0 > C BOREAU OF LAND MANAGEMENT	FORM APPR OMB No. 100 Expires Novembe Lease Serial No.	)4-0136
(August 1999) UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT	Expires Novembe	
	NMNM108025	<u> </u>
	If Indian, Allottee or Tribe	Name
	If Unit or CA Agreement,	Name and No
Ia. Type of Work:   DRILL   REENTER     7. I	II OIN OF CA Agreement,	Name and No.
	Lease Name and Well No. DRY LAND SWD 001	
2. Name of Operator Contact: MELANIE PARKER 9. 2	API Well No. 30 - 015 - 3	7050
3a. Address 3b. Phone No. (include area code) 10.	Field and Pool, or Explor	atory
P O BOX 227 ARTESIA, NM 88211-0227 Ph: 505.748.3303 Fx: 505.746.2523	PERMO PEŃN	96115
4. Location of Well (Report location clearly and in accordance with any State requirements.*) 11.	Sec., T., R., M., or Blk. a	and Survey or Area
	Sec 3 T21S R25E Me SME: BLM	er NMP
14. Distance in miles and direction from nearest town or post office* 12.	County or Parish	13. State
	EDDY Spacing Unit dedicated t	O this well
lease line, ft. (Also to nearest drig. unit line, if any)	Spacing One dedicated t	
18. Distance from proposed location to nearest well, drilling, 19. Proposed Depth 20. completed, applied for, on this lease, ft.	BLM/BIA Bond No. on	ĭle
sompleted, applied for, on this lease, n. 9000 MD		
	Estimated duration 21 DAYS	RECEIVED
CARLSBAD CONTROLLED WATER BASIN 24. Attachments		<u>JUN 1 0 2004</u>
The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this for	orm:	OPD:ARTES
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).</li> <li>Guerator certification</li> <li>Such other site specific information authorized officer.</li> </ol>	·	·
25. Signature (Electronic Submission) Name (Printed/Typed) MELANIE PARKER		Date 04/29/2004
Title AUTHORIZED REPRESENTATIVE		
Approved by (Signature) /s/ Joe G. Lara /s/ Joe G. Lara	<u>, , , , , , , , , , , , , , , , , , , </u>	Date JUN 2004
Title 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 w operations thereon.	which would entitle the ap	plicant to conduct
	OVAL FOR 1	
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 mak States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.	ke to any department or ag	ency of the United
Additional Operator Remarks (see next page)		
Electronic Submission #30103 verified by the BLM Well Informatic		
For MARBOB ENERGY CORPORATION, sent to the Carlsb APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED	oad (04LA0379AE)	

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TACHED \*\* BLM REVISED \*\*



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Joanna Prukop Cabinet Secretary Acting Director Oil Conservation Division

11 June 2004

Marbob Energy P.O. Box 227 Artesia, New Mexico 88211-0227

RE:

Pit Permit - Dry Land SWD # 1

Unit I SEC-3 T-21S R-25E

The Oil Conservation Division of Artesia is in receipt of your application for permit to drill. Construction of a pit(s) for the purpose of drilling is approved under your current "General Plan" with the following provisions:

- 1. Construction and closing of pit(s) must meet the criteria of Rule 19.15.2.50 and the Pit Guidelines.
- 2. The pit is not located in any watercourse, lakebed, sinkhole, playa lake, or wetland.
- 3. Notice is to be given to the OCD prior to construction of the pit(s).
- 4. Pit(s) must meet all requirements of approved plan.
- 5. Liner must be a minimum of 12 mil. woven.
- 6. Depth to groundwater may cause the pit's contents and the liner to be removed and disposed of in a manner approved by the Division.
- 7. Pit encapsulations must meet all specific criteria including, but not limited to:
  - A. Site evaluation
  - B. Amount of and type of cover
  - C. Drill cuttings will be sampled as per guidelines. Notify OCD 48 hours prior to any sampling event
  - D. In the event that the integrity of the pit lining is breached in a manner such that soil contamination would result, the contents of the pit will have to be disposed of in an approved OCD facility.
- 8. The Division may attach additional conditions to any permit upon a finding that such conditions are necessary to prevent the contamination of fresh water, or to protect public health or the environment. (19.15.2.50.C.3.G.1.)

If I can be of any further assistance, please feel free to call (505) 748-1283 ext. 109.

