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OCT 23 2009
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OCD Hobbs

ATS-09-604

Form 3160-3
(February 2005)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No. cr 10/20/09
SHL & BHL: NMNM~~000~~086

6 If Indian, Allotee or Tribe Name

1a. Type of work ☑ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No

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

8 Lease Name and Well No. <36212>
Hawg Federal #2 -H

2 Name of Operator
Marbob Energy Corporation <14049>

9 API Well No.
30-025-39555

3a Address **P.O. Box 227, Artesia, NM 88211-0227**

3b Phone No. *(include area code)*
575-748-3303

10 Field and Pool, or Exploratory
Lea; Bone Spring

4. Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface **330' FNL & 330' FWL** Unit D
At proposed prod zone **430' FNL & 330' FEL** Unit A

11 Sec , T R M or Blk. and Survey or Area
Section 25, T19S - R34E

14 Distance in miles and direction from nearest town or post office*
About 13 miles from Buckeye, NM

12 County or Parish
Lea County

13 State
NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) **330'**

16 No of acres in lease
640.00

17 Spacing Unit dedicated to this well
160

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

19 Proposed Depth
10850' TVD, ~~14500~~' THD
15268' CRW 10/01/09

20 BLM/BIA Bond No. on file
NMB000412

21 Elevations (Show whether DF, KDB, RT, GL, etc)
3773' GL

22. Approximate date work will start*
09/28/2009

23 Estimated duration
45 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
Name *(Printed Typed)* **Nancy T. Agnew**
Date **08/28/2009**

Title **Land Department**

Approved by *(Signature)* /s/ Don Peterson
Name *(Printed Typed)* /s/ Don Peterson
Date OCT 20 2009

Title **FIELD MANAGER**
Office **CARLSBAD FIELD OFFICE**

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 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)

Capitan Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

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AUG 21 2009

State of New Mexico
Energy, Minerals and Natural Resources Department

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

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

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	Pool Code	Pool Name
30-025-39555	37570	LEA; BONE SPRING

Property Code	Property Name	Well Number
36212	HAWG FEDERAL	2H

OGRID No.	Operator Name	Elevation
14049	MARBOB ENERGY CORPORATION	3773'

Surface Location

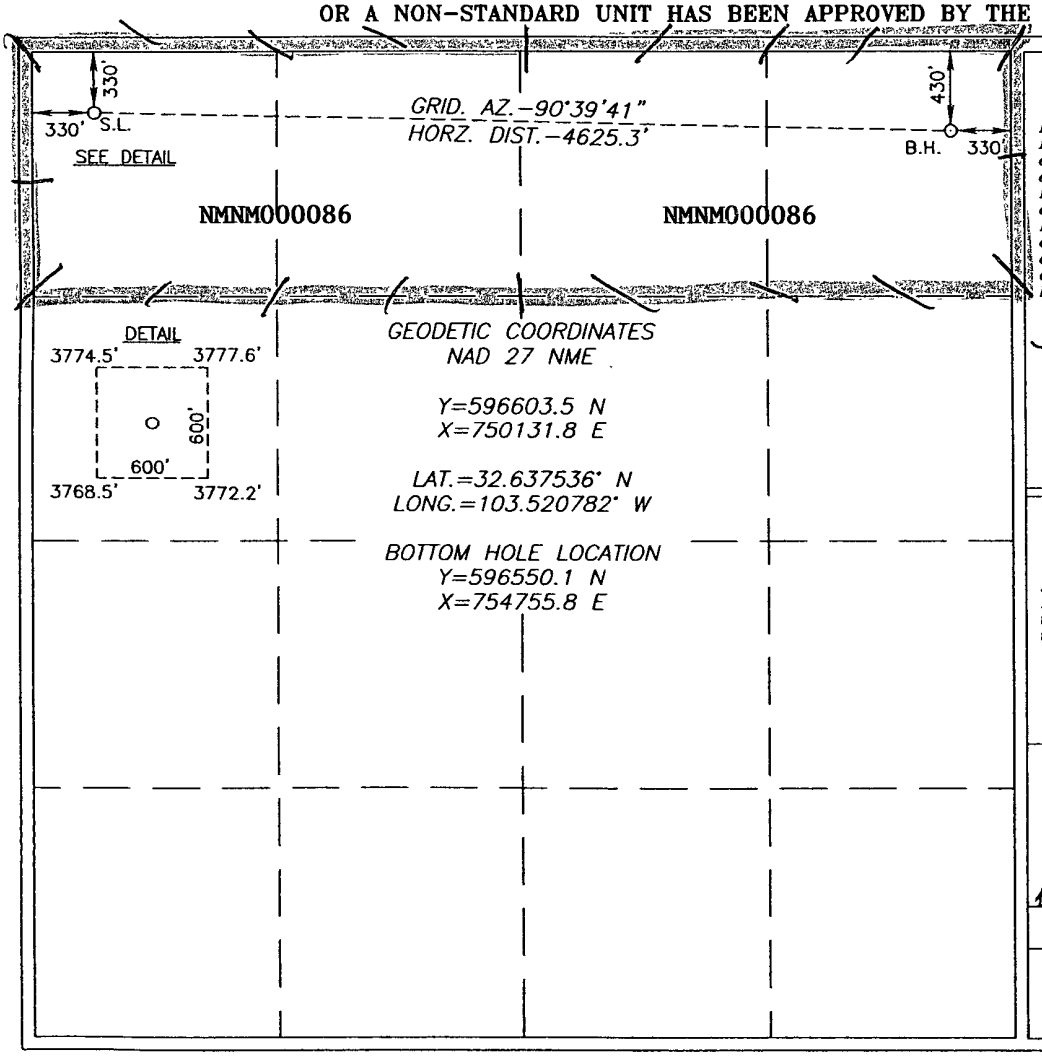
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	25	19-S	34-E		330	NORTH	330	WEST	LEA

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
A	25	19-S	34-E		430	NORTH	330	EAST	LEA

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.

Nancy T. Agnew 8/28/09
Signature Date

Nancy T. Agnew
Printed Name

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.

AUGUST 17, 2009
Date Surveyed LA

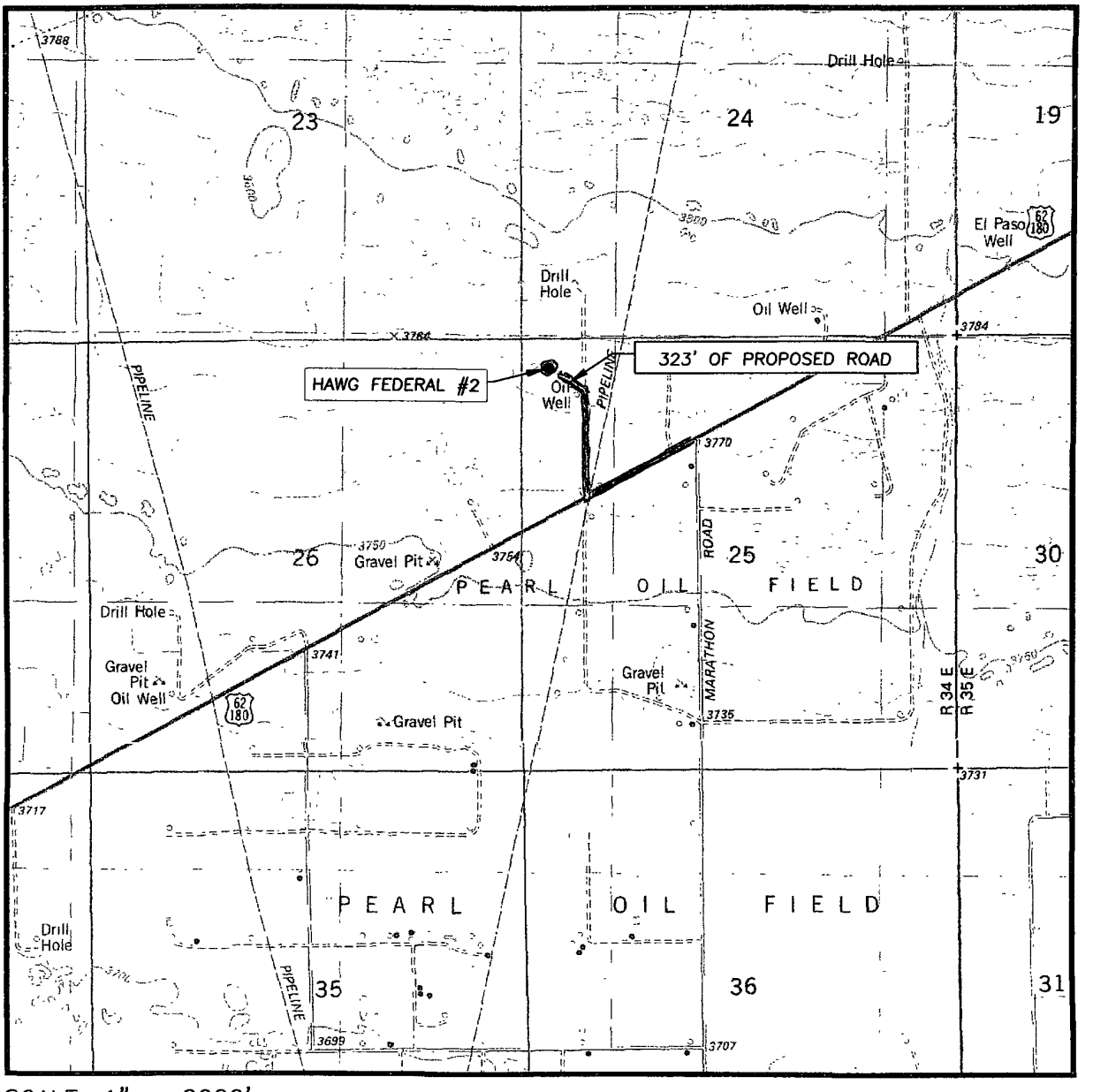
Signature & Seal of Professional Surveyor

Ronald J. Eidson 8-20-09

09.11.0731

Certificate No. GARY EIDSON 12641
RONALD EIDSON 3239

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
IRONHOUSE WELL, N.M. – 10'

SEC. 25 TWP. 19–S RGE. 34–E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 330' FNL & 330' FWL

ELEVATION 3773'

OPERATOR MARBOB ENERGY CORPORATION

LEASE HAWG FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
IRONHOUSE WELL, N.M.

