: #1H  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference: Well #1H  
TVD Reference: WELL @ 3583 00ft (22' KB)  
MD Reference: WELL @ 3583 00ft (22' KB)  
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Survey Calculation Method: Minimum Curvature  
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)
5,400 00	0 00	0 00	5,400 00	1,817 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
5,500 00	0 00	0 00	5,500 00	1,917 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
5,600 00	0 00	0 00	5,600 00	2,017 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
5,700 00	0 00	0 00	5,700 00	2,117 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
5,800 00	0 00	0 00	5,800 00	2,217 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
5,900 00	0 00	0 00	5,900 00	2,317 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
6,000 00	0 00	0 00	6,000 00	2,417 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
6,100 00	0 00	0 00	6,100 00	2,517 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
6,200 00	0 00	0 00	6,200 00	2,617 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
6,300 00	0 00	0 00	6,300 00	2,717 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
6,400 00	0 00	0 00	6,400 00	2,817 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
6,500 00	0 00	0 00	6,500 00	2,917 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
6,600 00	0 00	0 00	6,600 00	3,017 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
6,700 00	0 00	0 00	6,700 00	3,117 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
6,800 00	0 00	0 00	6,800 00	3,217 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
6,900 00	0 00	0 00	6,900 00	3,317 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
7,000 00	0 00	0 00	7,000 00	3,417 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
7,100 00	0 00	0 00	7,100 00	3,517 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
7,200 00	0 00	0 00	7,200 00	3,617 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
7,300 00	0 00	0 00	7,300 00	3,717 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
7,400 00	0 00	0 00	7,400 00	3,817 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
7,500 00	0 00	0 00	7,500 00	3,917 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
7,600 00	0 00	0 00	7,600 00	4,017 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
7,700 00	0 00	0 00	7,700 00	4,117 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
7,800 00	0 00	0 00	7,800 00	4,217 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
7,900 00	0 00	0 00	7,900 00	4,317 00	0 00	0 00	0 00	0 00	446,236 90	684,138 90
7,922 50	0 00	0 00	7,922 50	4,339 50	0 00	0 00	0 00	0 00	446,236 90	684,138 90



# Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: Marbob  
 Project: Eddy County  
 Site: Seabiscuit Federal Com  
 Well: #1H  
 Wellbore: OH  
 Design: Plan #1

Local Co-ordinate Reference: Well #1H  
 TVD Reference: WELL @ 3583 00ft (22' KB)  
 MD Reference: WELL @ 3583 00ft (22' KB)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 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)
7,925 00	0 30	357 85	7,925 00	4,342 00	0 01	0 00	0 01	12 00	446,236 91	684,138 90
7,950 00	3 30	357 85	7,949 98	4,366 98	0 79	-0 03	0 79	12 00	446,237 69	684,138 87
7,975 00	6 30	357 85	7,974 89	4,391 89	2 88	-0 11	2 88	12 00	446,239 78	684,138 79
8,000 00	9 30	357 85	7,999 66	4,416 66	6 27	-0 24	6 28	12 00	446,243 17	684,138 66
8,025 00	12 30	357 85	8,024 21	4,441 21	10 95	-0 41	10 96	12 00	446,247 85	684,138 49
8,050 00	15 30	357 85	8,048 49	4,465 49	16 91	-0 63	16 92	12 00	446,253 81	684,138 27
8,075 00	18 30	357 85	8,072 42	4,489 42	24 13	-0 91	24 15	12 00	446,261 03	684,137 99
8,100 00	21 30	357 85	8,095 94	4,512 94	32 59	-1 22	32 61	12 00	446,269 49	684,137 68
8,125 00	24 30	357 85	8,118 98	4,535 98	42 27	-1 59	42 30	12 00	446,279 17	684,137 31
8,150 00	27 30	357 85	8,141 49	4,558 49	53 14	-1 99	53 18	12 00	446,290 04	684,136 91
8,175 00	30 30	357 85	8,163 40	4,580 40	65 17	-2 45	65 22	12 00	446,302 07	684,136 45
8,200 00	33 30	357 85	8,184 64	4,601 64	78 34	-2 94	78 39	12 00	446,315 24	684,135 96
8,225 00	36 30	357 85	8,205 17	4,622 17	92 59	-3 48	92 66	12 00	446,329 49	684,135 42
8,250 00	39 30	357 85	8,224 92	4,641 92	107 90	-4 05	107 98	12 00	446,344 80	684,134 85
8,275 00	42 30	357 85	8,243 84	4,660 84	124 22	-4 66	124 31	12 00	446,361 12	684,134 24
8,300 00	45 30	357 85	8,261 89	4,678 89	141 51	-5 31	141 61	12 00	446,378 41	684,133 59
8,325 00	48 30	357 85	8,279 00	4,696 00	159 72	-6 00	159 83	12 00	446,396 62	684,132 90
8,350 00	51 30	357 85	8,295 14	4,712 14	178 80	-6 71	178 92	12 00	446,415 70	684,132 19
8,375 00	54 30	357 85	8,310 25	4,727 25	198 69	-7 46	198 83	12 00	446,435 59	684,131 44
8,400 00	57 30	357 85	8,324 30	4,741 30	219 35	-8 23	219 51	12 00	446,456 25	684,130 67
8,425 00	60 30	357 85	8,337 25	4,754 25	240 72	-9 04	240 89	12 00	446,477 62	684,129 86
8,450 00	63 30	357 85	8,349 07	4,766 07	262 73	-9 86	262 92	12 00	446,499 63	684,129 04
8,475 00	66 30	357 85	8,359 71	4,776 71	285 33	-10 71	285 53	12 00	446,522 23	684,128 19
8,500 00	69 29	357 85	8,369 16	4,786 16	308 46	-11 58	308 68	12 00	446,545 36	684,127 32
8,525 00	72 29	357 85	8,377 38	4,794 38	332 05	-12 47	332 28	12 00	446,568 95	684,126 43
8,550 00	75 29	357 85	8,384 36	4,801 36	356 04	-13 37	356 29	12 00	446,592 94	684,125 53
8,575 00	78 29	357 85	8,390 07	4,807 07	380 35	-14 28	380 62	12 00	446,617 25	684,124 62