Sincerely,

Van Barton

#### Additional Operator Remarks:

Marbob intends to drill the Dry Land SWD #1 to a TD of 9000 ft. and complete as a salt water disposal well.

State	of	New	Mexico
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DISTRICT I P.O. Box 1880, Mabba, MM 66241-1980

DISTRICT II P.O. Drawer DD. Artenia, NM 68211-0719

DISTRICT III

1000 Rio Brezos Ed., Axtee, NM 87410

### Energy. Minerals and Natural Resources Department.

OIL CONSERVATION DIVISION P.O. Box 2088

Santa Fe, New Mexico 87504-2088

Form C-102 Revised Pebruary 10, 1994 Submit to Appropriate District Office State Lesse - 4 Copiex For Lease - 3 Copies

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# LOCATION VERIFICATION MAP



#### DRILLING PROGRAM Attached to Form 3160-3 Marbob Energy Corporation Dry Land SWD #1 2852' FSL & 377' FEL Section 3-21S-25E Eddy County, New Mexico

#### 1. <u>Geologic Name of Surface Formation:</u> Permian

#### 2. Estimated Tops of Important Geologic Markers:

Permian	Surface	Bone Springs	2620'
Yates	650'	Wolfcamp	7700'
Seven Rivers/Capitan	1000'	Cisco/Canyon	8090'
Delaware	1730'	Strawn	9000'

#### 3. Estimated Depths of Anticipated Fresh Water, Oil or Gas:

Permian	Surface	Fresh Water
Seven Rivers/Capitan	1000'	Fresh Water
Wolfcamp	7700'	Oil/Gas
Cisco/Canyon	8090'	Oil/Gas
Strawn	9000'	Gas

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 300' and circulating cement back to surface. Any shallower zones above TD which contain commercial quantities of oil and/or gas will have cement circulated across them by running a 9 5/8" protection string, tying cement into surface, then running 7" casing at TD and cementing sufficiently to cover 200' above all known oil and gas horizons.

### 4. <u>Casing Program:</u>

<u>Hole</u> Size	Interval	OD Csg	<u>Weight</u>	Grade	Cond.
17 1/2"	0 – 300'	13 3/8"	48#	H-40	New
12 1/4"	300 – 2500'	8 5/8"	24#	J-55	New
7 7/8"	2500 – 9000'	5 1/2"	17#	J-55	New



#### DRILLING PROGRAM PAGE 2

#### Cement Program:

WITNESS 13 3/8" Surface Casing:	Cemented with 350 sx Class C. Circulate to surface.
WITNESS 5/8" Intermediate Casing:	
5 1/2" Production Casing:	Cemented with 1100 sx Class H. Will attempt to circulate to cover 200' above all oil and gas horizons to tie into intermediate casing.

#### 5. <u>Pressure Control Equipment:</u>

See Exhibit One.

#### 6. <u>Types and Characteristics of the Proposed Mud System:</u>

The well will be drilled to TD with cut brine. The applicable depths and properties of this system are as follows:

<u>Depth</u>	Type	Weight (ppg	Viscosity (sec)	Waterloss (cc)
0 – 300'	Fresh water spud	8.4 - 9.2	32 - 34	N.C.
300' – 2500'	Brine	10.0	28	N.C.
2500 – 9000'	Cut Brine	9.8 – 10.2	40 – 45	N.C. – 6cc

#### 7. Auxiliary Well Control and Monitoring Equipment:

- (A) A kelly cock will be kept in the drill string at all times.
- (B) A full opening drill pipe stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

#### 8. Logging, Testing, and Coring Program:

- (A) Drillstem tests are anticipated.
- (B) The electric logging program will consist of Dual Laterolog Micro SFL, Spectral Density Dual Spaced Neutron Csg Log, and Depth Control Log.
- (C) No conventional coring is anticipated.

#### DRILLING PROGRAM PAGE 3

(D) Further testing procedures will be determined after the 5 1/2" production casing has been cemented at TD based on log evaluation.

#### 9. Abnormal Conditions, Pressures, Temperatures, & Potential Hazards:

No abnormal pressures or temperatures are anticipated.

#### 10. Anticipated Starting Date and Duration of Operations:

Location and road work will not begin until approval has been received from the BLM. The anticipated spud date is May 30, 2004. Once commenced, the drilling operation should be finished in approximately 21 days. An additional 15 - 20 days will be required for completion.

