ATS-08-531

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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	
7 If Unit or CA Agreement, Name and No	
8 Lease Name and Well No.	**B-52 Federal #1** — Peterson — 37497 — See SN for name change
9 API Well No.	**30-025-39334**
10 Field and Pool, or Exploratory	**Lusk; Bone Spring North**
11 Sec., T R M or Blk. and Survey or Area	**Section 5, T19S - R32E**
12 County or Parish	**Lea County**
13 State	**NM**

1a. Type of work ☑ DRILL ☐ REENTER

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

2 Name of Operator
Marbob Energy Corporation — 14049

3a Address **P.O. Box 227, Artesia, NM 88211-0228**

3b. Phone No. *(include area code)*
505-748-3303

4. Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface **330' FNL & ~~1980'~~ FWL** Unit C
At proposed prod zone **1650 fwl per SN. ok**

14 Distance in miles and direction from nearest town or post office*
About 14 miles from, Maljamar, 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) **3677' 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)*	Name *(Printed/Typed)*	Date
CARLSBAD FIELD OFFICE	**CARLSBAD FIELD OFFICE**	**DEC 23 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 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)

SEE ATTACHED FOR CONDITIONS OF APPROVAL

CAPITAN CONTROLLED WATER BASIN

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

Witness Surface & Intermediate Casing

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Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JAN 06 2009

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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.
30-025-39334

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 10/22/08

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by
/s/ Don Peterson

Title FIELD MANAGER

Date DEC 23 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)

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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
30-025-39334	41450	Lusk Bone Spring North

Property Code	Property Name	Well Number
37497	Patterson B-52 FEDERAL	1

OGRID No.	Operator Name	Elevation
14049	MARBOB ENERGY CORPORATION	3673'

Surface Location

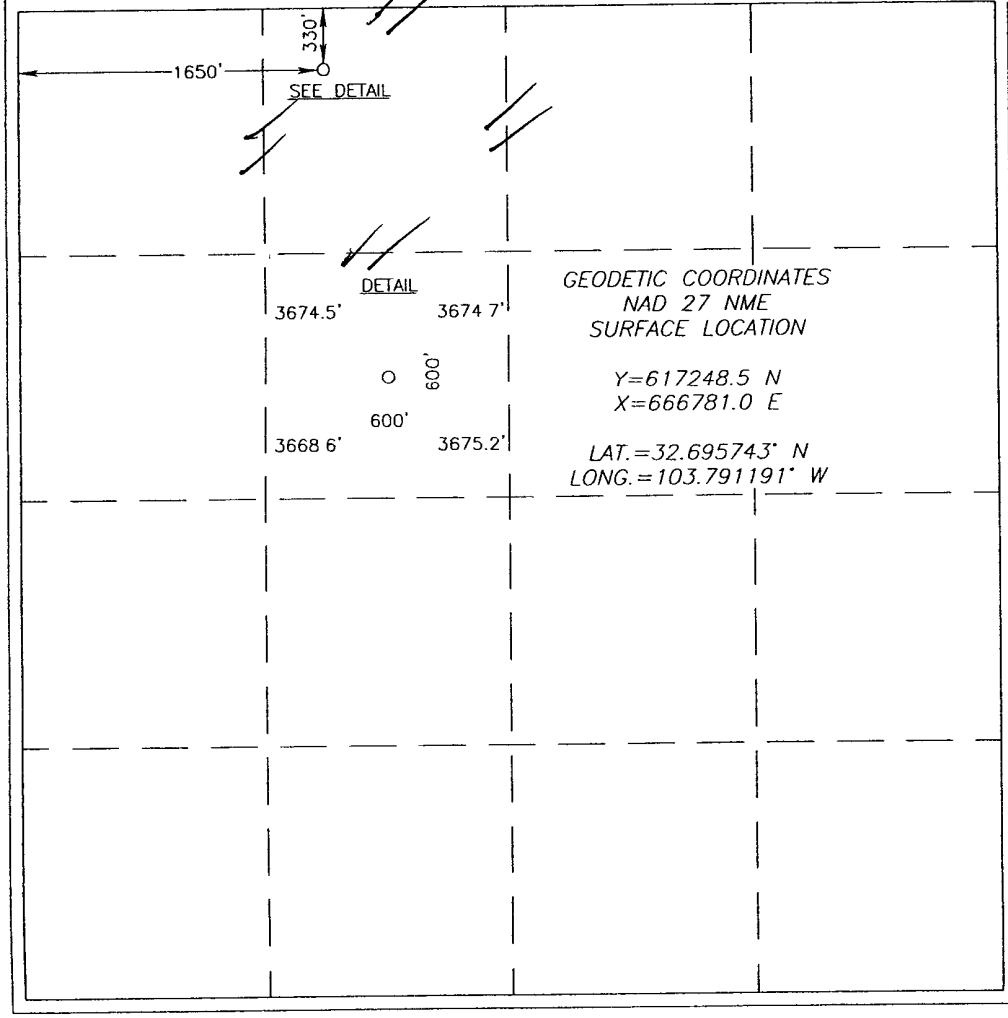
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	5	19-S	32-E		330	NORTH	1650	WEST	LEA

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

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 — Date: 10/22/08

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 5, 2008
Date Surveyed JC

Signature & Seal of Professional Surveyor
RONALD J. EIDSON
NEW MEXICO
3239
REGISTERED PROFESSIONAL SURVEYOR
10/22/08

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

I&E-HOBBS

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

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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. Name of Operator
Marbob Energy Corporation

9. API Well No.
30-025- 39334

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
1650'/W PUSH OR

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 Road 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 road change per negotations with the BLM:

See attached map. Spank you.

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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 12/12/2008

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by
/s/ Don Peterson

Title FIELD MANAGER

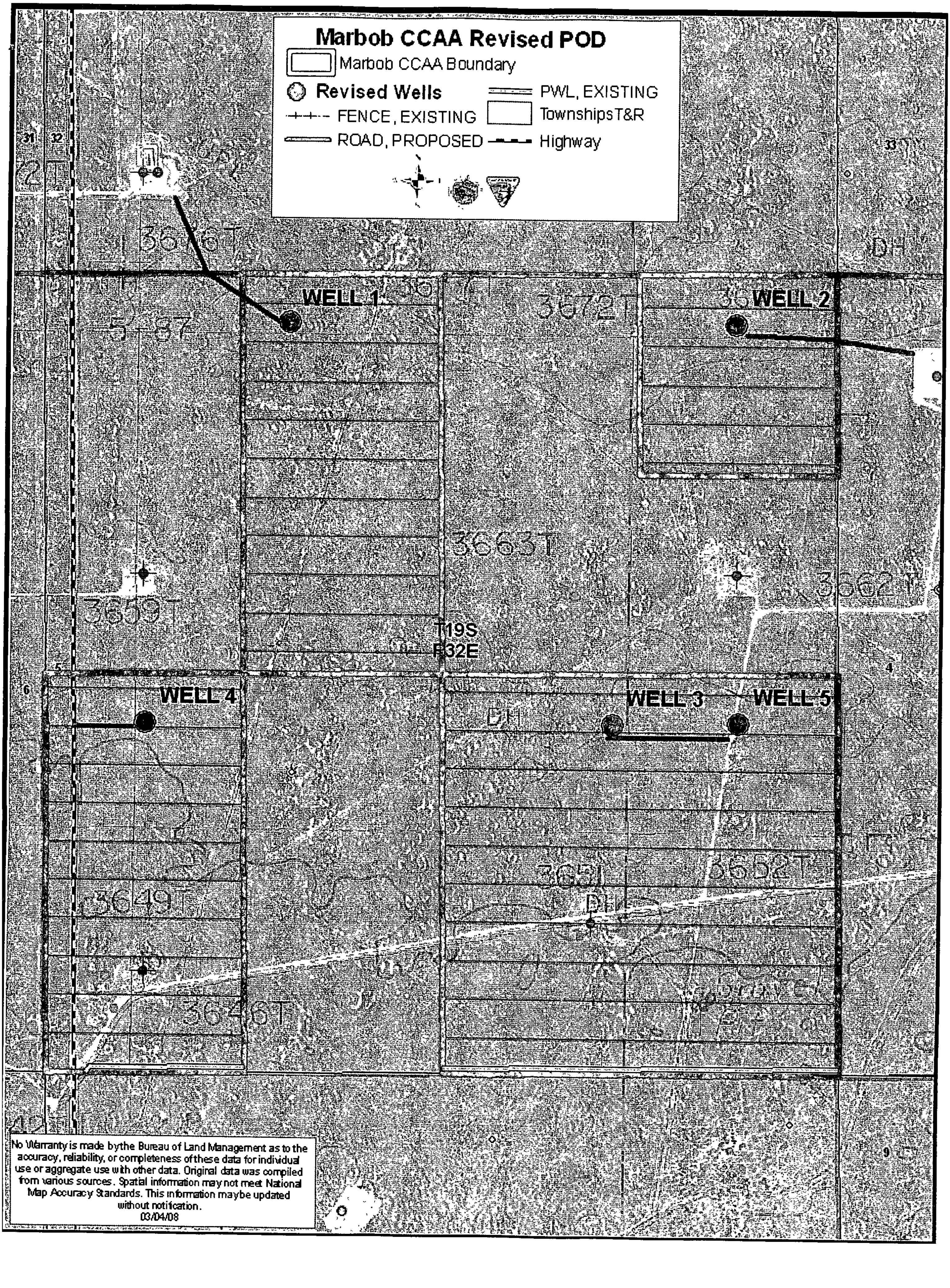
Date DEC 23 2008

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)