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

Existing Roads

Exhibit #2

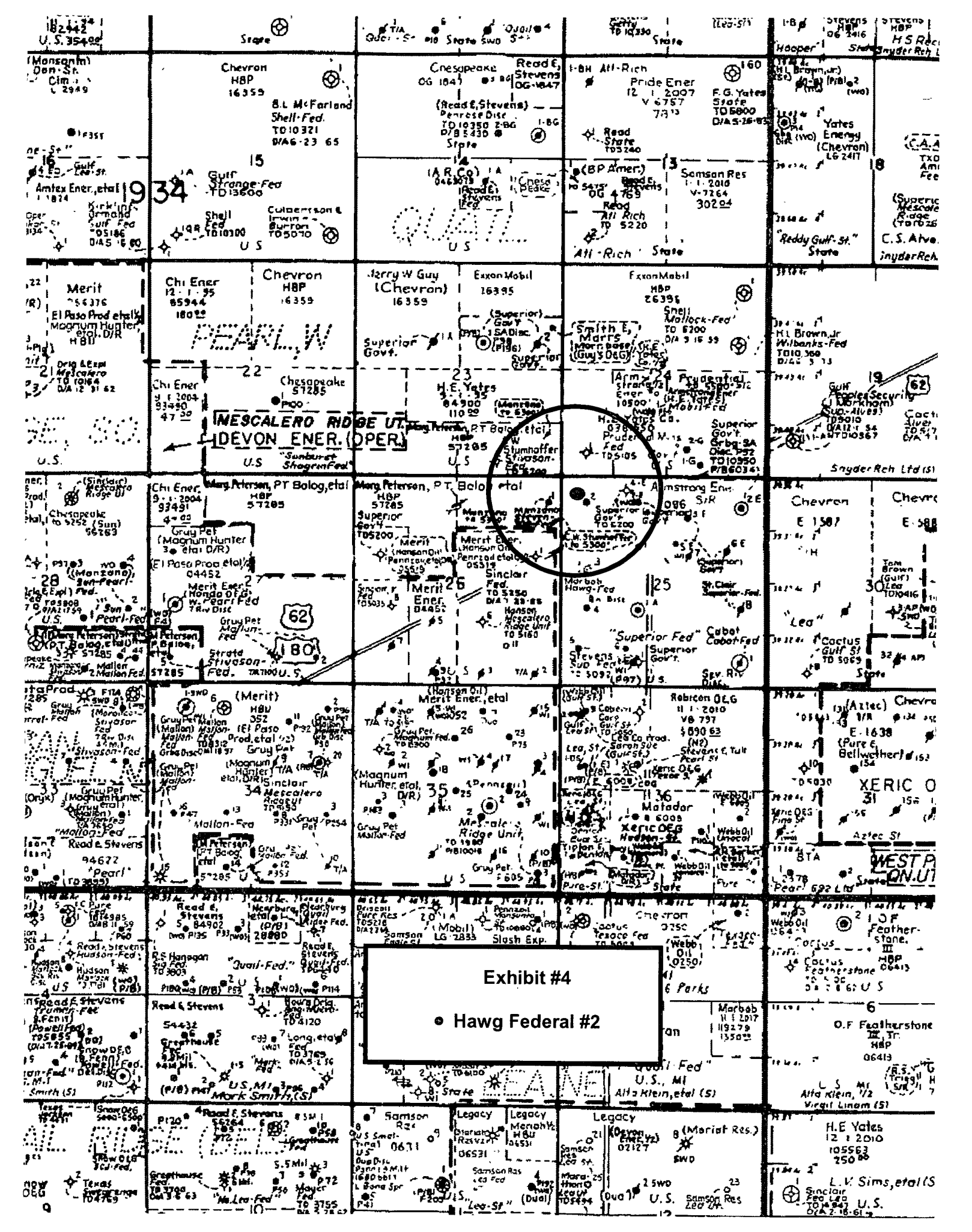


Exhibit #4
• Hawg Federal #2

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

Hawg Federal #2
Surf: 330' FNL & 330' FWL
BHL: 430' FNL & 330' FEL
Section 25, T19S, R34E
Lea 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	1800'	
Top of Salt	2050'	
Base of Salt	3200'	
Yates	3500'	Oil
Queen	4650'	Oil
San Andres	5800'	Oil
Delaware	6150'	Oil
Bone Spring	8200'	Oil
TVD	10850'	
THD	~~14500~~ 15269'	

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 1825' and circulating cement back to surface. All intervals will be isolated by setting 5 ½" casing to total depth and circulating cement above the base of the 13 3/8" 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 ½"	0' – 1825'	13 3/8"	New	54.5#	STC	J-55	1.125	1.125	1.6
12 ¼"	1825' – 3500'	9 5/8"	New	36#	BUTT	J-55	1.125	1.125	1.6
8 3/4"	3500'– 10300'	5 1/2"	New	17#	LTC	N-80	1.125	1.125	1.6
7 7/8"	10300' – ~~14500~~ 15,269' Per operator CRW 10/1/09	5 ½"	New	17#	LTC	N-80	1.125	1.125	1.6

2C → 2A

5. Proposed Cement Program: See COA

a. 13 3/8" Surf	Cement to surface with 750 sk "C" Light wt 12.7 yield 1.91 Tail in with 250 sk "c" wt 14.8 yield 1.34
b. 9 5/8" Int	Cement with 600 sk "c" light wt 12.7 yield 1.91 tail in with 200 sk "c" wt 14.8 yield 1.34 TOC 1300'
c. 5 1/2" Prod	Cement 1st stage with 350 sk "H" acid soluble cement wt 15.0 yield 2.6 2nd stage with 1000 sk "H" light wt 12.7 yield 1.91 Tail in with 200 sk "H" wt 13.0 yield 1.64 DV @ 10300' TOC 3000'

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.**

See COA

6. Minimum Specifications for Pressure Control:

Nipple up on 13 3/8" surface with a 2M system tested to 2000# with independent tester. 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: 4513.6 psi

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

Depth	Type System	Mud Weight	Viscosity (sec)	Waterloss (cc)
0' – 1825'	Fresh Water	8.4 - 8.8	29 - 32	N.C.
1825' – 3500'	Brine	9.9 - 10.0	29	N.C.
3500' – ~~14500~~' 15,269'	Cut Brine	8.9 - 9.0	29	N.C.

per Operator CRW 10/1/09

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 ½" 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 ½" 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: 4513.6 psi. No H2S is anticipated to be encountered.
b. If H2S is encountered in quantities under 10 ppm fans will be placed in the substructure, rig floor and possum belly area of drilling rig to prevent accumulation of gas. If higher levels of H2S are detected the well will be shut in and a gas separator installed with a flare line.

12. Anticipated starting date and Duration of Operations:

a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 45 days.

marbob
energy corporation
Artesia, N.M.

Marbob

Lea County
Hawg Federal
#2H
OH

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Plan: Plan #1

Pathfinder X & Y Planning Report

27 August, 2009

PATHFINDER

Company:	Marbob	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County	**TVD Reference:**	WELL @ 3795.00ft (Original Well Elev)
Site:	Hawg Federal	**MD Reference:**	WELL @ 3795.00ft (Original Well Elev)
Well:	#2H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Project Lea County, New Mexico

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 Hawg Federal

Site Position:		**Northing:**	596,603.500 ft	**Latitude:**	32° 38' 15 130 N
From:	Map	**Easting:**	750,131.800 ft	**Longitude:**	103° 31' 14 814 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	"	**Grid Convergence:**	0.44 °

Well #2H

Well Position	**+N/-S**	0.00 ft	**Northing:**	596,603.500 ft	**Latitude:**	32° 38' 15 130 N
	+E/-W	0.00 ft	**Easting:**	750,131.800 ft	**Longitude:**	103° 31' 14 814 W
Position Uncertainty		0 00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,773 00 ft

Wellbore OH

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	09/15/2009	7 79	60 64	49,073

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	90 66

Survey Tool Program **Date** 08/27/2009

From (ft)	**To (ft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
0 00	15,269 44	Plan #1 (OH)	MWD	MWD - Standard

