C/K 8043

APTS-08-219

OCD-ARTESIA

Form 3160-3
(September 2001)

FORM APPROVED
OMB No 1004-0136
Expires January 31, 2004

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

251

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a Type of Work ☐ DRILL ☑ REENTER	5. Lease Serial No. NMNM104646
	6 If Indian, Allottee or Tribe Name
	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 Michalada Federal #5
2 Name of Operator Marbob Energy Corporation	9 API Well No 30-015-27910
3a Address P.O. Box 227, Artesia, NM 88211-0227	3b Phone No *(include area code)* 505-748-3303
	10 Field and Pool, or Exploratory Azotea Mesa; Bone Spring
4 Location of Well *(Report location clearly and in accordance with any State requirements *)* At surface 460' FNL & 989' FEL At proposed prod zone	11 Sec , T., R , M , or Blk and Survey or Area Section 4, T22S - R25E
14 Distance in miles and direction from nearest town or post office* About 7 miles from Carlsbad, NM	12 County or Parish Eddy County, NM / 13 State NM

JAN 18 2008
OCD-ARTESIA

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) 460'	16 No of Acres in lease 521 64	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 4350	20. BLM/BIA Bond No on file NMB000412
21 Elevations (Show whether DF, KDB, RT, GL, etc) 3603' GL	22 Approximate date work will start* January 10, 2007	23 Estimated duration 15 Days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall 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 shall 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 authorized officer

25 Signature Nancy T. Agnew	Name *(Printed/Typed)* Nancy T. Agnew	Date 12/10/07
Title Land Department		
Approved by *(Signature)* /s/ James Stovall	Name *(Printed/Typed)* /s/ James Stovall	Date JAN 11 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 reverse)*

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

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

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

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

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

State of New Mexico
Energy, Minerals and Natural Resources Department

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

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
	3740	Azotea Mesa; Bone Spring

Property Code	Property Name	Well Number
35162	MICHALADA FEDERAL	5

OGRID No.	Operator Name	Elevation
14049	MARBOB ENERGY CORPORATION	3603'

Surface Location

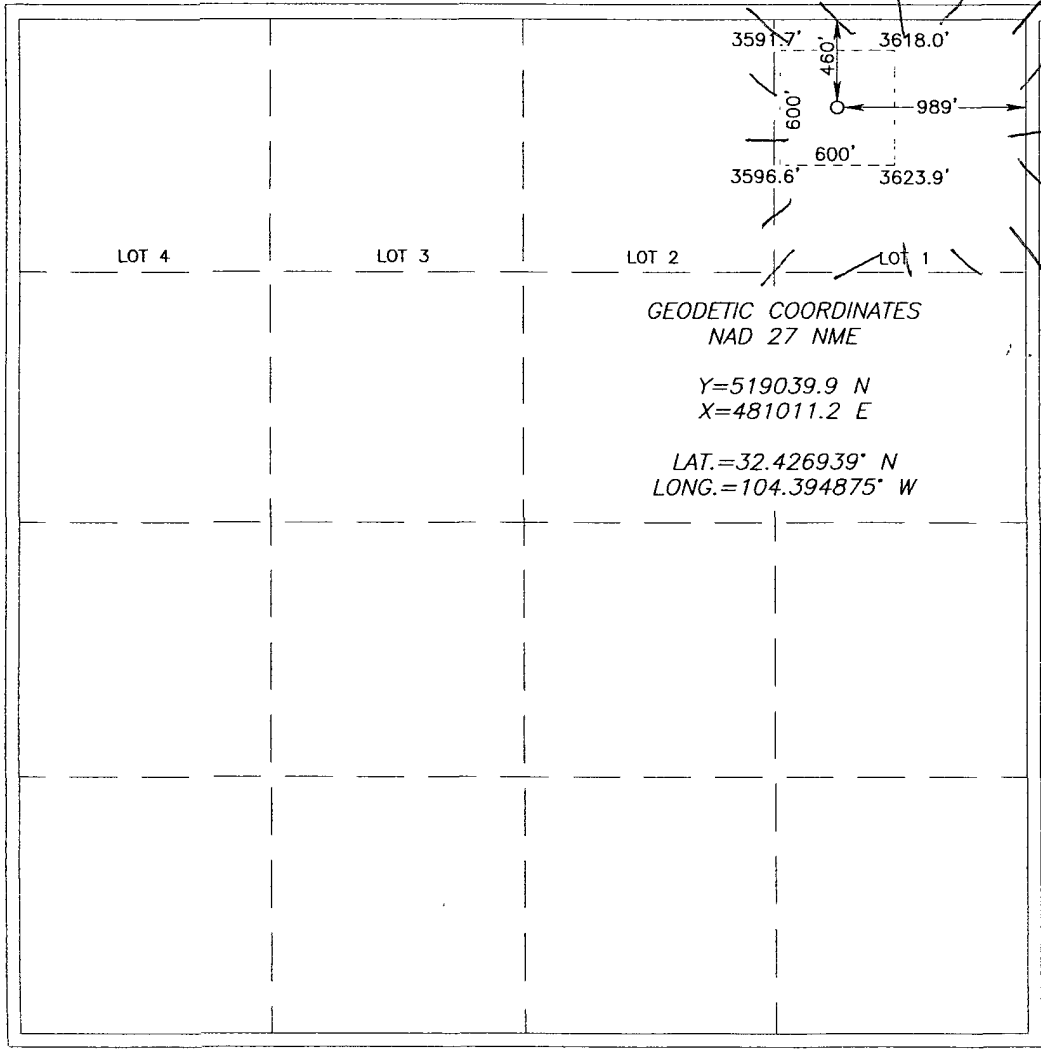
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	4	22-S	25-E		460	NORTH	989	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

