ATS-08-533

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Form 3160-3 (February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

	5 Lease Serial No. **NMNM 118720**
	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. <37497> Patterson **B-52 Federal #3H**
2 Name of Operator **Marbob Energy Corporation** <14049>	9 API Well No. 30-025-39638
3a Address **P.O. Box 227, Artesia, NM 88211-0228** / 3b Phone No. *(include area code)* **505-748-3303**	10 Field and Pool, or Exploratory **Lusk; Bone Spring** North
4. Location of Well *(Report location clearly and in accordance with any State requirements*)* At surface **2310' FSL & ~~1650'~~ 1500 FEL** Unit J B-Hunt per attached sw dated 10/22/08 At proposed prod zone	11 Sec, T R M or Blk and Survey or Area **Section 5, T19S - R32E**
14 Distance in miles and direction from nearest town or post office* **About 14 miles from Maljamar, NM** UNORTHODOX LOCATION	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 **360.00**	17 Spacing Unit dedicated to this well **40**
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19 Proposed Depth **9700'**	20 BLM/BIA Bond No. on file **NMB000412**
21 Elevations (Show whether DF, KDB, RT, GL, etc). **3662' GL**	22 Approximate date work will start* **05/04/2008**	23 Estimated duration **30 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 **04/04/2008**
Title **Land Department**		
Approved by *(Signature)* /s/ James Stovall	Name *(Printed/Typed)* /s/ James Stovall	Date NOV 21 2008
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 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)

KZ

CAPITAN CONTROLLED WATER BASIN

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

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

5. Lease Serial No.
NMNM 118720

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☑ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
Patterson B-52 Federal #1, #2, #3, #4 & #5

2. Name of Operator
Marbob Energy Corporation

9. API Well No.
30-025-39638

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 Area
Lusk; Bone Spring

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*
#1. 330' FNL & 1980' FWL, #3 2310' FSL & 1650' FEL; #5 2310' FSL & 660' FEL
#2· 330' FNL & 660' FEL; #4· 2310' FSL & 660' FWL; ALL IN SECTION 5, T19S - R32E

11. Country or Parish, State
Lea County, New Mexico

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other Name Change
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Marbob Energy Corporation respectfully requests the following name change on the above referenced:

From: B-52 Federal #1, #2, #3, #4 & #5
To: Patterson B-52 Federal #1, #2, #3, #4 & #5

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*
Nancy T. Agnew

Title Land Department

Signature Nancy T. Agnew

Date 07/25/2008

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by
/s/ James Stovall

Title FIELD MANAGER

Date NOV 21 2008

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

Office CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on page 2)

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-HOBBS

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

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

5 Lease Serial No
NM118720

6 If Indian, Allottee or Tribe Name

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

1 Type of Well
☑ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
B-52 #4, #3, #1

2 Name of Operator
Marbob Energy Corp

9. API Well No.
30-025-39638

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 Area
Lusk: Bone Sring

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*
Sec 5 T19S R32E

11 Country or Parish, State
Lea County

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☑ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other Move Location and access road
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation. Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection)

#4 – access of the Highway.

#3 - moved 150 feet east. The new surface footages will be: 2310 FSL & 1500 FEL. This will be an unorthodox surface location.

#1 – moved 330 feet to the west. The new surface footages will be: 330 FNL & 1650 FWL.

Pad Dimensions on the # 3 will be 125 x 175 the short side will be the west side.

Pad Dimensions on the # 1 will be 125 x 175 the short side will be the south side. Access will be from the NW off of another location.

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

Title Landman

Signature

Date 10/27/08

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by **/s/ James Stovall**

Title FIELD MANAGER

Date NOV 21 2008

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

Office CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

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

OIL 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
30-025-39638	41450	Lusk Bone Spring North

Property Code	Property Name	Well Number
37497	Patterson B-52 FEDERAL	3

OGRID No.	Operator Name	Elevation
14049	MARBOB ENERGY CORPORATION	3661'

Surface Location

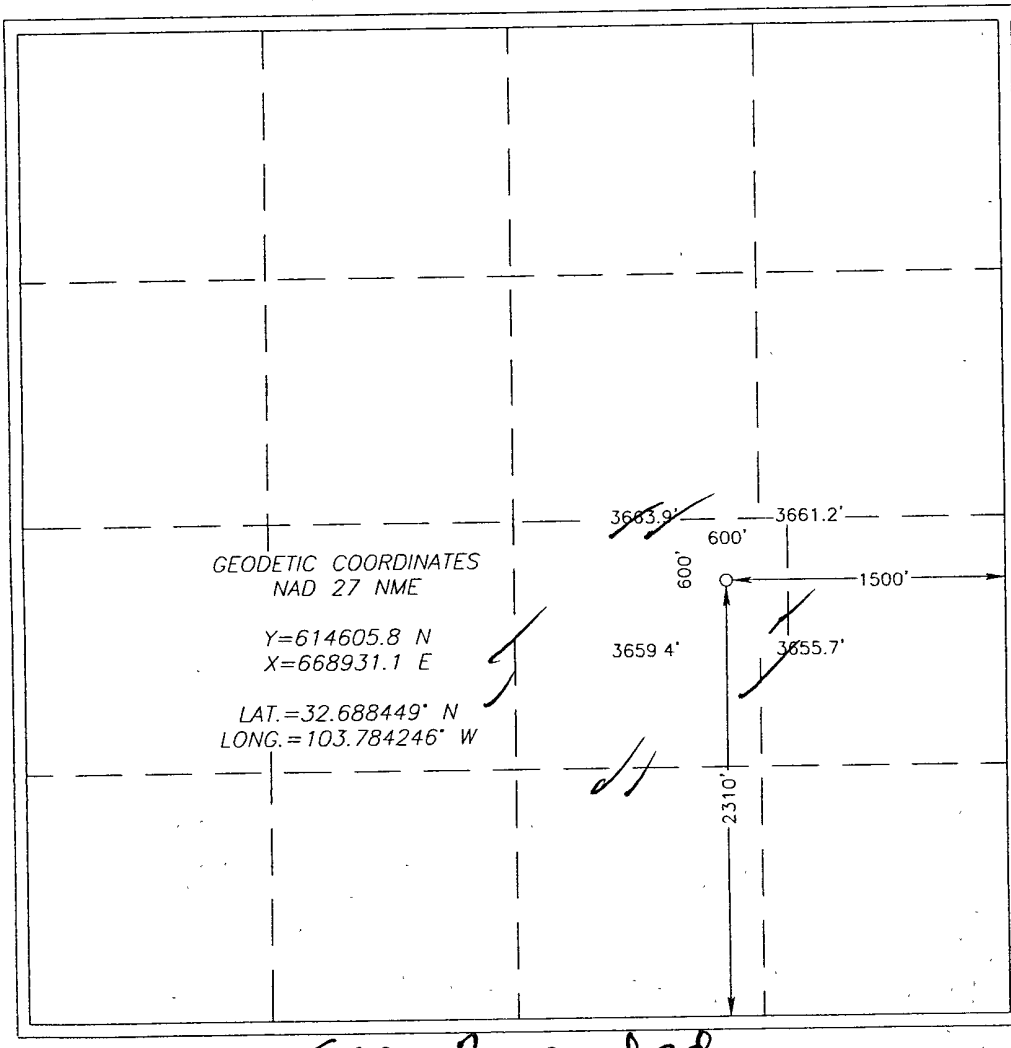
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	5	19-S	32-E		2310	SOUTH	1500	EAST	LEA

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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



OPERATOR CERTIFICATION

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

Signature 10/22/08 Date

William Miller

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.

SEPTEMBER 05, 2008

Date Surveyed JC

Signature & Seal of Professional Surveyor

RONALD J. EIDSON NEW MEXICO 3239 REGISTERED PROFESSIONAL SURVEYOR

Ronald J. Eidson 9/11/08

08.11.1399

Certificate No. GARY G. EIDSON 12641
RONALD J. EIDSON 3239

See Amended

Marbob

B-52 Federal #3
B-52 Federal #3
B-52 Federal #3
Original Hole

Plan: Plan #1

Pathfinder Survey Report

16 April, 2008

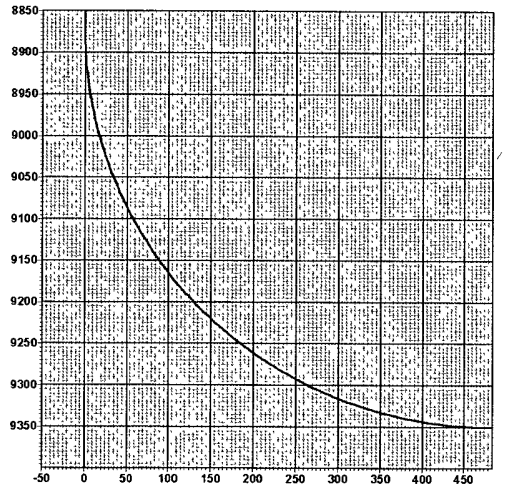
marbob
energy corporation
Artesia, N.M.