Company:	Marbob	**Local Co-ordinate Reference:**	Well #2H
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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	-3,795 00	0 00	0.00	0.00	0 00	596,603 50	750,131.80
100.00	0.00	0.00	100.00	-3,695 00	0 00	0.00	0.00	0.00	596,603 50	750,131.80
200.00	0.00	0 00	200.00	-3,595 00	0 00	0.00	0.00	0 00	596,603 50	750,131 80
300 00	0.00	0.00	300.00	-3,495.00	0.00	0.00	0.00	0.00	596,603 50	750,131 80
400 00	0.00	0.00	400.00	-3,395.00	0 00	0.00	0.00	0.00	596,603.50	750,131 80
500 00	0 00	0.00	500 00	-3,295.00	0.00	0.00	0.00	0 00	596,603 50	750,131 80
600 00	0 00	0.00	600 00	-3,195.00	0.00	0.00	0.00	0.00	596,603 50	750,131 80
700.00	0.00	0.00	700 00	-3,095.00	0 00	0.00	0.00	0.00	596,603.50	750,131.80
800.00	0.00	0 00	800 00	-2,995 00	0.00	0.00	0.00	0 00	596,603.50	750,131 80
900 00	0.00	0 00	900.00	-2,895 00	0.00	0.00	0 00	0.00	596,603.50	750,131.80
1,000 00	0 00	0.00	1,000 00	-2,795.00	0.00	0.00	0.00	0.00	596,603.50	750,131.80
1,100 00	0.00	0.00	1,100.00	-2,695.00	0.00	0.00	0.00	0.00	596,603.50	750,131.80
1,200.00	0 00	0 00	1,200.00	-2,595.00	0.00	0.00	0.00	0.00	596,603.50	750,131.80
1,300 00	0 00	0.00	1,300.00	-2,495.00	0.00	0.00	0 00	0.00	596,603.50	750,131 80
1,400.00	0.00	0.00	1,400.00	-2,395 00	0.00	0 00	0.00	0 00	596,603 50	750,131.80
1,500.00	0 00	0.00	1,500.00	-2,295 00	0.00	0.00	0.00	0.00	596,603.50	750,131.80
1,600.00	0 00	0.00	1,600 00	-2,195.00	0 00	0 00	0 00	0.00	596,603.50	750,131.80
1,700.00	0.00	0.00	1,700.00	-2,095.00	0.00	0.00	0.00	0.00	596,603.50	750,131.80
1,800 00	0.00	0 00	1,800.00	-1,995 00	0.00	0.00	0 00	0 00	596,603.50	750,131.80
1,900 00	0.00	0.00	1,900 00	-1,895 00	0.00	0.00	0.00	0 00	596,603.50	750,131.80
2,000.00	0.00	0.00	2,000.00	-1,795 00	0.00	0.00	0.00	0.00	596,603.50	750,131.80
2,100.00	0.00	0.00	2,100.00	-1,695 00	0.00	0.00	0.00	0.00	596,603.50	750,131.80
2,200.00	0 00	0.00	2,200 00	-1,595.00	0.00	0.00	0.00	0.00	596,603 50	750,131.80
2,300 00	0 00	0.00	2,300.00	-1,495.00	0 00	0.00	0 00	0.00	596,603 50	750,131.80
2,400.00	0.00	0.00	2,400.00	-1,395.00	0 00	0 00	0 00	0.00	596,603.50	750,131 80
2,500.00	0.00	0.00	2,500.00	-1,295.00	0 00	0 00	0 00	0.00	596,603.50	750,131.80
2,600.00	0.00	0.00	2,600.00	-1,195 00	0.00	0.00	0 00	0.00	596,603.50	750,131.80

Company:	Marbob	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County	**TVD Reference:**	WELL @ 3795.00ft (Original Well Elev)
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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)
2,700.00	0.00	0.00	2,700 00	-1,095.00	0 00	0 00	0.00	0.00	596,603 50	750,131.80
2,800.00	0.00	0 00	2,800 00	-995.00	0.00	0.00	0.00	0.00	596,603 50	750,131 80
2,900.00	0 00	0 00	2,900 00	-895.00	0 00	0 00	0.00	0 00	596,603.50	750,131 80
3,000 00	0.00	0.00	3,000.00	-795.00	0.00	0.00	0.00	0.00	596,603 50	750,131 80
3,100 00	0.00	0.00	3,100.00	-695.00	0 00	0 00	0.00	0.00	596,603 50	750,131 80
3,200 00	0.00	0.00	3,200.00	-595.00	0.00	0 00	0.00	0 00	596,603 50	750,131.80
3,300 00	0.00	0.00	3,300.00	-495.00	0.00	0.00	0.00	0.00	596,603 50	750,131 80
3,400 00	0.00	0.00	3,400 00	-395 00	0.00	0.00	0.00	0 00	596,603.50	750,131.80
3,500.00	0.00	0 00	3,500.00	-295 00	0.00	0.00	0.00	0.00	596,603.50	750,131 80
3,600.00	0.00	0.00	3,600.00	-195 00	0 00	0.00	0.00	0.00	596,603.50	750,131.80
3,700.00	0.00	0.00	3,700.00	-95 00	0.00	0.00	0 00	0.00	596,603.50	750,131 80
3,800.00	0 00	0 00	3,800.00	5.00	0 00	0.00	0.00	0.00	596,603.50	750,131 80
3,900 00	0.00	0 00	3,900.00	105.00	0 00	0.00	0 00	0 00	596,603.50	750,131.80
4,000 00	0.00	0.00	4,000.00	205 00	0.00	0.00	0.00	0 00	596,603.50	750,131 80
4,100.00	0.00	0.00	4,100.00	305.00	0 00	0.00	0 00	0 00	596,603.50	750,131 80
4,200.00	0 00	0.00	4,200.00	405.00	0 00	0.00	0 00	0 00	596,603.50	750,131 80
4,300.00	0 00	0 00	4,300 00	505 00	0.00	0 00	0 00	0.00	596,603.50	750,131.80
4,400.00	0.00	0.00	4,400.00	605 00	0.00	0.00	0.00	0.00	596,603 50	750,131.80
4,500 00	0.00	0.00	4,500.00	705.00	0.00	0 00	0.00	0.00	596,603.50	750,131.80
4,600.00	0.00	0.00	4,600 00	805 00	0.00	0.00	0.00	0 00	596,603.50	750,131.80
4,700 00	0.00	0.00	4,700 00	905.00	0.00	0.00	0.00	0 00	596,603.50	750,131.80
4,800 00	0.00	0 00	4,800 00	1,005 00	0.00	0.00	0.00	0 00	596,603.50	750,131 80
4,900.00	0.00	0 00	4,900.00	1,105.00	0.00	0.00	0 00	0 00	596,603.50	750,131 80
5,000 00	0.00	0 00	5,000.00	1,205.00	0.00	0.00	0.00	0 00	596,603.50	750,131 80
5,100 00	0.00	0.00	5,100.00	1,305.00	0 00	0.00	0.00	0.00	596,603.50	750,131 80
5,200 00	0.00	0.00	5,200.00	1,405.00	0.00	0.00	0.00	0.00	596,603.50	750,131 80
5,300.00	0.00	0.00	5,300.00	1,505.00	0 00	0.00	0.00	0 00	596,603.50	750,131.80

Company:	Marbob	**Local Co-ordinate Reference:**	Well #2H
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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	1,605 00	0.00	0.00	0.00	0.00	596,603.50	750,131.80
5,500 00	0.00	0.00	5,500.00	1,705.00	0.00	0.00	0.00	0.00	596,603 50	750,131.80
5,600 00	0.00	0.00	5,600.00	1,805.00	0.00	0.00	0.00	0 00	596,603.50	750,131 80
5,700.00	0 00	0.00	5,700 00	1,905.00	0.00	0.00	0.00	0.00	596,603 50	750,131.80
5,800.00	0.00	0.00	5,800.00	2,005.00	0.00	0.00	0.00	0 00	596,603 50	750,131.80
5,900.00	0.00	0.00	5,900 00	2,105 00	0.00	0.00	0.00	0 00	596,603.50	750,131.80
6,000.00	0.00	0.00	6,000.00	2,205.00	0.00	0.00	0.00	0.00	596,603 50	750,131 80
6,100 00	0.00	0.00	6,100.00	2,305.00	0.00	0.00	0.00	0.00	596,603 50	750,131.80
6,200.00	0.00	0 00	6,200.00	2,405.00	0.00	0.00	0 00	0.00	596,603.50	750,131.80
6,300.00	0.00	0 00	6,300.00	2,505.00	0.00	0.00	0 00	0.00	596,603.50	750,131.80
6,400 00	0.00	0.00	6,400 00	2,605.00	0.00	0.00	0.00	0 00	596,603.50	750,131 80
6,500.00	0.00	0.00	6,500.00	2,705 00	0.00	0.00	0.00	0 00	596,603.50	750,131.80
6,600 00	0.00	0.00	6,600 00	2,805.00	0.00	0.00	0.00	0 00	596,603.50	750,131 80
6,700.00	0.00	0 00	6,700.00	2,905.00	0.00	0.00	0.00	0 00	596,603.50	750,131.80
6,800.00	0 00	0 00	6,800.00	3,005.00	0.00	0.00	0.00	0.00	596,603.50	750,131.80
6,900 00	0 00	0.00	6,900.00	3,105.00	0.00	0 00	0.00	0.00	596,603 50	750,131.80
7,000.00	0.00	0.00	7,000.00	3,205.00	0.00	0.00	0.00	0 00	596,603.50	750,131 80
7,100.00	0.00	0.00	7,100.00	3,305.00	0.00	0.00	0.00	0.00	596,603.50	750,131.80
7,200.00	0.00	0.00	7,200.00	3,405 00	0.00	0.00	0 00	0.00	596,603.50	750,131.80
7,300.00	0 00	0.00	7,300.00	3,505 00	0.00	0 00	0.00	0.00	596,603 50	750,131.80
7,400.00	0.00	0.00	7,400 00	3,605.00	0.00	0.00	0.00	0.00	596,603 50	750,131.80
7,500.00	0.00	0.00	7,500.00	3,705.00	0.00	0.00	0.00	0 00	596,603.50	750,131.80
7,600.00	0.00	0.00	7,600.00	3,805.00	0.00	0.00	0.00	0 00	596,603.50	750,131.80
7,700.00	0.00	0.00	7,700.00	3,905.00	0.00	0.00	0.00	0 00	596,603 50	750,131.80
7,800 00	0.00	0.00	7,800.00	4,005 00	0 00	0 00	0.00	0.00	596,603.50	750,131.80
7,900.00	0 00	0.00	7,900 00	4,105 00	0 00	0 00	0 00	0 00	596,603.50	750,131 80
8,000.00	0.00	0.00	8,000.00	4,205.00	0.00	0 00	0 00	0.00	596,603.50	750,131.80

