

OCD-ARTESIA

Form 3160-3
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

EA 10-822

5 Lease Serial No.
SL: VO-6323, BHL: NMNM057239

6 If Indian, Allottee or Tribe Name

7 If Unit or CA Agreement, Name and No.

8 Lease Name and Well No.
Lizard Pot State Com #2H

9 API Well No.

10 Field and Pool, or Exploratory
WC Williams Sink; Bone Spring

11 Sec, T R M or Blk and Survey or Area
SL: Sec. 36 T19S-R31E
BHL: Sec. 1 T20S-R31E

1a. Type of work ☒ DRILL ☐ REENTER

SECRETARY'S POTASH

1b. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

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 (Report location clearly and in accordance with any State requirements*)

At surface 660' FSL & 1980' FWL (N)

At proposed prod. zone BHL: 330' FSL & 1980' FWL

Split Estate

14 Distance in miles and direction from nearest town or post office*
About 6 miles from Halfway, NM

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) 660'

16 No. of acres in lease
SL: 320.00 BHL: 637.480

17 Spacing Unit dedicated to this well
200

18 Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft

19 Proposed Depth
TVD: 9400' MD: 14793'

20 BLM/BIA Bond No. on file
NMB000412

21 Elevations (Show whether DF, KDB, RT, GL, etc.)
3481' GL

22 Approximate date work will start*
07/20/2010

23 Estimated duration
40 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
2. A Drilling Plan
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)

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25 Signature *Nancy T. Agnew*
Title Land Department

Name (Printed Typed)
Nancy T. Agnew

Date
05/26/2010

Approved by (Signature) /s/ Linda S.C. Rundell

Name (Printed Typed)

Date AUG 18 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)

Capitan Controlled Water Basin

Ka 09/13/10

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

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

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102

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

OIL CONSERVATION DIVISION

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

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

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-38146	Pool Code 97650	Pool Name WC WILLIAMS SINK; BONE SPRING
Property Code 38297	Property Name LIZARD POT STATE COM	Well Number 2H
OGRID No. 14049	Operator Name MARBOB ENERGY CORPORATION	Elevation 3481'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	36	19-S	31-E		660	SOUTH	1980	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
N	1	20-S	31-E		330	SOUTH	1980	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
200			


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>SURFACE LOCATION Y=586514.4 N X=656725.5 E</p> <p>LAT.=32 611401' N LONG.=103 824355' W</p> <p>BOTTOM HOLE LOCATION Y=580915.9 N X=656726.4 E</p>	<p>SCALE: 1"=2000'</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> 5/26/10 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><i>Gary G. Eidson</i> 5/13/10 Date Surveyed Signature & Seal Professional Surveyor</p> <p>Certificate No. GARY G. EIDSON 12641 RONALD J. EIDSON 3239</p>
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CONTOUR INTERVAL:
WILLIAMS SINK, N.M. - 10'
GREENWOOD LAKE, N.M. - 10'

~~Access~~ Access Road Planned



PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N DAL PASO
HOBBS, N M 88240
(575) 393-3117

PROVIDING SURVEYING SERVICES
SINCE 1946

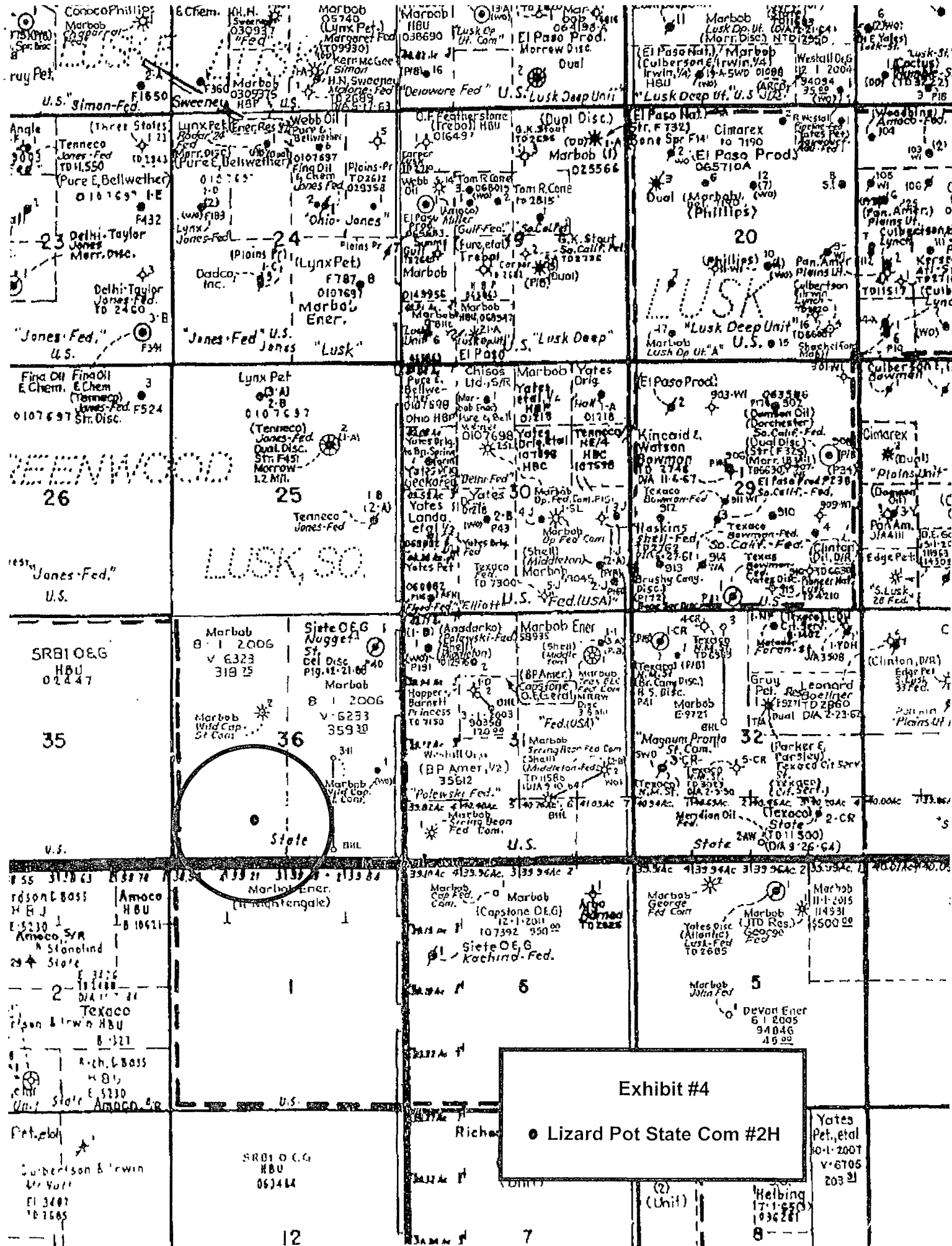
JOHN WEST SURVEYING COMPANY

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

40BBS, NM 88240

(575) 393-3117

Exhibit #2



MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

Lizard Pot State Com #2H
Surf: 660' FSL & 1980' FWL, Sec 36, T19S-R31E
BHL: 330' FSL & 1980' FWL, Sec 1, T20S-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	875'	
Top of Salt	1040'	
Base of Salt	2535'	
Yates	2735'	Oil
7 Rivers	3065'	
Reef	3165'	
Delaware	4450'	Oil
Bone Spring	7310'	
1 st BS	8475'	Oil
2 nd BS	9065'	Oil
3 rd BS	10030'	Oil
Wolfcamp	10615'	
TD	10815'	
TVD	9400'	
TMD	14793'	

