

OCD-ARTESIA

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-0557371
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator MArBob Energy Corporation 14049		7. If Unit or CA Agreement, Name and No.
3a. Address PO Box 227, Artesia, NM 88211-0227		8. Lease Name and Well No. AAO Federal #12 29723
3b. Phone No. (include area code) 505-748-3303		9. API Well No. 30-015-34998
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 890 FSL & 1650 FWL At proposed prod. zone N RECEIVED JUL - 5 2006		10. Field and Pool, or Exploratory Red Lake; Glorieta Yeso N.E.
14. Distance in miles and direction from nearest town or post office* OCD-ARTESIA		11. Sec., T., R., M., or Blk. and Survey or Area Section 1; T18S-R27E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of Acres in lease	12. County or Parish Eddy County
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 4000'	13. State NM
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3607 GL	22. Approximate date work will start* January 5, 2006	17. Spacing Unit dedicated to this well
23. Estimated duration 8 days		20. BLM/BIA Bond No. on file 585716
24. Attachments Roswell Controlled Water Basin		

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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature Nancy Bratcher	Name (Printed/Typed) Nancy Bratcher	Date 12/6/05
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Land Department

Approved by (Signature) /s/ Tony J. Herrell	Name (Printed/Typed) /s/ Tony J. Herrell	Date JUN 30 2006
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 1 YEAR

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)

WITNESS: 8 5/8" CASING CEMENT JOB

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

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

29.5

1625 N. FRENCH DR., HOBBS, NM 88240

State of New Mexico
Energy, Minerals and Natural Resources Department

1301 W. GRAND AVENUE, ARTESIA, NM 88210

1000 Rio Brazos Rd., Aztec, NM 87410

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 JUNE 10, 2003

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 96386	Pool Name RED LAKE; GLORIETA YESO, NORTHEAST
Property Code 29793	Property Name A A O FEDERAL		Well Number 12
OGRID No. 14049	Operator Name MARBOB ENERGY CORPORATION		Elevation 3607'

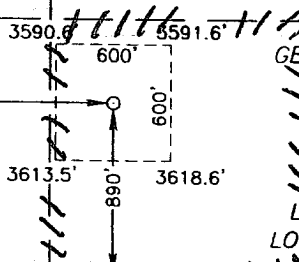
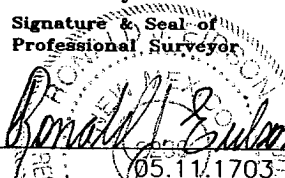
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	1	18-S	27-E		890	SOUTH	1650	WEST	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

LOT 4	LOT 3	LOT 2	LOT 1
<div style="display: flex; justify-content: space-between;"><div style="width: 45%;"><p style="text-align: center;">GEODETTIC COORDINATES NAD 27 NME</p><p>Y=644374.6 N X=530309.0 E</p><p>LAT.=32°46'17.18" N LONG.=104°14'05.01" W</p></div><div style="width: 50%; border-left: 1px solid black; padding-left: 10px; padding-top: 10px;"><div style="text-align: center;">OPERATOR CERTIFICATION</div><p><i>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</i></p><div style="border-bottom: 1px solid black; margin-bottom: 5px;"><i>Nancy Bratcher</i></div><div style="display: flex; justify-content: space-between;">Signature</div><div style="border-bottom: 1px solid black; margin-bottom: 5px;">Nancy T. Bratcher</div><div style="display: flex; justify-content: space-between;">Printed Name</div><div style="border-bottom: 1px solid black; margin-bottom: 5px;">Land Department</div><div style="display: flex; justify-content: space-between;">Title</div><div style="border-bottom: 1px solid black; margin-bottom: 5px;">12/6/2005</div><div style="display: flex; justify-content: space-between;">Date</div></div></div> <div style="border-left: 1px solid black; padding-left: 10px; padding-top: 10px;"><div style="text-align: center;">SURVEYOR CERTIFICATION</div><p><i>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.</i></p><div style="text-align: center; margin: 10px 0;">NOVEMBER 7, 2005</div><div style="display: flex; justify-content: space-between;"><div style="width: 60%;">Date Surveyed</div><div style="width: 40%;">LA</div></div><div style="border-bottom: 1px solid black; margin-bottom: 5px;">Signature & Seal of Professional Surveyor</div><div style="text-align: center;"><div style="display: flex; justify-content: space-between; margin-top: 10px;">Certificate No. RONALD J. EIDSON3239</div></div></div>			