Marbob CCAA Revised POD
Marbob CCAA Boundary
Revised Wells
PWL, EXISTING
FENCE, EXISTING
TownshipsT&R
ROAD, PROPOSED
Highway
WELL 1
WELL 2
WELL 3
WELL 4
WELL 5
T19S
R32E
No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data was compiled from various sources. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.
03/04/08

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

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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.
30-025-39334

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'~~ 1650' 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

1650' FWL per SV

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

TYPE OF SUBMISSION	TYPE OF ACTION			
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	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other Name Change
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☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

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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

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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/ Don Peterson

Title FIELD MANAGER

Date DEC 23 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

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(Instructions on page 2)

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: April 4, 2008

Lease #: NMNM 118720
B-52 Federal #1

Legal Description: Sec. 5-T19S-R32E
Eddy County, New Mexico

Formation(s): Permian

Bond Coverage: Statewide

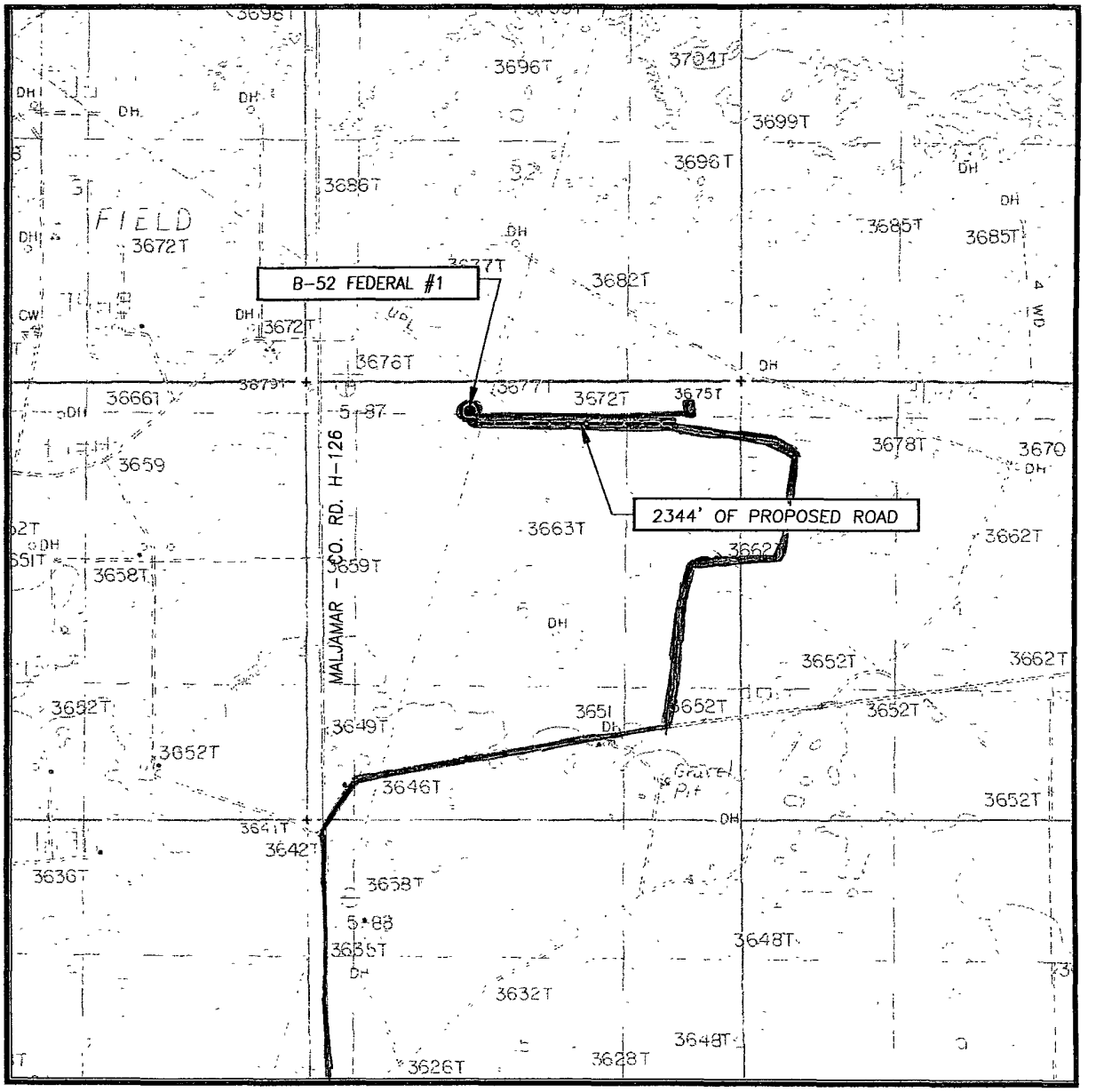
BLM Bond File #: NMB000412

Marbob Energy Corporation

Nancy Agnew

Nancy Agnew
Land Department

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 330' FNL & ~~1980'~~ 1650' FWL

ELEVATION 3677'