Company:	Marbob	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County	**TVD Reference:**	WELL @ 3795 00ft (Original Well Elev)
Site:	Hawg Federal	**MD Reference:**	WELL @ 3795 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	4,305.00	0.00	0 00	0.00	0.00	596,603 50	750,131.80
8,200.00	0 00	0.00	8,200.00	4,405.00	0.00	0 00	0 00	0 00	596,603.50	750,131.80
8,300 00	0.00	0.00	8,300.00	4,505.00	0.00	0.00	0 00	0.00	596,603.50	750,131.80
8,400.00	0.00	0 00	8,400.00	4,605.00	0 00	0.00	0.00	0.00	596,603.50	750,131.80
8,500.00	0.00	0 00	8,500.00	4,705.00	0.00	0 00	0 00	0 00	596,603 50	750,131.80
8,600.00	0.00	0.00	8,600.00	4,805.00	0.00	0.00	0.00	0.00	596,603.50	750,131.80
8,700 00	0 00	0.00	8,700.00	4,905 00	0.00	0.00	0.00	0.00	596,603.50	750,131.80
8,800 00	0.00	0.00	8,800 00	5,005.00	0.00	0.00	0.00	0.00	596,603.50	750,131.80
8,900.00	0.00	0.00	8,900 00	5,105.00	0.00	0.00	0.00	0.00	596,603.50	750,131.80
9,000 00	0.00	0.00	9,000.00	5,205 00	0 00	0 00	0.00	0.00	596,603 50	750,131.80
9,100 00	0.00	0.00	9,100.00	5,305 00	0.00	0 00	0.00	0.00	596,603 50	750,131.80
9,200 00	0.00	0.00	9,200.00	5,405 00	0 00	0 00	0.00	0.00	596,603.50	750,131 80
9,300.00	0.00	0.00	9,300 00	5,505 00	0 00	0.00	0.00	0 00	596,603.50	750,131 80
9,400.00	0 00	0 00	9,400.00	5,605.00	0.00	0 00	0.00	0.00	596,603.50	750,131.80
9,500.00	0 00	0.00	9,500.00	5,705.00	0.00	0 00	0 00	0 00	596,603.50	750,131 80
9,600.00	0.00	0 00	9,600 00	5,805.00	0 00	0.00	0.00	0 00	596,603 50	750,131.80
9,700.00	0 00	0.00	9,700.00	5,905.00	0 00	0 00	0.00	0.00	596,603 50	750,131.80
9,800.00	0 00	0.00	9,800.00	6,005.00	0.00	0.00	0.00	0.00	596,603.50	750,131 80
9,900.00	0.00	0.00	9,900 00	6,105.00	0.00	0.00	0 00	0 00	596,603.50	750,131.80
10,000 00	0 00	0 00	10,000.00	6,205 00	0 00	0 00	0 00	0.00	596,603.50	750,131 80
10,100 00	0.00	0 00	10,100 00	6,305 00	0.00	0 00	0.00	0.00	596,603 50	750,131.80
10,200.00	0.00	0.00	10,200.00	6,405.00	0 00	0.00	0.00	0.00	596,603 50	750,131.80
10,300 00	0 00	0 00	10,300.00	6,505.00	0.00	0 00	0.00	0.00	596,603.50	750,131 80
10,372 60	0 00	0 00	10,372.60	6,577.60	0.00	0.00	0 00	0.00	596,603.50	750,131 80
Start Build 12.00										
10,375.00	0.29	90.66	10,375.00	6,580.00	0.00	0.01	0 01	12.00	596,603 50	750,131.81
10,400.00	3 29	90.66	10,399.98	6,604.98	-0.01	0.79	0.79	12.00	596,603 49	750,132.59

Company:	Marbob	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County	**TVD Reference:**	WELL @ 3795 00ft (Original Well Elev)
Site:	Hawg Federal	**MD Reference:**	WELL @ 3795.00ft (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)
10,425.00	6.29	90.66	10,424 89	6,629.89	-0.03	2.87	2.87	12.00	596,603.47	750,134.67
10,450.00	9.29	90 66	10,449.66	6,654.66	-0.07	6.26	6.26	12.00	596,603.43	750,138.06
10,475 00	12 29	90.66	10,474.22	6,679 22	-0 13	10 94	10.94	12.00	596,603.37	750,142.74
10,500.00	15.29	90.66	10,498.49	6,703.49	-0.20	16.90	16.90	12.00	596,603.30	750,148.70
10,525.00	18 29	90.66	10,522.43	6,727 43	-0.28	24.11	24.12	12 00	596,603.22	750,155.91
10,550.00	21.29	90.66	10,545 95	6,750.95	-0.38	32 58	32.58	12.00	596,603 12	750,164.38
10,575.00	24.29	90.66	10,568.99	6,773.99	-0 49	42 26	42.26	12.00	596,603.01	750,174 06
10,600.00	27.29	90.66	10,591.50	6,796 50	-0 61	53.13	53 14	12.00	596,602.89	750,184 93
10,625.00	30 29	90.66	10,613.41	6,818.41	-0.75	65.17	65 17	12.00	596,602 75	750,196 97
10,650.00	33 29	90.66	10,634.66	6,839.66	-0.90	78 34	78 34	12.00	596,602.60	750,210.14
10,675 00	36.29	90 66	10,655 18	6,860.18	-1.07	92.60	92.60	12.00	596,602.43	750,224 40
10,700.00	39 29	90.66	10,674.94	6,879.94	-1.25	107.91	107.92	12 00	596,602.25	750,239.71
10,725 00	42 29	90.66	10,693.87	6,898.87	-1.43	124.24	124 25	12 00	596,602.07	750,256.04
10,750.00	45 29	90 66	10,711.91	6,916.91	-1.63	141 54	141.55	12 00	596,601.87	750,273 34
10,775.00	48.29	90 66	10,729 03	6,934.03	-1.84	159.76	159 77	12.00	596,601.66	750,291.56
10,800 00	51 29	90.66	10,745.17	6,950 17	-2.07	178.84	178.86	12.00	596,601 43	750,310 64
10,825.00	54.29	90.66	10,760 28	6,965 28	-2.30	198 75	198.76	12.00	596,601.20	750,330.55
10,850.00	57 29	90.66	10,774 34	6,979 34	-2.53	219 42	219.43	12 00	596,600.97	750,351.22
10,875 00	60.29	90.66	10,787.29	6,992.29	-2.78	240 80	240.81	12.00	596,600.72	750,372 60
10,900 00	63 29	90 66	10,799.11	7,004 11	-3.04	262.82	262.84	12 00	596,600 46	750,394.62
10,925 00	66.29	90.66	10,809.76	7,014.76	-3 30	285.44	285.46	12 00	596,600 20	750,417.24
10,950.00	69 29	90 66	10,819 21	7,024 21	-3.56	308 58	308.60	12.00	596,599 94	750,440.38
10,975.00	72 29	90 66	10,827 43	7,032 43	-3.84	332 18	332 20	12.00	596,599.66	750,463.98
11,000.00	75.29	90 66	10,834.41	7,039.41	-4.11	356.18	356 21	12.00	596,599 39	750,487.98
11,025.00	78.29	90.66	10,840.12	7,045 12	-4.39	380.52	380 54	12.00	596,599 11	750,512 32
11,050.00	81 29	90.66	10,844 56	7,049 56	-4 68	405.12	405.14	12.00	596,598.82	750,536.92
11,075 00	84.29	90 66	10,847.69	7,052.69	-4.96	429.91	429.94	12.00	596,598.54	750,561 71

Company:	Marbob	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County	**TVD Reference:**	WELL @ 3795 00ft (Original Well Elev)
Site:	Hawg Federal	**MD Reference:**	WELL @ 3795 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)
11,100 00	87.29	90.66	10,849 53	7,054.53	-5.25	454.84	454 87	12.00	596,598.25	750,586.64
11,122.60	90.00	90.66	10,850.06	7,055 06	-5 51	477.43	477.46	12 00	596,597.99	750,609.23
11,122.61	90.00	90.66	10,850.06	7,055.06	-5.51	477.44	477.47	0.00	596,597.99	750,609.24
Start 4146.83 hold at 11122.61 MD										
11,200.00	90.00	90 66	10,850.06	7,055 06	-6 41	554.83	554.86	0.00	596,597.09	750,686 63
11,300 00	90.00	90.66	10,850.06	7,055.06	-7.56	654.82	654 86	0 00	596,595.94	750,786.62
11,400.00	90 00	90 66	10,850.06	7,055.06	-8.72	754.81	754.86	0.00	596,594.78	750,886 61
11,500.00	90.00	90 66	10,850 06	7,055.06	-9.87	854.81	854.86	0.00	596,593.63	750,986 61
11,600.00	90.00	90 66	10,850 06	7,055.06	-11.03	954.80	954.86	0.00	596,592.47	751,086.60
11,700 00	90 00	90.66	10,850 06	7,055.06	-12.18	1,054.79	1,054.86	0.00	596,591.32	751,186.59
11,800.00	90.00	90.66	10,850 06	7,055 06	-13.34	1,154.79	1,154 86	0.00	596,590.16	751,286.59
11,900 00	90.00	90 66	10,850.06	7,055.06	-14.49	1,254 78	1,254 86	0.00	596,589.01	751,386.58
12,000.00	90.00	90 66	10,850.06	7,055.06	-15.65	1,354 77	1,354.86	0 00	596,587.85	751,486.57
12,100 00	90.00	90 66	10,850 06	7,055.06	-16 80	1,454.77	1,454 86	0.00	596,586 70	751,586.57
12,200.00	90.00	90.66	10,850.06	7,055.06	-17.96	1,554.76	1,554.86	0.00	596,585 54	751,686 56
12,300.00	90.00	90 66	10,850.06	7,055.06	-19.11	1,654.75	1,654 86	0 00	596,584.39	751,786.55
12,400.00	90 00	90 66	10,850 06	7,055 06	-20 26	1,754 75	1,754.86	0.00	596,583.24	751,886.55
12,500 00	90.00	90.66	10,850 06	7,055.06	-21.42	1,854.74	1,854.86	0.00	596,582 08	751,986.54
12,600 00	90.00	90.66	10,850.06	7,055 06	-22.57	1,954.73	1,954.86	0.00	596,580.93	752,086.53
12,700.00	90.00	90 66	10,850.06	7,055 06	-23.73	2,054 73	2,054 86	0.00	596,579 77	752,186.53
12,800.00	90.00	90.66	10,850.06	7,055 06	-24.88	2,154 72	2,154.86	0 00	596,578.62	752,286 52
12,900 00	90.00	90.66	10,850 06	7,055.06	-26 04	2,254.71	2,254.86	0.00	596,577.46	752,386 51
13,000.00	90.00	90 66	10,850 06	7,055.06	-27 19	2,354.71	2,354.86	0.00	596,576.31	752,486.51
13,100.00	90 00	90 66	10,850 06	7,055 06	-28 35	2,454 70	2,454.86	0.00	596,575.15	752,586 50
13,200.00	90.00	90.66	10,850.06	7,055 06	-29 50	2,554.69	2,554.86	0.00	596,574.00	752,686 49
13,300.00	90.00	90.66	10,850.06	7,055 06	-30.66	2,654.69	2,654.86	0.00	596,572.84	752,786 49
13,400.00	90.00	90.66	10,850 06	7,055 06	-31.81	2,754.68	2,754.86	0.00	596,571.69	752,886.48