# Pathfinder Energy Services

## Pathfinder X & Y Planning Report



Company: Marbob  
Project: Eddy County  
Site: Seabiscuit Federal Com  
Well: #1H  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference: Well #1H  
TVD Reference: WELL @ 3583 00ft (22' KB)  
MD Reference: WELL @ 3583 00ft (22' KB)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
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)
8,600 00	81 29	357 85	8,394 50	4,811 50	404 94	-15 20	405 22	12 00	446,641 84	684,123 70
8,625 00	84 29	357 85	8,397 63	4,814 63	429 72	-16 13	430 02	12 00	446,666 62	684,122 77
8,650 00	87 29	357 85	8,399 47	4,816 47	454 63	-17 07	454 95	12 00	446,691 53	684,121 83
8,672 56	90 00	357 85	8,400 00	4,817 00	477 16	-17 91	477 50	12 00	446,714 06	684,120 99
8,700 00	90 00	357 85	8,400 00	4,817 00	504 59	-18 94	504 94	0 00	446,741 49	684,119 96
8,800 00	90 00	357 85	8,400 00	4,817 00	604 52	-22 69	604 94	0 00	446,841 42	684,116 21
8,900 00	90 00	357 85	8,400 00	4,817 00	704 45	-26 45	704 94	0 00	446,941 35	684,112 45
9,000 00	90 00	357 85	8,400 00	4,817 00	804 38	-30 20	804 94	0 00	447,041 28	684,108 70
9,100 00	90 00	357 85	8,400 00	4,817 00	904 31	-33 95	904 94	0 00	447,141 21	684,104 95
9,200 00	90 00	357 85	8,400 00	4,817 00	1,004 24	-37 70	1,004 94	0 00	447,241 14	684,101 20
9,300 00	90 00	357 85	8,400 00	4,817 00	1,104 17	-41 45	1,104 94	0 00	447,341 07	684,097 45
9,400 00	90 00	357 85	8,400 00	4,817 00	1,204 10	-45 20	1,204 94	0 00	447,441 00	684,093 70
9,500 00	90 00	357 85	8,400 00	4,817 00	1,304 03	-48 96	1,304 94	0 00	447,540 93	684,089 94
9,600 00	90 00	357 85	8,400 00	4,817 00	1,403 96	-52 71	1,404 94	0 00	447,640 86	684,086 19
9,700 00	90 00	357 85	8,400 00	4,817 00	1,503 89	-56 46	1,504 94	0 00	447,740 79	684,082 44
9,800 00	90 00	357 85	8,400 00	4,817 00	1,603 81	-60 21	1,604 94	0 00	447,840 71	684,078 69
9,900 00	90 00	357 85	8,400 00	4,817 00	1,703 74	-63 96	1,704 94	0 00	447,940 64	684,074 94
10,000 00	90 00	357 85	8,400 00	4,817 00	1,803 67	-67 71	1,804 94	0 00	448,040 57	684,071 19
10,100 00	90 00	357 85	8,400 00	4,817 00	1,903 60	-71 47	1,904 94	0 00	448,140 50	684,067 43
10,200 00	90 00	357 85	8,400 00	4,817 00	2,003 53	-75 22	2,004 94	0 00	448,240 43	684,063 68
10,300 00	90 00	357 85	8,400 00	4,817 00	2,103 46	-78 97	2,104 94	0 00	448,340 36	684,059 93
10,400 00	90 00	357 85	8,400 00	4,817 00	2,203 39	-82 72	2,204 94	0 00	448,440 29	684,056 18
10,500 00	90 00	357 85	8,400 00	4,817 00	2,303 32	-86 47	2,304 94	0 00	448,540 22	684,052 43
10,600 00	90 00	357 85	8,400 00	4,817 00	2,403 25	-90 22	2,404 94	0 00	448,640 15	684,048 68
10,700 00	90 00	357 85	8,400 00	4,817 00	2,503 18	-93 97	2,504 94	0 00	448,740 08	684,044 93
10,800 00	90 00	357 85	8,400 00	4,817 00	2,603 11	-97 73	2,604 94	0 00	448,840 01	684,041 17
10,900 00	90 00	357 85	8,400 00	4,817 00	2,703 04	-101 48	2,704 94	0 00	448,939 94	684,037 42



# Pathfinder Energy Services

Pathfinder X & Y Planning Report



Company: Marbob  
Project: Eddy County  
Site: Seabiscuit Federal Com  
Well: #1H  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference: Well #1H  
TVD Reference: WELL @ 3583 00ft (22' KB)  
MD Reference: WELL @ 3583 00ft (22' KB)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
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)
11,000 00	90 00	357 85	8,400 00	4,817 00	2,802 97	-105 23	2,804 94	0 00	449,039 87	684,033 67
11,100 00	90 00	357 85	8,400 00	4,817 00	2,902 90	-108 98	2,904 94	0 00	449,139 80	684,029 92
11,200 00	90 00	357 85	8,400 00	4,817 00	3,002 83	-112 73	3,004 94	0 00	449,239 73	684,026 17
11,300 00	90 00	357 85	8,400 00	4,817 00	3,102 76	-116 48	3,104 94	0 00	449,339 66	684,022 42
11,400 00	90 00	357 85	8,400 00	4,817 00	3,202 69	-120 24	3,204 94	0 00	449,439 59	684,018 66
11,500 00	90 00	357 85	8,400 00	4,817 00	3,302 62	-123 99	3,304 94	0 00	449,539 52	684,014 91
11,600 00	90 00	357 85	8,400 00	4,817 00	3,402 55	-127 74	3,404 94	0 00	449,639 45	684,011 16
11,700 00	90 00	357 85	8,400 00	4,817 00	3,502 48	-131 49	3,504 94	0 00	449,739 38	684,007 41
11,800 00	90 00	357 85	8,400 00	4,817 00	3,602 41	-135 24	3,604 94	0 00	449,839 31	684,003 66
11,900 00	90 00	357 85	8,400 00	4,817 00	3,702 34	-138 99	3,704 94	0 00	449,939 24	683,999 91
12,000 00	90 00	357 85	8,400 00	4,817 00	3,802 27	-142 75	3,804 94	0 00	450,039 17	683,996 15
12,100 00	90 00	357 85	8,400 00	4,817 00	3,902 20	-146 50	3,904 94	0 00	450,139 10	683,992 40
12,200 00	90 00	357 85	8,400 00	4,817 00	4,002 13	-150 25	4,004 94	0 00	450,239 03	683,988 65
12,300 00	90 00	357 85	8,400 00	4,817 00	4,102 06	-154 00	4,104 94	0 00	450,338 96	683,984 90
12,400 00	90 00	357 85	8,400 00	4,817 00	4,201 98	-157 75	4,204 94	0 00	450,438 88	683,981 15
12,500 00	90 00	357 85	8,400 00	4,817 00	4,301 91	-161 50	4,304 94	0 00	450,538 81	683,977 40
12,600 00	90 00	357 85	8,400 00	4,817 00	4,401 84	-165 25	4,404 94	0 00	450,638 74	683,973 65
12,700 00	90 00	357 85	8,400 00	4,817 00	4,501 77	-169 01	4,504 94	0 00	450,738 67	683,969 89
12,800 00	90 00	357 85	8,400 00	4,817 00	4,601 70	-172 76	4,604 94	0 00	450,838 60	683,966 14
12,821 21	90 00	357 85	8,400 00	4,817 00	4,622 90	-173 55	4,626 16	0 00	450,859 80	683,965 35

PBHL(SB#1H)



# Pathfinder Energy Services

Pathfinder X & Y Planning Report



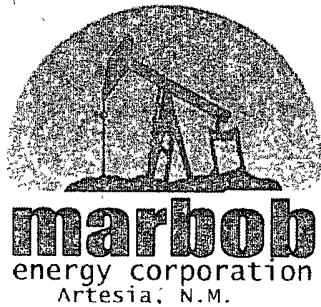
Company: Marbob  
Project: Eddy County  
Site: Seabiscuit Federal Com  
Well: #1H  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference: Well #1H  
TVD Reference: WELL @ 3583 00ft (22' KB)  
MD Reference: WELL @ 3583 00ft (22' KB)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: Midland Database

## Targets

Target Name - hit/miss:target - Shape	Dip Angle (°)	Dip Dir (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL(SB#1H) - plan hits target - Point	0 00	0 00	8,400 00	4,622 90	-173 80	450,859 800	683,965 100	32° 14' 17 268 N	103° 44' 18 057 W

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



Project Eddy County  
 Site Seabiscuit Federal C.  
 Well: #1H  
 Wellbore OH  
 Plan Plan #1 (#1H/OH)



Azimuths to Grid North  
 True North -0.32°  
 Magnetic North. 7.56°

Magnetic Field  
 Strength 48844 1nT  
 Dip Angle: 60.22°  
 Date: 07/16/2009  
 Model: IGRF200510