G
T M

Azimuths to Grid North
True North: -0.30°
Magnetic North: 7.79°

Magnetic Field
Strength: 49211.5snT
Dip Angle: 60.67°
Date: 4/16/2008
Model: IGRF200510

PATHFINDER
ENERGY SERVICES



WELL DETAILS B-52 Federal #3

Ground Elevation 3662 00
RKB Elevation: EST RKB @ 3662 00ft
Rig Name:

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0 00	0.00	614605 700	668781.100	32° 41' 18 421 N	103° 47' 5 042 W	

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	8872.54	0 00	0 00	8872.54	0 00	0 00	0.00	0.00	0.00	
3	9622.54	90 00	180 00	9350.00	-477 47	0 00	12.00	180.00	477.47	
4	11125.08	90 00	180 00	9350 00	-1980.00	0 00	0.00	0.00	1980.00	PBHL

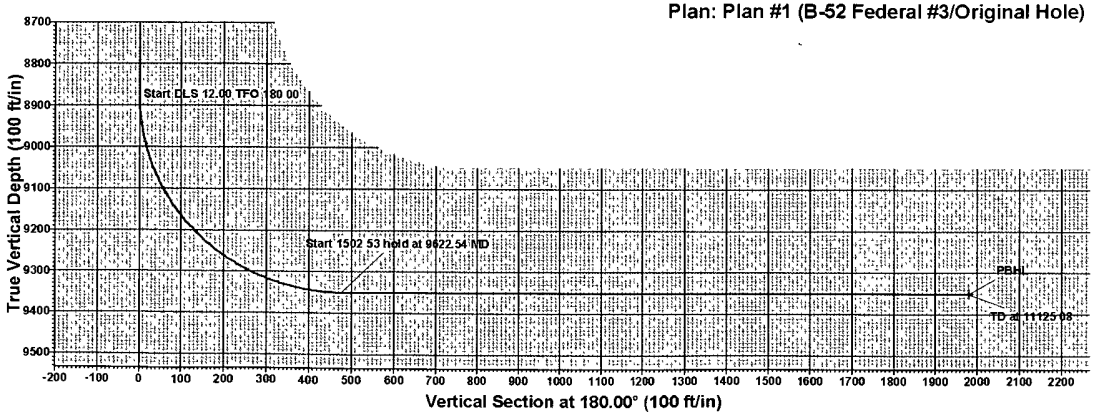
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

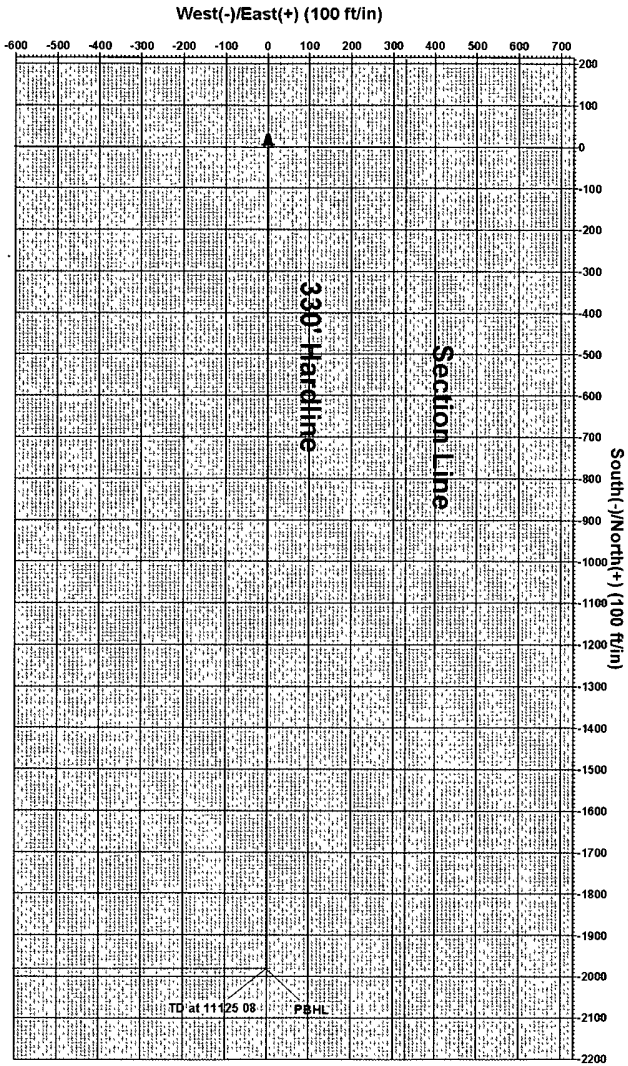
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	9350 00	-1980.00	0.00	612625 700	668781.100	Point

PROJECT DETAILS B-52 Federal #3

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

Project: B-52 Federal #3
Site: B-52 Federal #3
Well: B-52 Federal #3
Wellbore: Original Hole
Plan: Plan #1 (B-52 Federal #3/Original Hole)





Plan Plan #1 (B-52 Federal #3/Original Hole)
Created By Mark Freeman Date 10 54, April 16 2008
Checked _____ Date _____

WHS

Pathfinder Survey Report

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #3
Project:	B-52 Federal #3	**TVD Reference:**	EST RKB @ 3662 00ft
Site:	B-52 Federal #3	**MD Reference:**	EST RKB @ 3662.00ft
Well:	B-52 Federal #3	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003 16 Single User Db

Project B-52 Federal #3

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 B-52 Federal #3

Site Position:		**Northing:**	614,605 700 ft	**Latitude:**	32° 41' 18.421 N
From:	Map	**Easting:**	668,781 100 ft	**Longitude:**	103° 47' 5.042 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	"	**Grid Convergence:**	0 30 °

Well B-52 Federal #3

Well Position	**+N/-S**	0.00 ft	**Northing:**	614,605 700 ft	**Latitude:**	32° 41' 18 421 N
	+E/-W	0.00 ft	**Easting:**	668,781 100 ft	**Longitude:**	103° 47' 5 042 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,662 00 ft

Wellbore Original Hole

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	4/16/2008	8.09	60.67	49,211

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	180.00

Survey Tool Program **Date** 4/16/2008

From (ft)	**To (ft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
0 00	11,125.08	Plan #1 (Original Hole)	MWD	MWD - Standard

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
0.00	0 00	0.00	0 00	0.00	0.00	0 00	0 00
100 00	0 00	0 00	100 00	0 00	0 00	0.00	0 00
200 00	0.00	0.00	200.00	0 00	0 00	0.00	0 00
300 00	0.00	0.00	300 00	0.00	0.00	0.00	0.00
400.00	0.00	0 00	400 00	0.00	0.00	0.00	0.00
500 00	0.00	0.00	500.00	0.00	0 00	0 00	0 00
600 00	0.00	0.00	600 00	0 00	0.00	0 00	0.00
700 00	0 00	0.00	700 00	0 00	0 00	0 00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0 00	0 00
900.00	0.00	0.00	900.00	0 00	0.00	0.00	0.00
1,000.00	0 00	0.00	1,000.00	0.00	0.00	0 00	0.00
1,100 00	0 00	0.00	1,100.00	0 00	0.00	0 00	0.00

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #3
Project:	B-52 Federal #3	**TVD Reference:**	EST RKB @ 3662 00ft
Site:	B-52 Federal #3	**MD Reference:**	EST RKB @ 3662 00ft
Well:	B-52 Federal #3	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003.16 Single User Db

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
1,200 00	0.00	0.00	1,200 00	0.00	0.00	0.00	0.00
1,300.00	0 00	0.00	1,300 00	0.00	0.00	0 00	0.00
1,400.00	0 00	0.00	1,400.00	0.00	0 00	0 00	0.00
1,500.00	0.00	0 00	1,500 00	0.00	0.00	0 00	0.00
1,600 00	0.00	0 00	1,600.00	0.00	0.00	0 00	0.00
1,700 00	0.00	0 00	1,700.00	0 00	0.00	0 00	0 00
1,800 00	0.00	0 00	1,800 00	0 00	0.00	0.00	0.00
1,900.00	0 00	0 00	1,900.00	0 00	0.00	0.00	0.00
2,000.00	0.00	0 00	2,000.00	0 00	0.00	0.00	0.00
2,100 00	0 00	0.00	2,100 00	0.00	0.00	0.00	0 00
2,200 00	0 00	0 00	2,200 00	0 00	0.00	0.00	0.00
2,300.00	0 00	0.00	2,300 00	0.00	0.00	0.00	0.00
2,400 00	0.00	0 00	2,400.00	0 00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500 00	0.00	0 00	0 00	0.00
2,600 00	0.00	0.00	2,600 00	0.00	0.00	0 00	0.00
2,700 00	0.00	0.00	2,700 00	0.00	0 00	0 00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0 00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0 00	0.00	0 00
3,000.00	0 00	0 00	3,000 00	0.00	0.00	0.00	0 00
3,100 00	0.00	0 00	3,100.00	0.00	0.00	0 00	0 00
3,200.00	0 00	0.00	3,200 00	0.00	0 00	0.00	0 00
3,300 00	0.00	0 00	3,300 00	0 00	0.00	0 00	0.00
3,400.00	0 00	0.00	3,400 00	0 00	0 00	0.00	0.00
3,500.00	0.00	0.00	3,500 00	0.00	0 00	0.00	0 00
3,600.00	0 00	0.00	3,600 00	0.00	0 00	0 00	0 00
3,700 00	0 00	0 00	3,700.00	0.00	0.00	0 00	0.00
3,800 00	0 00	0 00	3,800.00	0.00	0.00	0 00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0 00	0.00
4,000 00	0 00	0.00	4,000 00	0 00	0 00	0 00	0 00
4,100.00	0 00	0.00	4,100 00	0 00	0 00	0 00	0 00
4,200 00	0.00	0.00	4,200 00	0 00	0.00	0 00	0 00
4,300.00	0 00	0 00	4,300.00	0.00	0 00	0 00	0 00
4,400.00	0 00	0.00	4,400.00	0 00	0 00	0 00	0 00
4,500.00	0 00	0 00	4,500 00	0.00	0.00	0 00	0.00
4,600.00	0 00	0.00	4,600.00	0.00	0.00	0 00	0.00
4,700.00	0 00	0 00	4,700 00	0.00	0.00	0.00	0 00
4,800 00	0 00	0.00	4,800.00	0 00	0 00	0.00	0 00
4,900.00	0.00	0 00	4,900 00	0 00	0.00	0.00	0.00
5,000.00	0 00	0 00	5,000 00	0.00	0 00	0 00	0.00
5,100.00	0 00	0.00	5,100.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0 00	5,200 00	0 00	0 00	0 00	0 00
5,300.00	0.00	0.00	5,300.00	0.00	0 00	0.00	0.00
5,400 00	0 00	0.00	5,400.00	0.00	0.00	0.00	0.00
5,500.00	0 00	0.00	5,500 00	0.00	0 00	0 00	0 00

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #3
Project:	B-52 Federal #3	**TVD Reference:**	EST RKB @ 3662 00ft
Site:	B-52 Federal #3	**MD Reference:**	EST RKB @ 3662.00ft
Well:	B-52 Federal #3	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003 16 Single User Db