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 900' 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 9 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
17 1/2"	0' - 900'	13 3/8"	New	54.5#	STC	J-55	1.125	1.125	1.6
12 1/4"	0' - 3450'	9 5/8"	New	36#	BUTT	J-55	1.125	1.125	1.6
12 1/4"	3450' - 4100'	9 5/8"	New	40#	BUTT	J-55	1.125	1.125	1.6
7 7/8"	4100' - 14793'	5 1/2"	New	17#	LTC	Top 5000' S95/P110 Bottom 10130' N80	1.125	1.125	1.6

* Marbob proposes to drill intermediate hole to 4100' with brine water if lost circulation is encountered in the reef will immediately switch to fresh water and drill to csg setting depth

5. Proposed Cement Program:

- a. 13 3/8" Surf Cement to surface with 500 sk "C" light wt 13.5 yield 1.69
Tail in with 200 sk "c" wt 14.8 yield 1.34
- b. 9 5/8" Int cement 1st stage with 300 sk "c" light wt 12.7 yield 1.91
Tail in with 200 sk "c" wt 14.8 yield 1.34. 2nd stage with
600 sk "c" light wt 12.7 yield 1.91 Tail in with 100 sk "c"
wt 14.8 yield 1.34 TOC 700' Surf packer stage collar @
2800' *Surface - See COA*
- c. 5 1/2" Prod Cement 1st stage with 600 sk acid soluble "H" wt 15.0 yield
2.6, second stage with 750 sk "H" light wt 12.7 yield 1.91
Tail in with 100 sk "H" wt 13.0 yield 1.64. DV @ 8850' TOC
2800'

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 9-5/8" casing shoe. **All casing is new and API approved.** *1300' See COA*

6. Minimum Specifications for Pressure Control:

Nipple up on 13 3/8 with 2M system tested to 2000 psi, nipple up on 9 5/8 with 3m system tested to 3000# by independent tester

Pipe rams will be operationally checked each 24 hour period. Blind rams 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 ram-type 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: 3910.40 psi

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

Depth	Type System	Mud Weight	Viscosity (sec)	Waterloss (cc)
0' - 900'	Fresh Water	8.4	29	N.C.
900' - 4100'	Brine	9.9 - 10.0	29	N.C.
4100' - 14793	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. 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 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:

See
COA

- 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: 3912.48 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 40 days.



Marbob

Eddy County

Lizard Pot State Com

#2H

OH

Plan: Plan #1

Pathfinder X & Y Planning Report

25 May, 2010

PATHFINDER



Pathfinder
Pathfinder X & Y Planning Report



Company:	Marbob	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County	TVD Reference:	WELL @ 3498.00ft (Original Well Elev)
Site:	Lizard Pot State Com	MD Reference:	WELL @ 3498.00ft (Original Well Elev)
Well:	#2H	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	Lizard Pot State Com		
Site Position:		Northing:	586,506.400 ft
From:	Map	Easting:	655,405.700 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	32° 36' 41.027 N
		Longitude:	103° 49' 43.108 W
		Grid Convergence:	0.27 °

Well	#2H			
Well Position	+N/-S	0.00 ft	Northing:	586,514.400 ft
	+E/-W	0.00 ft	Easting:	656,725.500 ft
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft
			Latitude:	32° 36' 41.044 N
			Longitude:	103° 49' 27.678 W
			Ground Level:	3,481.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	05/25/2010	7.85	60.55	48,958

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	179.99

Survey Tool Program	Date 05/25/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	14,793.56	Plan #1 (OH)	MWD	MWD - Standard



Pathfinder

Pathfinder X & Y Planning Report



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Well:	#2H	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	-3,498.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
100.00	0.00	0.00	100.00	-3,398.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
200.00	0.00	0.00	200.00	-3,298.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
300.00	0.00	0.00	300.00	-3,198.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
400.00	0.00	0.00	400.00	-3,098.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
500.00	0.00	0.00	500.00	-2,998.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
600.00	0.00	0.00	600.00	-2,898.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
700.00	0.00	0.00	700.00	-2,798.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
800.00	0.00	0.00	800.00	-2,698.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
900.00	0.00	0.00	900.00	-2,598.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
1,000.00	0.00	0.00	1,000.00	-2,498.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
1,100.00	0.00	0.00	1,100.00	-2,398.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
1,200.00	0.00	0.00	1,200.00	-2,298.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
1,300.00	0.00	0.00	1,300.00	-2,198.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
1,400.00	0.00	0.00	1,400.00	-2,098.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
1,500.00	0.00	0.00	1,500.00	-1,998.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
1,600.00	0.00	0.00	1,600.00	-1,898.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
1,700.00	0.00	0.00	1,700.00	-1,798.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
1,800.00	0.00	0.00	1,800.00	-1,698.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
1,900.00	0.00	0.00	1,900.00	-1,598.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
2,000.00	0.00	0.00	2,000.00	-1,498.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
2,100.00	0.00	0.00	2,100.00	-1,398.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
2,200.00	0.00	0.00	2,200.00	-1,298.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
2,300.00	0.00	0.00	2,300.00	-1,198.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
2,400.00	0.00	0.00	2,400.00	-1,098.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
2,500.00	0.00	0.00	2,500.00	-998.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
2,600.00	0.00	0.00	2,600.00	-898.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	



Pathfinder

Pathfinder X & Y Planning Report



Company:	Marbob	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County	TVD Reference:	WELL @ 3498.00ft (Original Well Elev)
Site:	Lizard Pot State Com	MD Reference:	WELL @ 3498.00ft (Original Well Elev)
Well:	#2H	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	-798.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
2,800.00	0.00	0.00	2,800.00	-698.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
2,900.00	0.00	0.00	2,900.00	-598.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
3,000.00	0.00	0.00	3,000.00	-498.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
3,100.00	0.00	0.00	3,100.00	-398.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
3,200.00	0.00	0.00	3,200.00	-298.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
3,300.00	0.00	0.00	3,300.00	-198.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
3,400.00	0.00	0.00	3,400.00	-98.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
3,500.00	0.00	0.00	3,500.00	2.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
3,600.00	0.00	0.00	3,600.00	102.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
3,700.00	0.00	0.00	3,700.00	202.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
3,800.00	0.00	0.00	3,800.00	302.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
3,900.00	0.00	0.00	3,900.00	402.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
4,000.00	0.00	0.00	4,000.00	502.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
4,100.00	0.00	0.00	4,100.00	602.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
4,200.00	0.00	0.00	4,200.00	702.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
4,300.00	0.00	0.00	4,300.00	802.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
4,400.00	0.00	0.00	4,400.00	902.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
4,500.00	0.00	0.00	4,500.00	1,002.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
4,600.00	0.00	0.00	4,600.00	1,102.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
4,700.00	0.00	0.00	4,700.00	1,202.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
4,800.00	0.00	0.00	4,800.00	1,302.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
4,900.00	0.00	0.00	4,900.00	1,402.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
5,000.00	0.00	0.00	5,000.00	1,502.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
5,100.00	0.00	0.00	5,100.00	1,602.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
5,200.00	0.00	0.00	5,200.00	1,702.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
5,300.00	0.00	0.00	5,300.00	1,802.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	