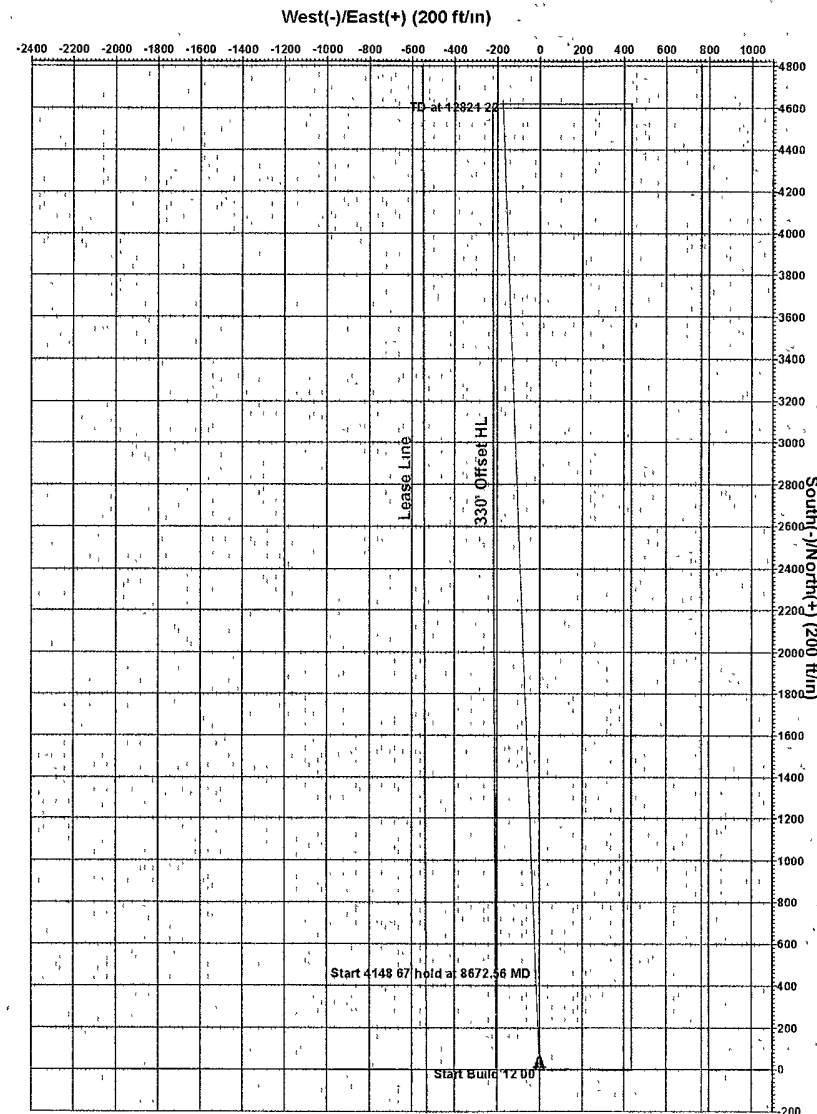
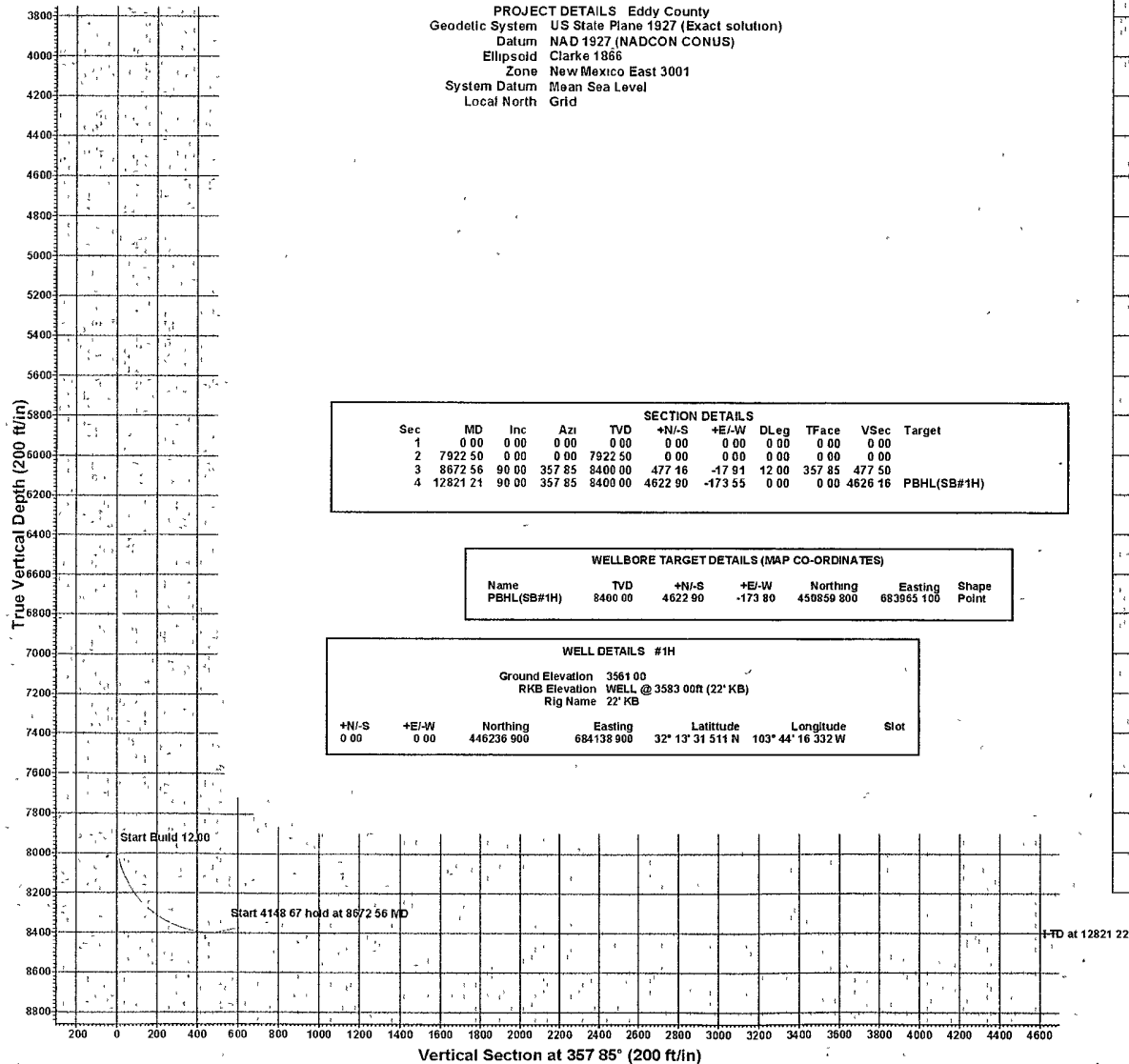
# PATHFINDER