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

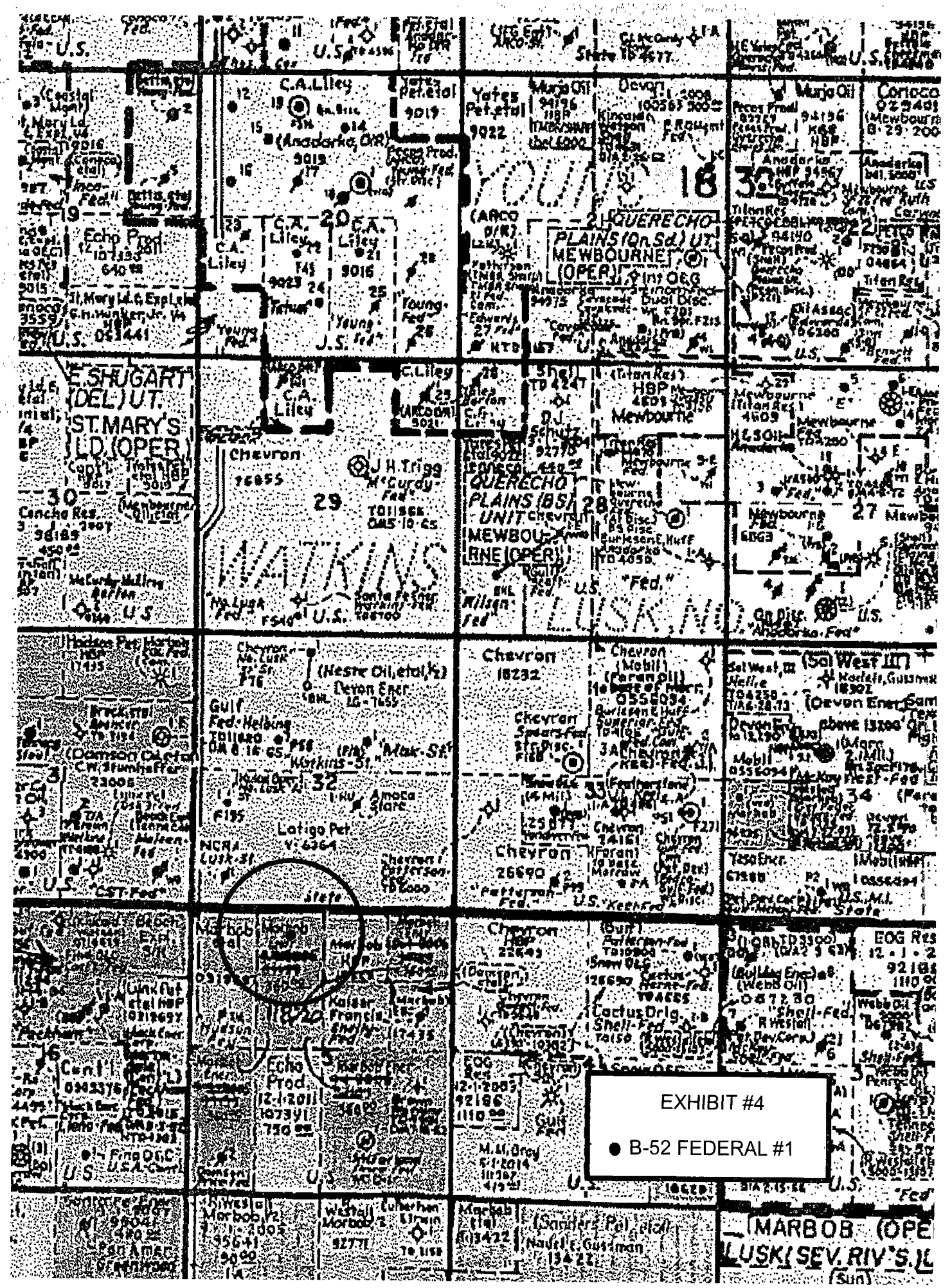


EXHIBIT #4
B-52 FEDERAL #1

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

B-52 Federal #1
330' FNL & ~~1980'~~ FWL 1650'/W per SN. cf
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	1120'	Queen	3715'
TOS	1250'	Delaware	4600'
BOS	2630'	Bone Spring Lime	6986'
Yates	2850'	1st Sand	8310'
7 Rivers	3300'	2nd Sand	9160'
		TD	9700'

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

Yates	2850'	Oil
Delaware	4600'	Oil
1st Sand	8310'	Oil
2nd Sand	9160'	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'

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 @ 9360' or the 1st Bone Springs Sand @ 8460'.

TOC = 3000' PER. S. BAKER 5/20/08 LG

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

1. **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' – 11135'	5 ½"	New	17#	LTC	N-80

Option "C"

7 7/8"	3300' – 10235'	5 ½"	New	17#	LTC	N-80

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

2. **Proposed Cement Program:**

Option "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

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

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

B-52 Federal #1
B-52 Federal #1
B-52 Federal #1
Original Hole

Plan: Plan #1

Pathfinder Survey Report

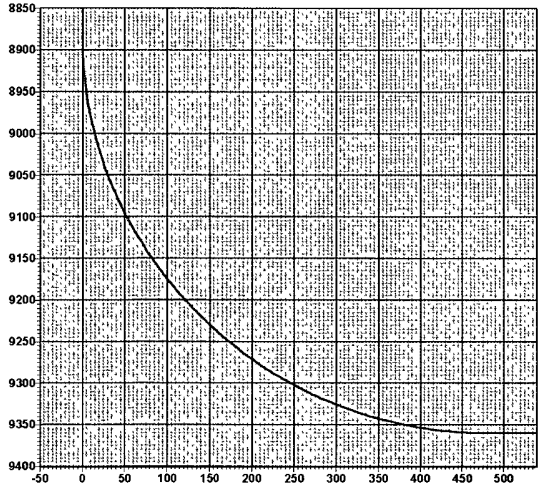
16 April, 2008

marbob
energy corporation
Artesia, N.M.

Azimuths to Grid North
True North: -0.29°
Magnetic North: 7.80°

Magnetic Field
Strength: 49215.4snT
Dip Angle: 60.68°
Date: 4/15/2008
Model: IGRF200510

PATHFINDER
ENERGY SERVICES



WELL DETAILS: B-52 Federal #1

Ground Elevation:: 3677.00
RKB Elevation: EST RKB @ 3677 00ft
Rig Name:

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0 00	0 00	617249 300	667110 900	32° 41' 44.665 N	103° 47' 24.426 W	

SECTION DETAILS

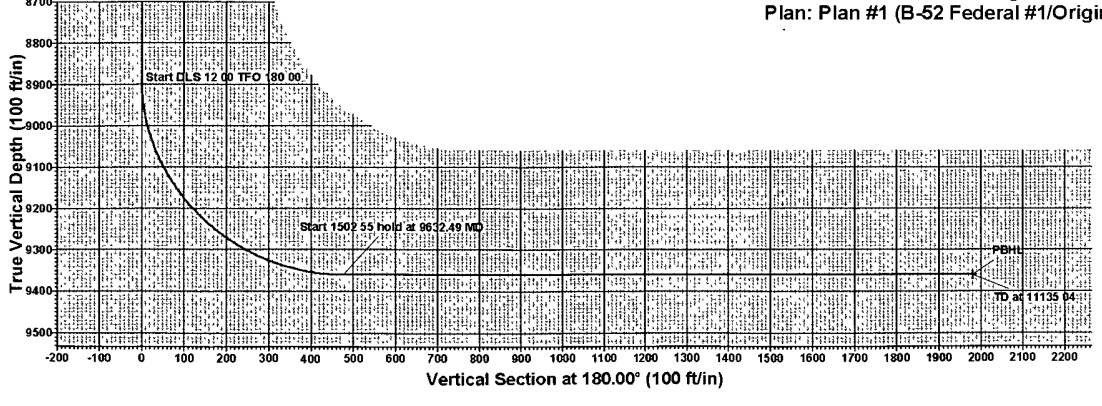
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0 00	0 00	0 00	0 00	0 00	0.00	0 00	0.00	
2	8882.50	0 00	0 00	8882.50	0.00	0.00	0 00	0 00	0 00	
3	9632.49	90 00	180.00	9359.96	-477.45	0.00	12 00	180 00	477.45	
4	11135.04	90.00	180.00	9360.00	-1980 00	0 00	0 00	0 00	1980 00	PBHL

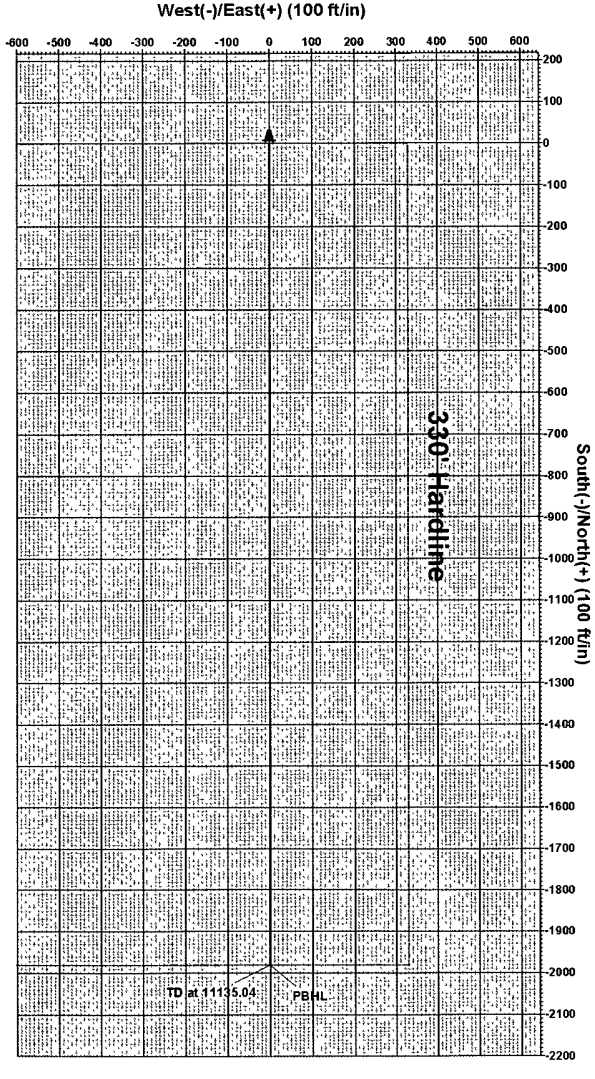
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	9360.00	-1980 00	0 00	615269.300	667110 900	Point

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





Plan Plan #1 (B-52 Federal #1/Original Hole)
Created By Mark Freeman Date 10 07, April 16 2008
Checked _____ Date _____

WHS

Pathfinder Survey Report

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #1
Project:	B-52 Federal #1	**TVD Reference:**	EST RKB @ 3677 00ft
Site:	B-52 Federal #1	**MD Reference:**	EST RKB @ 3677.00ft
Well:	B-52 Federal #1	**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 #1, Lea County, NM

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 #1

Site Position:		**Northing:**	617,249 300 ft	**Latitude:**	32° 41' 44 665 N
From:	Map	**Easting:**	667,110 900 ft	**Longitude:**	103° 47' 24 426 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	"	**Grid Convergence:**	0 29 °