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
5,600 00	0.00	0 00	5,600.00	0.00	0 00	0.00	0 00
5,700 00	0.00	0.00	5,700 00	0 00	0.00	0 00	0.00
5,800 00	0.00	0 00	5,800.00	0.00	0 00	0.00	0.00
5,900.00	0 00	0.00	5,900 00	0 00	0 00	0.00	0 00
6,000.00	0 00	0.00	6,000.00	0.00	0.00	0 00	0.00
6,100 00	0 00	0.00	6,100 00	0.00	0 00	0.00	0 00
6,200 00	0 00	0.00	6,200 00	0.00	0.00	0.00	0 00
6,300 00	0 00	0.00	6,300 00	0.00	0.00	0 00	0.00
6,400.00	0 00	0.00	6,400 00	0.00	0.00	0 00	0.00
6,500 00	0 00	0.00	6,500 00	0.00	0.00	0.00	0.00
6,600 00	0.00	0.00	6,600 00	0.00	0 00	0 00	0.00
6,700.00	0 00	0.00	6,700.00	0 00	0.00	0 00	0.00
6,800 00	0 00	0.00	6,800 00	0 00	0 00	0.00	0 00
6,900 00	0.00	0 00	6,900.00	0.00	0 00	0 00	0 00
7,000 00	0.00	0.00	7,000.00	0.00	0 00	0.00	0 00
7,100 00	0.00	0 00	7,100.00	0 00	0.00	0 00	0.00
7,200.00	0.00	0.00	7,200.00	0 00	0 00	0.00	0 00
7,300.00	0.00	0.00	7,300 00	0 00	0 00	0.00	0.00
7,400.00	0.00	0.00	7,400 00	0.00	0 00	0.00	0.00
7,500.00	0 00	0 00	7,500 00	0.00	0 00	0 00	0.00
7,600.00	0 00	0.00	7,600 00	0.00	0 00	0 00	0.00
7,700 00	0.00	0.00	7,700.00	0 00	0.00	0 00	0.00
7,800.00	0.00	0.00	7,800.00	0 00	0.00	0.00	0.00
7,900.00	0 00	0.00	7,900 00	0.00	0.00	0.00	0.00
8,000 00	0 00	0 00	8,000 00	0.00	0.00	0 00	0.00
8,100 00	0 00	0 00	8,100 00	0.00	0 00	0.00	0.00
8,200.00	0 00	0 00	8,200.00	0 00	0.00	0 00	0.00
8,300.00	0 00	0 00	8,300.00	0 00	0.00	0 00	0.00
8,400.00	0 00	0 00	8,400.00	0 00	0.00	0.00	0.00
8,500 00	0 00	0.00	8,500 00	0.00	0.00	0 00	0 00
8,600 00	0 00	0.00	8,600.00	0 00	0.00	0.00	0.00
8,700 00	0.00	0 00	8,700 00	0 00	0.00	0 00	0.00
8,800 00	0 00	0.00	8,800.00	0.00	0.00	0.00	0 00
8,872.54	0 00	0 00	8,872.54	0.00	0 00	0 00	0 00
8,875.00	0 30	180.00	8,875.00	-0 01	0 00	0 01	12 00
8,900.00	3.30	180.00	8,899 98	-0.79	0.00	0.79	12.00
8,925.00	6 30	180 00	8,924 89	-2.88	0.00	2.88	12 00
8,950 00	9.30	180.00	8,949.66	-6.27	0 00	6 27	12.00
8,975 00	12.30	180.00	8,974.22	-10 95	0 00	10 95	12.00
9,000 00	15 30	180.00	8,998 49	-16 91	0 00	16 91	12.00
9,025.00	18.30	180 00	9,022 42	-24 13	0 00	24 13	12.00
9,050.00	21.30	180.00	9,045.94	-32.60	0 00	32.60	12 00
9,075.00	24.30	180.00	9,068.99	-42.29	0 00	42 29	12 00
9,100.00	27.30	180.00	9,091 49	-53 16	0.00	53.16	12 00

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #3
Project:	B-52 Federal #3	**TVD Reference:**	EST RKB @ 3662.00ft
Site:	B-52 Federal #3	**MD Reference:**	EST RKB @ 3662 00ft
Well:	B-52 Federal #3	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003 16 Single User Db

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
9,125 00	30.30	180 00	9,113.40	-65 20	0.00	65 20	12 00
9,150 00	33.30	180 00	9,134 65	-78 37	0 00	78 37	12.00
9,175 00	36.30	180 00	9,155.17	-92.64	0 00	92.64	12.00
9,200.00	39.30	180.00	9,174 93	-107.96	0 00	107 96	12.00
9,225 00	42.30	180 00	9,193 85	-124.29	0 00	124.29	12.00
9,250 00	45.30	180 00	9,211 89	-141.59	0 00	141 59	12 00
9,275.00	48.30	180.00	9,229 01	-159.81	0.00	159 81	12.00
9,300 00	51.30	180 00	9,245 14	-178 90	0 00	178 90	12 00
9,325 00	54.30	180 00	9,260.26	-198.81	0 00	198.81	12 00
9,350 00	57.30	180.00	9,274 31	-219.49	0.00	219 49	12.00
9,375.00	60 30	180.00	9,287.26	-240 87	0.00	240 87	12 00
9,400.00	63 30	180.00	9,299.08	-262 90	0.00	262 90	12 00
9,425.00	66 30	180.00	9,309.72	-285 51	0.00	285.51	12 00
9,450.00	69 30	180.00	9,319.17	-308 66	0.00	308.66	12 00
9,475 00	72 30	180 00	9,327 39	-332 26	0 00	332 26	12 00
9,500 00	75 30	180.00	9,334 37	-356 27	0.00	356 27	12.00
9,525.00	78.30	180 00	9,340 08	-380.60	0 00	380.60	12.00
9,550 00	81.30	180 00	9,344.51	-405.20	0 00	405.20	12.00
9,575.00	84.30	180 00	9,347 64	-430.00	0.00	430 00	12.00
9,600 00	87.30	180.00	9,349 47	-454 93	0.00	454.93	12.00
9,622.54	90.00	180.00	9,350.00	-477.47	0.00	477.47	12.00
9,700.00	90 00	180.00	9,350.00	-554 92	0.00	554.92	0.00
9,800 00	90.00	180 00	9,350 00	-654.92	0.00	654.92	0.00
9,900 00	90.00	180 00	9,350 00	-754.92	0 00	754.92	0.00
10,000.00	90 00	180 00	9,350.00	-854 92	0 00	854 92	0 00
10,100.00	90.00	180 00	9,350 00	-954.92	0 00	954 92	0 00
10,200 00	90 00	180.00	9,350 00	-1,054.92	0.00	1,054 92	0.00
10,300.00	90 00	180.00	9,350.00	-1,154.92	0.00	1,154 92	0.00
10,400 00	90.00	180 00	9,350.00	-1,254 92	0 00	1,254 92	0 00
10,500 00	90 00	180 00	9,350 00	-1,354 92	0 00	1,354.92	0.00
10,600.00	90 00	180.00	9,350 00	-1,454 92	0 00	1,454.92	0.00
10,700 00	90.00	180.00	9,350.00	-1,554 92	0.00	1,554.92	0 00
10,800 00	90 00	180 00	9,350.00	-1,654.92	0.00	1,654.92	0.00
10,900.00	90.00	180 00	9,350 00	-1,754 92	0.00	1,754 92	0.00
11,000 00	90 00	180 00	9,350.00	-1,854 92	0 00	1,854.92	0.00
11,100.00	90.00	180.00	9,350.00	-1,954.92	0 00	1,954 92	0.00
11,125.08	90.00	180.00	9,350.00	-1,980.00	0 00	1,980 00	0.00

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #3
Project:	B-52 Federal #3	**TVD Reference:**	EST RKB @ 3662.00ft
Site:	B-52 Federal #3	**MD Reference:**	EST RKB @ 3662.00ft
Well:	B-52 Federal #3	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003.16 Single User Db

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 - plan hits target - Point	0 00	0 00	9,350 00	-1,980 00	0.00	612,625 700	668,781 100	32° 40' 58.829 N	103° 47' 5.162 W

Checked By: _____ Approved By: _____ Date: _____

Marbob

B-52 Federal #3
B-52 Federal #3
B-52 Federal #3
Original Hole

Plan: Plan #2

Pathfinder Survey Report

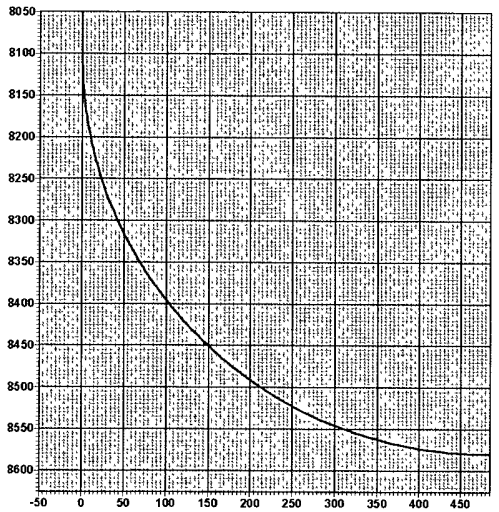
16 April, 2008

marbob
energy corporation
Artesia, N.M.