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.

Nancy Agnew 11/26/07
Signature Date

Nancy Agnew
Printed Name

SURVEYOR CERTIFICATION

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

OCTOBER 15, 2007
Date Surveyed DSS

Signature & Seal of Professional Surveyor

NEW MEXICO 3239 REGISTERED PROFESSIONAL SURVEYOR
Ronald J. Eidson 10/23/07
07.11.1440

Certificate No. GARY EIDSON 12641
RONALD J. EIDSON 3239

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: December 10, 2007

Lease #: NMNM104646
Michalada Federal #5

Legal Description: 460' FNL & 989' FEL, Sec. 4-T22S-R25E
Eddy County, New Mexico

Formation(s): Permian

Bond Coverage: Statewide

BLM Bond File #: NMB000412

Marbob Energy Corporation

Nancy T. Agnew

Nancy T. Agnew
Land Department

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

Re-Entry
Michalada Federal #5
(Previously "Champagne 4 Federal #1")
460' FNL & 989' FEL
Section 4, T22S, R25E
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Marbob Energy Corporation submits the following ten items of pertinent information in accordance with BLM requirements. Our general plan is to rig up a well service unit and reverse unit, drill out cement plugs, squeeze cement original perfs 3031'-3121' and 1952'-2109', drill 120' of new hole from 4230' to 4350' and complete in the upper Bone Spring Sand in the open hole from 4230' to 4350'. All the casings set when the well was originally drilled are in place and cemented to surface, including the 5 ½" long string set at 4230'.

1. **Geological surface formation:** Permian

2. **The estimated tops of geologic markers are as follows:**

Capitan	300'
Delaware	1945'
Bone Spring	4150'
TD	4350'

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

Capitan	300'	Water
Delaware	1945'	Oil
Bone Spring	4150'	Oil

No other formations are expected to give up oil, gas, or fresh water in measurable quantities. The surface fresh water sands are protected by 11 3/4" casing at 259' with cement circulated to surface. Capitan Reef is protected by 8 5/8" casing at 2017' with cement circulated to surface. The Delaware intervals are isolated by 5 ½" casing set at 4230' and cemented to surface. The Bone Spring 4230'-4350' will be drilled with a 4 ¾" bit and completed as an open hole completion.

4. **Existing Casing Program:**

Hole Size	Interval	OD Casing	New or Used	Wt	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
14 3/4"	0'–259'	11 3/4"	New	42#	STC	H-40	N/A	N/A	N/A
11"	0'-2017'	8 5/8"	New	24#	STC	J-55	N/A	N/A	N/A
7 7/8"	0'-4230'	5 ½"	New	15.5#	LTC	J-55	N/A	N/A	N/A
4 ¾"	4230'-4350'	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

5. Existing Cement Program:

a. 11 3/4" Surface	Cemented to surface with 200 sk class "C" (Circulateed 65 sx)
b. 8 5/8" Int	Cemented 150 sk thixotropic followed by 580 sk "C" light, Tailed in with 150 sk "C" (Circulated 180 sx)
c. 5 ½" Prod	Cemented with 565 sk class "C" (Original TOC 200', raised to surface when well was plugged)

6. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of nippling up on the 5 ½" casing spool with a 3000 psi WP double ram BOP and testing to 2000 psi upon initial installation.