Pathfinder Pathfinder X & Y Planning Report



Company:	Marbob	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County	TVD Reference:	WELL @ 3498.00ft (Original Well Elev)
Site:	Lizard Pot State Com	MD Reference:	WELL @ 3498.00ft (Original Well Elev)
Well:	#2H	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)	
5,400.00	0.00	0.00	5,400.00	1,902.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
5,500.00	0.00	0.00	5,500.00	2,002.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
5,600.00	0.00	0.00	5,600.00	2,102.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
5,700.00	0.00	0.00	5,700.00	2,202.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
5,800.00	0.00	0.00	5,800.00	2,302.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
5,900.00	0.00	0.00	5,900.00	2,402.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
6,000.00	0.00	0.00	6,000.00	2,502.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
6,100.00	0.00	0.00	6,100.00	2,602.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
6,200.00	0.00	0.00	6,200.00	2,702.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
6,300.00	0.00	0.00	6,300.00	2,802.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
6,400.00	0.00	0.00	6,400.00	2,902.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
6,500.00	0.00	0.00	6,500.00	3,002.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
6,600.00	0.00	0.00	6,600.00	3,102.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
6,700.00	0.00	0.00	6,700.00	3,202.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
6,800.00	0.00	0.00	6,800.00	3,302.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
6,900.00	0.00	0.00	6,900.00	3,402.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
7,000.00	0.00	0.00	7,000.00	3,502.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
7,100.00	0.00	0.00	7,100.00	3,602.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
7,200.00	0.00	0.00	7,200.00	3,702.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
7,300.00	0.00	0.00	7,300.00	3,802.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
7,400.00	0.00	0.00	7,400.00	3,902.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
7,500.00	0.00	0.00	7,500.00	4,002.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
7,600.00	0.00	0.00	7,600.00	4,102.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
7,700.00	0.00	0.00	7,700.00	4,202.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
7,800.00	0.00	0.00	7,800.00	4,302.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
7,900.00	0.00	0.00	7,900.00	4,402.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
8,000.00	0.00	0.00	8,000.00	4,502.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	



Pathfinder

Pathfinder X & Y Planning Report



Company:	Marbob	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County	TVD Reference:	WELL @ 3498.00ft (Original Well Elev)
Site:	Lizard Pot State Com	MD Reference:	WELL @ 3498.00ft (Original Well Elev)
Well:	#2H	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)	
8,100.00	0.00	0.00	8,100.00	4,602.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
8,200.00	0.00	0.00	8,200.00	4,702.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
8,300.00	0.00	0.00	8,300.00	4,802.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
8,400.00	0.00	0.00	8,400.00	4,902.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
8,500.00	0.00	0.00	8,500.00	5,002.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
8,600.00	0.00	0.00	8,600.00	5,102.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
8,700.00	0.00	0.00	8,700.00	5,202.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
8,800.00	0.00	0.00	8,800.00	5,302.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
8,900.00	0.00	0.00	8,900.00	5,402.00	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
8,922.50	0.00	0.00	8,922.50	5,424.50	0.00	0.00	0.00	0.00	586,514.40	656,725.50	
8,925.00	0.30	179.99	8,925.00	5,427.00	-0.01	0.00	0.01	12.00	586,514.39	656,725.50	
8,950.00	3.30	179.99	8,949.98	5,451.98	-0.79	0.00	0.79	12.00	586,513.61	656,725.50	
8,975.00	6.30	179.99	8,974.89	5,476.89	-2.88	0.00	2.88	12.00	586,511.52	656,725.50	
9,000.00	9.30	179.99	8,999.66	5,501.66	-6.28	0.00	6.28	12.00	586,508.12	656,725.50	
9,025.00	12.30	179.99	9,024.21	5,526.21	-10.96	0.00	10.96	12.00	586,503.44	656,725.50	
9,050.00	15.30	179.99	9,048.49	5,550.49	-16.92	0.00	16.92	12.00	586,497.48	656,725.50	
9,075.00	18.30	179.99	9,072.42	5,574.42	-24.15	0.00	24.15	12.00	586,490.25	656,725.50	
9,100.00	21.30	179.99	9,095.94	5,597.94	-32.61	0.01	32.61	12.00	586,481.79	656,725.51	
9,125.00	24.30	179.99	9,118.98	5,620.98	-42.30	0.01	42.30	12.00	586,472.10	656,725.51	
9,150.00	27.30	179.99	9,141.49	5,643.49	-53.18	0.01	53.18	12.00	586,461.22	656,725.51	
9,175.00	30.30	179.99	9,163.40	5,665.40	-65.22	0.01	65.22	12.00	586,449.18	656,725.51	
9,200.00	33.30	179.99	9,184.64	5,686.64	-78.39	0.01	78.39	12.00	586,436.01	656,725.51	
9,225.00	36.30	179.99	9,205.17	5,707.17	-92.66	0.02	92.66	12.00	586,421.74	656,725.52	
9,250.00	39.30	179.99	9,224.92	5,726.92	-107.98	0.02	107.98	12.00	586,406.42	656,725.52	
9,275.00	42.30	179.99	9,243.84	5,745.84	-124.31	0.02	124.31	12.00	586,390.09	656,725.52	
9,300.00	45.30	179.99	9,261.89	5,763.89	-141.61	0.02	141.61	12.00	586,372.79	656,725.52	
9,325.00	48.30	179.99	9,279.00	5,781.00	-159.83	0.03	159.83	12.00	586,354.57	656,725.53	