Azimuths to Grid North
True North: -0.30°
Magnetic North: 7.79°

Magnetic Field
Strength: 49211.5snT
Dip Angle: 60.67°
Date: 4/16/2008
Model: IGRF200510

PATHFINDER
ENERGY SERVICES



WELL DETAILS B-52 Federal #3

Ground Elevation 3662.00
RKB Elevation EST RKB @ 3662 00ft
Rig Name

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0 00	0 00	614605 700	668781 100	32° 41' 18.421 N	103° 47' 5 042 W	

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	8102.54	0 00	0.00	8102.54	0 00	0 00	0 00	0.00	0 00	
3	8852.54	90 00	180.00	8580.00	-477 47	0 00	12 00	180.00	477 47	
4	10355 08	90 00	180 00	8580.00	-1980 00	0 00	0 00	0 00	1980.00	PBHL2

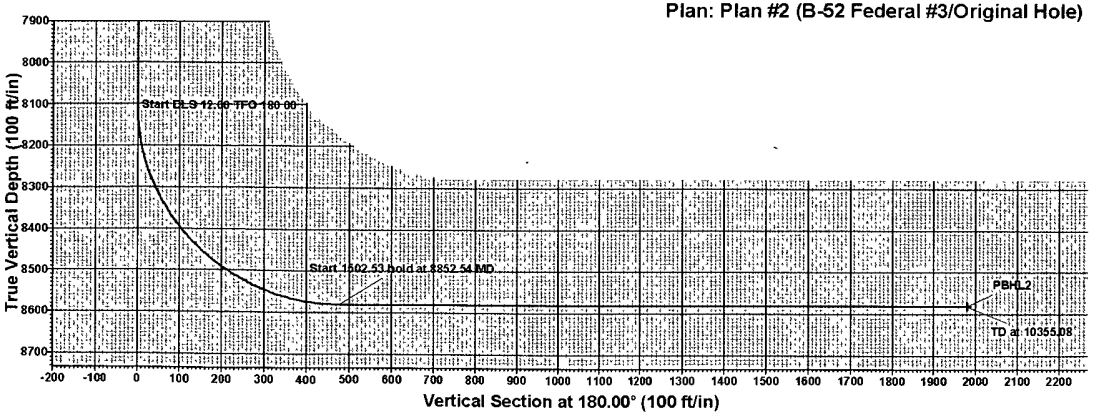
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

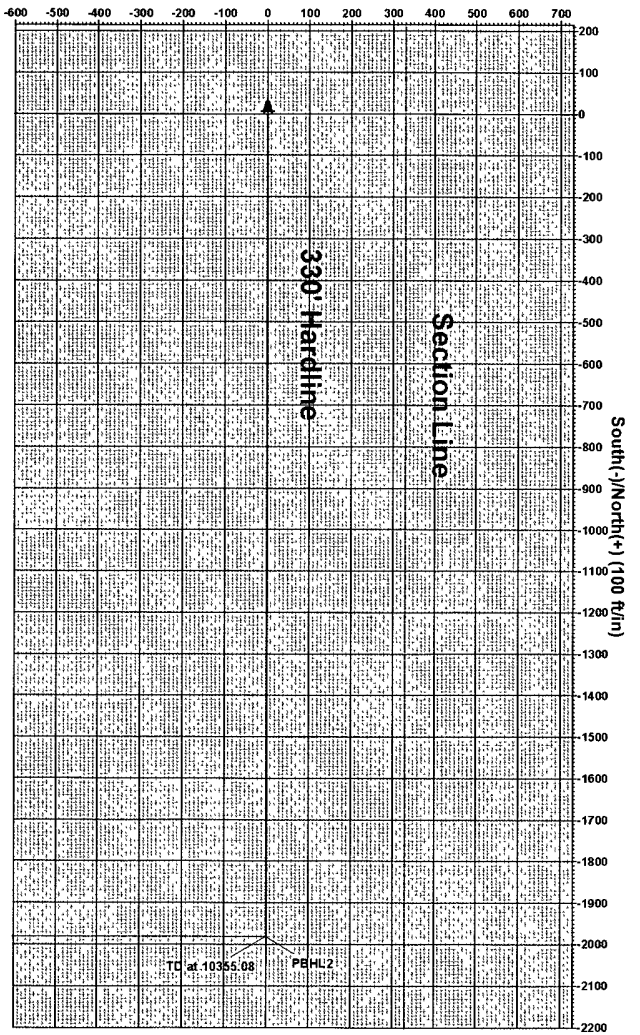
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL2	8580 00	-1980 00	0 00	612625 700	668781 100	Point

PROJECT DETAILS B-52 Federal #3

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

Project: B-52 Federal #3
Site: B-52 Federal #3
Well: B-52 Federal #3
Wellbore: Original Hole
Plan: Plan #2 (B-52 Federal #3/Original Hole)





Plan Plan #2 (B-52 Federal #3/Original Hole)
Created By Mark Freeman Date 11 02, April 16 2008
Checked _____ Date _____

WHS

Pathfinder Survey Report

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #3
Project:	B-52 Federal #3	**TVD Reference:**	EST RKB @ 3662.00ft
Site:	B-52 Federal #3	**MD Reference:**	EST RKB @ 3662 00ft
Well:	B-52 Federal #3	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**Database:**	EDM 2003.16 Single User Db

Project B-52 Federal #3

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 B-52 Federal #3

Site Position:		**Northing:**	614,605 700 ft	**Latitude:**	32° 41' 18.421 N
From:	Map	**Easting:**	668,781.100 ft	**Longitude:**	103° 47' 5.042 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	"	**Grid Convergence:**	0 30 °

Well B-52 Federal #3

Well Position	**+N/-S**	0 00 ft	**Northing:**	614,605 700 ft	**Latitude:**	32° 41' 18 421 N
	+E/-W	0.00 ft	**Easting:**	668,781.100 ft	**Longitude:**	103° 47' 5 042 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,662 00 ft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	4/16/2008	8.09	60.67	49,211

Design Plan #2

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0 00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0 00	0.00	0.00	180 00

Survey Tool Program **Date** 4/16/2008

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	10,355 08	Plan #2 (Original Hole)	MWD	MWD - Standard

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
0.00	0 00	0 00	0.00	0.00	0 00	0.00	0.00
100.00	0 00	0.00	100 00	0 00	0.00	0 00	0 00
200.00	0 00	0 00	200.00	0.00	0.00	0 00	0 00
300.00	0.00	0 00	300 00	0.00	0 00	0.00	0.00
400.00	0.00	0.00	400.00	0 00	0.00	0.00	0 00
500 00	0 00	0.00	500.00	0.00	0 00	0 00	0 00
600.00	0.00	0 00	600.00	0 00	0.00	0.00	0.00
700 00	0 00	0.00	700 00	0.00	0.00	0.00	0.00
800 00	0 00	0 00	800.00	0.00	0 00	0.00	0.00
900.00	0.00	0 00	900 00	0.00	0 00	0.00	0 00
1,000.00	0 00	0.00	1,000 00	0 00	0 00	0 00	0 00
1,100.00	0.00	0 00	1,100.00	0.00	0 00	0 00	0.00

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #3
Project:	B-52 Federal #3	**TVD Reference:**	EST RKB @ 3662 00ft
Site:	B-52 Federal #3	**MD Reference:**	EST RKB @ 3662 00ft
Well:	B-52 Federal #3	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**Database:**	EDM 2003.16 Single User Db

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
1,200.00	0 00	0 00	1,200 00	0 00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0 00	0 00	0 00
1,400.00	0 00	0 00	1,400 00	0.00	0 00	0.00	0 00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0 00	0 00
1,600.00	0 00	0.00	1,600 00	0 00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0 00	0 00	0 00
1,800 00	0.00	0 00	1,800 00	0.00	0 00	0.00	0.00
1,900.00	0.00	0.00	1,900 00	0.00	0 00	0.00	0 00
2,000.00	0.00	0.00	2,000.00	0.00	0 00	0 00	0 00
2,100 00	0 00	0.00	2,100 00	0 00	0.00	0 00	0 00
2,200 00	0.00	0.00	2,200.00	0.00	0.00	0 00	0 00
2,300.00	0.00	0.00	2,300 00	0 00	0 00	0.00	0.00
2,400 00	0.00	0 00	2,400 00	0.00	0 00	0.00	0.00
2,500 00	0 00	0 00	2,500.00	0 00	0 00	0.00	0.00
2,600 00	0 00	0.00	2,600.00	0.00	0.00	0 00	0 00
2,700.00	0 00	0.00	2,700 00	0 00	0.00	0 00	0.00
2,800 00	0 00	0.00	2,800.00	0.00	0 00	0.00	0.00
2,900.00	0 00	0 00	2,900 00	0.00	0 00	0 00	0.00
3,000.00	0.00	0 00	3,000.00	0 00	0 00	0.00	0.00
3,100.00	0.00	0 00	3,100.00	0 00	0.00	0 00	0 00
3,200.00	0 00	0.00	3,200 00	0 00	0.00	0.00	0 00
3,300 00	0.00	0.00	3,300 00	0.00	0 00	0.00	0 00
3,400.00	0 00	0 00	3,400 00	0.00	0.00	0 00	0.00
3,500.00	0 00	0 00	3,500.00	0.00	0 00	0.00	0.00
3,600 00	0.00	0.00	3,600 00	0 00	0.00	0.00	0.00
3,700.00	0 00	0.00	3,700 00	0.00	0.00	0 00	0 00
3,800.00	0.00	0 00	3,800 00	0 00	0.00	0.00	0 00
3,900.00	0.00	0.00	3,900.00	0.00	0 00	0.00	0 00
4,000 00	0 00	0.00	4,000.00	0 00	0 00	0.00	0 00
4,100 00	0.00	0 00	4,100 00	0 00	0.00	0.00	0 00
4,200 00	0.00	0 00	4,200 00	0 00	0.00	0 00	0 00
4,300.00	0 00	0.00	4,300.00	0.00	0 00	0 00	0.00
4,400 00	0.00	0 00	4,400 00	0.00	0 00	0 00	0.00
4,500.00	0.00	0 00	4,500 00	0 00	0 00	0.00	0.00
4,600 00	0 00	0.00	4,600.00	0.00	0.00	0 00	0 00
4,700.00	0 00	0 00	4,700.00	0 00	0.00	0 00	0.00
4,800 00	0.00	0 00	4,800.00	0 00	0.00	0.00	0.00
4,900.00	0 00	0.00	4,900.00	0.00	0.00	0 00	0 00
5,000.00	0.00	0 00	5,000.00	0 00	0.00	0 00	0.00
5,100 00	0.00	0 00	5,100 00	0 00	0.00	0.00	0.00
5,200.00	0 00	0.00	5,200.00	0 00	0.00	0.00	0.00
5,300 00	0.00	0.00	5,300 00	0.00	0.00	0 00	0.00
5,400.00	0 00	0 00	5,400.00	0 00	0.00	0.00	0 00
5,500.00	0 00	0 00	5,500 00	0.00	0 00	0 00	0.00

