

EC

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

OCD-ARTESIA

OCD

OCT 23, 2007

OCD-ARTESIA

FORM APPROVED
OMB No 1004-0136
Expires July 31, 2010

S

1a. Type of Work: <input type="checkbox"/> DRILL <input checked="" type="checkbox"/> REENTER		UNORTHODOX LOCATION	
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other: OTH <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		8. Lease Name and Well No. HIGH NET SWD 1	
2. Name of Operator MARBOB ENERGY CORPORATION		9. API Well No. 30-015-35602	
Contact: NANCY AGNEW Email: landtech@marbob.com		10. Field and Pool, or Exploratory SWD; Delaware	
3a. Address P O BOX 227 ARTESIA, NM 88211-0227		11. Sec., T., R., M., or Blk. and Survey or Area Sec 2 T25S R28E Mer NMP	
3b. Phone No. (include area code) Ph: 505.748.3303		12. County or Parish EDDY	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface NWNE 100FNL 2140FEL At proposed prod. zone NWNE 100FNL 2140FEL Carlsbad Controlled Water Basin		13. State NM	
14. Distance in miles and direction from nearest town or post office* ABOUT 18 MILES SOUTH OF MALAGA, NM		17. Spacing Unit dedicated to this well 40.00	
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 100'		16. No. of Acres in Lease 160.60	
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.		19. Proposed Depth 6480 MD	
20. BLM/BIA Bond No. on file		21. Elevations (Show whether DF, KB, RT, GL, etc.) 2960 GL	
22. Approximate date work will start 10/20/2007		23. Estimated duration 10 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 (Electronic Submission)	Name (Printed/Typed) NANCY AGNEW Ph: 505.748.3303	Date 09/20/2007
Title LAND DEPARTMENT		
Approved by (Signature) /S/ DON PETERSON	Name (Printed/Typed) /S/ DON PETERSON	Date OCT 20 2007
Title FOR FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify 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 100
States any false, fictitious or

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

son knowingly and willfully to make to any department or agency of the United States in its jurisdiction.

by the BLM Well Information System
RATION, sent to the Carlsbad
A CISNEROS on 09/20/2007 (07TLC0532AE)

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

OCT 23 2007
OCD-ARTESIA



The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Date: September 20, 2007

Lease #: NM-98813
High Net SWD #1

Legal Description: Sec. 2-T25S-R28E
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

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

DISTRICT II
1501 W. GRAND AVENUE, ALBUQUERQUE, NM 87102

DISTRICT III
1909 Rio Grande Rd., Artesia, NM 87210

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

OCT 23 2007
OCD-ARTESIA

Form 6-106
Revised October 12, 2006
Subject to appropriate Mineral Order
State Lease - 4 Copies
Fee Lease - 2 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name SWD; Delaware
Property Code	Property Name SWD HIGH NET FEDERAL	Well Number
OGRI No. 14049	Operator Name MARBOE ENERGY CORPORATION	Elevation 2960

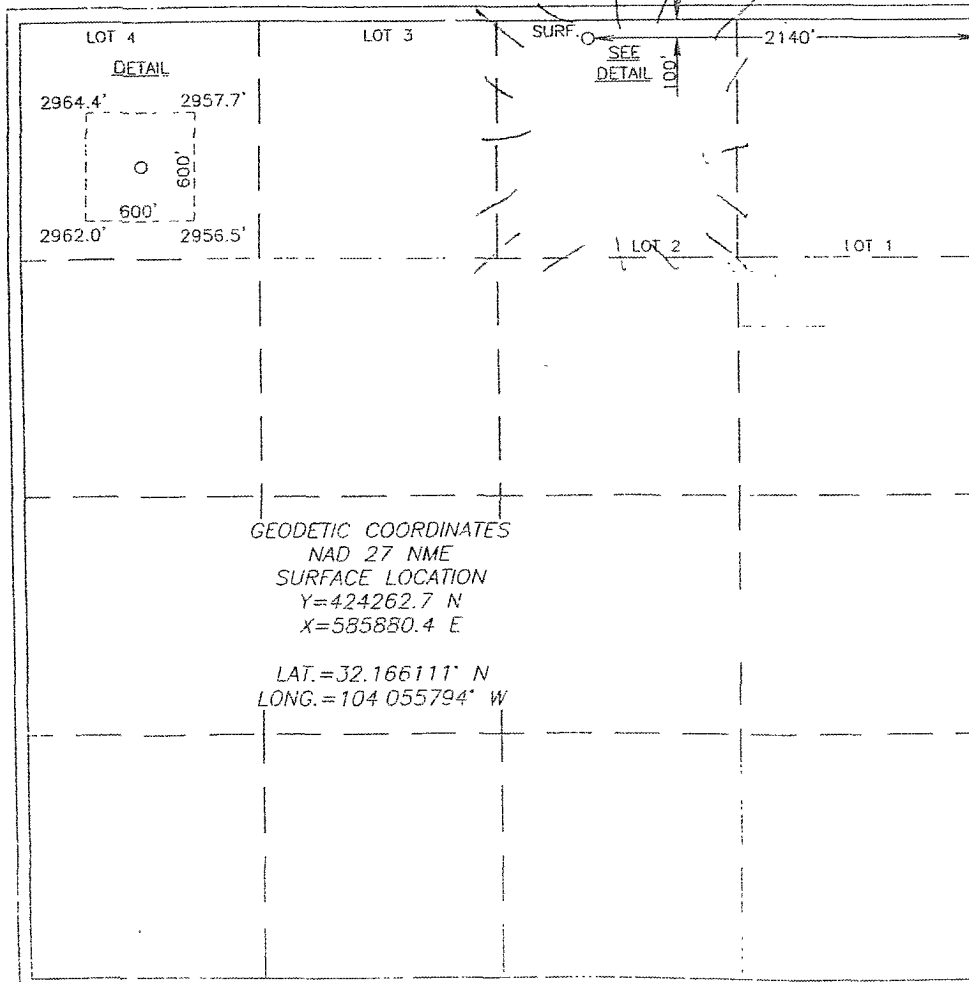
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	2	25-S	28-E		100	NORTH	2140	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 40	Joint or Infill	Consolidation Code	Order No.						