Company:	Marbob	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County	**TVD Reference:**	WELL @ 3795.00ft (Original Well Elev)
Site:	Hawg Federal	**MD Reference:**	WELL @ 3795.00ft (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)
13,500 00	90 00	90.66	10,850.06	7,055.06	-32 97	2,854 67	2,854.86	0.00	596,570 53	752,986.47
13,600.00	90.00	90.66	10,850.06	7,055 06	-34.12	2,954.67	2,954.86	0.00	596,569 38	753,086 47
13,700.00	90.00	90.66	10,850.06	7,055.06	-35 28	3,054.66	3,054.86	0.00	596,568.22	753,186 46
13,800.00	90 00	90.66	10,850.06	7,055.06	-36.43	3,154.65	3,154.86	0.00	596,567 07	753,286.45
13,900.00	90.00	90.66	10,850.06	7,055 06	-37.59	3,254.65	3,254.86	0.00	596,565.91	753,386 45
14,000 00	90.00	90.66	10,850.06	7,055.06	-38.74	3,354 64	3,354.86	0.00	596,564.76	753,486.44
14,100.00	90.00	90.66	10,850.06	7,055.06	-39.90	3,454.63	3,454.86	0.00	596,563.60	753,586.43
14,200 00	90.00	90.66	10,850.06	7,055.06	-41.05	3,554.63	3,554.86	0.00	596,562.45	753,686.43
14,300 00	90.00	90 66	10,850.06	7,055.06	-42.21	3,654.62	3,654.86	0.00	596,561.29	753,786 42
14,400.00	90.00	90 66	10,850.06	7,055.06	-43 36	3,754.61	3,754.86	0.00	596,560.14	753,886 41
14,500.00	90.00	90.66	10,850.06	7,055.06	-44.51	3,854.61	3,854 86	0 00	596,558.99	753,986.41
14,600.00	90.00	90.66	10,850.06	7,055.06	-45.67	3,954 60	3,954 86	0 00	596,557.83	754,086 40
14,700.00	90.00	90.66	10,850.06	7,055.06	-46.82	4,054 59	4,054 86	0.00	596,556.68	754,186.39
14,800 00	90.00	90.66	10,850.06	7,055.06	-47.98	4,154.59	4,154.86	0.00	596,555.52	754,286.39
14,900.00	90 00	90 66	10,850.06	7,055 06	-49.13	4,254 58	4,254.86	0.00	596,554.37	754,386.38
15,000.00	90.00	90.66	10,850 06	7,055.06	-50.29	4,354.57	4,354.86	0.00	596,553.21	754,486 37
15,100 00	90.00	90 66	10,850.06	7,055.06	-51 44	4,454 57	4,454.86	0.00	596,552.06	754,586.37
15,200.00	90 00	90.66	10,850 06	7,055.06	-52.60	4,554.56	4,554.86	0 00	596,550.90	754,686.36
15,269.44	90 00	90.66	10,850.00	7,055 00	-53.40	4,624.00	4,624.31	0.00	596,550.10	754,755 80

TD at 15269.44

Company:	Marbob	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County	**TVD Reference:**	WELL @ 3795 00ft (Original Well Elev)
Site:	Hawg Federal	**MD Reference:**	WELL @ 3795.00ft (Original Well Elev)
Well:	#2H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**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(HA#2H) - plan hits target - Point	0.00	0 00	10,850.00	-53 40	4,624.00	596,550.100	754,755 800	32° 38' 14.248 N	103° 30' 20.748 W

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
10,372 60	10,372 60	0.00	0.00	Start Build 12.00
11,122.61	10,850.06	-5.51	477.44	Start 4146.83 hold at 11122.61 MD
15,269.44	10,850.00	-53.40	4,624 00	TD at 15269.44

Checked By: _____ Approved By: _____ Date: _____

marbob energy corporation
Artesia, N.M.

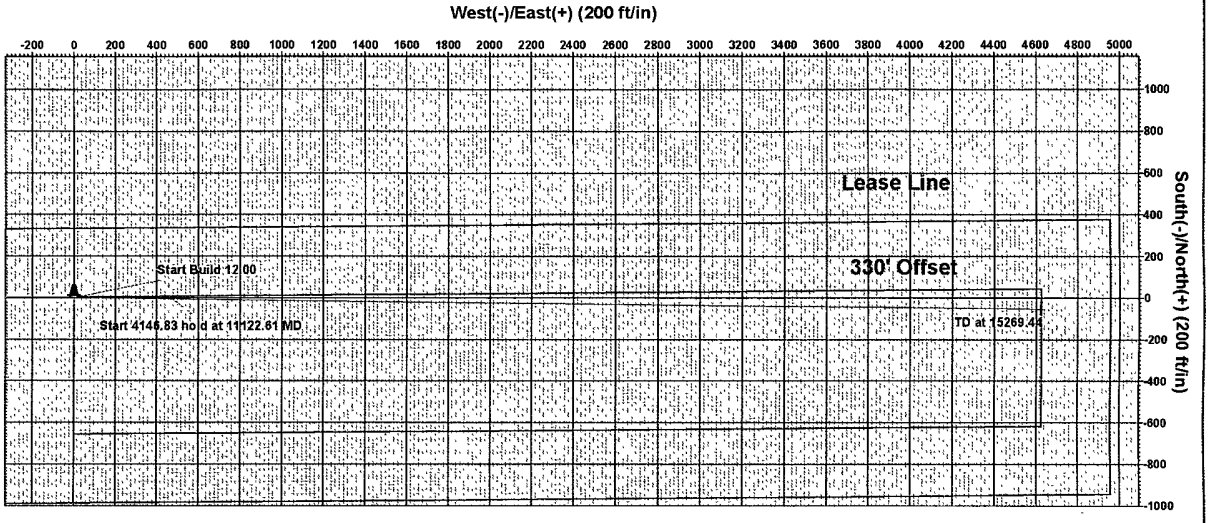
Project: Lea County
Site: Hawg Federal
Well: #2H
Wellbore: OH
Plan: Plan #1 (#2H/OH)