Pathfinder

Pathfinder X & Y Planning Report



Company:	Marbob	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County	TVD Reference:	WELL @ 3498.00ft (Original Well Elev)
Site:	Lizard Pot State Com	MD Reference:	WELL @ 3498.00ft (Original Well Elev)
Well:	#2H	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)	
9,350.00	51.30	179.99	9,295.14	5,797.14	-178.92	0.03	178.92	12.00	586,335.48	656,725.53	
9,375.00	54.30	179.99	9,310.25	5,812.25	-198.83	0.03	198.83	12.00	586,315.57	656,725.53	
9,400.00	57.30	179.99	9,324.30	5,826.30	-219.51	0.04	219.51	12.00	586,294.89	656,725.54	
9,425.00	60.30	179.99	9,337.25	5,839.25	-240.89	0.04	240.89	12.00	586,273.51	656,725.54	
9,450.00	63.30	179.99	9,349.07	5,851.07	-262.92	0.05	262.92	12.00	586,251.48	656,725.55	
9,475.00	66.30	179.99	9,359.71	5,861.71	-285.53	0.05	285.53	12.00	586,228.87	656,725.55	
9,500.00	69.29	179.99	9,369.16	5,871.16	-308.68	0.05	308.68	12.00	586,205.72	656,725.55	
9,525.00	72.29	179.99	9,377.38	5,879.38	-332.28	0.06	332.28	12.00	586,182.12	656,725.56	
9,550.00	75.29	179.99	9,384.36	5,886.36	-356.29	0.06	356.29	12.00	586,158.11	656,725.56	
9,575.00	78.29	179.99	9,390.07	5,892.07	-380.62	0.07	380.62	12.00	586,133.78	656,725.57	
9,600.00	81.29	179.99	9,394.50	5,896.50	-405.22	0.07	405.22	12.00	586,109.18	656,725.57	
9,625.00	84.29	179.99	9,397.63	5,899.63	-430.02	0.08	430.02	12.00	586,084.38	656,725.58	
9,650.00	87.29	179.99	9,399.47	5,901.47	-454.95	0.08	454.95	12.00	586,059.45	656,725.58	
9,672.56	90.00	179.99	9,400.00	5,902.00	-477.50	0.08	477.50	12.00	586,036.90	656,725.58	
9,700.00	90.00	179.99	9,400.00	5,902.00	-504.94	0.09	504.94	0.00	586,009.46	656,725.59	
9,800.00	90.00	179.99	9,400.00	5,902.00	-604.94	0.11	604.94	0.00	585,909.46	656,725.61	
9,900.00	90.00	179.99	9,400.00	5,902.00	-704.94	0.12	704.94	0.00	585,809.46	656,725.62	
10,000.00	90.00	179.99	9,400.00	5,902.00	-804.94	0.14	804.94	0.00	585,709.46	656,725.64	
10,100.00	90.00	179.99	9,400.00	5,902.00	-904.94	0.16	904.94	0.00	585,609.46	656,725.66	
10,200.00	90.00	179.99	9,400.00	5,902.00	-1,004.94	0.18	1,004.94	0.00	585,509.46	656,725.68	
10,300.00	90.00	179.99	9,400.00	5,902.00	-1,104.94	0.19	1,104.94	0.00	585,409.46	656,725.69	
10,400.00	90.00	179.99	9,400.00	5,902.00	-1,204.94	0.21	1,204.94	0.00	585,309.46	656,725.71	
10,500.00	90.00	179.99	9,400.00	5,902.00	-1,304.94	0.23	1,304.94	0.00	585,209.46	656,725.73	
10,600.00	90.00	179.99	9,400.00	5,902.00	-1,404.94	0.25	1,404.94	0.00	585,109.46	656,725.75	
10,700.00	90.00	179.99	9,400.00	5,902.00	-1,504.94	0.26	1,504.94	0.00	585,009.46	656,725.76	
10,800.00	90.00	179.99	9,400.00	5,902.00	-1,604.94	0.28	1,604.94	0.00	584,909.46	656,725.78	
10,900.00	90.00	179.99	9,400.00	5,902.00	-1,704.94	0.30	1,704.94	0.00	584,809.46	656,725.80	



Pathfinder

Pathfinder X & Y Planning Report



Company:	Marbob	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County	TVD Reference:	WELL @ 3498.00ft (Original Well Elev)
Site:	Lizard Pot State Com	MD Reference:	WELL @ 3498.00ft (Original Well Elev)
Well:	#2H	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)
11,000.00	90.00	179.99	9,400.00	5,902.00	-1,804.94	0.32	1,804.94	0.00	584,709.46	656,725.82
11,100.00	90.00	179.99	9,400.00	5,902.00	-1,904.94	0.33	1,904.94	0.00	584,609.46	656,725.83
11,200.00	90.00	179.99	9,400.00	5,902.00	-2,004.94	0.35	2,004.94	0.00	584,509.46	656,725.85
11,300.00	90.00	179.99	9,400.00	5,902.00	-2,104.94	0.37	2,104.94	0.00	584,409.46	656,725.87
11,400.00	90.00	179.99	9,400.00	5,902.00	-2,204.94	0.38	2,204.94	0.00	584,309.46	656,725.88
11,500.00	90.00	179.99	9,400.00	5,902.00	-2,304.94	0.40	2,304.94	0.00	584,209.46	656,725.90
11,600.00	90.00	179.99	9,400.00	5,902.00	-2,404.94	0.42	2,404.94	0.00	584,109.46	656,725.92
11,700.00	90.00	179.99	9,400.00	5,902.00	-2,504.94	0.44	2,504.94	0.00	584,009.46	656,725.94
11,800.00	90.00	179.99	9,400.00	5,902.00	-2,604.94	0.45	2,604.94	0.00	583,909.46	656,725.95
11,900.00	90.00	179.99	9,400.00	5,902.00	-2,704.94	0.47	2,704.94	0.00	583,809.46	656,725.97
12,000.00	90.00	179.99	9,400.00	5,902.00	-2,804.94	0.49	2,804.94	0.00	583,709.46	656,725.99
12,100.00	90.00	179.99	9,400.00	5,902.00	-2,904.94	0.51	2,904.94	0.00	583,609.46	656,726.01
12,200.00	90.00	179.99	9,400.00	5,902.00	-3,004.94	0.52	3,004.94	0.00	583,509.46	656,726.02
12,300.00	90.00	179.99	9,400.00	5,902.00	-3,104.94	0.54	3,104.94	0.00	583,409.46	656,726.04
12,400.00	90.00	179.99	9,400.00	5,902.00	-3,204.94	0.56	3,204.94	0.00	583,309.46	656,726.06
12,500.00	90.00	179.99	9,400.00	5,902.00	-3,304.94	0.58	3,304.94	0.00	583,209.46	656,726.08
12,600.00	90.00	179.99	9,400.00	5,902.00	-3,404.94	0.59	3,404.94	0.00	583,109.46	656,726.09
12,700.00	90.00	179.99	9,400.00	5,902.00	-3,504.94	0.61	3,504.94	0.00	583,009.46	656,726.11
12,800.00	90.00	179.99	9,400.00	5,902.00	-3,604.94	0.63	3,604.94	0.00	582,909.46	656,726.13
12,900.00	90.00	179.99	9,400.00	5,902.00	-3,704.94	0.65	3,704.94	0.00	582,809.46	656,726.15
13,000.00	90.00	179.99	9,400.00	5,902.00	-3,804.94	0.66	3,804.94	0.00	582,709.46	656,726.16
13,100.00	90.00	179.99	9,400.00	5,902.00	-3,904.94	0.68	3,904.94	0.00	582,609.46	656,726.18
13,200.00	90.00	179.99	9,400.00	5,902.00	-4,004.94	0.70	4,004.94	0.00	582,509.46	656,726.20
13,300.00	90.00	179.99	9,400.00	5,902.00	-4,104.94	0.72	4,104.94	0.00	582,409.46	656,726.22
13,400.00	90.00	179.99	9,400.00	5,902.00	-4,204.94	0.73	4,204.94	0.00	582,309.46	656,726.23
13,500.00	90.00	179.99	9,400.00	5,902.00	-4,304.94	0.75	4,304.94	0.00	582,209.46	656,726.25
13,600.00	90.00	179.99	9,400.00	5,902.00	-4,404.94	0.77	4,404.94	0.00	582,109.46	656,726.27