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

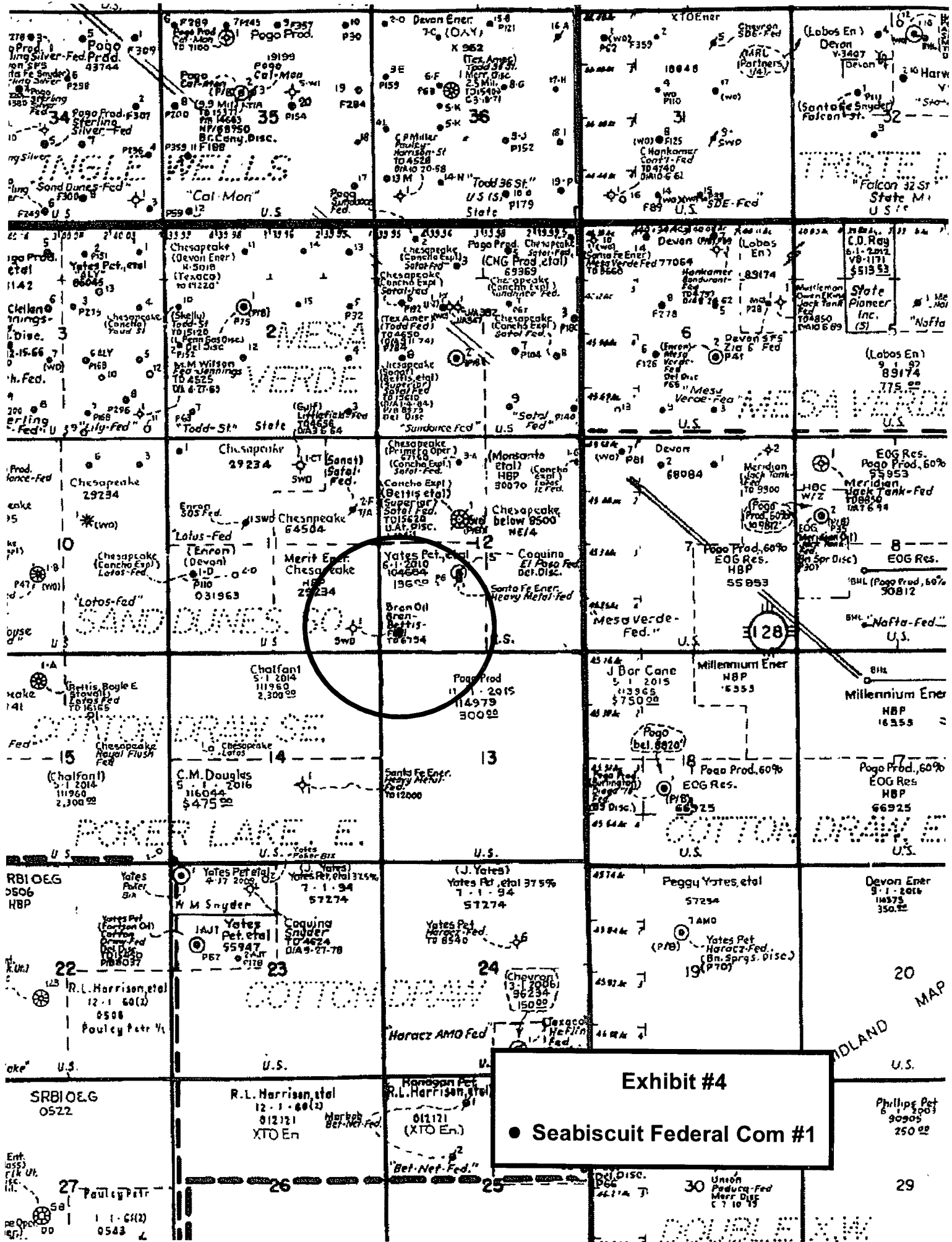
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
2	7922.50	0 00	0 00	7922.50	0 00	0 00	0 00	0 00	0 00	
3	8672.56	90 00	357.85	8400.00	477.16	-17.91	12.00	357.85	477.50	
4	12821.21	90 00	357.85	8400.00	4622.90	-173.55	0 00	0 00	4626.16	PBHL(SB#1H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL(SB#1H)	8400.00	4622.90	-173.55	458859.800	683965.100	Point

WELL DETAILS #1H						
Ground Elevation 3561.00						
RKB Elevation WELL @ 3583.00ft (22' KB)						
Rig Name 22' KB						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0 00	0 00	446236.900	684138.900	32° 13' 31.511 N	103° 44' 16.332 W	



Plan Plan #1 (#1H/OH)  
 Created By Nate Bingham Date 9 00, October 01 2009  
 Checked \_\_\_\_\_ Date \_\_\_\_\_



**MARBOB ENERGY CORPORATION  
DRILLING AND OPERATIONS PROGRAM**

**Seabiscuit Federal Com #1**  
**Surf: 330' FSL & 380' FWL**  
**BHL: 330' FNL & 380' FWL**  
**Section 12, T24S - R31E**  
**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	810'	
Top Salt	948'	
Bottom Salt	4350'	
Delaware	4575'	Oil
Bone Spring	8421'	Oil
TD (Pilot Hole)	9600'	
TVD Horz.	8400'	

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 13 3/8" casing at 840' 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 13 3/8" casing.

3. **Proposed Casing Program:** *see COA*

Hole Size	Interval	OD Casing	New or Used	Wt	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
	<del>875'</del>								
17 1/2"	0' - 840'	13 3/8"	New	54.5#	STC	J-55	1.125	1.125	1.6
12 1/4"	840' - 3500'	9 5/8"	New	36#	BUTT	J-55	1.125	1.125	1.6
12 1/4"	3500' - 4500'	9 5/8"	New	40#	BUTT	J-55	1.125	1.125	1.6
7 7/8"	4500' - 13000'	5 1/2"	New	17#	LTC	N--80	1.125	1.125	1.6

Plan to drill 17 1/2" hole to 840' set and cement 13 3/8" casing. Drill to 4500' with 12 1/4" bit set and cement 9 5/8" casing then drill Pilot hole to 9600' log well then plug back and horizontal well bore to new BHL @ 8400' TVD.



## 5. Proposed Cement Program: *See COA*

- a. 13 3/8" Surf Cement to surface with 300 sk "C" light wt 12.7 yield 1.91. Tail in with 200 sk "c" wt 14.8 yield 1.34.
- b. 9 5/8" Int cement with 800 sk "c" Light wt 12.7 yield 1.91 Tail in w/250 sk "c" wt 14.8 yield 1.34 to <sup>500'</sup> Surface - *See COA*
- c. 5 1/2" Prod 1<sup>st</sup> Stage 500 sk Acid Soluble "H" cement wt. 15.0 yield 2.6 2<sup>nd</sup> stage with 550 sk "H" Light wt. 12.7 yield 1.91 tail in with 100 "H" wt. 13.0 yield 1.64. DV @ 8000' TOC 4000'

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 <sup>200'</sup> above the 9 5/8" casing shoe. **All casing is new and API approved.** <sup>500'</sup>

## 6. Minimum Specifications for Pressure Control:

Nipple up on 13 3/8" with 2M system and test to 2000# with independent tester. Nipple up on 9 5/8" with 3M system & test to 3000# with independent tester.

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 3000 psi WP rating.