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

AAO Federal No. 12
890' FSL & 1650' FWL
Section 1-T18S-R27E
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. The geological surface formation is Permian:
2. The estimated tops of geologic markers are as follows:

Permian	Surface	San Andres	1850'
Seven Rivers	450'	Glorietta	3250'
Queen	1050'		

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

Upper Permian Sands	180'	Fresh Water
Queen	1050'	Oil
San Andres	1850'	Oil
Glorietta	3250'	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 8 5/8" casing at 350' 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 inserting a float shoe joint into the 5 1/2" production casing which will be run at TD.

4. Proposed Casing Program:

Hole Size	Interval	OD Casing	Wt	Grade
12 1/4"	0 - 350'	8 5/8"	24#	J-55 LTC New R-3
7 7/8"	350' - TD	5 1/2"	17#	J-55 LTC New R-3

Proposed Cement Program:

8 5/8" Surface Casing: Cement w/ 300 sx Class C. Circulate to surface.

5 1/2" Production Casing: Cement w/ 750 sx Class C.

5. Pressure Control Equipment: See Exhibit 1.

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

Depth	Type	Weight (ppg)	Viscosity (sec)	Waterloss (cc)
0 – 350'	Cut Brine	8.5	28	N.C.
350' – 4000'	Cut Brine	9.8 – 10.2	40 -45	N.C.

7. Auxiliary Equipment: Kelly Cock; Sub with full opening valve on floor; and drill pipe connections.

8. Testing, Logging and Coring Program:

No drillstem tests are anticipated.

The electric logging program will consist of Dual Laterolog Micro SFL, Spectral Density Dual Spaced Neutron Csg Log, and Depth Control Log.

No conventional coring is anticipated.

9. No abnormal pressures or temperatures are anticipated.
10. Anticipated starting date: As soon as possible after approval.

MARBOB ENERGY CORPORATION
MULTI-POINT SURFACE USE AND OPERATIONS PLAN

AAO Federal No. 12
890' FSL & 1650' FWL
Section 1-T18S-R27E
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:

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.

DIRECTIONS:

From the intersection of U.S. Highway #82 and County Road #204 (Hilltop Road) go south east on County Road #204 for approx. 2.3 miles. Turn right and go west approx. 0.2 miles. Turn left and go south approx. 1.0 miles. Turn right and go west approx. 0.45 miles. Turn right and go north approx. 0.25 miles. Turn right and go east approx. 0.1 miles to this location.

2. PLANNED ACCESS ROAD:

No new access road is necessary.

3. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. If well is productive, Marbob Energy Corporation will utilize the existing facility located on the AAO Federal #2 well pad.

4. METHODS OF HANDLING WASTE DISPOSAL:

- A. Drill cuttings will be disposed of in the lined pit.
- B. Drilling fluids will be allowed to evaporate in the lined pit until the pit is dry.
- C. Water produced during completion may be disposed into the lined reserve pit.
- D. All trash and debris will be removed from the wellsite within 30 days after finishing drilling and/or completion operations. All waste material will be contained to prevent scattering by the wind.

5. WELLSITE LAYOUT:

- A. Exhibit 3 shows the relative location and dimensions of the well pad, the pit.
- B. The reserve pit will be lined with high quality plastic sheeting.

6. PLANS FOR RESTORATION:

- A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the wellsite in as aesthetically pleasing a condition as possible.
- B. Reserve pit will be fenced until they have dried and been leveled.
- C. All rehabilitation and/or vegetation requirements of the BLM will be complied with and will be accomplished as expeditiously as possible. All pits will be filled level within 90 days after abandonment.

7. SURFACE OWNERSHIP:

The well site and lease are 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.

8. OTHER INFORMATION:

- A. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.

9. 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

10. 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.