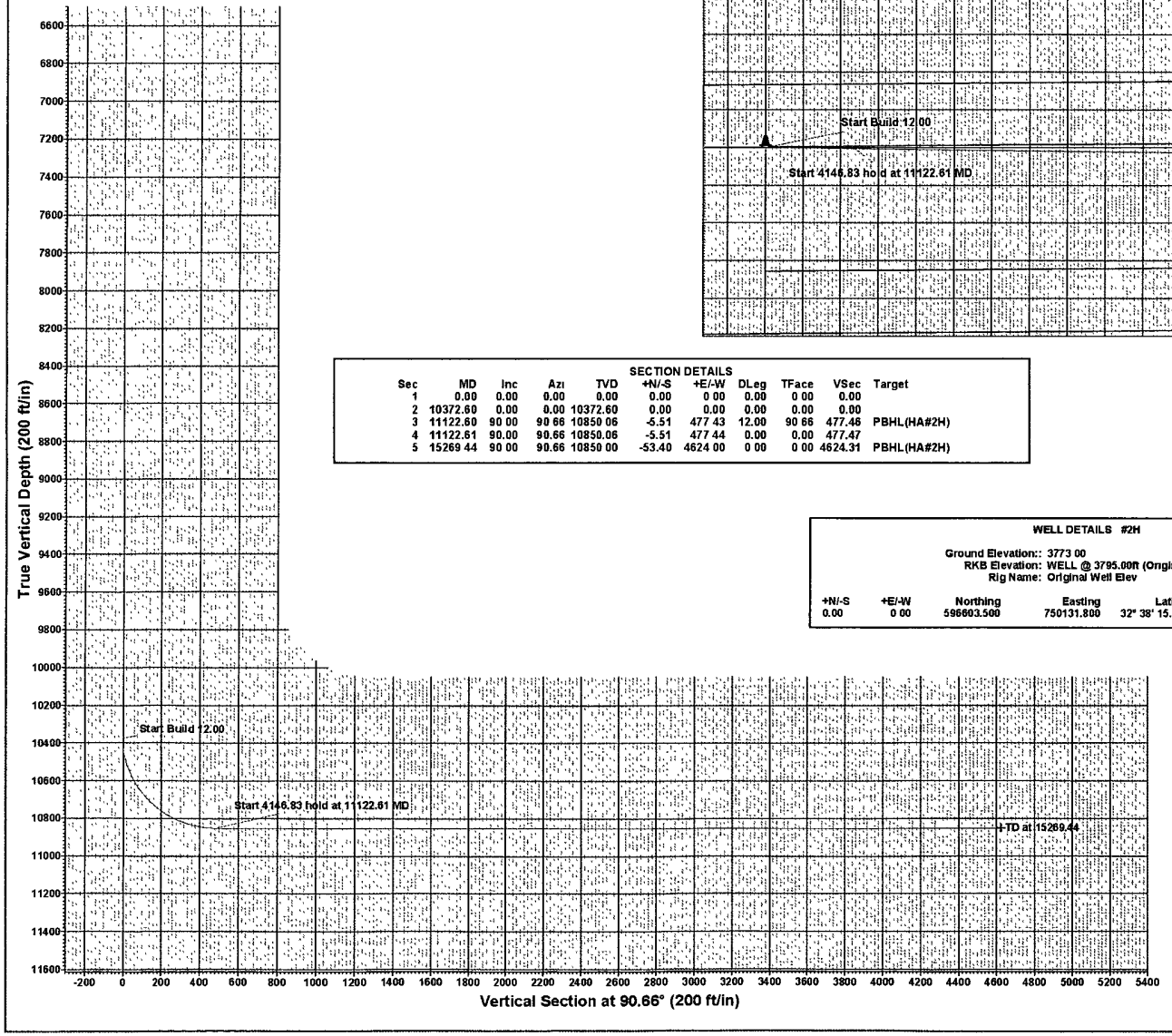
G
T M

Azimuths to Grid North
True North: -0.44°
Magnetic North: 7.35°

Magnetic Field
Strength: 49072.7snT
Dip Angle: 60.64°

PATHFINDER





SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	10372.60	0.00	0.00	10372.60	0.00	0.00	0.00	0.00	0.00	
3	11122.60	90.00	90.66	10850.06	-5.51	477.43	12.00	90.66	477.46	PBHL(HA#2H)
4	11122.61	90.00	90.66	10850.06	-5.51	477.44	0.00	0.00	477.47	
5	15269.44	90.00	90.66	10850.00	-53.40	4624.00	0.00	0.00	4624.31	PBHL(HA#2H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL(HA#2H)	10850.00	-53.40	4624.00	596550.100	754755.800	Point

WELL DETAILS #2H

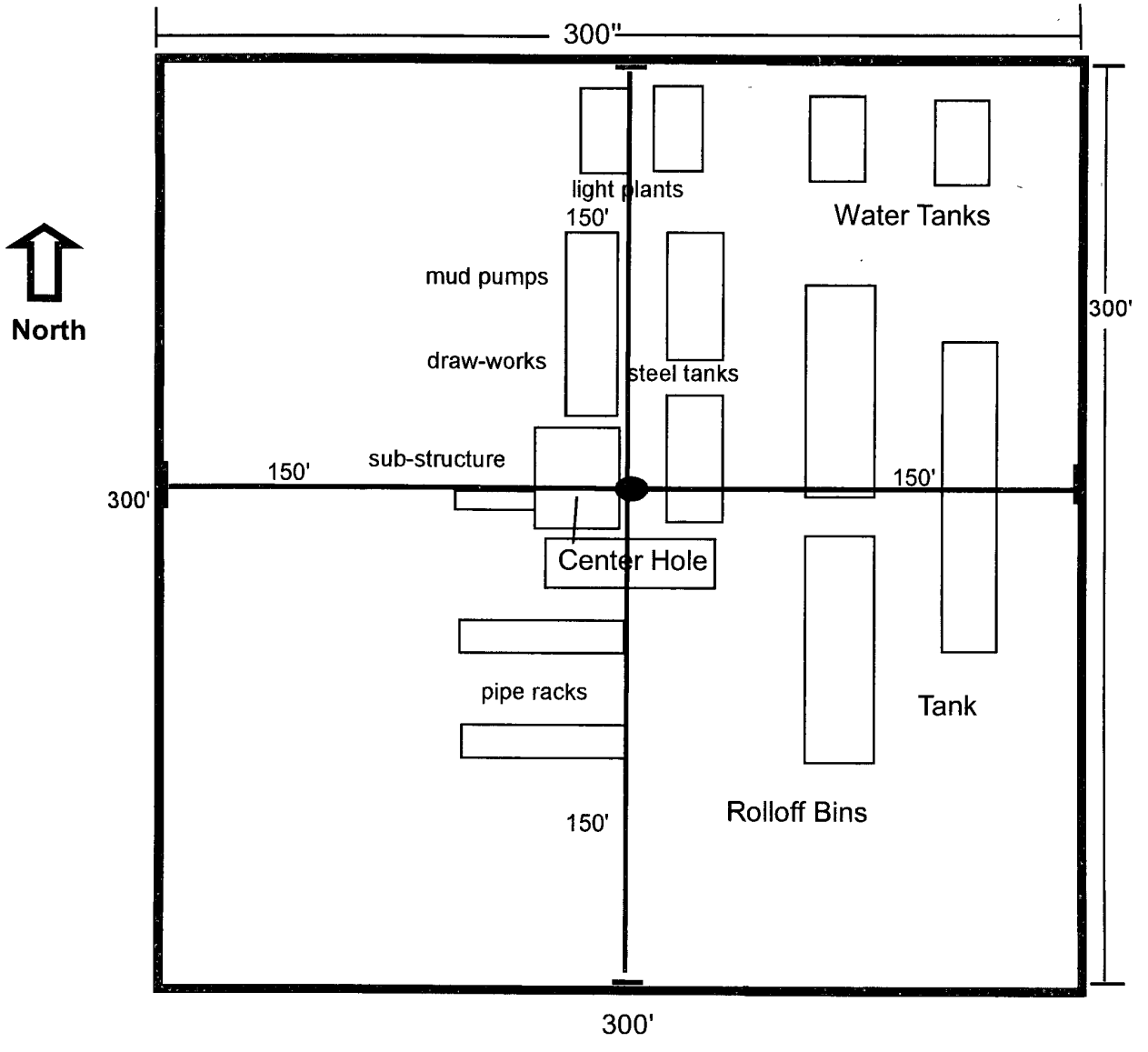
Ground Elevation:: 3773.00
RKB Elevation: WELL @ 3795.00ft (Original Well Elev)
Rig Name: Original Well Elev

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	596603.500	750131.800	32° 38' 15.130 N	103° 31' 14.814 W	

PROJECT DETAILS: Lea 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

Plan: Plan #1 (#2H/OH)
Created By: Nate Bingham Date: 16:59, August 27 2009
Checked _____ Date _____

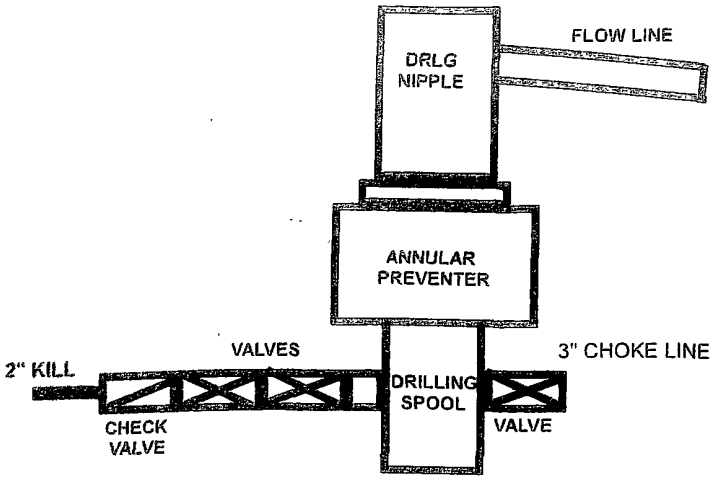
Well Site Lay-Out Plat

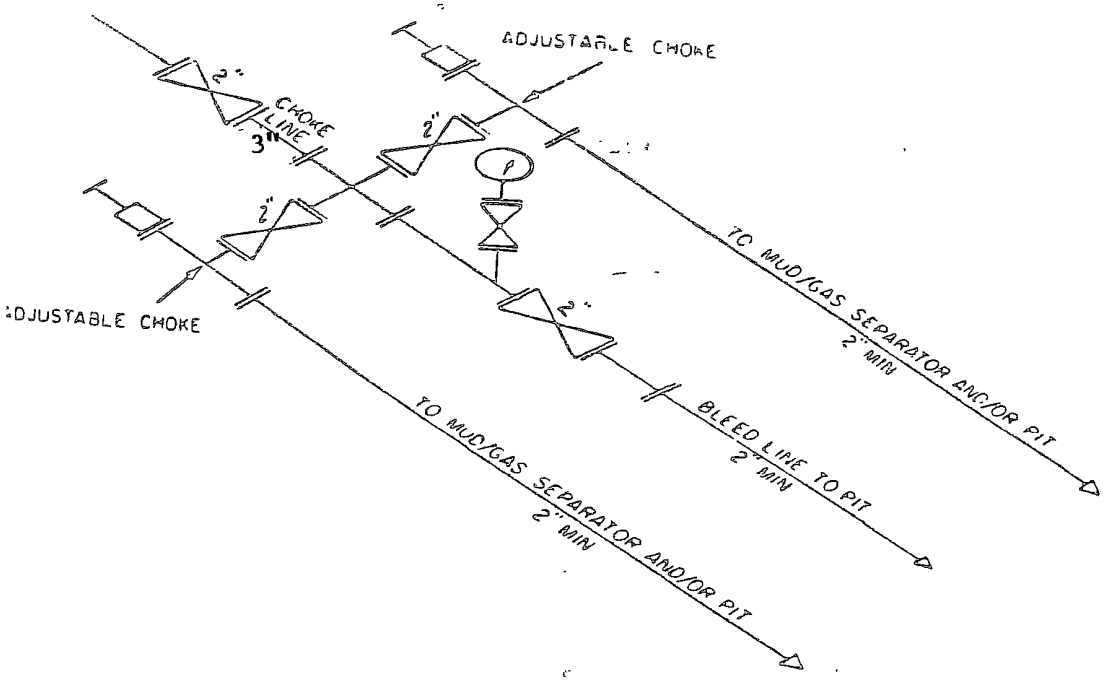


Hawg Federal #2
Surf: 330' FNL & 330' FWL
BHL: 430' FNL & 330' FEL
Section 25, T19S, R34E
Lea County, New Mexico