Well B-52 Federal #1

Well Position	**+N/-S**	0 00 ft	**Northing:**	617,249 300 ft	**Latitude:**	32° 41' 44.665 N
	+E/-W	0 00 ft	**Easting:**	667,110.900 ft	**Longitude:**	103° 47' 24 426 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,677.00 ft

Wellbore Original Hole

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	4/15/2008	8 09	60.68	49,215

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	11,134 54	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 #1
Project:	B-52 Federal #1	**TVD Reference:**	EST RKB @ 3677 00ft
Site:	B-52 Federal #1	**MD Reference:**	EST RKB @ 3677 00ft
Well:	B-52 Federal #1	**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 #1
Project:	B-52 Federal #1	**TVD Reference:**	EST RKB @ 3677.00ft
Site:	B-52 Federal #1	**MD Reference:**	EST RKB @ 3677.00ft
Well:	B-52 Federal #1	**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
8,882.50	0 00	0 00	8,882.50	0.00	0.00	0 00	0.00
8,900.00	2.10	180.00	8,900.00	-0 32	0 00	0 32	12.00
8,925 00	5.10	180.00	8,924 94	-1 89	0.00	1.89	12 00
8,950.00	8.10	180.00	8,949 78	-4 76	0.00	4.76	12 00
8,975 00	11.10	180 00	8,974.42	-8 93	0 00	8.93	12 00
9,000.00	14.10	180.00	8,998.82	-14 39	0 00	14.39	12 00
9,025.00	17 10	180.00	9,022 89	-21.11	0.00	21.11	12 00
9,050 00	20 10	180 00	9,046 59	-29.08	0 00	29.08	12.00
9,075.00	23 10	180.00	9,069 83	-38 28	0.00	38 28	12 00
9,100 00	26 10	180.00	9,092.56	-48 69	0.00	48.69	12.00
9,125.00	29.10	180 00	9,114.71	-60 27	0.00	60.27	12 00

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #1
Project:	B-52 Federal #1	**TVD Reference:**	EST RKB @ 3677 00ft
Site:	B-52 Federal #1	**MD Reference:**	EST RKB @ 3677 00ft
Well:	B-52 Federal #1	**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)
9,150.00	32.10	180.00	9,136.22	-72 99	0 00	72.99	12 00
9,175 00	35.10	180.00	9,157.04	-86.83	0 00	86 83	12 00
9,200.00	38.10	180 00	9,177.11	-101 73	0.00	101 73	12 00
9,225 00	41 10	180 00	9,196.37	-117.66	0 00	117 66	12.00
9,250.00	44 10	180 00	9,214.77	-134 58	0 00	134.58	12.00
9,275 00	47 10	180 00	9,232.26	-152 44	0.00	152 44	12 00
9,300.00	50.10	180 00	9,248.79	-171.20	0 00	171.20	12 00
9,325.00	53 10	180 00	9,264.32	-190.79	0 00	190 79	12 00
9,350.00	56 10	180 00	9,278.80	-211.16	0 00	211.16	12.00
9,375 00	59 10	180.00	9,292.20	-232.27	0.00	232 27	12 00
9,400 00	62.10	180 00	9,304 47	-254 04	0.00	254 04	12 00
9,425.00	65 10	180.00	9,315.58	-276.44	0 00	276.44	12 00
9,450 00	68.10	180.00	9,325.51	-299.38	0.00	299.38	12.00
9,475 00	71 10	180.00	9,334 22	-322.81	0 00	322 81	12.00
9,500.00	74 10	180 00	9,341.70	-346.66	0.00	346.66	12 00
9,525.00	77.10	180.00	9,347 91	-370.87	0.00	370 87	12 00
9,550 00	80.10	180.00	9,352 86	-395.37	0 00	395 37	12 00
9,575 00	83.10	180.00	9,356 51	-420.10	0.00	420 10	12 00
9,600.00	86 10	180.00	9,358.86	-444 99	0.00	444.99	12 00
9,625.00	89 10	180.00	9,359.91	-469 97	0.00	469 97	12 00
9,632 49	90.00	180.00	9,359 96	-477 45	0 00	477 45	12.00
9,700 00	90.00	180.00	9,359 97	-544 96	0 00	544.96	0 00
9,800 00	90.00	180.00	9,359.97	-644 96	0 00	644.96	0 00
9,900 00	90.00	180 00	9,359 97	-744.96	0 00	744.96	0.00
10,000.00	90 00	180.00	9,359.97	-844 96	0.00	844 96	0 00
10,100 00	90.00	180 00	9,359.98	-944 96	0.00	944.96	0 00
10,200 00	90.00	180 00	9,359.98	-1,044.96	0 00	1,044.96	0 00
10,300 00	90.00	180 00	9,359.98	-1,144 96	0.00	1,144.96	0 00
10,400.00	90 00	180 00	9,359.98	-1,244 96	0 00	1,244.96	0 00
10,500 00	90 00	180 00	9,359.99	-1,344.96	0.00	1,344.96	0 00
10,600 00	90.00	180.00	9,359.99	-1,444 96	0 00	1,444.96	0.00
10,700 00	90 00	180 00	9,359 99	-1,544.96	0.00	1,544.96	0 00
10,800 00	90 00	180 00	9,359 99	-1,644.96	0 00	1,644 96	0.00
10,900.00	90 00	180 00	9,359.99	-1,744.96	0 00	1,744.96	0.00
11,000 00	90.00	180 00	9,360.00	-1,844 96	0 00	1,844.96	0 00
11,100 00	90.00	180.00	9,360.00	-1,944 96	0.00	1,944.96	0.00
11,135 04	90.00	180.00	9,360.00	-1,980 00	0 00	1,980.00	0 00

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #1
Project:	B-52 Federal #1	**TVD Reference:**	EST RKB @ 3677 00ft
Site:	B-52 Federal #1	**MD Reference:**	EST RKB @ 3677.00ft
Well:	B-52 Federal #1	**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	9,360.00	-1,980 00	0.00	615,269.300	667,110 900	32° 41' 25.073 N	103° 47' 24.545 W

Checked By: _____ Approved By: _____ Date: _____

Marbob

B-52 Federal #1
B-52 Federal #1
B-52 Federal #1
Original Hole

Plan: Plan #2

Pathfinder Survey Report

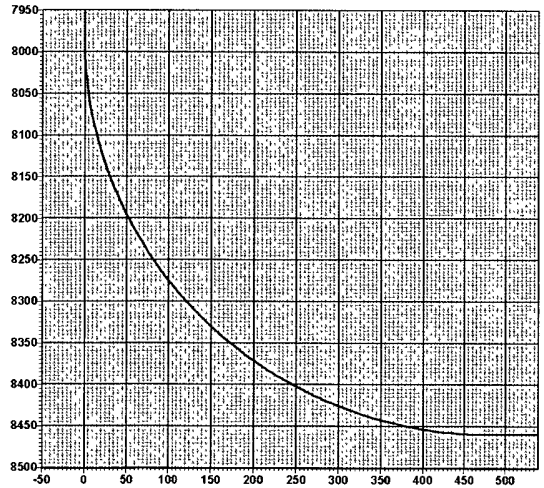
16 April, 2008

marbob
energy corporation
Artesia, N.M.

Azimuths to Grid North
True North: -0.29°
Magnetic North: 7.80°

Magnetic Field
Strength: 49215.4snT
Dip Angle: 60.68°
Date: 4/15/2008
Model: IGRF200510

PATHFINDER
ENERGY SERVICES



WELL DETAILS B-52 Federal #1

Ground Elevation 3677.00
RKB Elevation: EST RKB @ 3677.00ft
Rig Name:

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	617249.300	667110.900	32° 41' 44.665 N	103° 47' 24.426 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	7982.50	0.00	0.00	7982.50	0.00	0.00	0.00	0.00	0.00	
3	8732.49	90.00	180.00	8459.96	-477.45	0.00	12.00	180.00	477.45	
4	10235.04	90.00	180.00	8460.00	-1980.00	0.00	0.00	0.00	1980.00	PBHL2