## 7. Estimated BHP: 3993.6 psi

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

*see COA*

Depth <sup>825'</sup>	Type System	Mud Weight	Viscosity (sec)	Waterloss (cc)
0' - 840'	Fresh Water	8.4	29	N.C.
840' - 4500'	Brine	9.9 - 10.0	29	N.C.
4500' - 13000'	Cut Brine	9.0	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 Kelly cock will be in the drill string at all times.
- 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 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" 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.
- 

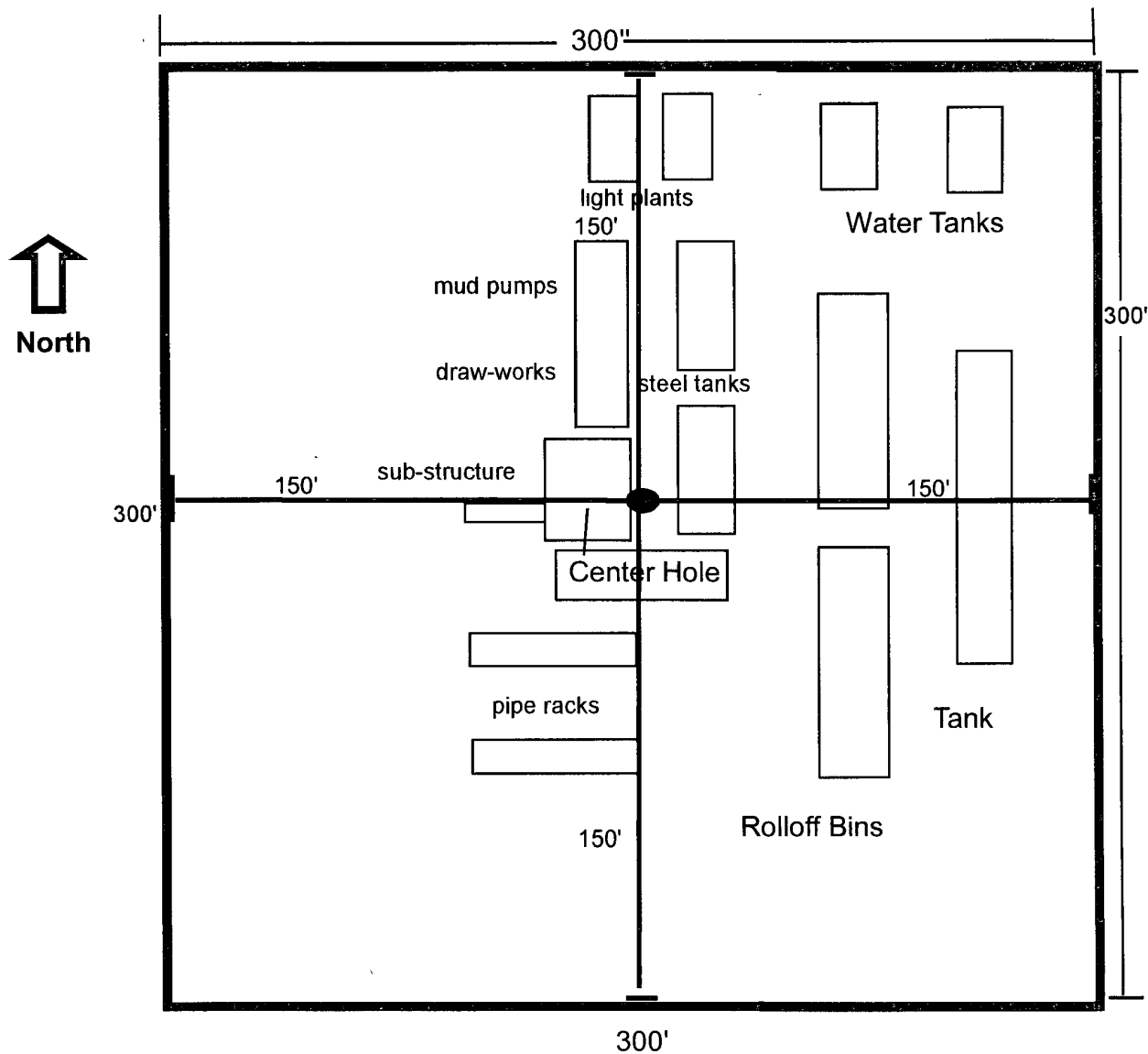
**11. Potential Hazards:**

- 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: 3993.6 psi. No H2S is anticipated to be encountered.

**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 35 days.

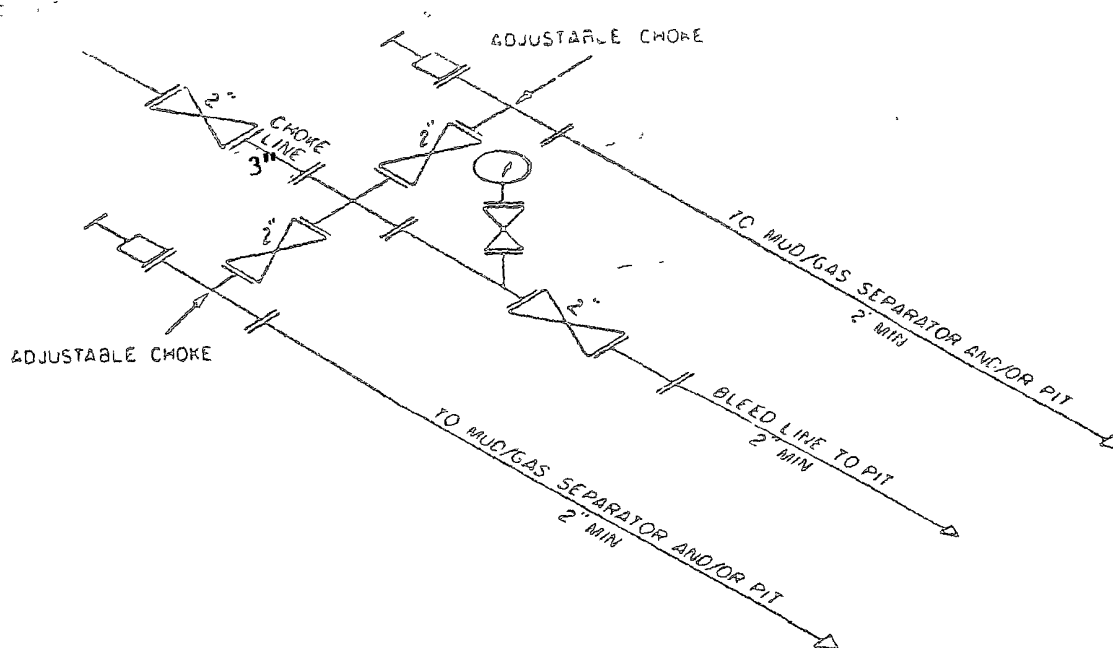
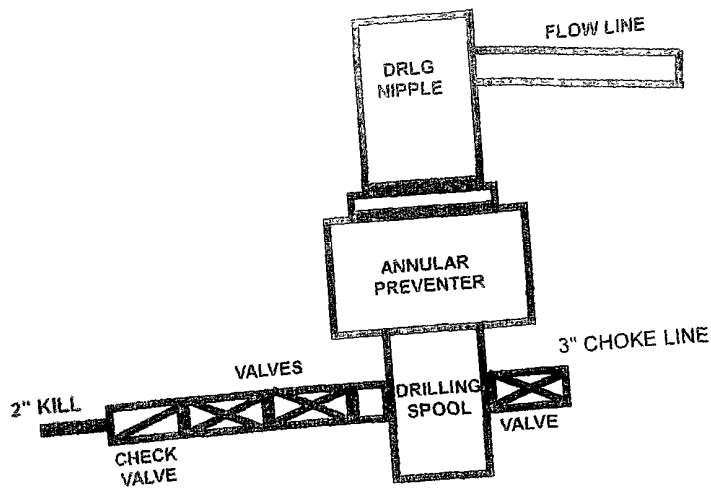
Well Site Lay-Out Plat



**Seabiscuit Federal Com #1**  
**Surf: 330' FSL & 380' FWL**  
**BHL: 330' FNL & 380' FWL**  
**Section 12, T24S – R31E**  
**Eddy County, New Mexico**