Attached to Form 3160-3 Marbob Energy Corporation Dry Land SWD #1 2852' FSL & 377' FEL Section 3-21S-25E Eddy County, New Mexico

#### 1. Existing Roads:

- A. The well site and elevation plat for the proposed well is attached. It was staked by John West Engineering.
- B. All roads to the location are shown in Exhibit Two. The existing roads are illustrated in red and are adequate for travel during drilling and production operations. Upgrading of the road prior to drilling will be done where necessary as determined during the onsite inspection.
- C. Directions to location: From Artesia, proceed south on U.S. 285 for 23 miles. Turn east on County Road 30 for 0.2 miles, take right fork to old paved highway. Turn right and go southeast on old highway for 0.45 miles to proposed access road.
- D. 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.

### 2. <u>Proposed Access Road:</u>

A new access road of 443' will be necessary. The new road will be constructed as follows:

- A. The maximum width of the running surface will be 10'. The road will be crowned and ditched and constructed of 6" of rolled and compacted caliche. Ditches will be at 3:1 slope and 4 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns. BLM may specify any additions or changes during the onsite inspection.
- B. The average grade will be less than 1%.
- C. No turnouts are planned.

- D. No culverts, cattleguard, gates, low-water crossings, or fence cuts are necessary.
- E. Surfacing material will consist of native caliche. Caliche will be obtained from the nearest BLM-approved caliche pit. Any additional materials that are required will be purchased from the dirt contractor.
- F. The proposed access road as shown in Exhibit 2 has been centerline flagged by John West Engineering.

#### 3. Location of Existing and/or Proposed Facilities:

- A. Marbob Energy Corporation proposes a salt water disposal facility to be located on the Dry Land Shiner Fed. Com #1 well pad.
- B. Rehabilitation plans are as follows:
  - (1) The reserve pit will be back-filled after the contents of the pit are dry (within 10 months after the well is completed).
  - (2) Topsoil removed from the drill site will be used to recontour the pit area and any unused portions of the drill pad to the original natural level, as nearly as possible, and reseeded as per BLM specifications.

#### 4. Location and Type of Water Supply:

The well will be drilled with a combination brine and fresh water mud system as outlined in the drilling program. The water will be obtained from commercial water stations in the area and hauled to the location by transport truck over the existing and proposed access roads shown in Exhibit #3. If a commercial fresh water source is nearby, fasline may be laid along existing road ROW's and fresh water pumped to the well. No water well will be drilled on the location.

#### 5. <u>Source of Construction Materials:</u>

All caliche required for construction of the drill pad and the proposed new access road (approximately 1500 cubic yards) will be obtained from a BLM - approved caliche pit. All roads and pads will be constructed of 6" of rolled and compacted caliche.

#### 6. <u>Methods of Handling Water Disposal:</u>

A. Drill cuttings not retained for evaluation purposes will be disposed into the reserve pit.

- B. Drilling fluids will be contained in lined working pits. The reserve pit will contain any excess drilling fluid or flow from the well during drilling, cementing, and completion operations.
- C. The reserve pit will be an earthen pit, approximately 120' X 120' X 6' deep. A portion of the pit will be lined with plastic should be more than adequate for normal drilling operations.
- D. Water produced from the well during completion may be disposed into the reserve pit.
- E. <u>Garbage and trash produced during drilling or completion</u> <u>operations will be hauled off.</u> All waste material will be contained to prevent scattering by the wind. All water and fluids will be disposed of into the reserve pit. Salts and other chemicals produced during drilling or testing will be disposed into the reserve pit. No toxic waste or hazardous chemicals will be produced by this operation.
- F. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned-up within 30 days. No adverse materials will be left on location. The reserve pit will be completely fenced until it has dried. When the reserve pit is dry enough to breakout and fill, the reserve pit will be leveled and reseeded as per BLM specifications. In the event of a dry hole, the location will be ripped and seeded, as per BLM Specifications, and a dry hole marker will remain.

#### 7. Ancillary Facilities:

No airstrip, campsite, or other facilities will be built as a result of the operations on this well.

#### 8. <u>Well Site Layout:</u>

- A. The drill pad layout, is shown in Exhibit Three. Dimensions of the pad and pits are shown. Top soil, if available, will be stockpiled per BLM specifications as determined at the on-site inspection.
- B. The reserve pit will be lined with a high-quality plastic sheeting.