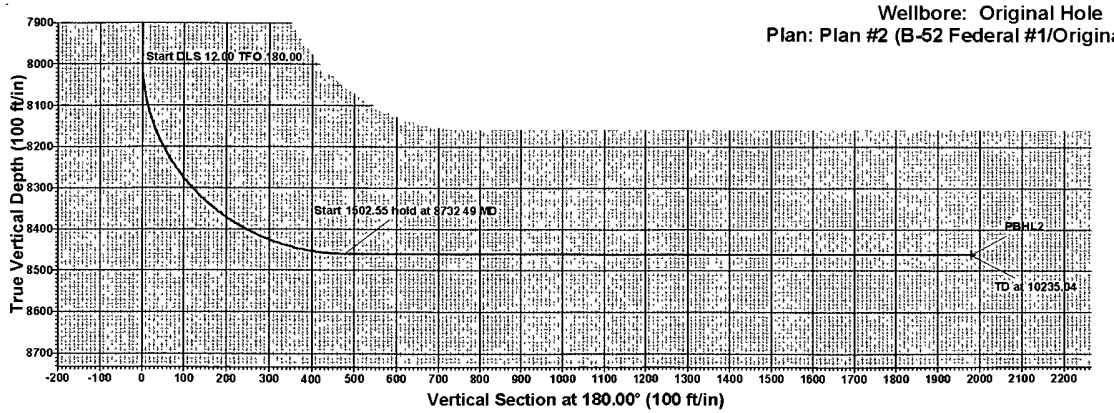
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

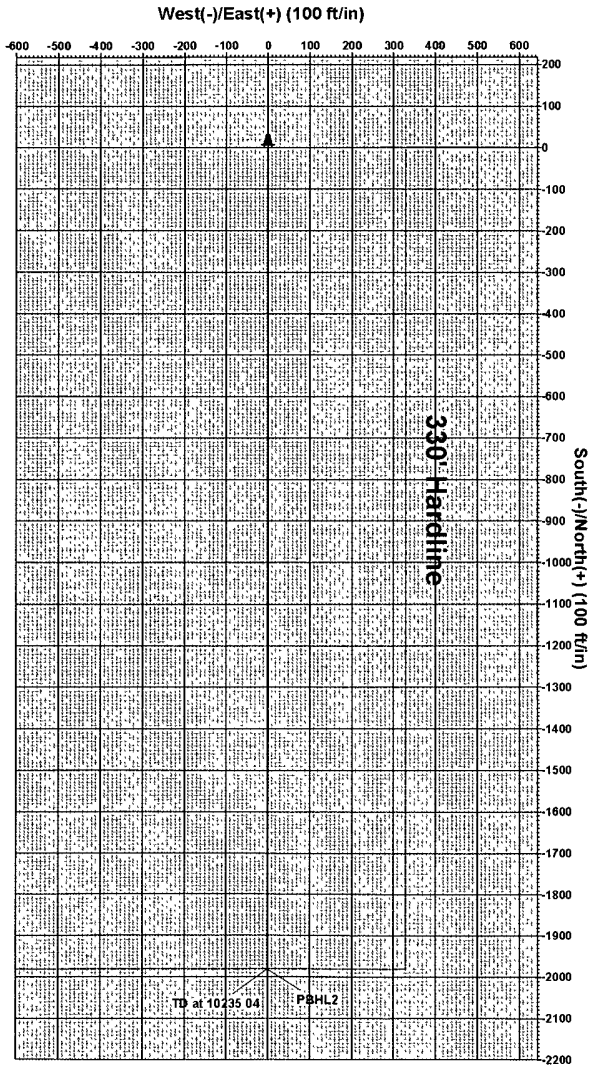
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL2	8460.00	-1980.00	0.00	615269.300	667110.900	Point

PROJECT DETAILS: B-52 Federal #1

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 #1
Site: B-52 Federal #1
Well: B-52 Federal #1
Wellbore: Original Hole
Plan: Plan #2 (B-52 Federal #1/Original Hole)





Plan Plan #2 (B-52 Federal #1/Original Hole)

Created By Mark Freeman Date 10 11, April 16 2008

Checked _____ Date _____

WHS

Pathfinder Survey Report

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #1
Project:	B-52 Federal #1	**TVD Reference:**	EST RKB @ 3677 00ft
Site:	B-52 Federal #1	**MD Reference:**	EST RKB @ 3677 00ft
Well:	B-52 Federal #1	**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 #1, Lea County, NM

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 #1

Site Position:		**Northing:**	617,249 300 ft	**Latitude:**	32° 41' 44 665 N
From:	Map	**Easting:**	667,110 900 ft	**Longitude:**	103° 47' 24.426 W
Position Uncertainty:	0 00 ft	**Slot Radius:**	"	**Grid Convergence:**	0 29 °

Well B-52 Federal #1

Well Position	**+N/-S**	0.00 ft	**Northing:**	617,249.300 ft	**Latitude:**	32° 41' 44 665 N
	+E/-W	0 00 ft	**Easting:**	667,110.900 ft	**Longitude:**	103° 47' 24 426 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,677.00 ft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	4/15/2008	8.09	60 68	49,215

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	10,235.04	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 #1
Project:	B-52 Federal #1	**TVD Reference:**	EST RKB @ 3677.00ft
Site:	B-52 Federal #1	**MD Reference:**	EST RKB @ 3677 00ft
Well:	B-52 Federal #1	**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

WHS

Pathfinder Survey Report

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #1
Project:	B-52 Federal #1	**TVD Reference:**	EST RKB @ 3677.00ft
Site:	B-52 Federal #1	**MD Reference:**	EST RKB @ 3677 00ft
Well:	B-52 Federal #1	**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
7,982.50	0 00	0.00	7,982 50	0 00	0.00	0 00	0.00
8,000.00	2 10	180.00	8,000.00	-0 32	0.00	0 32	12.00
8,025.00	5.10	180.00	8,024 94	-1.89	0.00	1.89	12.00
8,050.00	8.10	180 00	8,049.78	-4.76	0 00	4 76	12.00
8,075 00	11 10	180.00	8,074.42	-8 93	0.00	8.93	12.00
8,100.00	14.10	180.00	8,098 82	-14 39	0.00	14.39	12 00
8,125 00	17 10	180.00	8,122.89	-21.11	0 00	21 11	12.00
8,150.00	20 10	180 00	8,146.59	-29 08	0 00	29.08	12 00
8,175.00	23.10	180 00	8,169.83	-38.28	0 00	38.28	12.00
8,200.00	26.10	180.00	8,192 56	-48.69	0.00	48 69	12.00
8,225 00	29 10	180 00	8,214.71	-60 27	0 00	60 27	12.00
8,250 00	32.10	180.00	8,236 22	-72 99	0 00	72 99	12.00
8,275.00	35 10	180 00	8,257.04	-86.83	0.00	86.83	12.00
8,300 00	38.10	180.00	8,277.11	-101 73	0 00	101.73	12 00
8,325.00	41 10	180.00	8,296.37	-117.66	0 00	117 66	12.00
8,350 00	44.10	180 00	8,314.77	-134.58	0 00	134 58	12 00
8,375 00	47.10	180.00	8,332 26	-152.44	0.00	152.44	12.00
8,400.00	50.10	180.00	8,348.79	-171.20	0.00	171.20	12.00
8,425 00	53.10	180 00	8,364 32	-190 79	0.00	190 79	12 00
8,450.00	56.10	180.00	8,378 80	-211 16	0 00	211.16	12.00

WHS

Pathfinder Survey Report

Company:	Marbob	**Local Co-ordinate Reference:**	Well B-52 Federal #1
Project:	B-52 Federal #1	**TVD Reference:**	EST RKB @ 3677.00ft
Site:	B-52 Federal #1	**MD Reference:**	EST RKB @ 3677 00ft
Well:	B-52 Federal #1	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**Database:**	EDM 2003.16 Single User Db