Pathfinder

Pathfinder X & Y Planning Report



Company: Marbob
 Project: Eddy County
 Site: Lizard Pot State Com
 Well: #2H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Well #2H
 TVD Reference: WELL @ 3498.00ft (Original Well Elev)
 MD Reference: WELL @ 3498.00ft (Original Well Elev)
 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)	
13,700.00	90.00	179.99	9,400.00	5,902.00	-4,504.94	0.79	4,504.94	0.00	582,009.46	656,726.29	
13,800.00	90.00	179.99	9,400.00	5,902.00	-4,604.94	0.80	4,604.94	0.00	581,909.46	656,726.30	
13,900.00	90.00	179.99	9,400.00	5,902.00	-4,704.94	0.82	4,704.94	0.00	581,809.46	656,726.32	
14,000.00	90.00	179.99	9,400.00	5,902.00	-4,804.94	0.84	4,804.94	0.00	581,709.46	656,726.34	
14,100.00	90.00	179.99	9,400.00	5,902.00	-4,904.94	0.86	4,904.94	0.00	581,609.46	656,726.36	
14,200.00	90.00	179.99	9,400.00	5,902.00	-5,004.94	0.87	5,004.94	0.00	581,509.46	656,726.37	
14,300.00	90.00	179.99	9,400.00	5,902.00	-5,104.94	0.89	5,104.94	0.00	581,409.46	656,726.39	
14,400.00	90.00	179.99	9,400.00	5,902.00	-5,204.94	0.91	5,204.94	0.00	581,309.46	656,726.41	
14,500.00	90.00	179.99	9,400.00	5,902.00	-5,304.94	0.93	5,304.94	0.00	581,209.46	656,726.43	
14,600.00	90.00	179.99	9,400.00	5,902.00	-5,404.94	0.94	5,404.94	0.00	581,109.46	656,726.44	
14,700.00	90.00	179.99	9,400.00	5,902.00	-5,504.94	0.96	5,504.94	0.00	581,009.46	656,726.46	
14,793.56	90.00	179.99	9,400.00	5,902.00	-5,598.50	0.98	5,598.50	0.00	580,915.90	656,726.48	
PBHL(LP#2H)											

Targets									
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude Longitude
PBHL(LP#2H)	- plan hits target center	0.00	0.00	9,400.00	-5,598.50	0.90	580,915.900	656,726.400	32° 35' 45.645 N 103° 49' 27.981 W
- Point									

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County
 Site: Lizard Pot State Co
 Well: #2H
 Wellbore: OH
 Plan: Plan #1 (#2H/OH)



Azimuths to Grid North
 True North: -0.27°
 Magnetic North: 7.57°

Magnetic Field
 Strength: 48958.4snT
 Dip Angle: 60.55°
 Date: 05/25/2010
 Model: IGRF200510

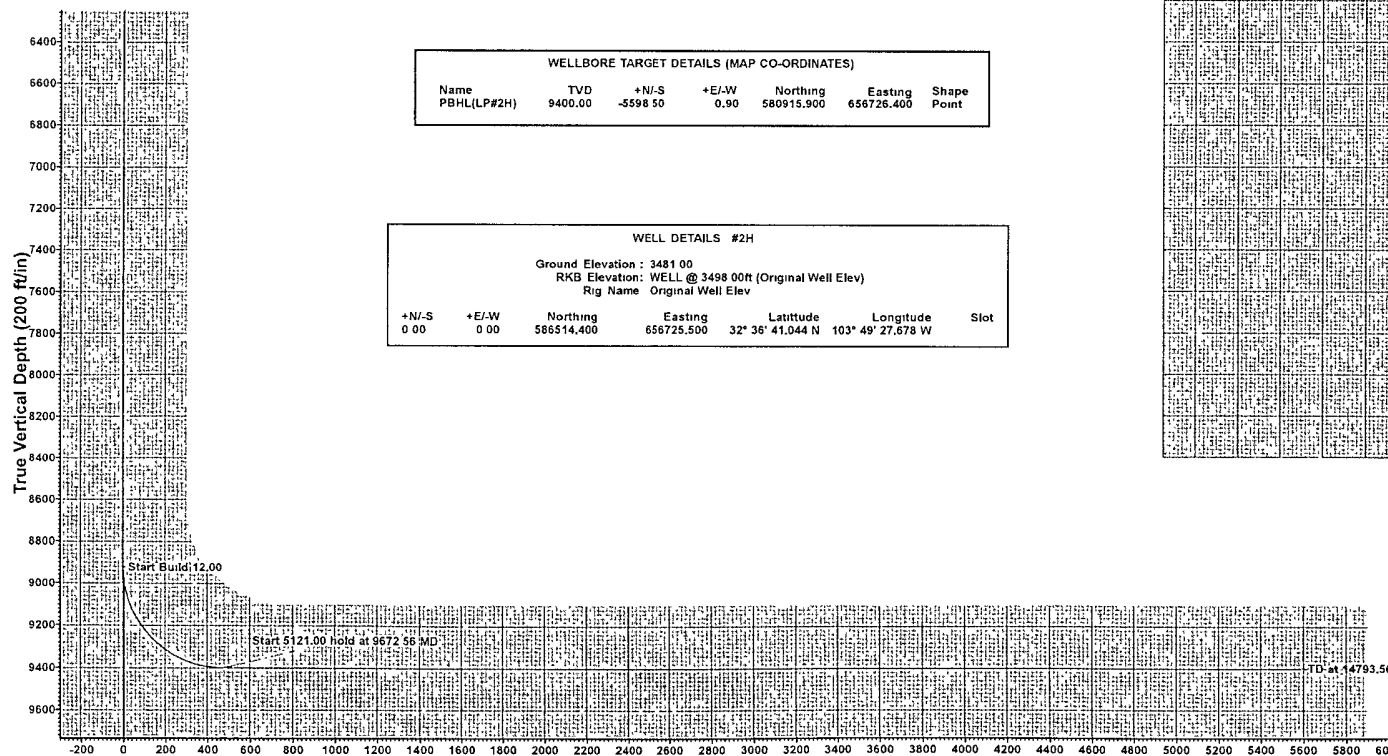


PROJECT DETAILS Eddy County
 Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico East 3001
 System Datum: Mean Sea Level
 Local North: Grid

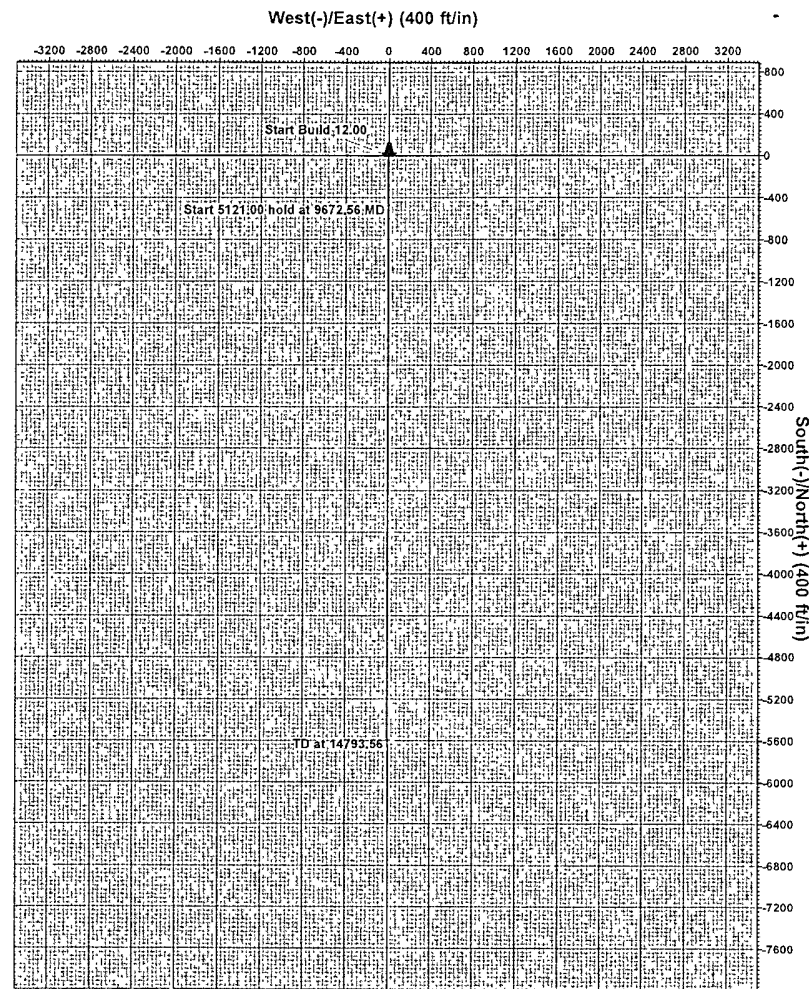
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	8922.50	0.00	0.00	8922.50	0.00	0.00	0.00	0.00	0.00	
3	9672.56	90.00	179.99	9400.00	-477.50	0.08	12.00	179.99	477.50	
4	14793.56	90.00	179.99	9400.00	-5598.50	0.98	0.00	0.00	5598.50	PBHL(LP#2H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL(LP#2H)	9400.00	-5598.50	0.90	580915.900	656726.400	Point