12/6/05
Date

Nancy Bratcher
Nancy Bratcher
Land Department

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 (H₂S).
- B. The proper use and maintenance of personal protective equipment and life support systems.
- C. The proper use of H₂S 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 H₂S 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 H₂S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S 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. H₂S SAFETY EQUIPMENT AND SYSTEMS

Note: All H₂S 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 H₂S.

A. Well Control Equipment:

Flare line.

Choke manifold.

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

Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head.

B. Protective equipment for essential personnel:

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

C. H₂S detection and monitoring equipment:

2 - portable H₂S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H₂S 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 H₂S circulated to the surface.

A mud-gas separator will be utilized.

F. Metallurgy:

All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.

G. Communication:

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

W A R N I N G

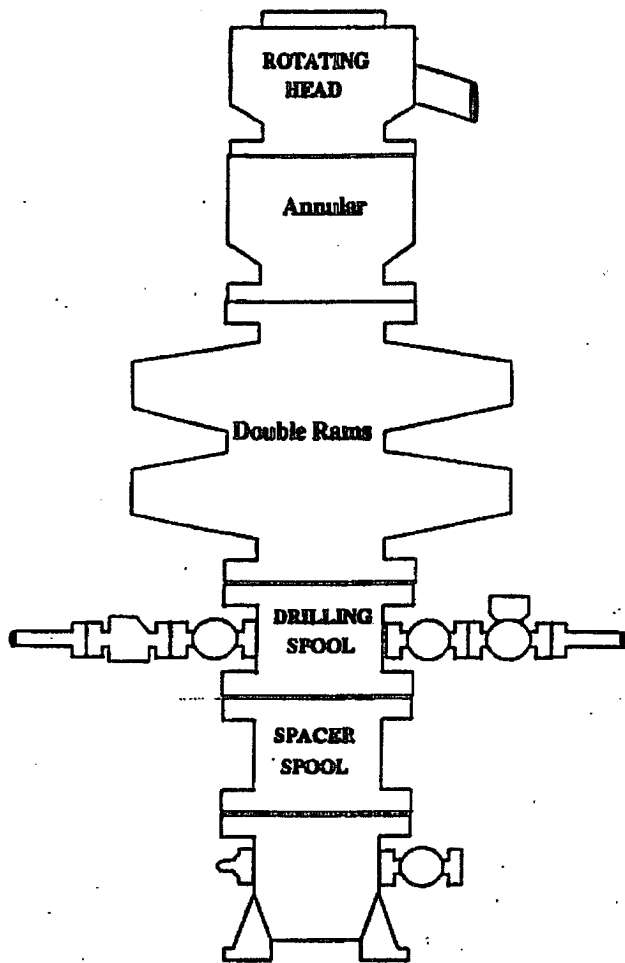
**YOU ARE ENTERING AN H₂S AREA
AUTHORIZED PERSONNEL ONLY**

- 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**

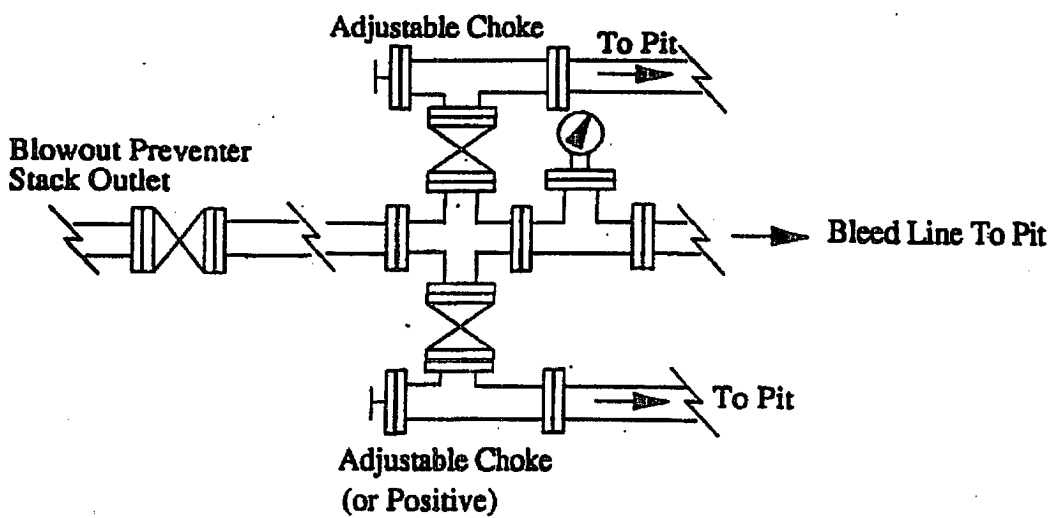
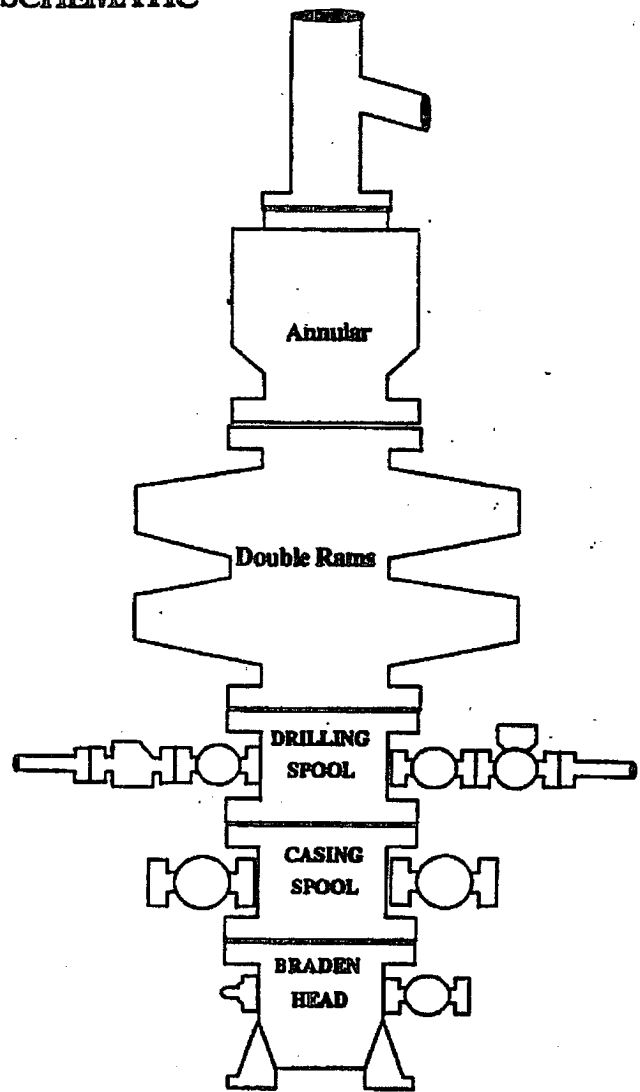
MARBOB ENERGY CORPORATION