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. Other accessories to the BOP equipment will include a floor safety valve (inside BOP) with 3000 psi WP rating.

This well will be deepened 120' using a well service unit and reverse unit (power swivel, mud pump and steel pit(s)). A basic double ram BOP without a kill or choke manifold will be sufficient on this reentry and deepening because the Bone Spring is subnormally pressured and requires the use of artificial lift to produce fluid to surface. We've drilled three nearby wells to or through the Bone Spring using 9 ppg cut brine and have encountered no pressure or lost circulation. The Bone Spring was tested in the Michalada Federal 3D and swabbed dry after being acidized. The shut in tubing pressure the day after the well was acidized was 650 psi. After blowing the pressure down the fluid level in the well was 300' above the packer. The calculated bottomhole pressure using this data is 1017 psi (650 psi + (358')(9ppg)(.052) + (3982')(.05psi/ft)). Our best engineering estimate is that the bottomhole pressure falls in the 7 to 8 ppg equivalent range. This application assumes 8 ppg pore pressure equivalent which equates to 1810 psi at 4350'.

7. Estimated BHP: 1810 psi

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

Depth	Type System	Mud Weight	Viscosity (sec)	Waterloss (cc)
4230' - 4350'	Cut Brine	9.0	29-32	N.C.

9. Auxiliary Well Control and Monitoring Equipment:

a. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
b. Hydrogen Sulfide detection equipment will be in operation after drilling out the 5 1/2" casing shoe until TD of 4350' is reached. Breathing equipment will be on location upon drilling the 5 1/2" shoe until total depth is reached.

10. Testing, Logging and Coring Program:

No testing, logging or coring planned

11. Potential Hazards:

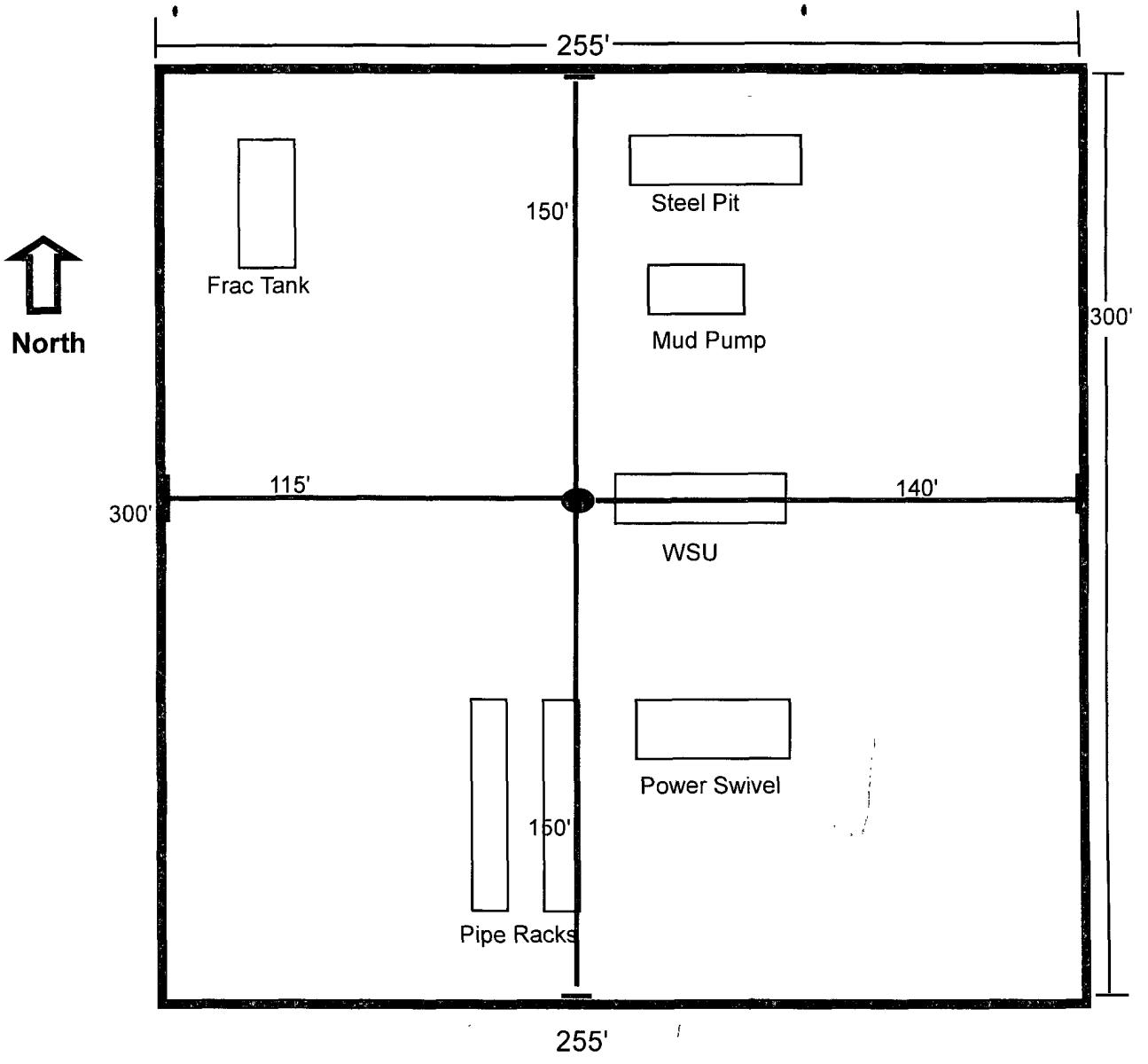
a. No abnormal pressures or temperatures are expected. There is H2S in this area in the upper Bone Spring. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP: 1810 psi. Estimated BHT: 105°.