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



OPERATOR CERTIFICATION

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

Nancy T. Agnew 9/19/07
Signature Date
Nancy T. Agnew
Printed Name

SURVEYOR CERTIFICATION

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

JANUARY 1, 2007
Date Surveyed REVISION DATE: 3/15/07
Signature & Seal of Professional Surveyor AR

Gary E. Edson 3/15/07
07.13.0335

Certificate No. GARY EDSON 12841
RONALD J. EDSON 3239

5

OCT 23 2007
OCD-ARTESIA

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

RE-ENTRY
High Net SWD #1
(Previously High Net Federal #1)
Surf: 100' FNL and 2140' FEL
Section 2-25S-28E
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Marbob Energy Corporation submits the following ten items of pertinent information in accordance with BLM requirements.

1. **Geological surface formation:** Permian
2. **The estimated tops of geologic markers are as follows:**

Salt	611'
Delaware	2604'
Bone Spring	6428'
TD	6480'

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

Marbob Energy Corporation plans to re-enter this well by drilling out the existing plugs to original TD: 6480'.

4. **Proposed Casing Program:**

Hole Size	Interval	OD Casing	New or Used	Wt	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
12 1/4"	0'-604'	9 5/8"	In Place	36#	STC	J-55	1.125	1.125	1.6
8 3/4"	604'-6480'	5 1/2"	New	17#	LTC	J-55	1.125	1.125	1.6

5. **Proposed Cement Program:**

- a. 9 5/8" Surface Cement to surface with 450 sk, "C" plus 2 yds redimix, (In Place)
- b. 5 1/2" Prod
 - 1st Stage: 1000 CF Slurry (Super H, 13 ppg, 1.66 CFPS)
 - 2nd Stage: 2475 CF Slurry to circulate to surface (Interfil C, 11.9 ppg, 2.45 CFPS) DV Tool: 3500'

see COA

Circulate to Surface. **All casing is new and API approved.**

OCT 23 2007

OCD-AK, E&IA

6. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of nipping up on the 9 5/8" surface casing with a 2000 psi WP casing spool and a 3000 psi WP double ram BOP with side outlets below BOP in casing spool.

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. Choke and Kill lines aren't needed because no hydrocarbons, no flows and no pressure were encountered when the well was originally drilled and abandoned.

7. Estimated BHP: 2700 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' - 6480'	Brine	10.0	28	N/C

The 10 ppg mud weight doesn't reflect pore pressure – it occurs because the salt section will be open during the re-entry process.

9. Auxiliary Well Control and Monitoring Equipment:

- a. A full opening pipe stabbing valve having the appropriate connections will be on the rig floor at all times.

10. Testing, Logging and Coring Program:

Logs were run when well was originally drilled. There will be no logs, cores, DST's or other well tests.

11. Potential Hazards:

- a. No abnormal pressures or temperatures were encountered when well was originally drilled. There was no lost circulation or H2S encountered when well was originally drilled. Estimated BHP at TD is 2700 psi. BHT is 110° F.