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #3
Project:	B-52 Federal #3	**TVD Reference:**	EST RKB @ 3662.00ft
Site:	B-52 Federal #3	**MD Reference:**	EST RKB @ 3662.00ft
Well:	B-52 Federal #3	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**Database:**	EDM 2003.16 Single User Db

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
5,600 00	0.00	0 00	5,600.00	0 00	0.00	0 00	0 00
5,700.00	0.00	0.00	5,700.00	0 00	0 00	0 00	0 00
5,800 00	0 00	0 00	5,800 00	0.00	0 00	0.00	0.00
5,900 00	0 00	0 00	5,900 00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0 00	0.00	0.00
6,100 00	0.00	0.00	6,100.00	0.00	0 00	0.00	0.00
6,200 00	0 00	0 00	6,200 00	0 00	0.00	0 00	0 00
6,300.00	0 00	0 00	6,300 00	0 00	0.00	0.00	0 00
6,400.00	0 00	0 00	6,400 00	0.00	0.00	0 00	0 00
6,500 00	0.00	0.00	6,500 00	0 00	0.00	0 00	0.00
6,600.00	0 00	0 00	6,600.00	0 00	0 00	0 00	0.00
6,700 00	0 00	0 00	6,700.00	0 00	0 00	0 00	0 00
6,800 00	0 00	0 00	6,800 00	0.00	0 00	0.00	0 00
6,900.00	0 00	0 00	6,900 00	0.00	0.00	0 00	0 00
7,000.00	0.00	0.00	7,000 00	0 00	0.00	0 00	0 00
7,100 00	0.00	0.00	7,100.00	0.00	0 00	0.00	0.00
7,200.00	0.00	0 00	7,200.00	0 00	0.00	0.00	0 00
7,300.00	0.00	0.00	7,300.00	0 00	0.00	0.00	0 00
7,400 00	0.00	0 00	7,400 00	0.00	0 00	0.00	0.00
7,500 00	0.00	0.00	7,500 00	0.00	0 00	0 00	0.00
7,600.00	0.00	0 00	7,600 00	0 00	0 00	0.00	0.00
7,700 00	0 00	0 00	7,700.00	0.00	0.00	0.00	0 00
7,800.00	0.00	0.00	7,800.00	0.00	0 00	0 00	0 00
7,900.00	0.00	0.00	7,900 00	0.00	0 00	0 00	0.00
8,000 00	0.00	0 00	8,000 00	0 00	0.00	0 00	0.00
8,102.54	0.00	0 00	8,102.54	0.00	0 00	0.00	0.00
8,125.00	2 70	180.00	8,124.99	-0 53	0.00	0 53	12.00
8,150.00	5.70	180.00	8,149 92	-2.36	0.00	2.36	12.00
8,175.00	8.70	180.00	8,174.72	-5 49	0.00	5.49	12.00
8,200 00	11 70	180 00	8,199.32	-9.91	0.00	9.91	12.00
8,225.00	14.70	180.00	8,223 66	-15.62	0.00	15 62	12 00
8,250 00	17.70	180.00	8,247.67	-22 59	0 00	22 59	12.00
8,275 00	20 70	180 00	8,271.27	-30 81	0.00	30 81	12 00
8,300.00	23 70	180.00	8,294 42	-40.25	0.00	40.25	12.00
8,325.00	26 70	180.00	8,317.04	-50 89	0.00	50 89	12.00
8,350.00	29.70	180 00	8,339 07	-62 70	0.00	62.70	12.00
8,375 00	32 70	180.00	8,360.45	-75.65	0.00	75 65	12 00
8,400 00	35.70	180 00	8,381.13	-89 70	0.00	89.70	12 00
8,425.00	38 70	180.00	8,401 04	-104.81	0.00	104.81	12.00
8,450.00	41.70	180.00	8,420 13	-120.94	0.00	120.94	12 00
8,475 00	44 70	180.00	8,438.36	-138 05	0.00	138.05	12.00
8,500 00	47 70	180.00	8,455 66	-156 10	0.00	156.10	12 00
8,525 00	50 70	180 00	8,472 00	-175.02	0.00	175.02	12 00
8,550.00	53.70	180.00	8,487.32	-194 77	0 00	194 77	12 00

WHS

Pathfinder Survey Report

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #3
Project:	B-52 Federal #3	**TVD Reference:**	EST RKB @ 3662.00ft
Site:	B-52 Federal #3	**MD Reference:**	EST RKB @ 3662.00ft
Well:	B-52 Federal #3	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**Database:**	EDM 2003.16 Single User Db

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
8,575.00	56.70	180 00	8,501 59	-215.29	0 00	215.29	12.00
8,600.00	59.70	180 00	8,514 76	-236 54	0 00	236.54	12.00
8,625.00	62.70	180 00	8,526.81	-258 44	0 00	258.44	12.00
8,650.00	65.70	180.00	8,537.69	-280 94	0.00	280.94	12.00
8,675.00	68.70	180.00	8,547.38	-303 99	0.00	303.99	12.00
8,700.00	71.70	180 00	8,555 84	-327.51	0 00	327 51	12.00
8,725.00	74.70	180.00	8,563 07	-351 44	0.00	351.44	12.00
8,750 00	77 70	180 00	8,569 04	-375 71	0.00	375.71	12 00
8,775 00	80 70	180 00	8,573.72	-400.27	0 00	400 27	12 00
8,800.00	83 70	180 00	8,577.12	-425 03	0 00	425 03	12.00
8,825 00	86 70	180 00	8,579 21	-449 94	0.00	449 94	12 00
8,850.00	89.70	180.00	8,580.00	-474.92	0.00	474.92	12.00
8,852 54	90.00	180.00	8,580.00	-477.47	0.00	477.47	12.00
8,900.00	90 00	180 00	8,580.00	-524.92	0 00	524 92	0.00
9,000.00	90.00	180.00	8,580.00	-624 92	0 00	624 92	0 00
9,100.00	90 00	180 00	8,580.00	-724.92	0.00	724.92	0.00
9,200 00	90 00	180 00	8,580.00	-824.92	0.00	824.92	0.00
9,300 00	90 00	180.00	8,580 00	-924 92	0.00	924 92	0.00
9,400.00	90.00	180.00	8,580.00	-1,024 92	0.00	1,024 92	0.00
9,500.00	90 00	180 00	8,580.00	-1,124.92	0.00	1,124.92	0.00
9,600 00	90.00	180.00	8,580.00	-1,224.92	0.00	1,224.92	0.00
9,700 00	90 00	180 00	8,580 00	-1,324 92	0 00	1,324.92	0.00
9,800.00	90.00	180.00	8,580 00	-1,424.92	0.00	1,424.92	0.00
9,900 00	90 00	180.00	8,580 00	-1,524 92	0 00	1,524 92	0.00
10,000.00	90 00	180 00	8,580 00	-1,624.92	0 00	1,624 92	0.00
10,100 00	90.00	180 00	8,580.00	-1,724 92	0.00	1,724 92	0 00
10,200 00	90 00	180 00	8,580.00	-1,824 92	0.00	1,824 92	0 00
10,300.00	90 00	180.00	8,580 00	-1,924 92	0.00	1,924 92	0 00
10,355 08	90.00	180.00	8,580.00	-1,980.00	0 00	1,980 00	0.00

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
PBHL2 - plan hits target - Point	0 00	0.00	8,580 00	-1,980.00	0 00	612,625.700	668,781.100	32° 40' 58 829 N	103° 47' 5 162 W

Checked By: _____ Approved By: _____ Date: _____

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Marbob Energy**
LEASE NO.:	**NMNM118720**
WELL NAME & NO.:	**Patterson B-52 Federal 3**
SURFACE HOLE FOOTAGE:	**2310' FSL & 1500' FEL**
BOTTOM HOLE FOOTAGE	**330' FSL & 1680' FEL**
LOCATION:	**Section 5, T. 19 S., R 32 E., NMPM**
COUNTY:	**Lea County, New Mexico**

I. 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 **Yates** 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 water and brine flows in the Salado and Artesia Group.
Possible lost circulation in the Artesia Group.

1. The **13-3/8** inch surface casing shall be set at **approximately 1150 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface**.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

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

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

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

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.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

a. First stage to DV tool, cement shall:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool, cement shall:

☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section).

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch 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. Casing cut-off and BOP installation will not be initiated until the cement has had 4-6 hours of setup time in a water basin and 12 hours in the potash areas. This time will start after the cement plug is bumped. Testing the BOP/BOPE against a plug can commence after meeting the above conditions plus the BOP installation time.

    b. The tests shall be done by an independent service company utilizing a test plug.

    c. The results of the test shall be reported to the appropriate BLM office.

    d. 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.**

    e. 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.