EXHIBIT THREE

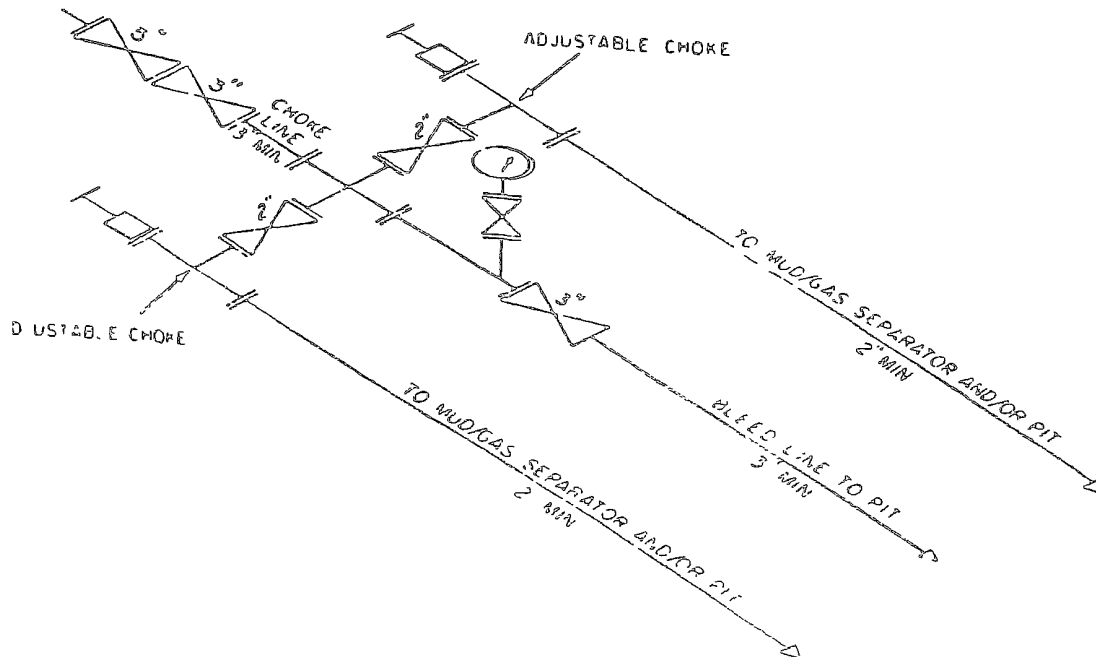
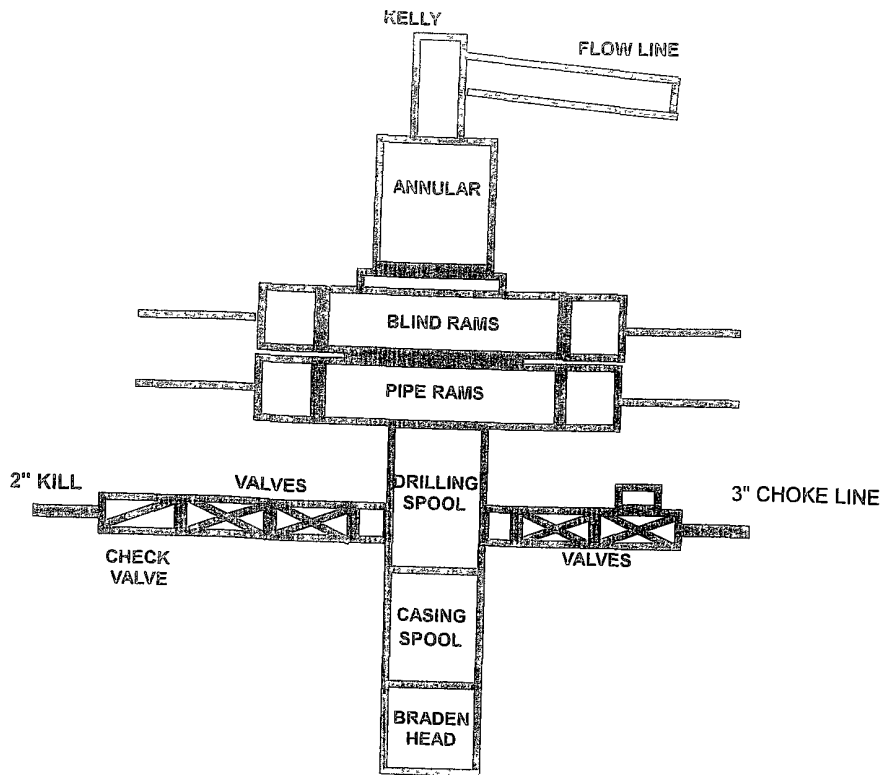
# 2M SYSTEM