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 5 days.

See COA's

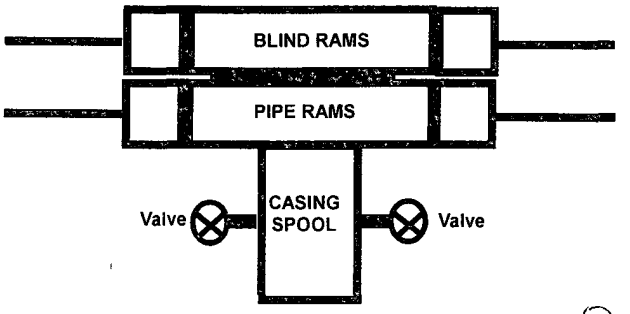
Well Site Lay-Out Plat



Michalada Federal #5
460' FNL & 989' FEL
Section 4, T22S, R25E
Eddy County, New Mexico

EXHIBIT THREE

PROPOSED BOP SYSTEM



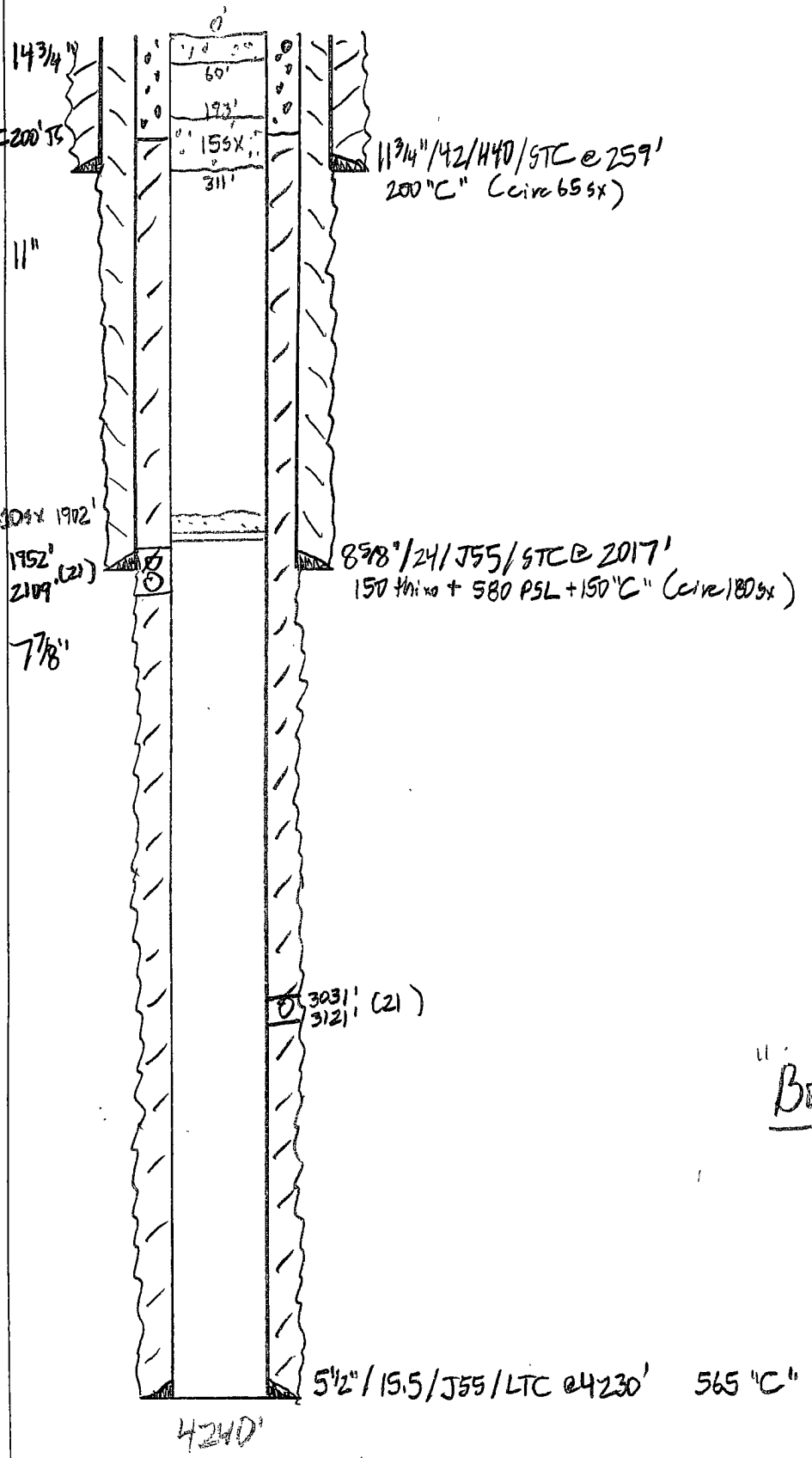
3000 psi

EXHIBIT #1

Champagne 4 Fed. 1

460' FNL, 990' FEL
Lot 1 - 4 - 22S - 25E
Eddy NM
30-015-27910

Del: 1945'
BS: 4150'