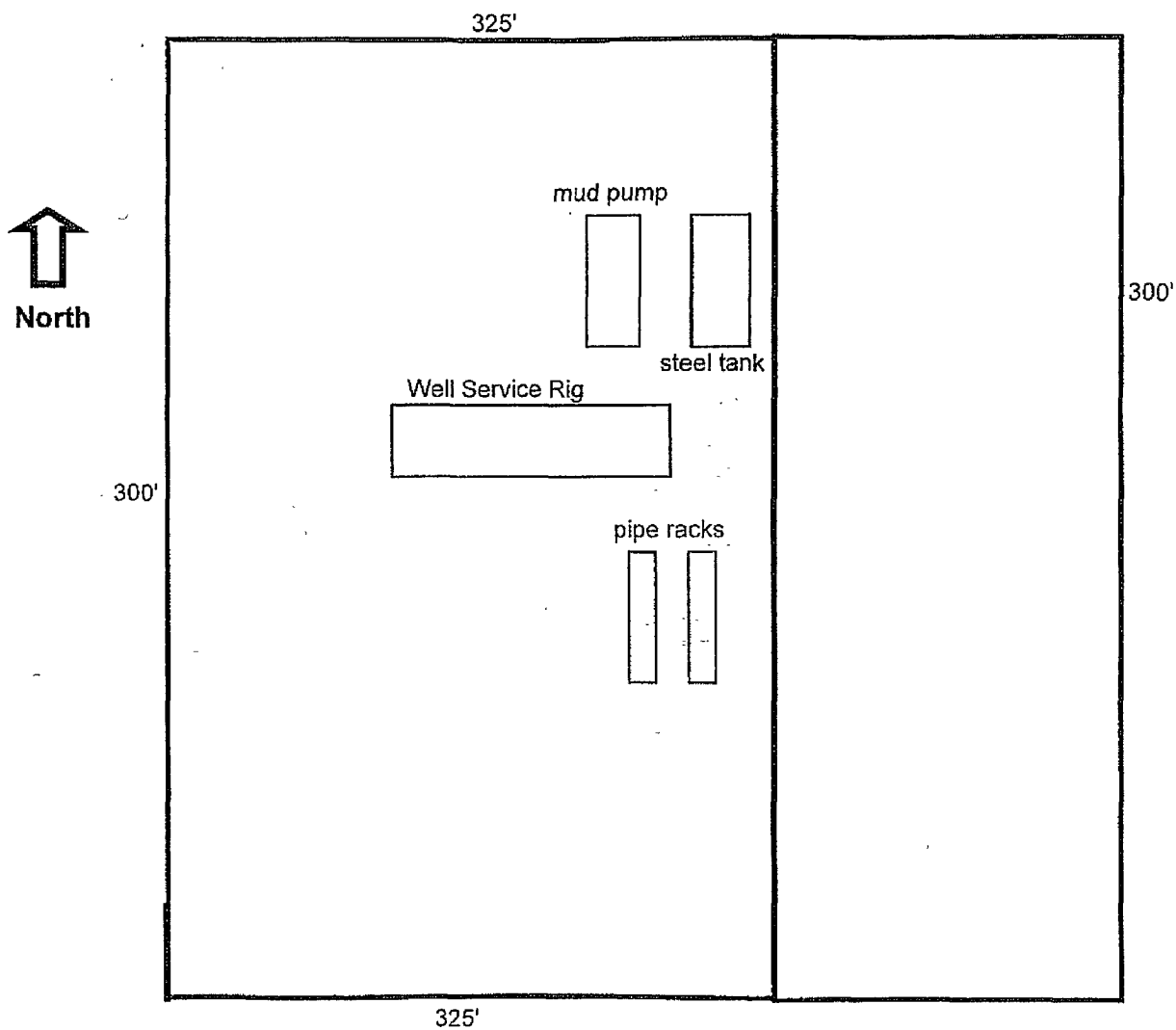
12. Anticipated starting date and Duration of Operations:

- 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 10 days.



Well Site Lay-Out Plat

OCT 23 2007
OCD-ARTESIA

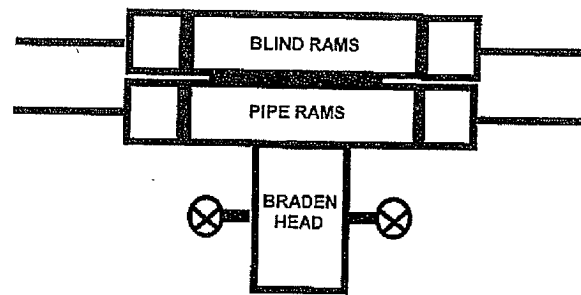


RE-ENTRY
High Net SWD #1
(Previously High Net Federal #1)
Surf: 100' FNL and 2140' FEL
Section 2-25S-28E
Eddy County, New Mexico

EXHIBIT THREE



3M SYSTEM



OCT 23 2007
OCD-ARTESIA

EXHIBIT #1

S

MARBOB ENERGY CORPORATION

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

No H₂S encountered when well was originally drilled.