Planned Survey

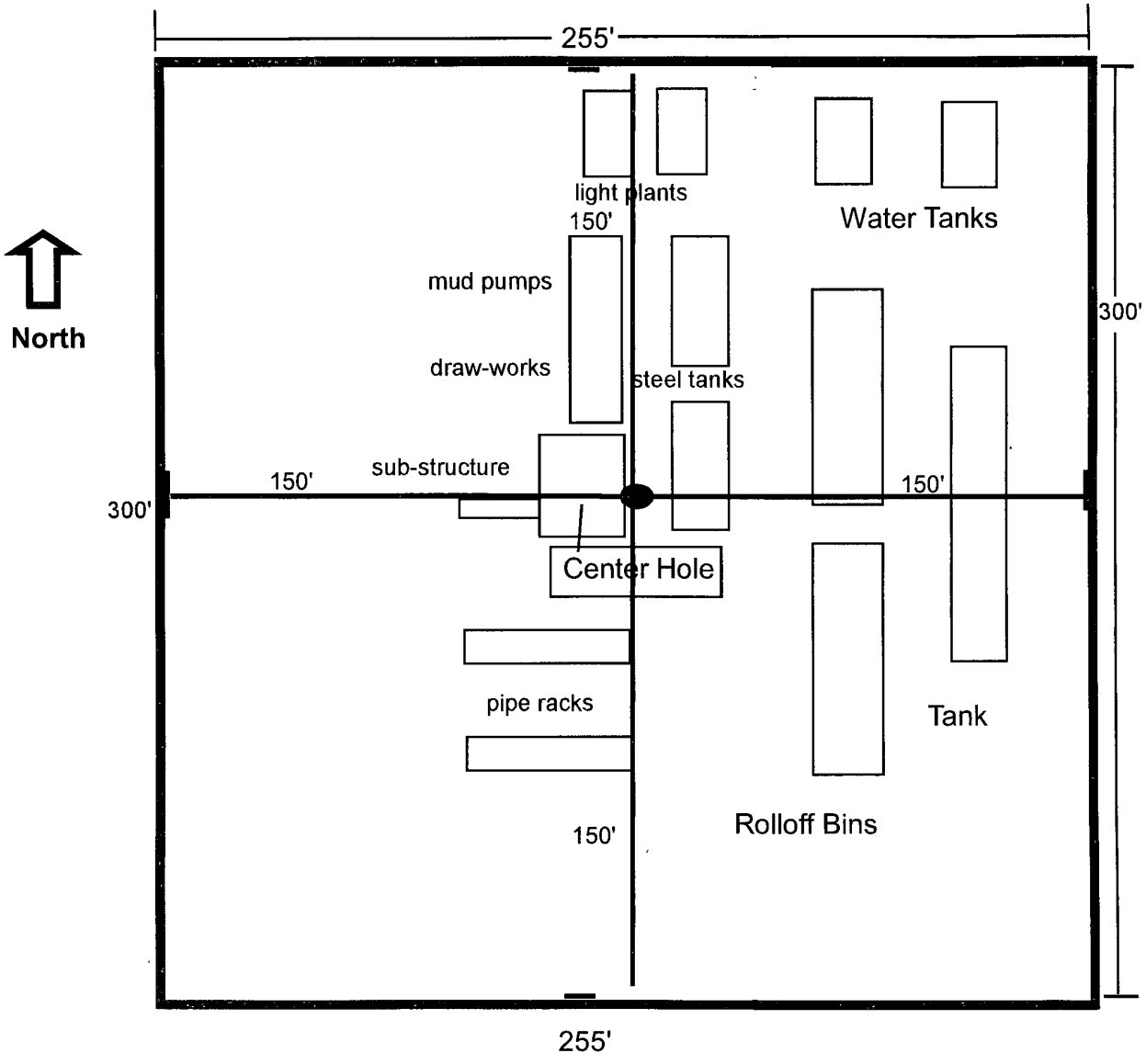
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
8,475 00	59.10	180.00	8,392.20	-232 27	0.00	232.27	12.00
8,500 00	62.10	180 00	8,404.47	-254 04	0 00	254 04	12 00
8,525.00	65.10	180 00	8,415 58	-276 44	0.00	276 44	12 00
8,550 00	68.10	180 00	8,425.51	-299.38	0.00	299 38	12.00
8,575 00	71.10	180.00	8,434.22	-322 81	0.00	322 81	12 00
8,600.00	74 10	180.00	8,441 70	-346 66	0 00	346.66	12.00
8,625.00	77.10	180 00	8,447 91	-370.87	0.00	370 87	12.00
8,650 00	80.10	180 00	8,452.86	-395 37	0.00	395 37	12.00
8,675.00	83 10	180.00	8,456.51	-420 10	0.00	420.10	12.00
8,700.00	86.10	180.00	8,458.86	-444 99	0.00	444 99	12.00
8,725 00	89.10	180 00	8,459 91	-469.97	0 00	469.97	12 00
8,732.49	90.00	180 00	8,459.96	-477 45	0.00	477.45	12 00
8,800 00	90.00	180.00	8,459.97	-544.96	0 00	544 96	0.00
8,900 00	90 00	180.00	8,459.97	-644 96	0.00	644 96	0.00
9,000 00	90 00	180.00	8,459 97	-744.96	0 00	744 96	0.00
9,100.00	90 00	180.00	8,459 97	-844 96	0.00	844 96	0 00
9,200.00	90 00	180.00	8,459.98	-944 96	0.00	944 96	0.00
9,300 00	90.00	180 00	8,459.98	-1,044 96	0 00	1,044.96	0 00
9,400.00	90.00	180 00	8,459.98	-1,144.96	0.00	1,144.96	0 00
9,500 00	90 00	180.00	8,459 98	-1,244 96	0.00	1,244.96	0.00
9,600.00	90.00	180.00	8,459.99	-1,344 96	0 00	1,344.96	0 00
9,700 00	90.00	180.00	8,459 99	-1,444.96	0 00	1,444.96	0 00
9,800.00	90 00	180.00	8,459.99	-1,544.96	0.00	1,544 96	0.00
9,900 00	90.00	180 00	8,459.99	-1,644 96	0 00	1,644.96	0 00
10,000 00	90.00	180 00	8,459.99	-1,744.96	0.00	1,744.96	0.00
10,100 00	90.00	180.00	8,460 00	-1,844.96	0 00	1,844.96	0.00
10,200 00	90.00	180.00	8,460.00	-1,944 96	0.00	1,944 96	0 00
10,235 04	90.00	180.00	8,460.00	-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	8,460.00	-1,980 00	0 00	615,269 300	667,110 900	32° 41' 25.073 N	103° 47' 24 545 W

Checked By: _____ Approved By: _____ Date: _____

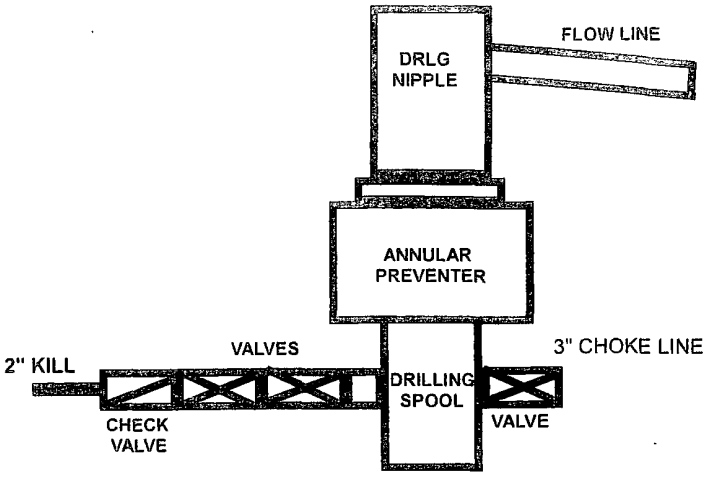
Well Site Lay-Out Plat

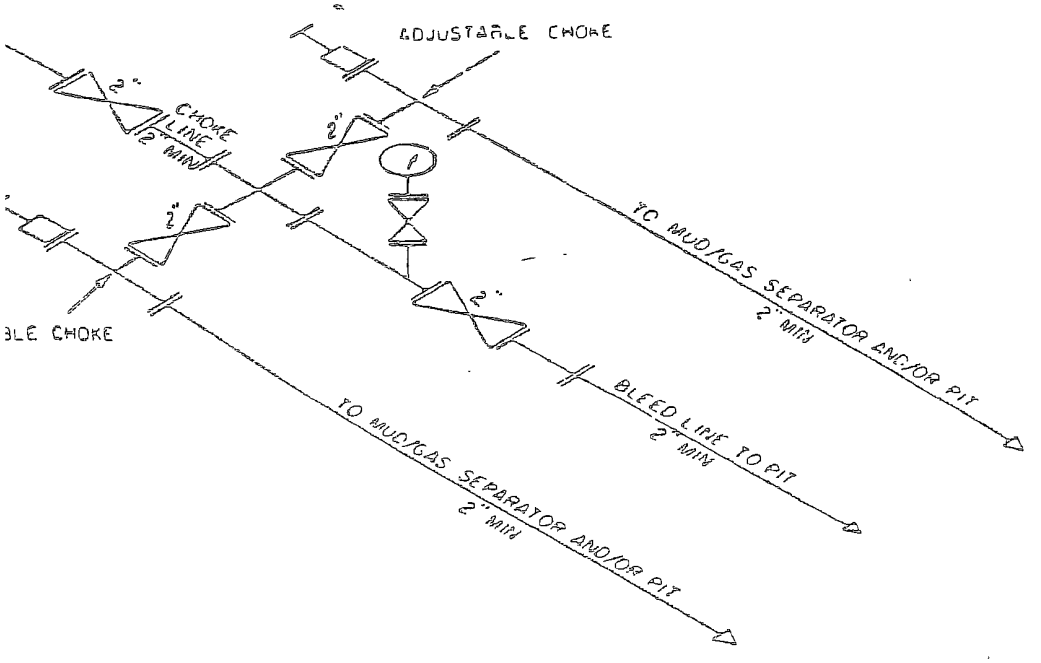


B-52 Federal #1 1650' W
330' FNL & ~~1980'~~ FWL
Section 5, T19S - R32E
Lea County, New Mexico