EXHIBIT THREE

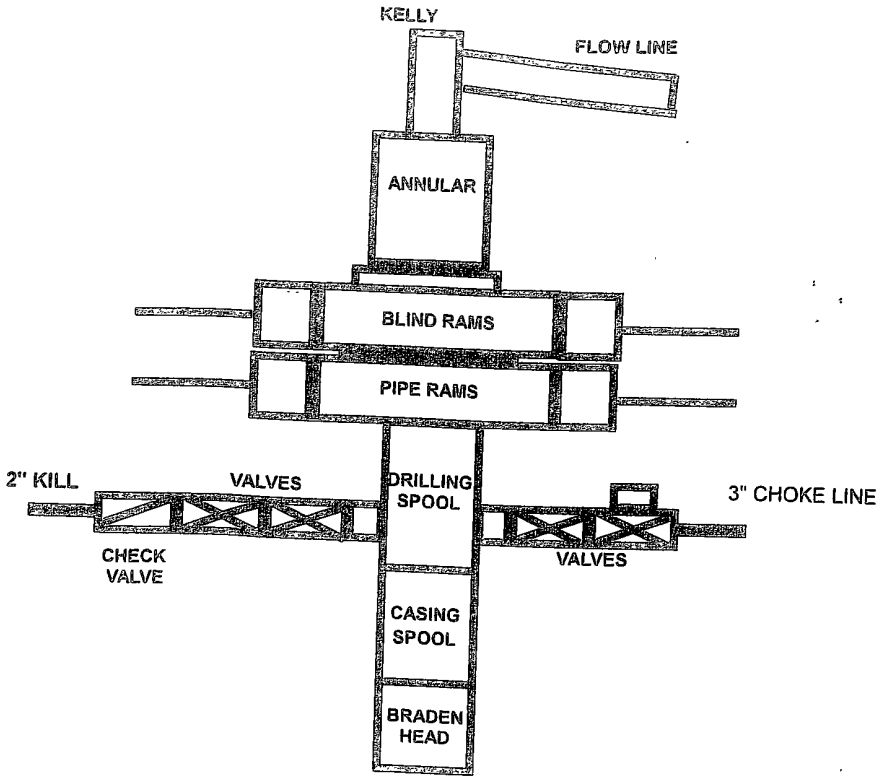
2M SYSTEM

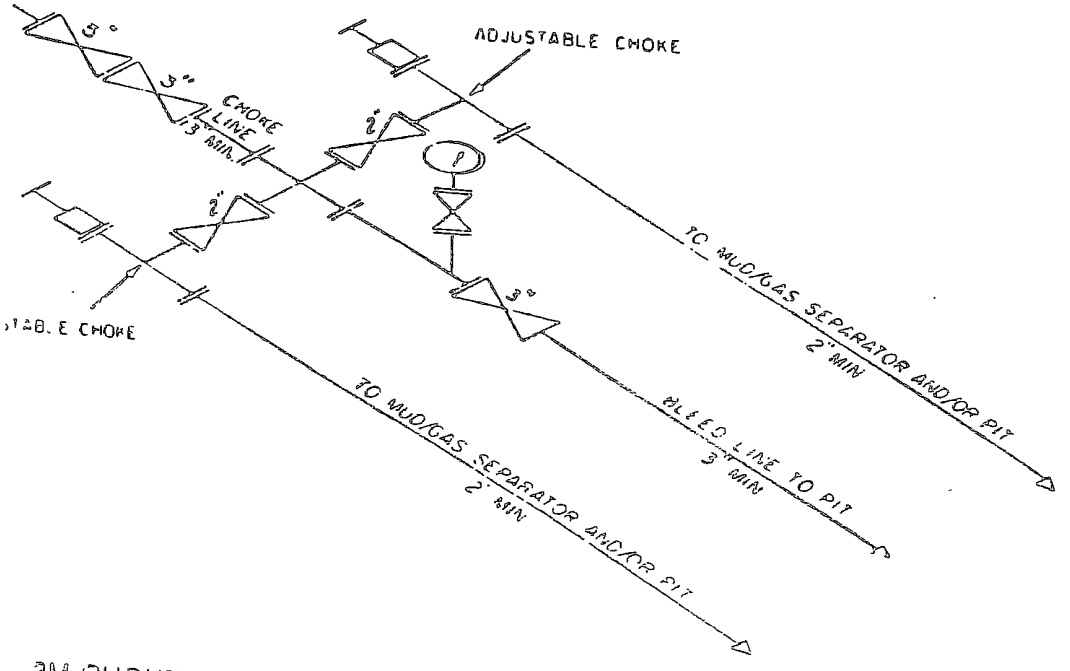




2M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

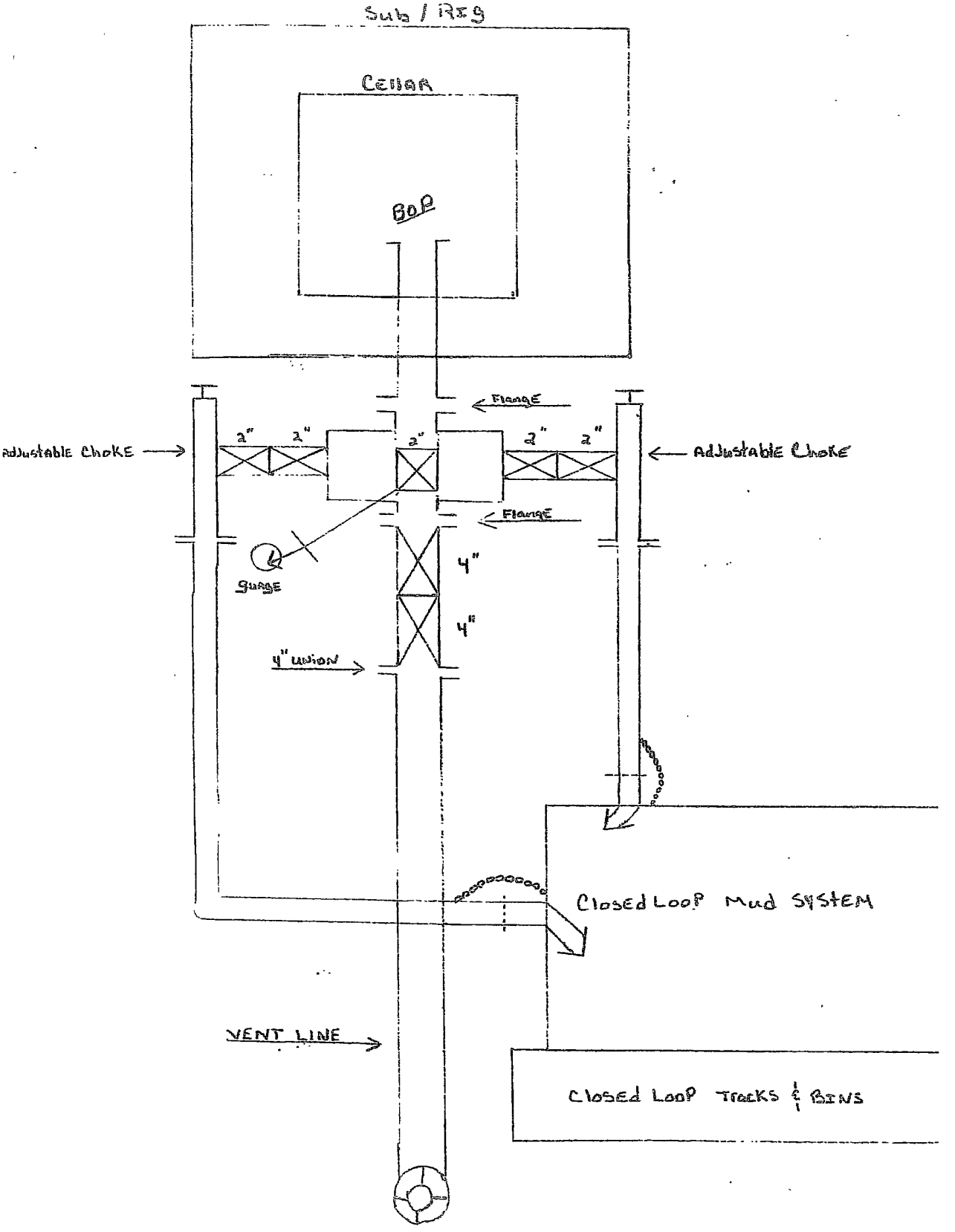
3M SYSTEM



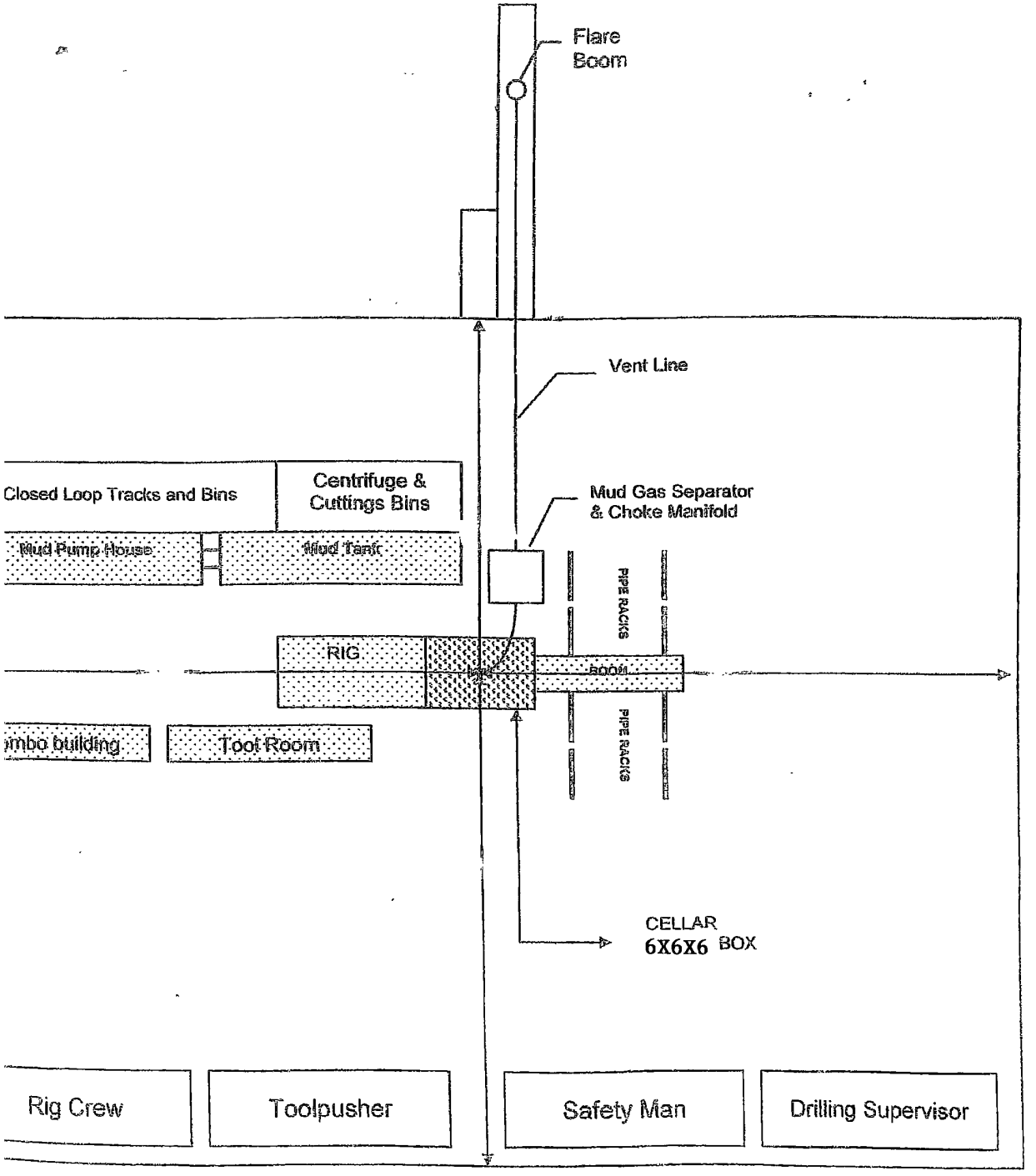


3M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

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_2S).

B. The proper use and maintenance of personal protective equipment and life support systems.

C. The proper use of H_2S 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_2S 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_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S 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_2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H_2S 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_2S.

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_2S detection and monitoring equipment:

2 - portable H_2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H_2S 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_2S 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_2S 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.

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

W A R N I N G

YOU ARE ENTERING AN H_2S AREA
AUTHORIZED PERSONNEL ONLY

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

MARBOB ENERGY CORPORATION

1-505-748-3303

EMERGENCY CALL LIST

	Office	Mobile	Home
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

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: August 28, 2009 10/20/09 ar

Lease #: NMNM000086
Hawg Federal #2

Legal Description: Sec. 25-T19S-R34E
Lea County, New Mexico

Formation(s): Permian

Bond Coverage: Statewide

BLM Bond File #: NMB000412

Marbob Energy Corporation

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.

Marbob Energy Corporation

Aug 28 2009
Date

William Miller
Land Department

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Marbob Energy Corporation
LEASE NO.:	NM086
WELL NAME & NO.:	2 Hawg Federal
SURFACE HOLE FOOTAGE:	330' FNL & 330' FWL
BOTTOM HOLE FOOTAGE	430' FNL & 330' FEL
LOCATION:	Section 25, T. 19 S., R 34 E., NMPM
COUNTY:	Lea County, New Mexico

TABLE OF CONTENTS

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

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.

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

C. RESERVE PITS

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

D. FEDERAL MINERAL MATERIALS PIT

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

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

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

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.