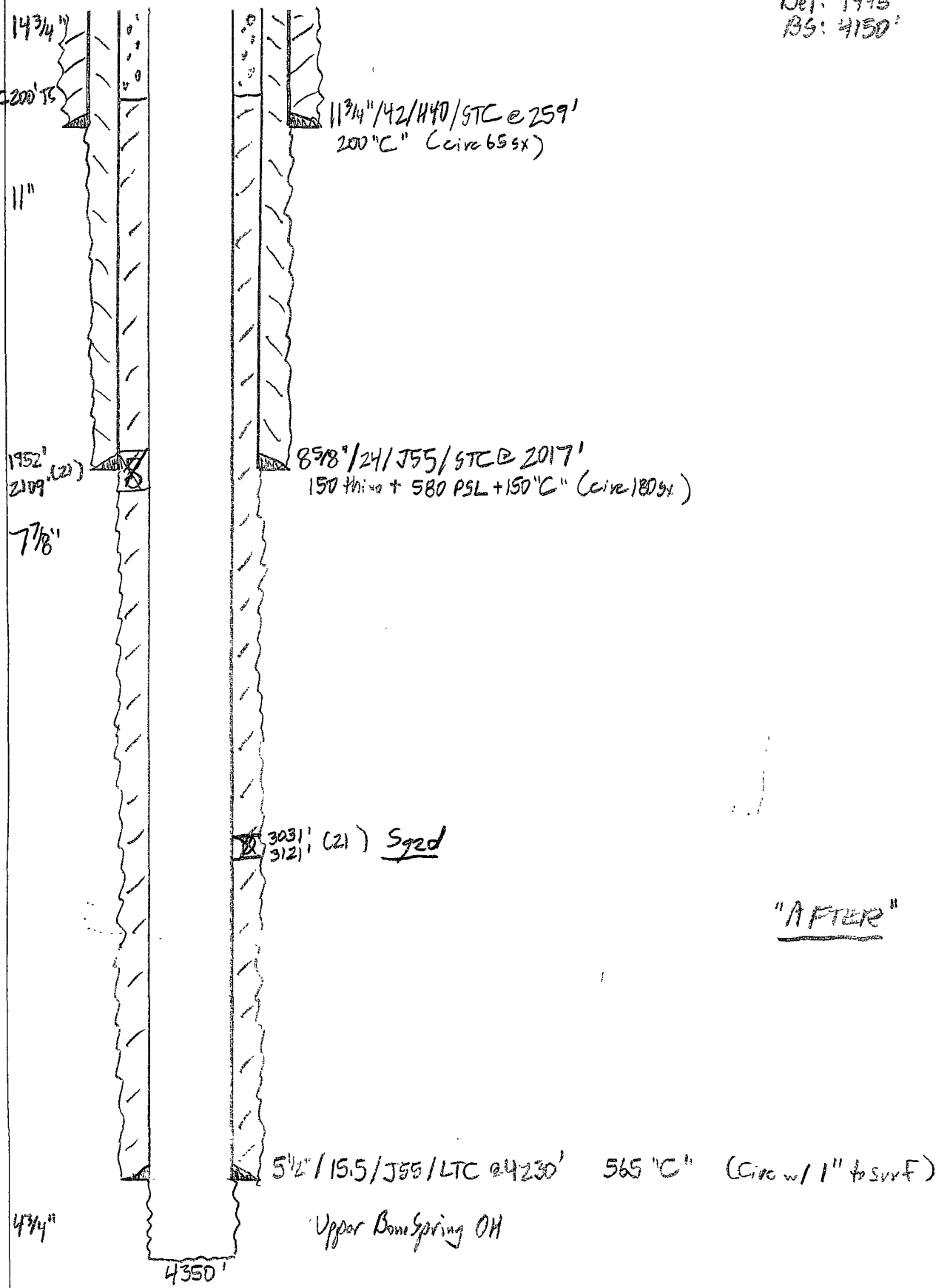


"BEFORE"

Michalada Fed. 5

460' FNL, 990' FEL
Lot 1 - 4 - 22S - 25E
Eddy NM
30-015-27910

Del: 1945'
BS: 4150'



MARBOB ENERGY CORPORATION

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

A. The hazards and characteristics of hydrogen sulfide (H_2S).

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

C. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

D. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

A. The effects of H_2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

B. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.

C. The contents and requirements of the H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

II. H_2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling out the 5 ½" casing shoe at 4230'.

A. Well Control Equipment:

Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

B. Protective equipment for essential personnel:

Mark II Surviveair 30-minute units located in the dog house and at briefing areas.

C. H_2S detection and monitoring equipment:

2 - portable H_2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H_2S levels of 20 ppm are reached.

D. Visual warning systems:

Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

E. Mud Program:

The mud program has been designed to minimize the volume of H_2S circulated to the surface.

F. Metallurgy:

All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H_2S service.

G. Communication:

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

WARNING

YOU ARE ENTERING AN H_2S AREA
AUTHORIZED PERSONNEL ONLY

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

MARBOB ENERGY CORPORATION

1-505-748-3303

MARBOB ENERGY CORPORATION
MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Re-Entry
Michalada Federal #5
(Previously "Champagne 4 Federal #1")
460' FNL & 989' FEL
Section 4, T22S, R25E
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

a. The well site and elevation plat for the proposed well are reflected on the well site layout; Form C-102. The well was staked by John West Surveying Company.