2M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOSES

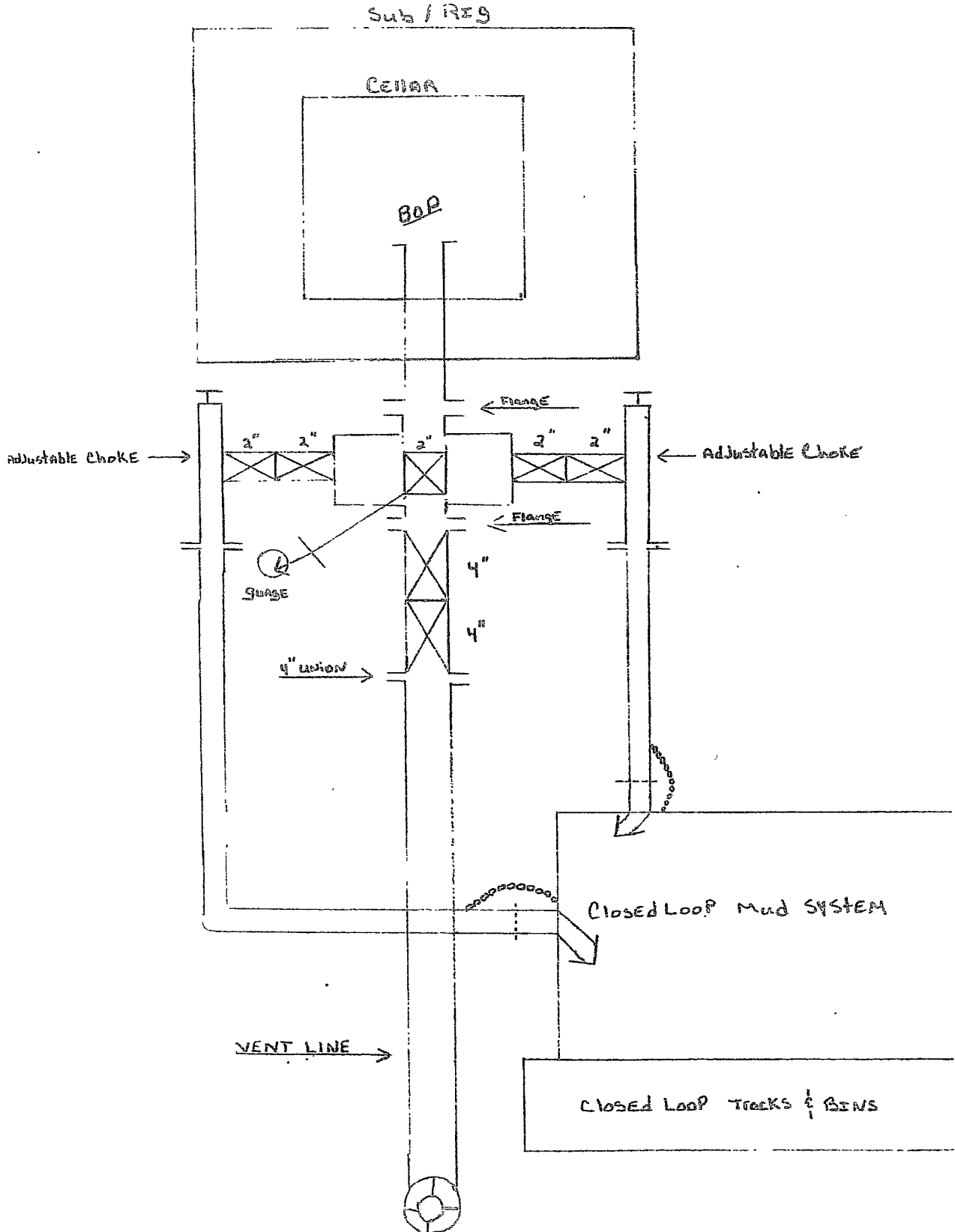
MAY VARY

# 3M SYSTEM

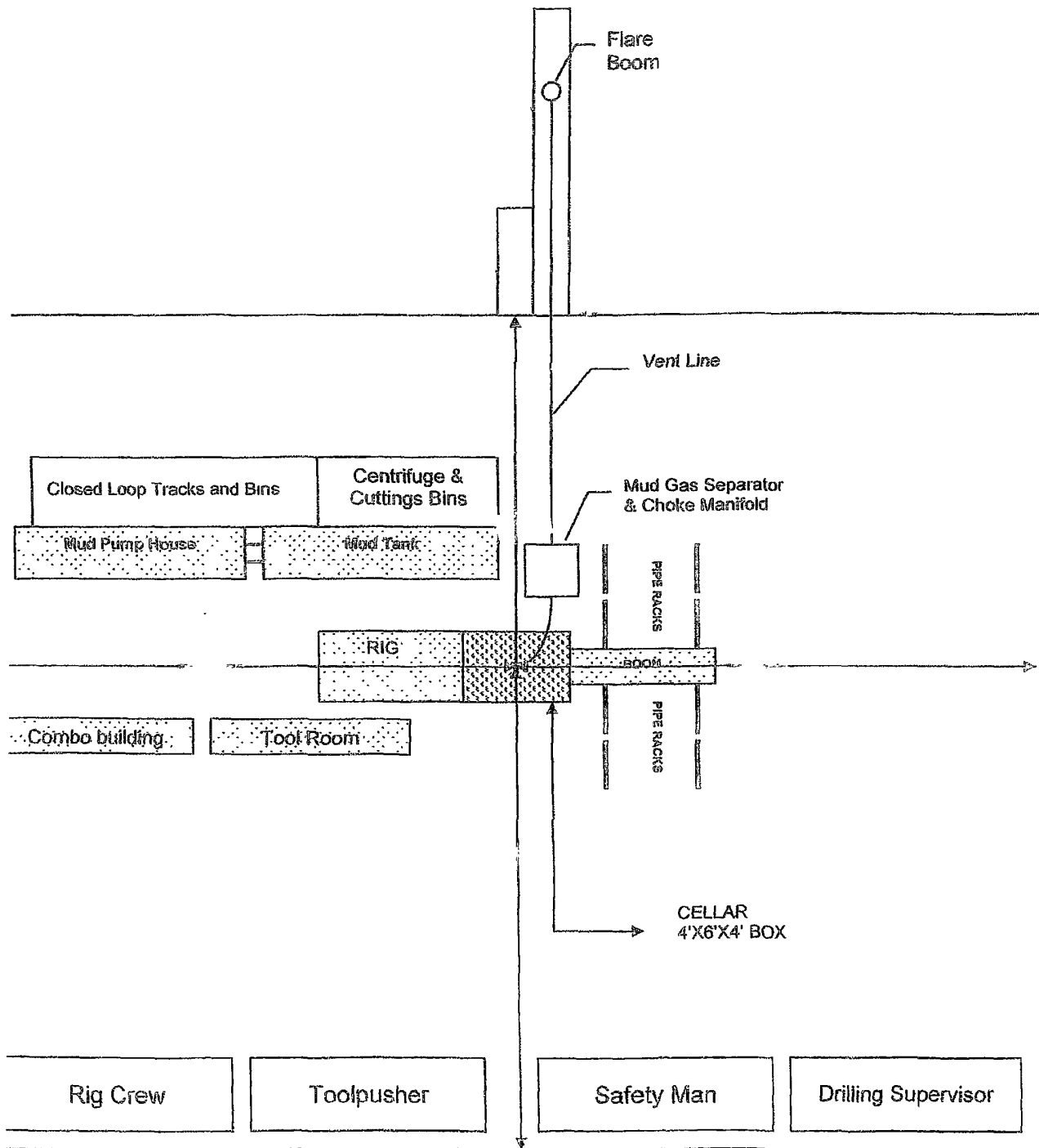


3M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES  
MAY VARY

## 2M Choke Manifold Equipment



### 3M 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 (H<sub>2</sub>S).
- B. The proper use and maintenance of personal protective equipment and life support systems.
- C. The proper use of H<sub>2</sub>S 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 H<sub>2</sub>S 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 H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S 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. H<sub>2</sub>S SAFETY EQUIPMENT AND SYSTEMS**

Note: All H<sub>2</sub>S 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 H<sub>2</sub>S.

### **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. H<sub>2</sub>S detection and monitoring equipment:**

2 - portable H<sub>2</sub>S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H<sub>2</sub>S 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 H<sub>2</sub>S 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 H<sub>2</sub>S service.

G. Communication:

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

Marbob Energy has conducted a review to determine if an H<sub>2</sub>S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal. H<sub>2</sub>S concentrations of wells in this area from surface to TD are low enough; therefore we do not believe that an H<sub>2</sub>S Contingency Plan would be necessary.

# **W A R N I N G**

**YOU ARE ENTERING AN H<sub>2</sub>S 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**

**1-575-748-3303**

## **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**

**Seabiscuit Federal Com #1**  
**Surf: 330' FSL & <sup>330'</sup>380' FWL**  
**BHL: 330' FNL & 380' FWL**  
**Section 12, T24S – R31E**  
**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.
- 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 St. Hwy. #126 and Co. Rd. (Buck Jackson Rd.), go southwest on Buck Jackson Road approx. 1.0 mile. Turn right and go northwest approx. 0.3 miles. Turn left and go south approx. 0.2 miles. Veer right and continue west approx. 0.3 miles to a proposed road survey. Follow road survey south approx. 70 feet to this location.

**2. PLANNED ACCESS ROAD:**

Marbob will build 70' of new access road coming in on the northeast side of the well pad. See directions above.

**3. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:**

- A. In the event the well is found productive, the Seabiscuit Federal Com #1 tank battery 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 reserve and 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.

July 21 2009

Date

Marbob Energy Corporation



William Miller

Land Department

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Marbob Energy Corporation
LEASE NO.:	NM67106
WELL NAME & NO.:	Seabiscuit Federal Com # 1
SURFACE HOLE FOOTAGE:	330' FSL & 530' FWL
BOTTOM HOLE FOOTAGE:	330' FNL & 380' FWL
LOCATION:	Section 12 T. 24 S., R 31 E., NMPM
COUNTY:	Eddy County, New Mexico

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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.

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- ☐ **Noxious Weeds**
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- ☐ **Production (Post Drilling)**
  - Well Structures & Facilities
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- ☒ **Reseeding Procedure/Interim Reclamation**
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## **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)

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, geophysical exploration other than 3-D operations, and pipeline, road, 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 ft. from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

### **Communitization Agreement**

**A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales. Operator to supply NMOCD order, which details the vertical and horizontal extent of pool to verify that requested communitization is within an approved and established pool.**

## **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. TOPSOIL**

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Although this will be a closed loop system and no reserve pits will be utilized, the v-door will be on the East side of the location.