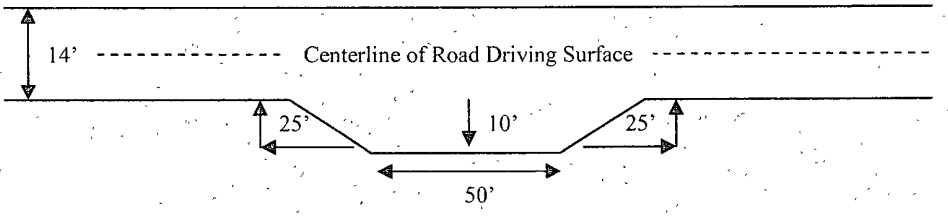
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

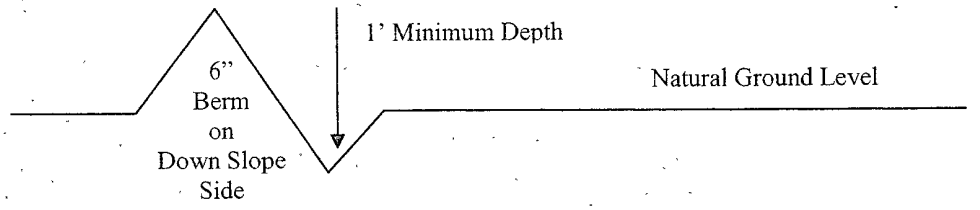
Standard Turnout – Plan View



Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, 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.

Cross Section of a Typical 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: $\frac{400'}{4\%} + 100' = 200'$ 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.

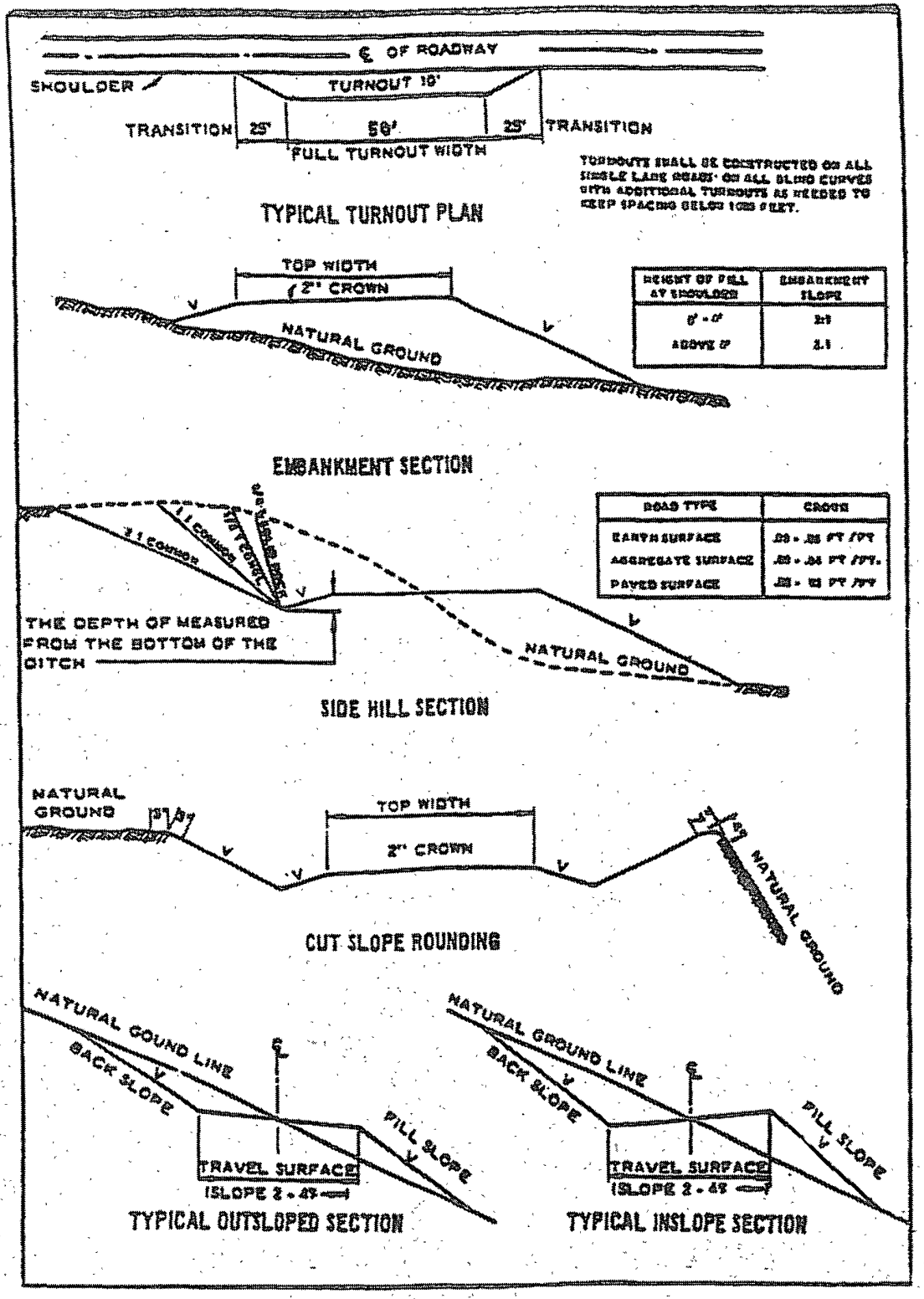
A gate shall be constructed and fastened securely to H-braces.

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

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

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Queen** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. 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. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

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

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

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

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

Possible lost circulation and water flows in the Capitan Reef.

1. The **13-3/8** inch surface casing shall be set **at approximately 1825 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Additional cement may be required as the excess was calculated to be 17%. Casing is to be kept liquid filled while running casing into hole.**

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. **Additional cement may be required as the excess was calculated to be -15%.**

   b. Second stage above DV tool, cement shall:

   ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **Additional cement may be required as the excess was calculated to be 21%.**

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 093009

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 & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

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

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

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

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

Seed Mixture for LPC Sand/Shinnery Sites

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

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

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

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

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

*Pounds of pure live seed:

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

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

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

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