b. Exhibit 2 is a portion of a topo map showing the well and roads in the vicinity of the proposed location. The proposed wellsite and the access route to the location are indicated in red on Exhibit 2.
c. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

DIRECTIONS:

From Marbob Energy Corporations Tequiza Federal #1 location follow highlighted proposed access road shown on Exhibit #2 approximately 6200'.

2. PLANNED ACCESS ROAD:

There is an existing reclaimed road.

3. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. In the event the well is found productive, the Michalada Federal #5 tank battery would be utilized and the necessary production equipment will be installed at the well site. A Site Facilities Diagram will be submitted upon completion of facility.
B. All flowlines will adhere to API standards
C. If electricity is needed, power will be obtained from Central Valley Electric. Central Valley Electric will apply for ROW for their power lines.
D. If the well is productive, rehabilitation plans are as follows:
    i. The original topsoil from the well site will be returned to the location. The drill site will then be contoured as close as possible to the original state.

4. LOCATION AND TYPES OF WATER SUPPLY:

This location will be drilled using a cut brine mud system (outlined in the Drilling Program). The water will be obtained from commercial water stations in the area and hauled to location by transport truck using the existing and proposed roads shown in Exhibit #2. If a poly pipeline is used to transport water for drilling purposes, the existing and proposed road shown in Exhibit "2" will be utilized.

5. CONSTRUCTION MATERIALS:

All Caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM approved pit or from prevailing deposits found under the location. All roads will be constructed of 6" rolled and compacted caliche. Will use BLM recommended use of extra caliche from other locations close by for roads, if available.