#### 10. Plans for Restoration of the Surface:

A. Upon finishing drilling and/or completion operations, all equipment and other material not needed for operations will be removed.

All trash, garbage, and pit lining will be hauled away in order to leave the location in an aesthetically pleasing condition. All pits will be filled and the location leveled within 10 months after abandonment.

- B. Three sides of the reserve pit will be fenced prior to and during drilling operations. At the time that the rig is removed, the reserve pit will be fenced on the rig (fourth) side. The fencing will remain in place until the pit area is cleaned-up and leveled. No oil will be left on the surface of the fluid in the pit.
- C. Upon completion of the proposed operations, if the well is completed, the reserve pit area will be treated as outlined above within the same prescribed time. Any additional caliche required for facilities will be obtained from a BLM approved caliche pit. Topsoil removed from the drill site will be used to recontour the pit area to the original natural level and reseeded as per BLM specifications.

#### 11. <u>Surface Ownership</u>:

The wellsite and lease is located on Federal Surface.

- A. The area around the well site is grassland and the top soil is sandy. The vegetation is native scrub grasses with abundant oakbrush, sagebrush, yucca, and prickly pear.
- B. A Cultural Resources Examination has been requested and will be forwarded to your office in the near future.

#### 12. Lessee's and Operator's Representative:

The Marbob Energy Corporation representative responsible for assuring compliance with the surface use plan is as follows:

Johnny C. Gray **Marbob Energy Corporation** 324 W. Main. Suite 103 P. O. Drawer 227 Artesia, New Mexico 88211 Phone: 505/748-3303 (office) 505/885-3879 (home)

#### 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 currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and 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 provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date: Signed:

Dean Chumbley

#### 12. Lessee's and Operator's Representative:

The Marbob Energy Corporation representative responsible for assuring compliance with the surface use plan is as follows:

Johnny C. Gray Marbob Energy Corporation 324 W. Main, Suite 103 P. O. Drawer 227 Artesia, New Mexico 88211 Phone: 505/748-3303 (office) 505/885-3879 (home)

#### **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 currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and 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 provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date: 1-29-2004

Signed:

/Dean Chumbley

#### 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 29, 2004

Lease #: NM-108025 Dry Land Shiner Federal

Legal Description: Section 3: Lots 1, 2, 8, 9, 15, 16, 17, 18: Tract 37; N/2 SW/4, E/2 SE/4 Township 21 South, Range 25 East Eddy County, New Mexico

Formation(s):

Bond Coverage: Statewide

BLM Bond File #: 585716

Melanie J. Parker ( Land Department

#### MARBOB ENERGY CORPORATION HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

#### I. <u>HYDROGEN SULFIDE TRAINING</u>

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:

- 1. The hazards and characteristics of hydrogen sulfide  $(H_2S)$ .
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- 3. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- 4. The proper techniques for first aid and rescue procedures.

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

- 1. The effects of H<sub>2</sub>S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- 3. The contents and requirements of the H<sub>2</sub>S 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. <u>H<sub>2</sub>S SAFETY EQUIPMENT AND SYSTEMS</u>

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the

first zone containing or reasonably expected to contain H<sub>2</sub>S.

- 1. Well Control Equipment:
  - A. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
  - B. Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head.
- 2. Protective equipment for essential personnel:
  - A. Mark II Surviveair 30-minute units located in the dog house and at briefing areas, as indicated on well site diagram.
- 3. H<sub>2</sub>S detection and monitoring equipment:
  - A. 2 portable H<sub>2</sub>S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H<sub>2</sub>S levels of 20 ppm are reached.
  - B. 1 portable SO2 monitor positioned near flare line.
- 4. Visual warning systems:
  - A. Wind direction indicators as shown on well site diagram.
  - B. 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.
- 5. Mud Program:
  - A. The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H<sub>2</sub>S scavengers will minimize hazards when penetrating H<sub>2</sub>S bearing zones.
  - B. A mud-gas separator will be utilized.

- 6. Communication:
  - A. Radio communications in company vehicles including cellular telephone and 2-way radio.
  - B. Land line (telephone) communications at field office.
- 8. Well testing:
  - A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill

stem testing operations conducted in an  $H_2S$  environment will use the closed chamber method of testing.







Exhibit One

## Well Site Lay-Out Plat



275'

Dry Land SWD #1 2852' FSL & 377' FEL Section 3, T21S, R25E Eddy County, New Mexico

### **EXHIBIT THREE**