1-505-748-3303

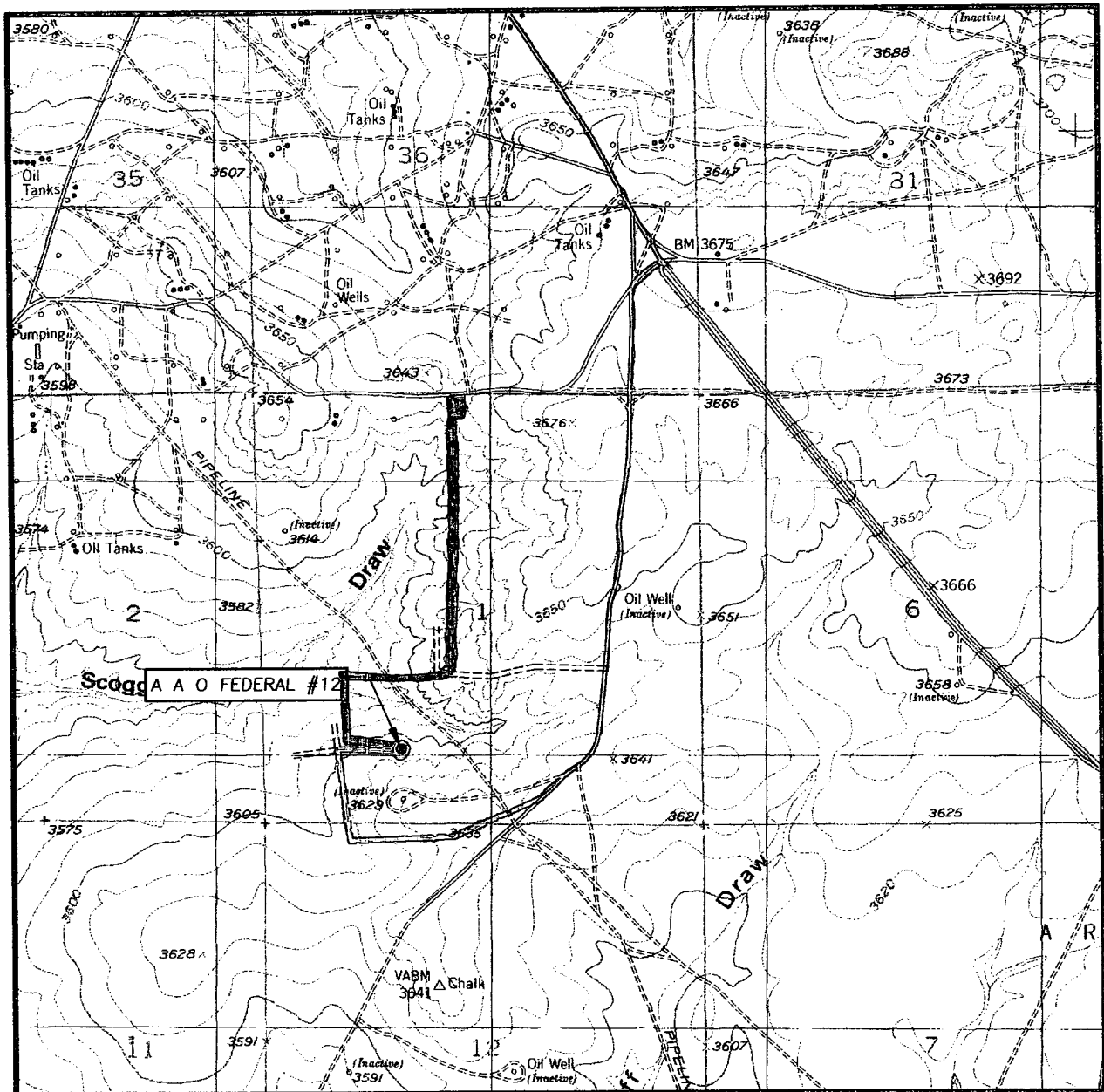
BOPE SCHEMATIC



Choke Manifold



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
RED LAKE, N.M. - 10'

SEC. 1 TWP. 18-S RGE. 27-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 890' FSL & 1650' FWL

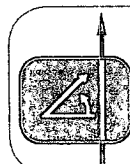
ELEVATION 3607'

OPERATOR MARBOB ENERGY CORPORATION

LEASE A A O FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
RED LAKE, N.M.

Existing Roads
Flowline



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

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: MARBOB ENERGY CORPORATION
Well Name & No. 12 – AAO FEDERAL
Location: 890' FSL & 1650' FWL – SEC 1 – T18S – R27E – EDDY COUNTY
Lease: NM-0557371

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 234-5972 (Daytime) or (505) 361-2822 (After hours) -for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 8-5/8 inch 5-1/2 inch

C. BOP tests

2. **There is no known occurrence of H₂S gas in Sec 1 – T18S – R27E** although H₂S has been reported in Sections 7, 8, 9, 12, 13 and 15 – T18S – R27E.

3 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.

4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

II. CASING:

1. The 8-5/8 inch surface casing shall be set at 350 feet, below usable water and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the 5-1/2 inch production casing is **cement shall extend upward a minimum of 500 feet above the uppermost hydrocarbon bearing intervals.**

III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 8-5/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.