6. . METHODS OF HANDLING WASTE MATERIAL:

a. All trash, junk and other waste material will be removed from the wellsite within 30 days after finishing drilling and/or completion operations. All waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed, all contents will be removed and disposed of in an approved sanitary landfill.

b. The supplier, including broken sacks, will pick up slats remaining after completion of well.

c. A porto-john will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.

d. Disposal of fluids to be transported by an approved disposal company.

7. ANCILLARY FACILITIES:

No campsite or other facilities will be constructed as a result of this well.

8. WELLSITE LAYOUT:

a. Exhibit 3 shows the proposed well site layout with dimensions of the pad layout.

b. No reserve or sump pits will be utilized.

c. Mud pits in the active circulating system will be steel pits and a closed loop system will be utilized.

9. PLANS FOR SURFACE RECLAMATION:

a. After finishing drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The original top soil will again be returned to the pad and contoured, as close as possible, to the original state.

b. The location and road will be rehabilitated as recommended by the BLM.

c. If the well is deemed commercially productive, caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography.

10. SURFACE OWNERSHIP:

The surface is owned by the US Government and is administered by the Bureau of Land Management. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas. The proposed road routes and the surface location will be restored as directed by the BLM.

11.OTHER INFORMATION:

a. The proposed access road and well pad are located in topography that varies from small rolling hills to generally flat areas. Soil is of the Limestone rock land-Ector association: Rock land and very shallow, stony and rocky, loamy soils over limestone; on hills and mountains. Vegetation associated with the project area is consistent with the Chihuahuan Desert Scrub and includes acacia, creosote, sotol, cane cholla, juniper, pencil cholla, lechuguilla, prickly pear, algerita, ocotillo, crucifix bush, horse crippler, and various grasses. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.

b. There is no permanent or live water in the general proximity of the location.

c. There are no dwellings within 2 miles of location.

d. A Cultural Resources Examination will be completed by Boone Archeological and forwarded to the BLM office in Carlsbad, New Mexic

12.OPERATOR'S REPRESENTATIVE:

A. Through A.P.D. Approval:

Dean Chumbley, Landman
Marbob Energy Corporation
P. O. Box 227
Artesia, NM 88211-0227
Phone (505)748-3303
Cell (505)748-5988

B. Through Drilling Operations

Sheryl Baker, Drilling Supervisor
Marbob Energy Corporation
P. O. Box 227
Artesia, NM 88211-0227
Phone (505)748-3303
Cell (505)748-5489

CERTIFICATION:

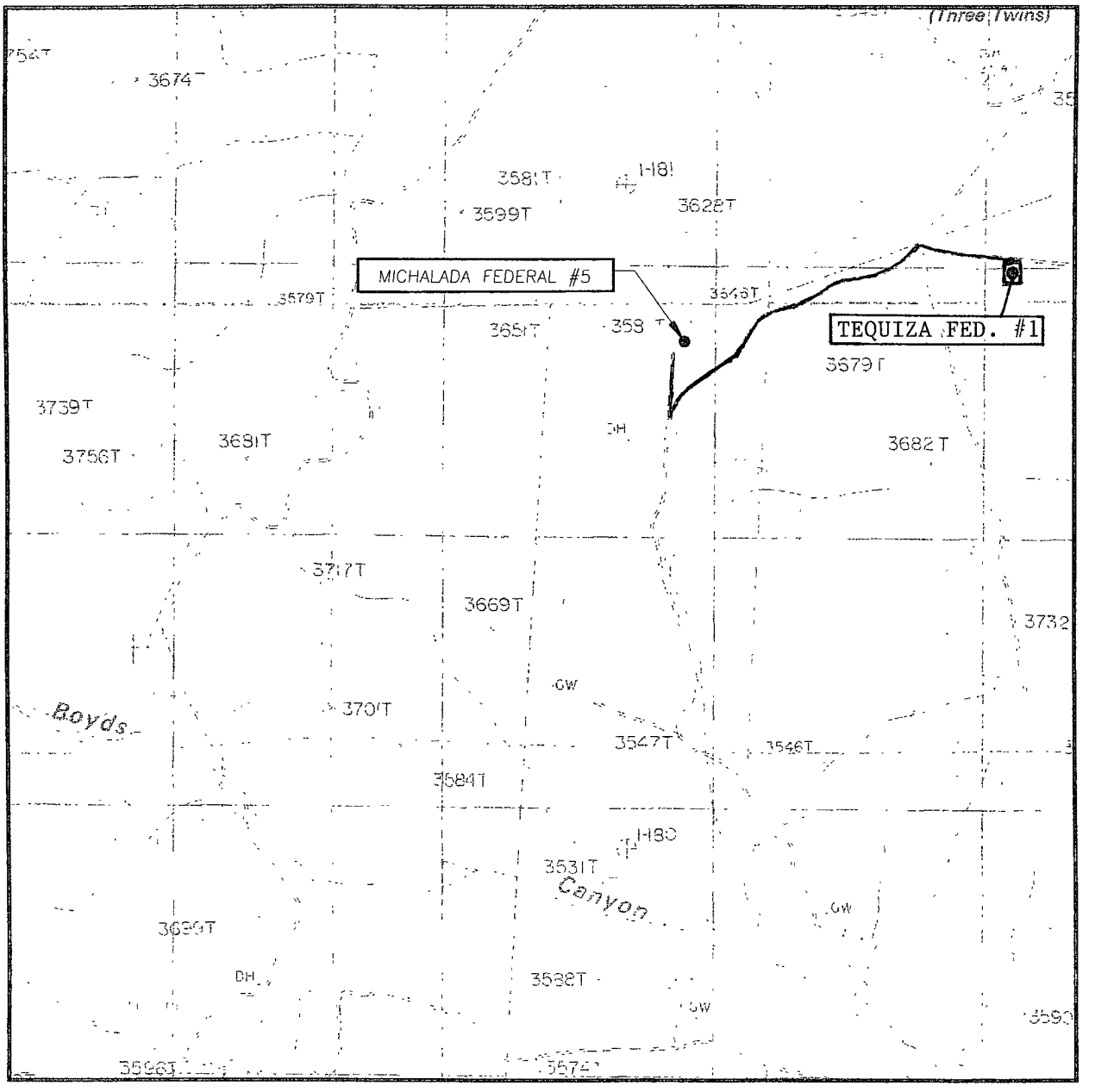
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Marbob Energy Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Marbob Energy Corporation