EXHIBIT THREE

2M SYSTEM

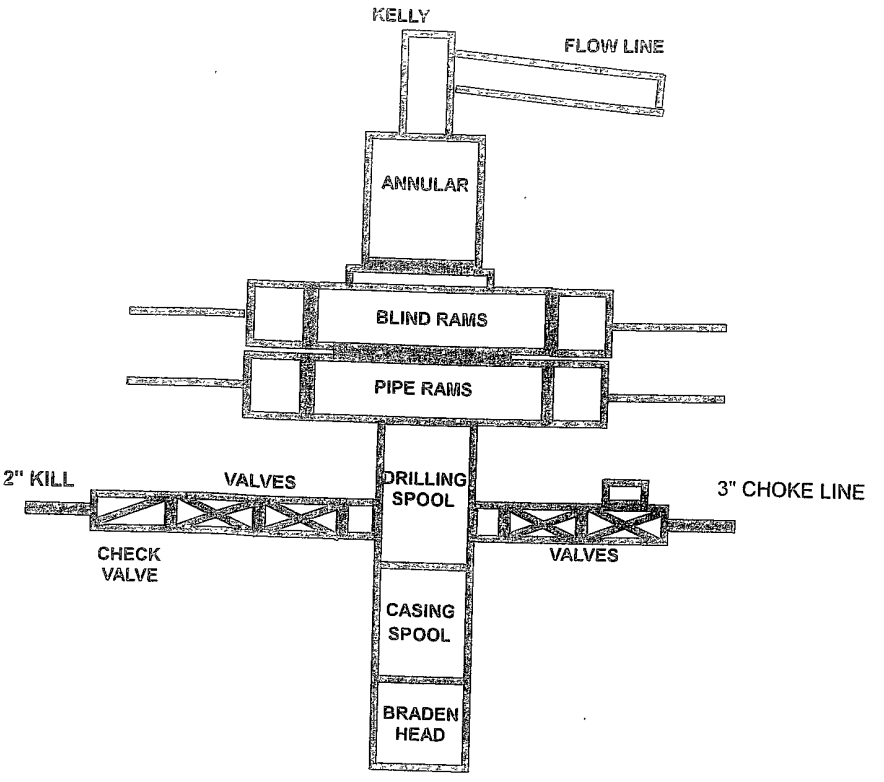


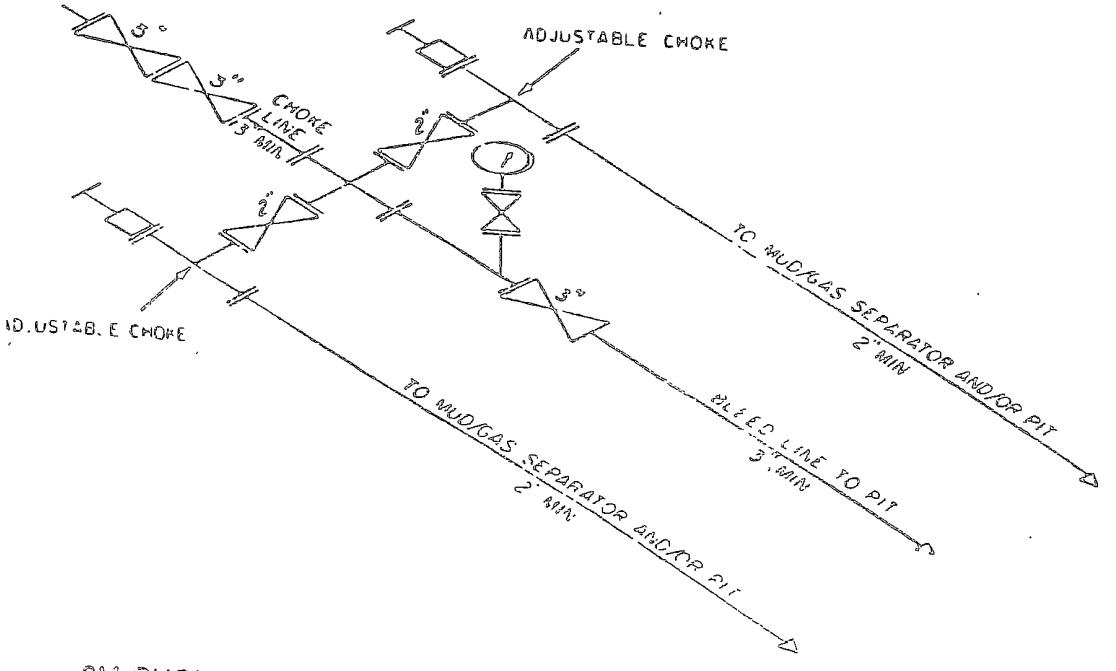


2M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

Exhibit One

3M SYSTEM





3M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Marbob Energy
LEASE NO.:	NMNM118720
WELL NAME & NO.:	B 52 Federal No 1
SURFACE HOLE FOOTAGE:	330' FNL & 1650' FWL
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

V-DOOR WEST

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.

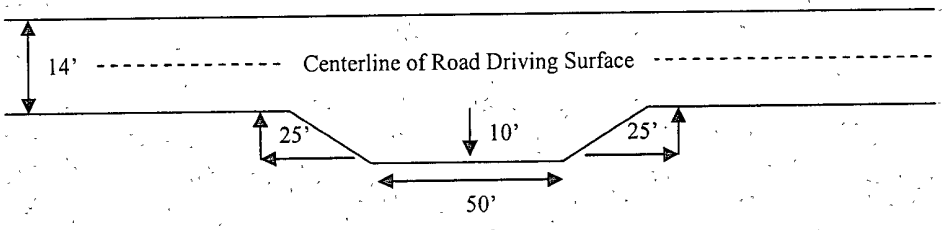
Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

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:

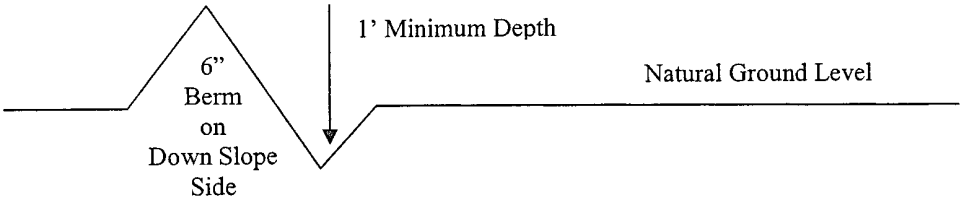
Standard Turnout – Plan View



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.