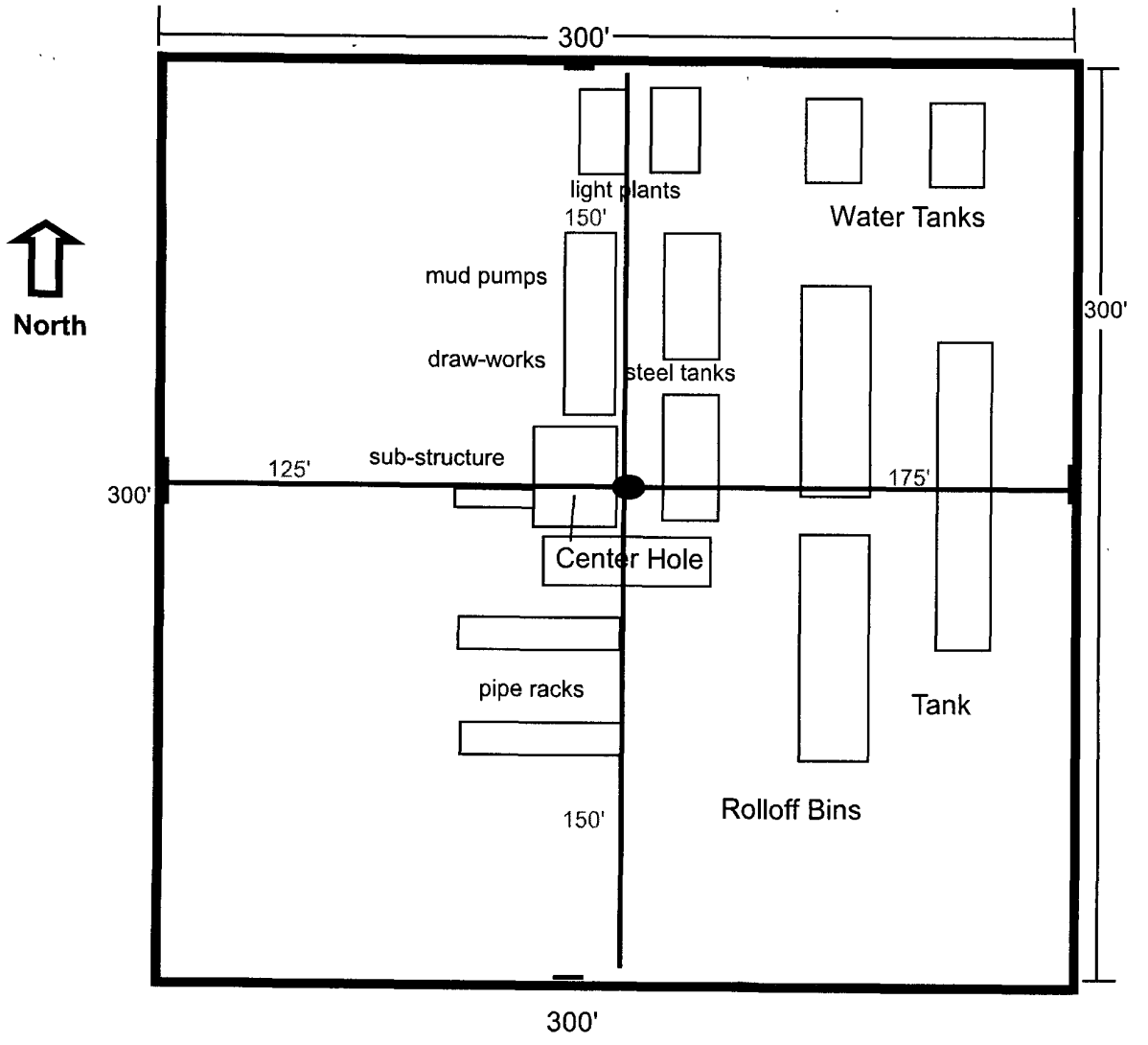
    f. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

D. DRILL STEM TEST

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

CRW 010610

Well Site Lay-Out Plat



B-52 Federal #3
2310' FSL & ~~1650~~ 1500' FEL
Section 5, T19S - R32E
Lea County, New Mexico

EXHIBIT THREE

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

B-52 Federal #3
2310' FSL & 1650' FEL
Section 5, T19S, R32E
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 are as follows:

Rustler	1126'	Queen	3780'
TOS	1256'	Delaware	4850'
BOS	2740'	Bone Spring Lime	7090'
Yates	2910'	1st Sand	8430'
7 Rivers	3345'	2nd Sand	9150'
		TD	9700'

3. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Yates	2910'	Oil
Delaware	4850'	Oil
1st Sand	8430'	Oil
2nd Sand	9150'	Oil

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 1150' 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~~ 9 5/8" casing. ^300' TOC = 3000' PER S. BAKER 5/20/08 LB

Marbob plans to drill this well to a total depth of 9700' then log the open hole. At this time it will be decided to run casing and cement the vertical wellbore or to horizontal 1 of 2 zones, either the 2nd Bone Springs Sand @ 9350' or the 1st Bone Springs Sand @ 8580'.

Option "A" Vertical
Option "B" Horizontal 2nd Bone Springs Sand
Option "C" Horizontal 1st Bone Springs Sand

4. **Proposed Casing Program:**

Option "A"

Hole Size	Interval	OD Casing	New or Used	Wt	Collar	Grade
17 ½"	0' – 1150'	13 3/8"	New	54.5#	STC	J-55
12 1/4"	1150'– 3300'	9 5/8"	New	36#	STC	J-55
7 7/8"	3300' – 9700'	5 ½"	New	17#	LTC	N-80

Option "B"

7 7/8"	3300' – 11125'	5 ½"	New	17#	LTC	N-80

Option "C"

7 7/8"	3300' – 10355'	5 ½"	New	17#	LTC	N-80

Collapse Design Factor	Burst Design Factor	Tension Design Factor
1.125	1.125	1.6

5. **Proposed Cement Program:**

Option "A"

a. 13 3/8" Surf — Cement to surface with 500 sk "C" Light wt 12.7 ppg yield 1.91 tail in with 200 sk "c" wt 14.8 ppg yield 1.34

b. 9 5/8" Int — Cement to surface with 650 sk "c" Light wt 12.7 ppg yield 1.91 Tail in with 200 sk "c" yield 1.34 wt 14.8 ppg

c. 5 1/2" Prod — Stage 1 350 sk "H" wt 13.0 ppg yield 1.67
Stage 2 450 sk "H" Lite yield 1.91 wt 12.7 Tail in with 200 sk "H" yield 1.67 wt 13.0 DV Tool @ 7000' TOC 3000'

Option "B"

5 ½" Prod — Cement 1st stage with 250 sk Acid Soluble "H" wt 15.0# yield 2.6. 2nd stage with 550 sk "H" light wt 12.7 ppg yield 1.91 Tail in with 100 sk "H" wt 13.0 yield 1.64 DV Tool 8800 TOC 3000

Option "C"

5 ½" Prod — Cement 1st stage with 250 sk Acid soluble "H" wt. 15.0# yield 2.6. 2nd stage with 500 sk "H" light Tail in with 100 sk "H" wt 13.0 ppg yield 1.64 DV Tool @ 8000' 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 13 3/8" casing shoe. **All casing is new and API approved.**

6. **Minimum Specifications for Pressure Control:**

Nipple up on 13 3/8" casing with a 2M system test to 1000# with rig pumps. Nipple up on 9 5/8 with a 3M system tested to 3000# with 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:** 4035.2 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' – 1150'	Fresh Water	8.3 - 8.4	29	N.C.
1150' – 3300'	Brine	10.0	29	N.C.
3300' – 9700'	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 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:**

   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: 4035.2 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 30 days.

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

B-52 Federal #3
2310' FSL & 1650' FEL
Section 5, T19S, R32E
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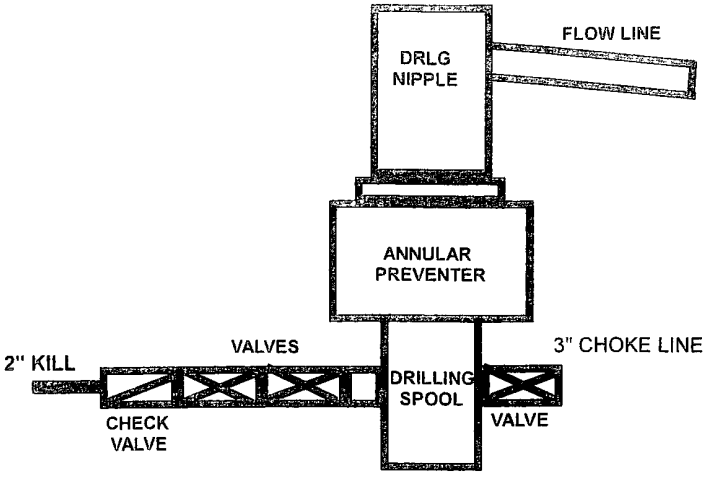
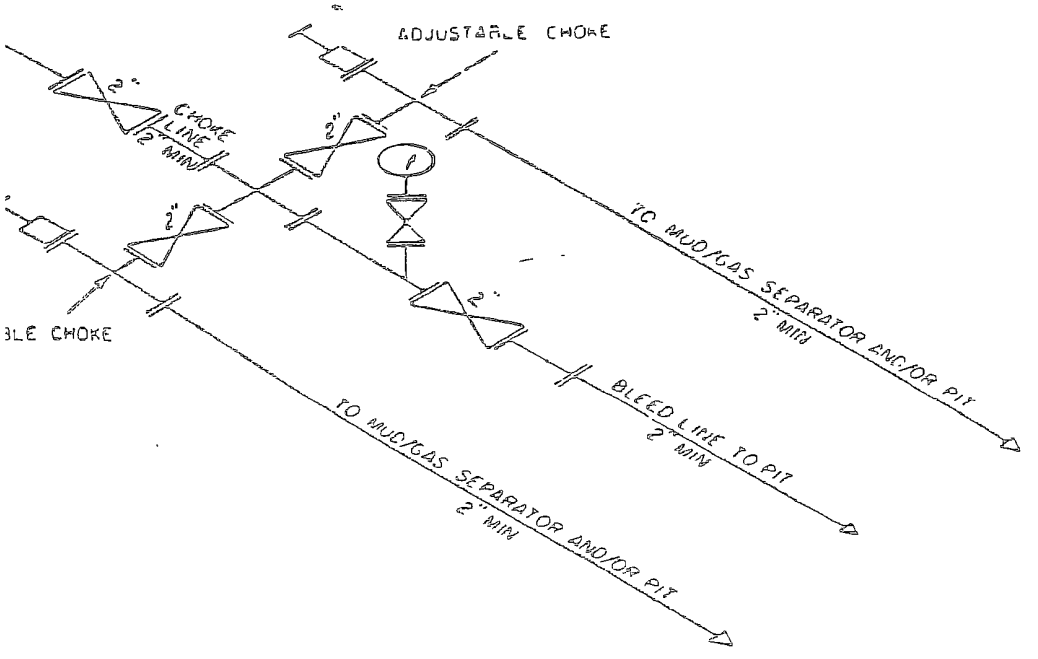
2M SYSTEM