WELL DETAILS #2H						
Ground Elevation : 3481.00						
RKB Elevation: WELL @ 3498.00ft (Original Well Elev)						
Rig Name Original Well Elev						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	586514.400	656725.500	32° 36' 41.044 N	103° 49' 27.678 W	



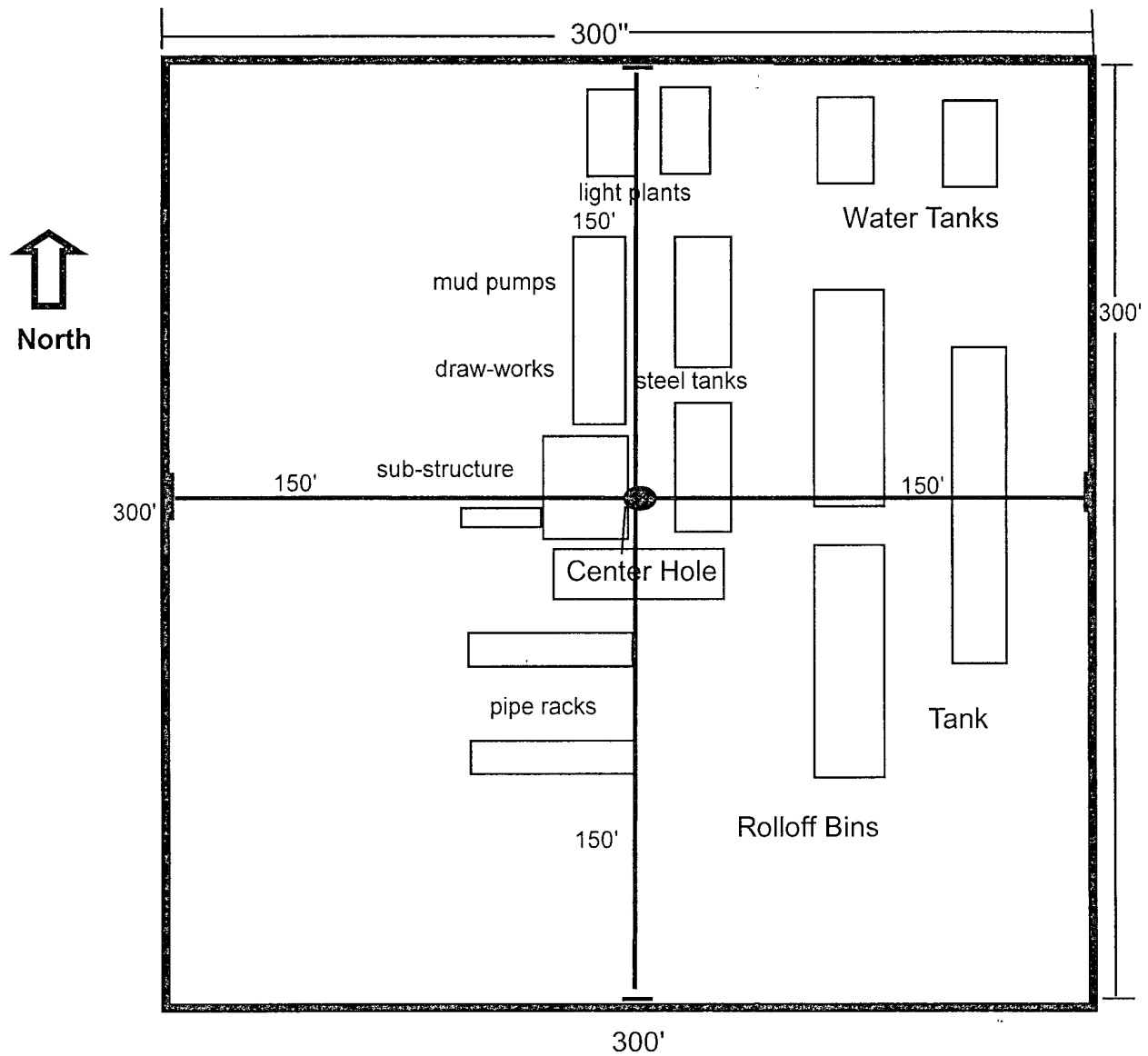
Vertical Section at 179.99° (200 ft/in)



Plan Plan #1 (#2H/OH)