Tanks are required for drilling operations: No Pits.

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.

## **F. ON LEASE ACCESS ROADS**

### **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

### **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

### **Crowning**

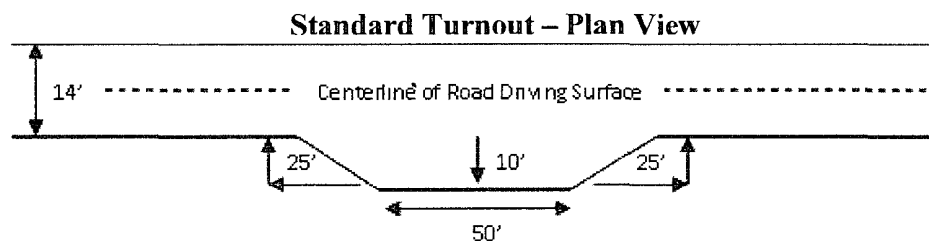
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Ditching**

Ditching shall be required on both sides of the road.

### **Turnouts**

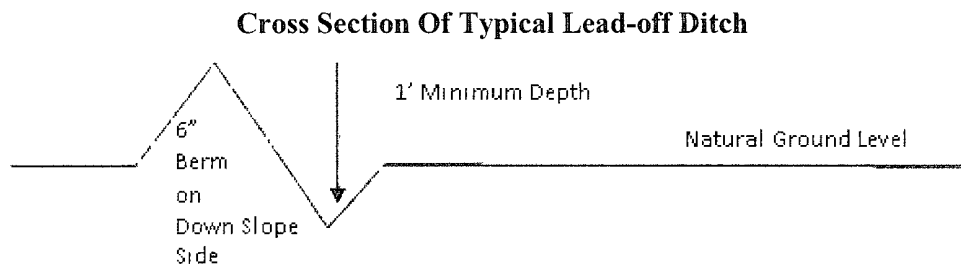
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



### **Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outslowing and inslaping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

#### **Formula for Spacing Interval of Lead-off Ditches**

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope:  $400/4\% + 100' = 200'$  lead-off ditch interval

#### **Culvert Installations**

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

#### **Cattleguards**

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

#### **Fence Requirement**

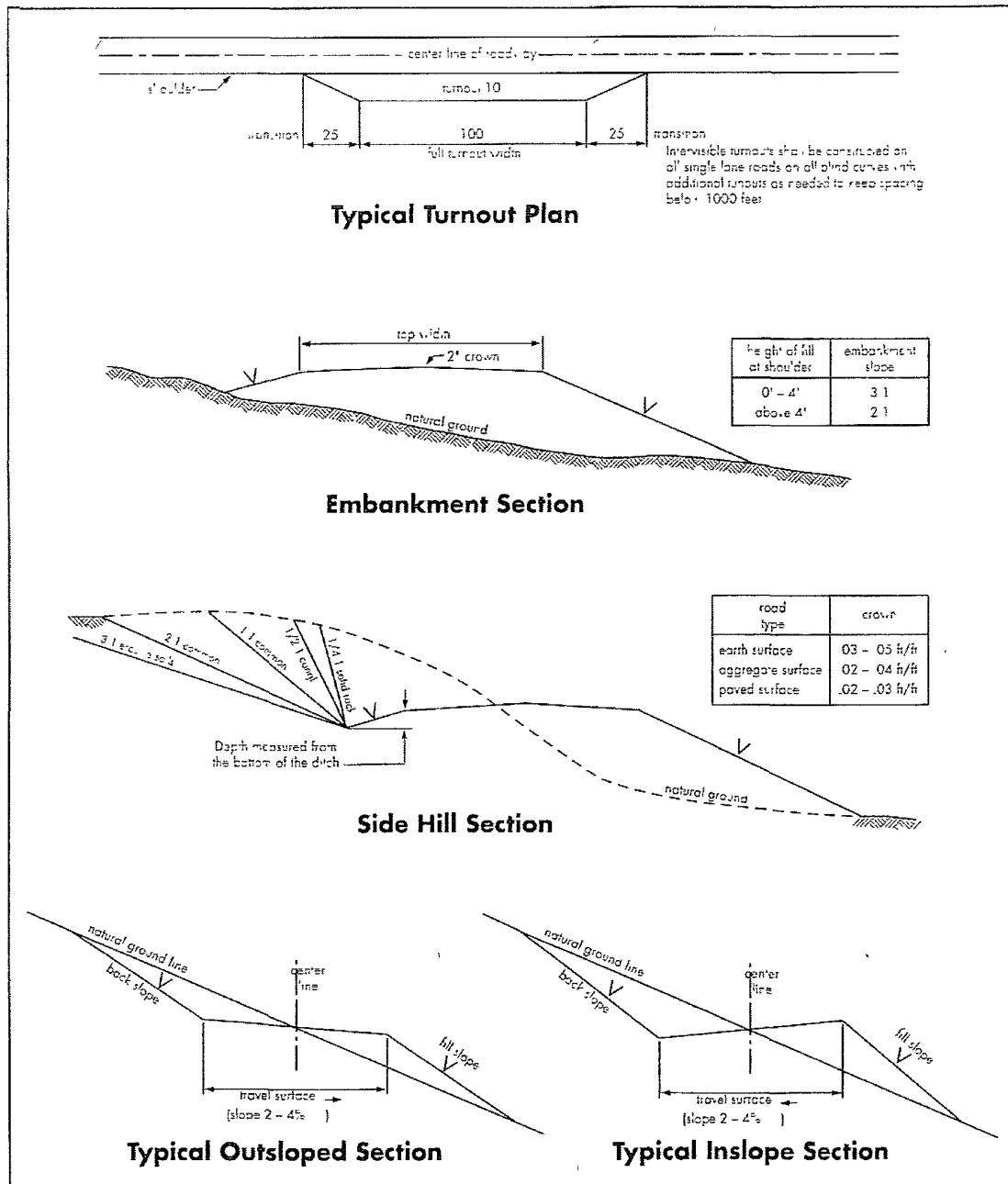
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

**Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



## 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. **Hydrogen Sulfide has been reported as a hazard, but no measurements have been recorded. It is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide. If Hydrogen Sulfide is encountered, please report measurements 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. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
4. **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. 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.**

#### **Secretary's Potash**

**Possible water flows in the Castile, Salado, Delaware and Bone Springs Formations.  
Possible lost circulation in the Delaware and Bone Springs Formations.**

1. The 13-3/8 inch surface casing shall be set **at approximately 875 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Fresh water is 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 9-5/8 inch production casing must be kept liquid filled while running into hole to meet minimum BLM requirements for collapse.**

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

- ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

**Pilot hole is required to have a plug at the bottom of the hole. If two plugs are set, the BLM is to be contacted (575-361-2822) prior to tag of bottom plug, which must be a minimum of 200' in length. Operator can set one plug from bottom of pilot hole to kick-off point and save the WOC time for tagging the first plug.**

**Centralizers required on horizontal leg, must be type for horizontal service and minimum of one every other joint.**

3. 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 should tie-back at least 500 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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8"** intermediate casing shoe shall be **3000 (3M)** psi.
4. 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.
  - 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.

#### **D. DRILL STEM TEST**

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

**CRW 090809**

## **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

## **IX. INTERIM RECLAMATION & RESEEDING PROCEDURE**

### **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.

### **B. RESEEDING PROCEDURE**

Once the well has been drilled, all completion procedures have been accomplished, and all trash removed, reseed the location and all surrounding disturbed areas as follows:

## 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:

Species    lb/acre

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

## **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.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

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.