12/10/07
Date

Ross Duncan
Land Department

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
AZOTEA PEAK, N.M. – 20'

SEC. 4 TWP. 22-S RGE. 25-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 460' FNL & 989' FEL

ELEVATION 3603'

OPERATOR MARBOB ENERGY CORPORATION

LEASE MICHALADA FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
AZOTEA PEAK, N.M.

Existing Roads

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

EXHIBIT #2

Cave and Karst

Cave/Karst Surface Mitigation
The following stipulations will be applied to minimize impacts during construction, drilling and production.

Berming:
Any tank batteries will be constructed and bermed large enough to contain any spills that may occur.

Bermed areas will be lined with rip-stop padding to prevent tears or punctures in liners and lined with a permanent 20 mil plastic liner.

Closed Mud System Using Steel Tanks with All Fluids and Cuttings Hauled Off.

Cave/Karst Subsurface Mitigation
The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:
Rotary drilling techniques in cave or karst areas will include the use of fresh water as a circulating medium in zones where caves or karst features are expected. Use depth to the deepest expected fresh water as listed in the geologist report.

Casing:
All casing will meet or exceed National Association of Corrosion Engineers specifications pertaining to the geology of the location and be run to American Petroleum Institute and BLM standards.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported.

Regardless of the type of drilling machinery used, if a void (bit drops) of four feet or more and circulation losses greater then 75 percent occur simultaneously while drilling in any cave-bearing zone, drilling operations will immediately stop and the BLM will be notified by the operator. The BLM will assess the consequences of the situation and work with operator on corrective actions to resolve the problem.

Abandonment Cementing:
Upon well abandonment the well bore will be cemented completely from 100 feet below the bottom of the cave bearing zone to the surface.

Record Keeping:

The Operator will track customary drilling activities, including the rate of penetration, pump pressure, weight on bit, bit drops, percent of mud returns, and presence of absence of cuttings returning to the surface. As part of customary record keeping, each detectable void or sudden increase in the rate of penetration not attributable to a change in the formation type should be documented and evaluated as it is encountered.

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts 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.

B. CASING

1. **The 11-3/4 inch surface casing exists and is set at 259 feet and cemented to surface.**

2. **The 8-5/8 inch intermediate casing exists and is set at 2017 feet and cemented to surface.**

3. ***The 5-1/2 inch production casing exists and is set at 4230 feet and cemented to surface.***

   CIT required on 5-1/2" casing prior to drilling open hole portion.

   Possible lost circulation in the Bone Spring formation.
   Location is near City of Carlsbad Water Well Field.

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. **Choke manifold not required.**

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.

Engineer on call phone (after hours): **Carlsbad: (575) 706-2779**

WWI 122807