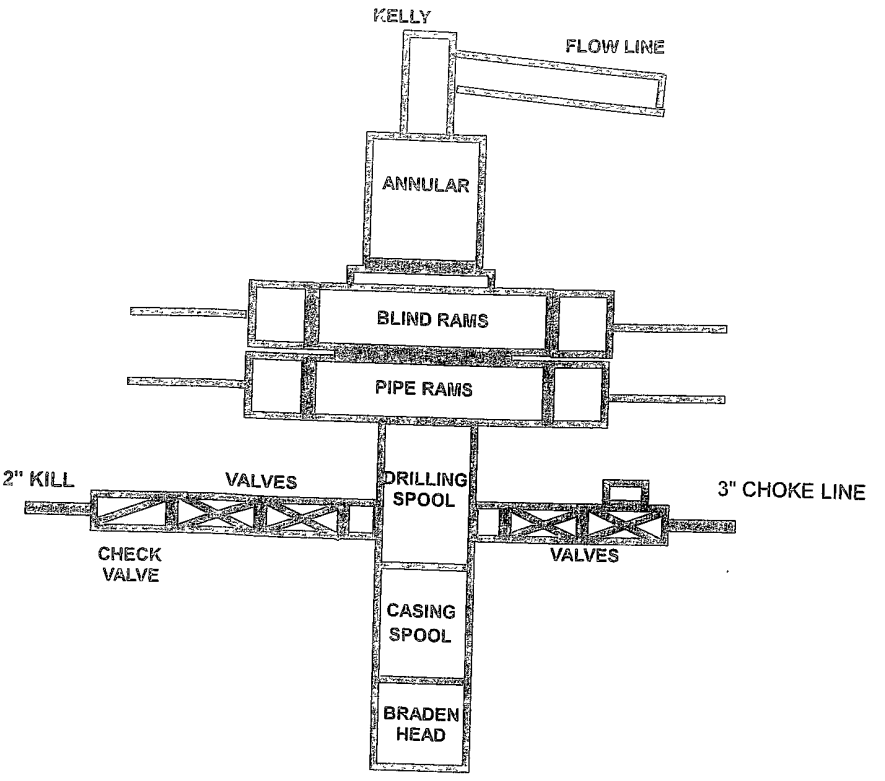


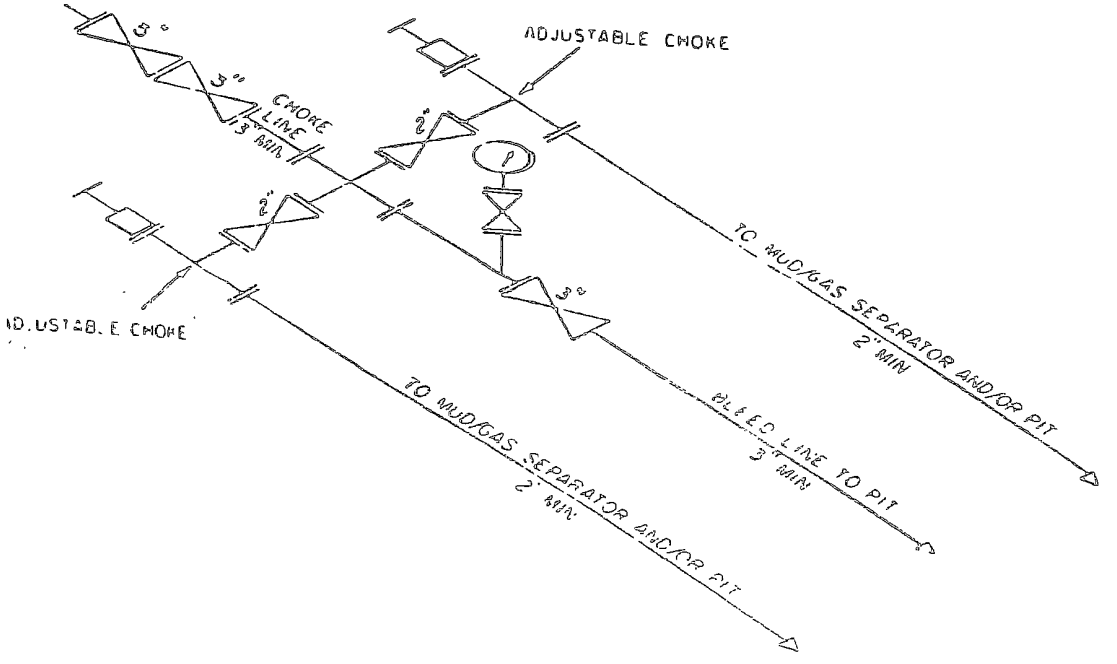


2M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

Exhibit One

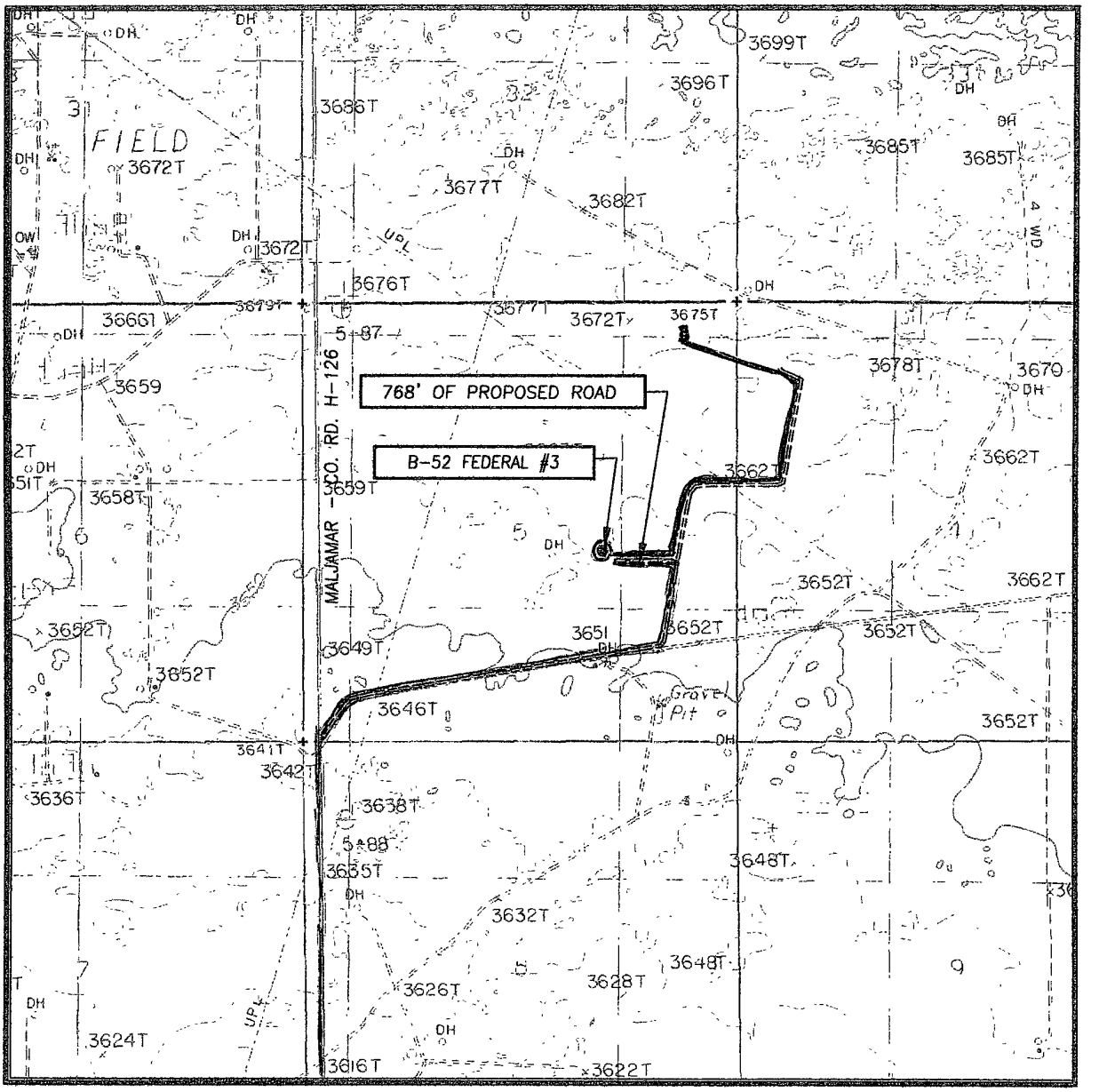
3M SYSTEM





3M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'
GREENWOOD LAKE, NM

SEC. 5 TWP. 19-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 2310' FSL & ~~1650'~~ 1500' FEL

ELEVATION 3662'

OPERATOR MARBOB ENERGY CORPORATION

LEASE B-52 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
GREENWOOD LAKE, NM