Created By: Nate Bingham Date 16 24, May 25 2010

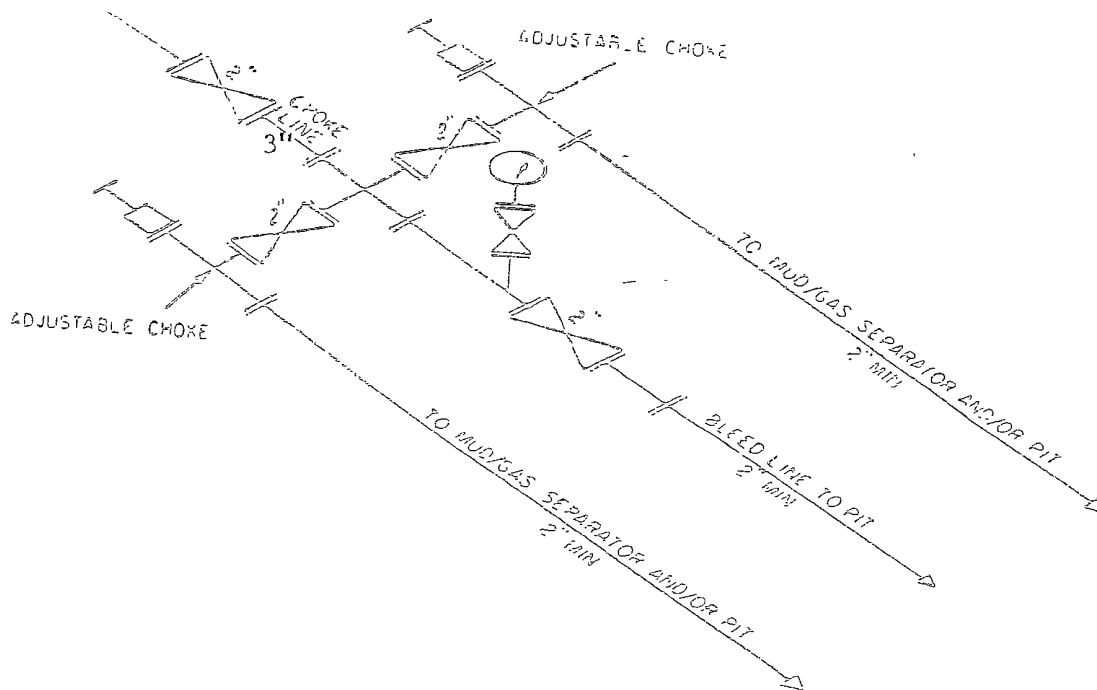
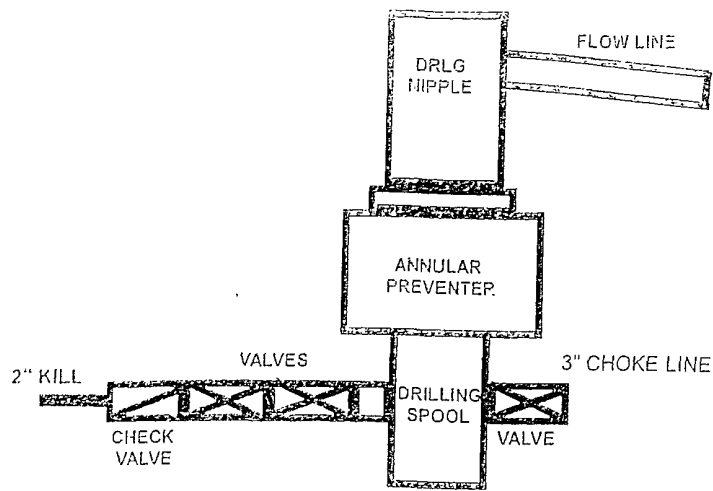
Well Site Lay-Out Plat



Lizard Pot State Com #2H
Surf: 660' FSL & 1980' FWL, Sec 36, T19S-R31E
BHL: 330' FSL & 1980' FWL, Sec 1, T20S-R31E
Eddy County, New Mexico

EXHIBIT THREE

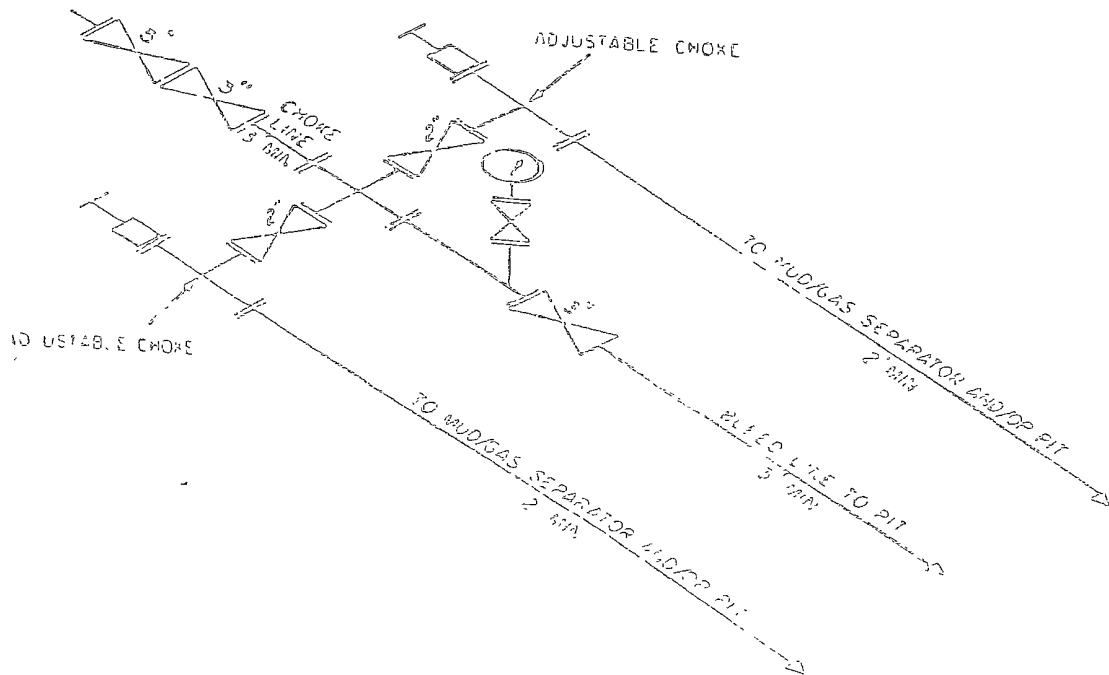
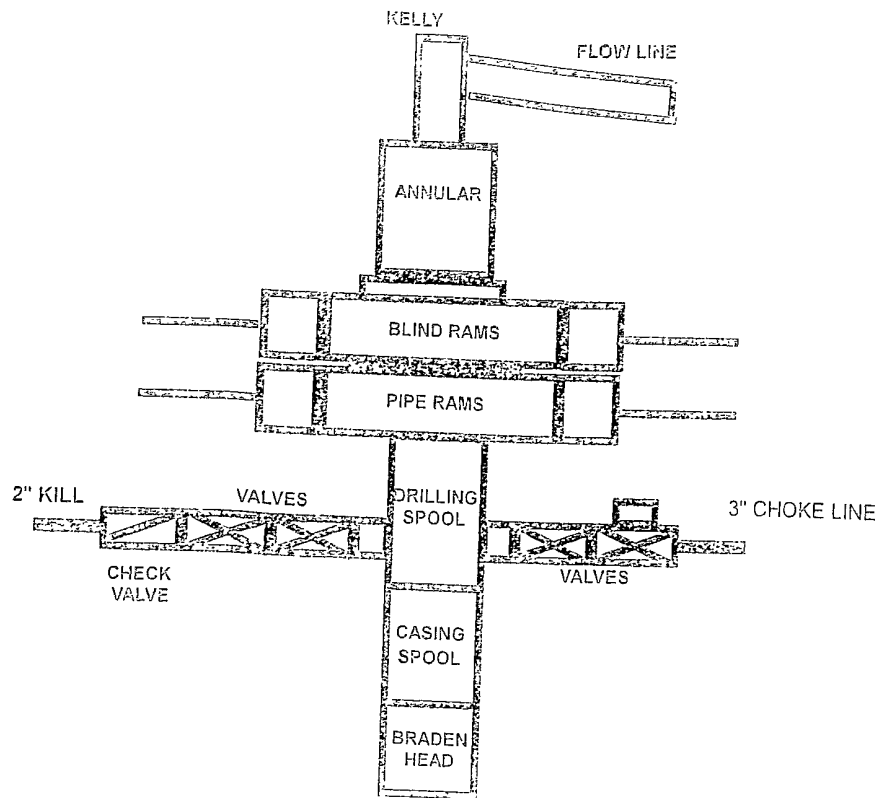
2M SYSTEM