OCT 23 2007
OCD-ARTESIA

S

OCT 23 2007
OCD-ARTESIA

MARBOB ENERGY CORPORATION
MULTI-POINT SURFACE USE AND OPERATIONS PLAN

RE-ENTRY
High Net SWD #1
(Previously High Net Federal #1)
Surf: 100' FNL and 2140' FEL
Section 2-25S-28E
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 the intersection of U.S. Highway #285 and Eddy County Rd. #720, go South on U.S. Highway #285 for approx. 4.1 miles. Turn left and go East approx. 0.8 miles. This location is approx. 25 feet south.

2. ACCESS ROAD:

There is an existing access road which passes through the southwest corner of the proposed well pad.

The road is constructed as follows:

- A. The maximum width of the road will be 15'. It will be crowned and made of 6" of rolled and compacted caliche. Water will be deflected, as necessary, to avoid accumulation and prevent surface erosion.
- B. Surface material will be native caliche. This material will be obtained from a BLM approved pit nearest in proximity to the location. Any additional materials that



are required will be purchased from the dirt contractor. The average grade will be approximately 1%.

OCT 23 2007

OCD-ARTESIA

- C. No turnouts are planned.
- D. No culverts, cattleguard, gates, low-water crossings, or fence cuts are necessary.
- E. The access road as shown in Exhibit 2 has been centerline flagged by John West Engineering.

3. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. In the event the well is found productive, the High Net SWD #1 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:

The water will be obtained from commercial water stations in the area and hauled to location by transport truck using the existing roads shown in Exhibit #2.

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. Drill cuttings will be disposed of in a steel tank. No earthen pit will be used.
- b. 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.
- c. The supplier, including broken sacks, will pick up slats remaining after completion of well.

- d. 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.

OCT 23 2007

OCD-ARTESIA

- e. All fluids will be stored in steel tanks. No earthen pit will be used.
- f. 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. The original pad will be used for the reentry.
- c. Mud pits in the active circulating system will be steel pits.

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 reserve pit area will be broken out and leveled after drying to a condition where these efforts are feasible. The original top soil will again be returned to the pad and contoured, as close as possible, to the original state. The pit will be closed per OCD compliance regulations.
- b. The location and road will be rehabilitated as recommended by the BLM.

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 area surrounding the well site is grassland. The topsoil is very sandy in nature. The vegetation is moderately sparse with native prairie grass, some mesquite bushes and shinnery oak. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.
- b. There is no permanent or live water in the general proximity of the location.
- c. There are no dwellings within 2 miles of location.



- d. A Cultural Resources Examination was performed by Boone Archeological and forwarded to the BLM office in Carlsbad, New Mexico when well was originally drilled.

OCT 23 2007

12. OPERATOR'S REPRESENTATIVE:

OCD-ARTESIA

A. Through A.P.D. Approval:

Dean Chumbley, Landman
Marbob Energy Corporation
P. O. Box 227
Artesia, NM 88211-0227
Phone (505)748-5988
Cell (505)513-2544

B. Through Re-entry Operations

Shane Gray, Completions Supervisor
Marbob Energy Corporation
P. O. Box 227
Artesia, NM 88211-0227
Phone (505)748-3303
Cell (505)748-5959

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.

20 Sept 07
Date

Marbob Energy Corporation

Brian Collins
Brian Collins
Engineer

§

EXHIBIT #2

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 2 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,
(505) 361-2822

1. **Although Hydrogen Sulfide was not detected when this well was originally drilled, it is always a potential hazard. H₂S has been reported in Sections 11 and 14 measuring 1200-1500 ppm in STVs. It is recommended that monitoring equipment be available on site.**
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 9-5/8 inch surface casing **exists and is set at 604 feet and cemented to surface.**

Possible lost circulation in the Delaware.

Medium cave/karst area.

Possible high sulphur content in shallow formations.

2. The minimum required fill of cement behind the 5-1/2 inch production casing is for cement to come to surface. **Both stages to circulate.**
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
 - b. Wait on cement (WOC) time for a primary cement job 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 action will be done prior to drilling out that string.
3. 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.

OCT 23 2007
OCD-ARTESIA

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. **Operator will be using a work over rig to re-enter this well. There will be no new drilling. They will use a BOP stack, but no choke manifold.**
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) psi.**
3. The appropriate BLM office shall be notified a minimum of 2 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. **Drill out surface plug and cement to within 50' of 9-5/8" shoe. Then set BOP on casing and perform BOP and casing test to 2000 psi prior to drilling remainder of shoe plug.**

Engineer on call phone (after hours): Carlsbad: (505) 706-2779

WWI 101107