Existing Roads
Proposed Flowline

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

EXHIBIT #2

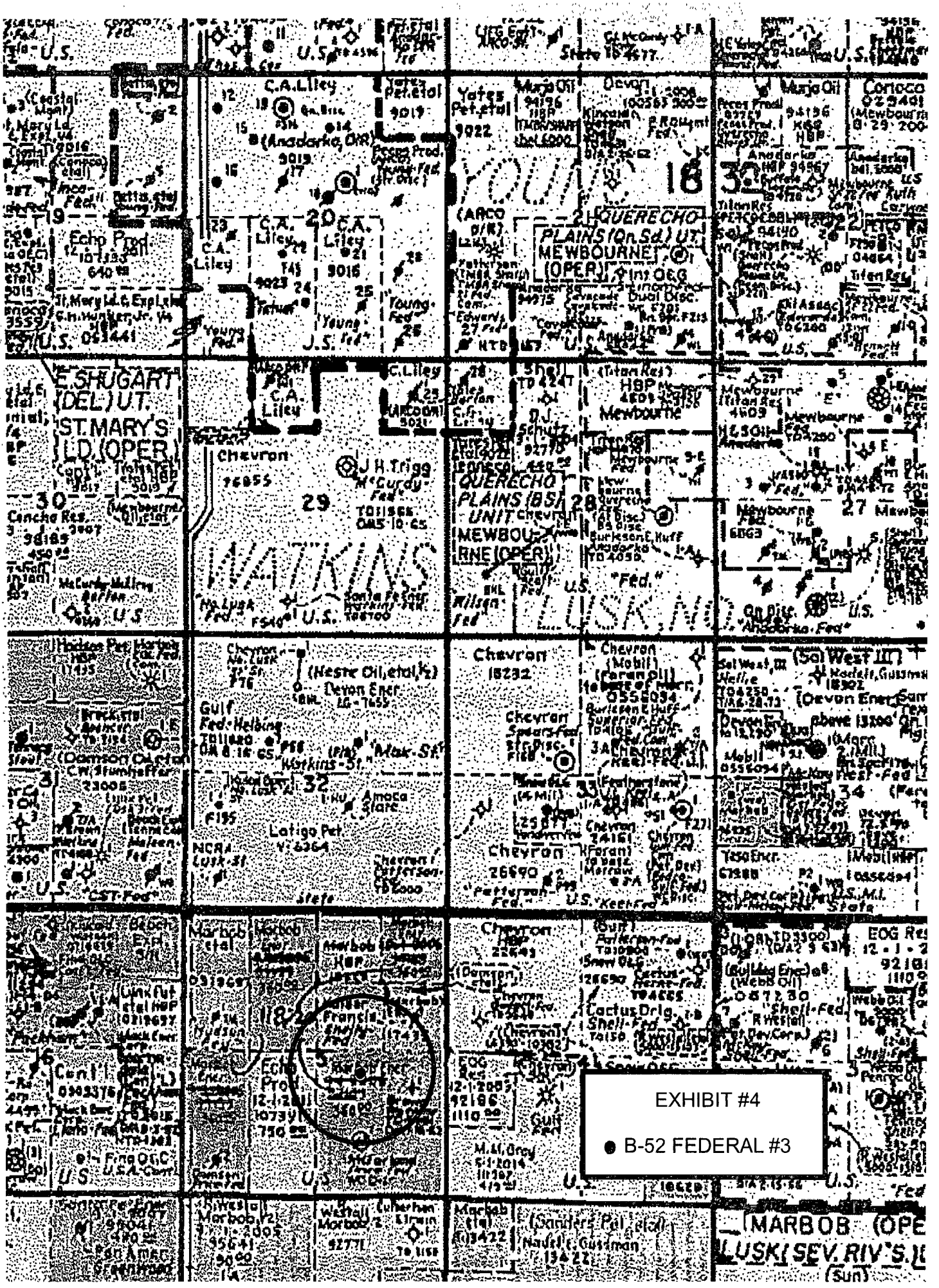


EXHIBIT #4
B-52 FEDERAL #3

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Marbob Energy
LEASE NO.:	NMNM118720
WELL NAME & NO.:	B 52 Federal No 3
SURFACE HOLE FOOTAGE:	2310' FSL & 1500' FEL
BOTTOM HOLE FOOTAGE LOCATION:	Section 5, T. 19 S., R 32 E., NMPM
COUNTY:	Lea County, New Mexico

TABLE OF CONTENTS

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

LESSER PRAIRIE-CHICKENS

No surface use is allowed during the following time periods; unless otherwise specified, this stipulation does not apply to operation and maintenance of production facilities.

For the purpose of Protecting Lesser Prairie-Chickens:

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.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (505) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

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

B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 8 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. RESERVE PITS

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the
Carlsbad Field Office at (505) 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.

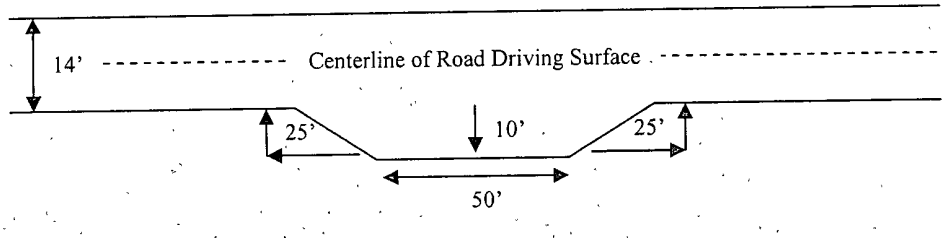
Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

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:

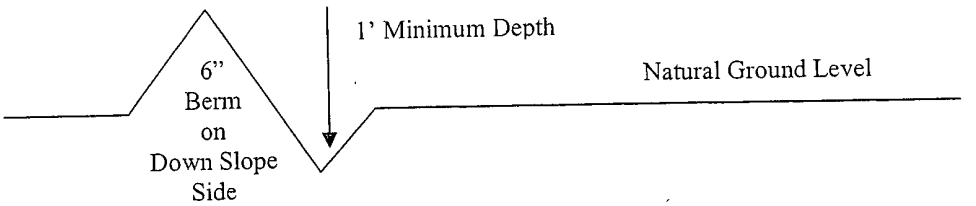
Standard Turnout – Plan View



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:

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

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.

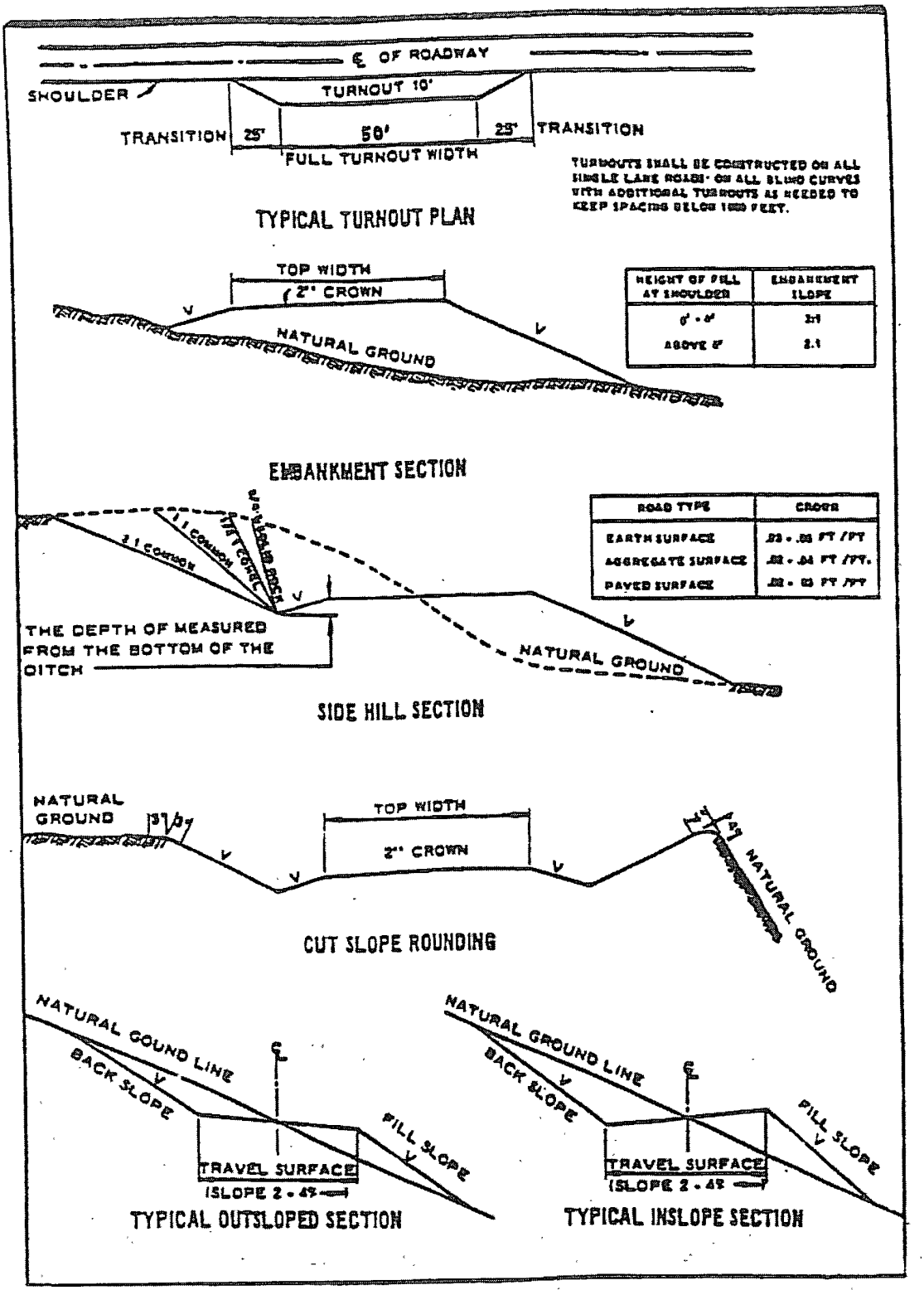
A gate shall be constructed and fastened securely to H-braces.

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. BOP/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 Yates Formation. 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.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work.

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

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string.

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

Possible lost circulation in Artesia Group
Possible H2O/brine flows in Artesia Group & Salado

1. The **13-3/8** inch surface casing shall be set at **approximately 1150 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 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 will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).

   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-d above.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   a. **First stage to DV tool, cement shall:**

   ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with second stage cement job.

   b. **Second stage above DV tool, cement shall:**

   ☒ Cement should tie-back at least 200 feet into previous casing string. **Operator shall provide method of verification.**

   Marbob plans to drill this well to 9700' TD then log the open hole. At this time it will be decided to run and cement casing for a vertical wellbore completion or to horizontal 1 of 2 zones, either the 2nd Bone Spring Sand @ 9350' or the 1st Bone Spring Sand @ 8580'. Centralizers required on horizontal leg, must be type for horizontal service and minimum of one every other joint.

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. 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.

    e. A variance to test the surface casing and BOP/BOPE **(entire system)** to the reduced pressure of **1000** psi with the rig pumps is approved.

D. DRILL STEM TEST

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

LB 5/23/08

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

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

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

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

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

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

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

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.

b. Activities of other parties including, but not limited to:

(1) Land clearing.
(2) Earth-disturbing and earth-moving work.
(3) Blasting.
(4) Vandalism and sabotage.

c. Acts of God.

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

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

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

of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of **25** feet.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of **24** inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

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

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.

The 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

(Insert Seed Mixture Here)

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.