2M CHOKES MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES

MAY VARY

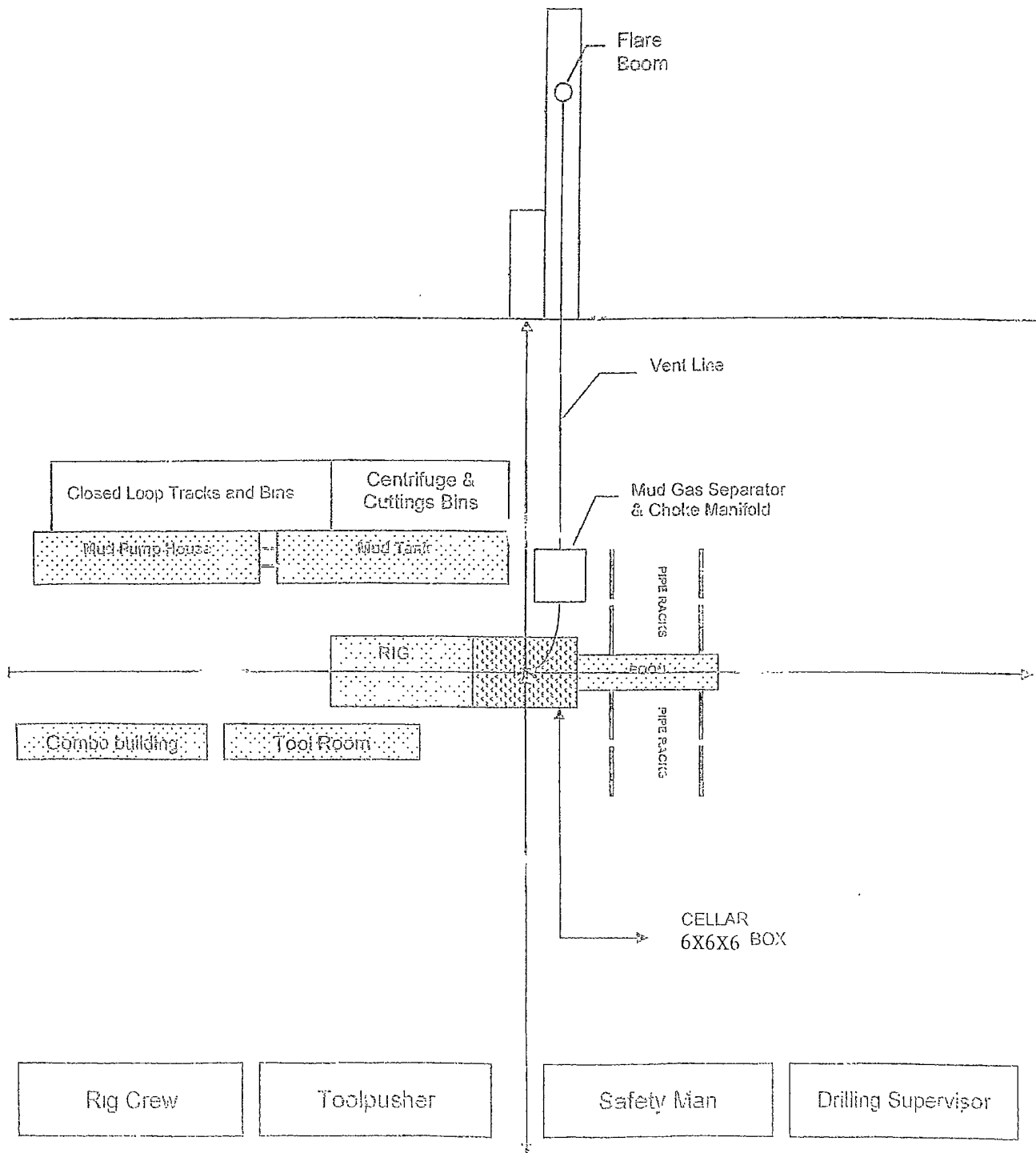
3M SYSTEM



3M CHOKE MANIFOLD EQUIPMENT -- COMPLETION OF CHOSES

11-1-1971

3H 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.

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

1-575-748-3303

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

Lizard Pot State Com #2H
Surf: 660' FSL & 1980' FWL, Sec 36, T19S-R31E
BHL: 330' FSL & 1980' FWL, Sec 1, T20S-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. 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 St. Hwy. #529 and Co. Rd. #H126 (Maljamar Rd.), go south on Co. Rd. #H126 approx. 12.0 miles. Turn right and go west approx. 1.1 mile. Turn left and go south approx. 0.25 miles. Turn right and go west approx. 0.55 miles to ext. Marbob Wildcap #2 Battery. Follow proposed road survey southwest approx. 2595 feet. Proposed road survey turns left, go southeast approx. 67 feet. The Lizard Pot State Com #1H well location stake is approx. 212 feet southeast. Go east approx 1320 feet to the location.

2. PLANNED ACCESS ROAD:

Marbob will be using a proposed access road of 1320' coming in on the west side of the well pad.

3. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. In the event the well is found productive, the Lizard Pot State Com #2H 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. All flowlines will adhere to API standards

- B. If electricity is needed, power will be obtained from Central Valley Electric. Central Valley Electric will apply for ROW for their power lines.
- C. 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.
- a. If the well is deemed commercially productive, 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. Reserve pit will not be used on this location therefore no reclamation is needed.
- b. Topsoil will be stockpiled on the EAST SIDE of the location until it is needed for interim reclamation described in paragraph above.

10. SURFACE OWNERSHIP:

The surface is owned by the State of New Mexico and the NM state Land office. 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

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: May 26, 2010

Lease #: SL: V063
BHL: NMD 57239
Lizard Pot State Com #2H

Legal Description: SL: Sec. 36-T19S-R31E
BHL: Sec. 1, T20S-R31E
Eddy County, New Mexico

Formation(s): Permian

Bond Coverage: Statewide

BLM Bond File #: NMB000412

Marbob Energy Corporation

Nancy Agnew

Nancy Agnew
Land Department

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.

5/1/10
Date

Marbob Energy Corporation

William Miller
Land Department

**PECOS DISTRICT
CONDITIONS OF APPROVAL**

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MARBOB ENERGY CORPORATION
LEASE NO.:	NM057239
WELL NAME & NO.:	LIZARD POT STATE COM # 2H
SURFACE HOLE FOOTAGE:	0660' FSL & 1980' FWL, Sec. 36, T. 19 S., R. 31 E.
BOTTOM HOLE FOOTAGE:	0330' FSL & 1980' FWL
LOCATION:	Section 1, T. 20 S., R. 31E., 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**
 - Lesser Prairie-Chicken Timing Stipulations
 - Ground-level Abandoned Well Marker
 - Communitization Agreement
- ☐ **Construction**
 - Notification
 - V-Door Direction – not stipulated
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - Secretary's Potash
 - H2S – Onshore Order 6 requirements
 - 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.

In addition, daily drilling reports are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning from the setting of the surface casing until the intermediate casing is set. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume on an hourly basis. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a fluid caliper survey for the intermediate well bore and submit to the appropriate BLM office.

~~2.~~ The minimum required fill of cement behind the 9-5/8 inch intermediate 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. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool, cement shall:

☒ 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.**

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. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool, cement shall:

☒ Cement should tie-back at least **1300** 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.

Seed Mixture for LPC Sand/Shinnery Sites

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

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

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

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

*Pounds of pure live seed:

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