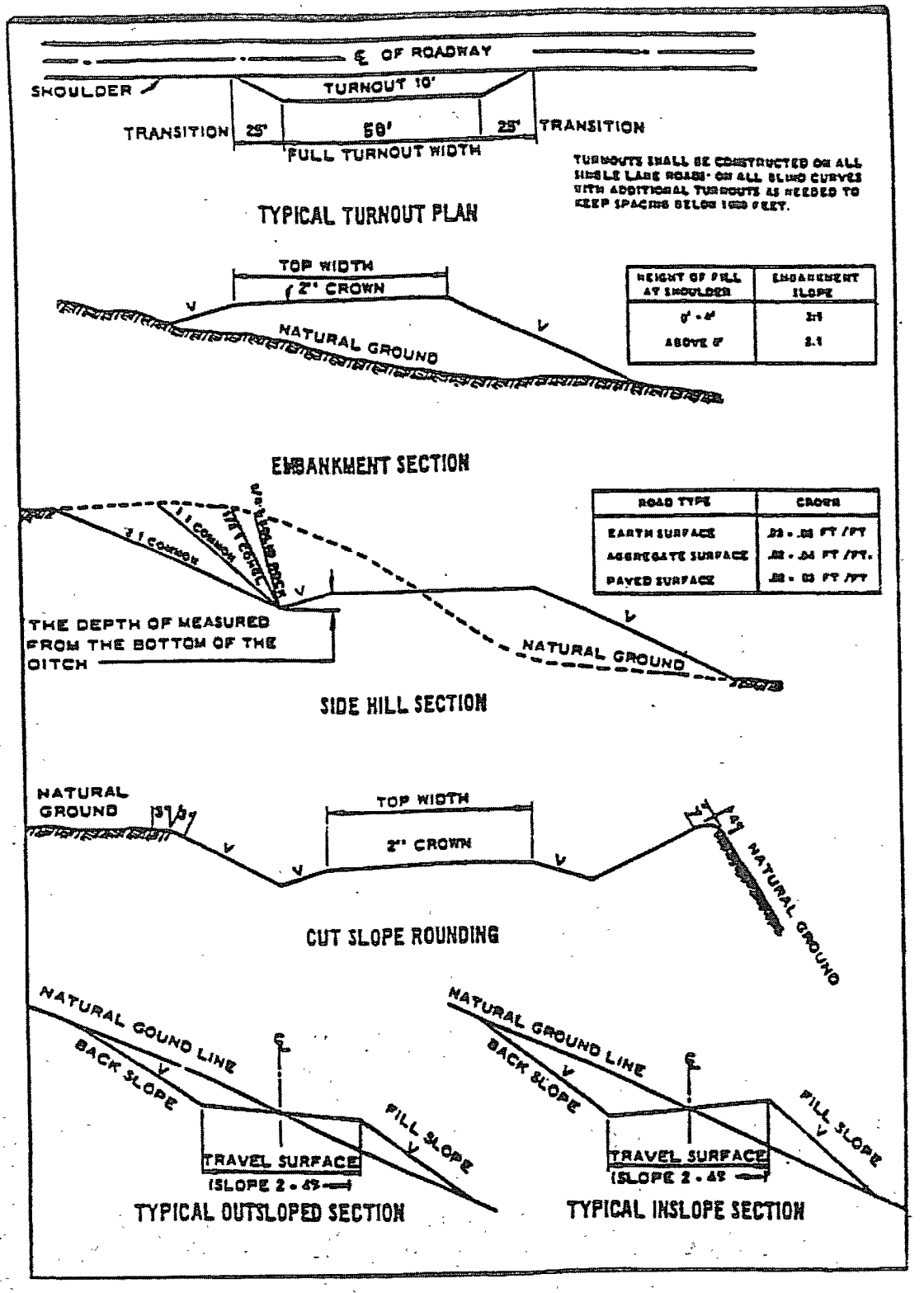
A gate shall be constructed and fastened securely to H-braces.

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 @ 9360' or the 1st Bone Spring Sand @ 8460'. 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 behalf, 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.

COPY

United States Department of the Interior
Bureau of Land Management
Carlsbad Field Office

Refer To: 3160-3

April 07, 2008

To: AFM, Lands and Minerals, CFO

From: Geologist, CFO

Subject: Geologic Review of Application for Permit to Drill

Operator: Marbob Energy Corporation

Well Name and Number: B52 Federal No.1

Location: 330' FNL & 1980' FWL (SHL)
330'FNL & 1980' FWL (BHL)

Section: 05, T. 19 S., R. 32 E., NMPM

County: Lea State: NM

Lease No.: NM-118720 Date APD Rec'd: 04/07/08

1. Surface Elevation **X** Surface Geology **X**

2. Geologic Marker Tops (from reports on surrounding wells):

Geologic Marker	Depth
Anhydrite	940'
Yates Ss.	2900'
Queen	3700'
Delaware Ss.	5340'
Bone Springs	6935'
1ST Bone Springs Ss.	8265'
2ND Bone Springs Ss.	9060'
3RD Bone Springs Ss.	9790'
Wolfcamp	10,280'
Strawn	11,125'
Reef	11,259'
Morrow	11,780'

Marker tops taken from the Llano A Federal No. 1 well located in the SW¼NW¼, sec. 8, T. 19 S., R. 32 E., NMPM

Geologic Marker	Depth
Rustler	933'
Salado	1014'
Tansill	2634'

Marker tops taken form the USA-Trigg B no. 1 well located in the SW¼SE¼, sec. 8, T. 19 S., R. 32 E., NMPM

Geologic Marker	Depth
Top of Salt	1025'
Base of Salt	2450'
Yates Ss.	2810'
Delaware	5170'
Bone Springs	6955'
1ST Bone Springs Ss.	8256'
2ND Bone Springs Ss.	9007'
3RD Bone Springs Ss.	9790'
Wolfcamp	10,210'
Strawn	11,157'
Atoka	11,484'
Morrow	11,835'

Marker tops taken from the Hawkeye "07" Federal No. 2 well located in the NW¼SE¼, sec. 7, T. 19 S., R. 32 E., NMPM

3. Fresh Water Information: Fresh water for stock use is obtained from the Santa Rosa Formation. A stock well in sec. 8 obtains water from 800 ft.

   Additionally, research of the State Engineers water quality lists and the O&G historical well files in Lea County indicates that there are many citations of usable water in the Santa Rosa and some few in the Dewey Lake Formations. Furthermore, it appears that whenever useable water is unavailable from the Quaternary Alluviums and the Ogallala Formation, water wells are then drilled to the first water encountered in the Chinle, Santa Rosa and/or the Dewey Lake Formations.

   It was also noted that some of the water encountered and listed as Santa Rosa is actually obtained from the Dewey Lake Formation. This apparent ambiguity is due to the similar lithologies of the Dewey Lake and Santa Rosa Formations which in a lot of areas are indistinguishable from each other.

Regardless of the ambiguity and in keeping with the statement made by Nicholson and Clebsch (1961), "The top of the Rustler Formation should be regarded as the effective boundary below which no waters of presently useful quality can be found." The exceptions are the extreme west edge and the southern most portion of the county where useable water occurs in the top of the Rustler Formation. An additional point to be made here is the fact that all the red beds above the Rustler Anhydrite are basically incompetent for cementing the casing shoe in place and are more than likely washing out around the shoe due to turbulence. Therefore, surface casing should be set in the top of the Rustler Formation. This protective measure will adequately protect the potential for all useable waters in the redbeds.

Deepest Expected Fresh Water: above 940 based on the tops for the Llano A Federal No. 1 cited above.

Does Surface Casing cover all anticipated usable fresh water zones? Yes

If no, set surface casing to feet

Controlled Water Basin: Yes

Capitan **X** Carlsbad Roswell Lea No basin

Remarks: Witness setting surface casing at 1150 feet within the Rustler Formation. Care must be taken that surface casing is not set too deep within the salt. Witness setting intermediate casing at 3,300 feet within the top of the Artesia Group preferably within the Tansill Formation as this measure will isolate any hydrocarbons in the Yates Formation from entering the salt above.

4. Geologic Hazards? Yes

H_2S **X** Karst Abnormal Pressures Other **X**

Remarks: H_2S has been reported twice in a Big Circle lease well completed in the South Tonto Yates, located in the SE¼SE¼ of Sec. 24, T. 19 S., R. 32 E., NMPM., Lea County; measuring 3,000 ppm. in the Gas Streams and 3,000 ppm. in STVs. H_2S has been reported in a Mack Energy Corporation, Miller Federal lease well in the Lusk Yates, located in the SW¼NW¼ of Sec. 19, T. 19 S., R. 32 E., NMPM, Lea County; measuring 2,000 ppm. in the Gas Stream and 200 ppm. in STVs. H_2S has also been reported twice in a Shackelford Oil Company, Amoco Federal lease well in the W. Lusk Delaware, located in the NW¼NW¼ of Sec. 21, T. 19 S., R. 32 E., NMPM; measuring 200 ppm. in the Gas Streams and 200 ppm. in STVs. Two other wells in the northern half of Section 5, T. 19S., R. 32E. have also reported H_2S. Possible lost circulation in the Artesia Group. Possible lost circulation in the Capitan Reef. Possible water flows in the Artesia and

brine flows in Salado Groups. There is a low potential for the occurrence of Karst type features in the area. Maximum bottom hole pressure is expected to be approximately 4,550psi with pressures at the surface possibly reaching 2,450psi.

5. Other Mineral Deposits: Possible Halite and other associated salts in the Rustler Formation and the Salado and Castile Groups. Possible potash in the Salado Group.

6. Potash:

Secretary's Oil-Potash Area	R-111-P Area	Not Applicable **X**

7. References:

New Mexico State Engineer's Water Well Listings;

Lea County H_2S List;

Nicholson, A., Jr., and Clebsch, A., Jr., 1961, Geology and Ground-Water Conditions of Southern Lea County, New Mexico; Ground-Water Report No. 6, New Mexico Bureau of Mines and Mineral Resources, Campus Station, Socorro, New Mexico.

Hendrikson, G. E., and Jones, R. S., 1952, Geology and Ground-Water Resources of Eddy County, New Mexico; Ground-Water Report No. 3, New Mexico Bureau of Mines and Minerals Resources, Campus Station, Socorro, New Mexico.

8. No active mining claims are located in this vicinity.

Geologist Signature: Jerry Bo Tant Date 04/07/08