OPERATIONS COPY

Form 3160-3
(February 2005)

FEB 08 2010

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No.
NMLC 029395A

6 If Indian, Allotee or Tribe Name

1a Type of work ☐ DRILL ☑ REENTER

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.
Tony Federal #32

2. Name of Operator
Marbob Energy Corporation

9 API Well No.
30-015-20142

3a. Address **P.O. Box 227, Artesia, NM 88211-0227**

3b Phone No *(include area code)*
575-748-3303

10 Field and Pool, or Exploratory
Cedar Lake; Abo

4. Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface **1980' FSL & 660' FWL**
At proposed prod zone

11. Sec , T. R. M. or Blk. and Survey or Area
Section 18, T17S - R31E

14 Distance in miles and direction from nearest town or post office*
About 11 miles from Maljamar, NM

12 County or Parish
Eddy County

13. State
NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) **660'**	16 No of acres in lease **609.43**	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 **6900'**	20 BLM/BIA Bond No on file **NMB000412**
21. Elevations (Show whether DF, KDB, RT, GL, etc) **3758' GL**	22 Approximate date work will start* **01/01/2009**	23 Estimated duration **2 Weeks**

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form

1. Well plat certified by a registered surveyor.
2. A Drilling Plan
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office)
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature Nancy T. Agnew	Name *(Printed Typed)* **Nancy T. Agnew**	Date **12/01/2009**
Title **Land Department**		
Approved by *(Signature)*	Name *(Printed Typed)* /s/ Don Peterson	Date 2/3/10
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 USC Section 1001 and Title 43 USC Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

*(Instructions on page 2)

Roswell Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& 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 & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 15,2009
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-20142	11620	Cedar Lake; Abo

[4] Property Code	[5] Property Name	[6] Well Number
	Tony Federal	32

[7] OGRID No.	[8] Operator Name	[9] Elevation
14049	Marbob Energy Corporation	3758

[10] Surface Location

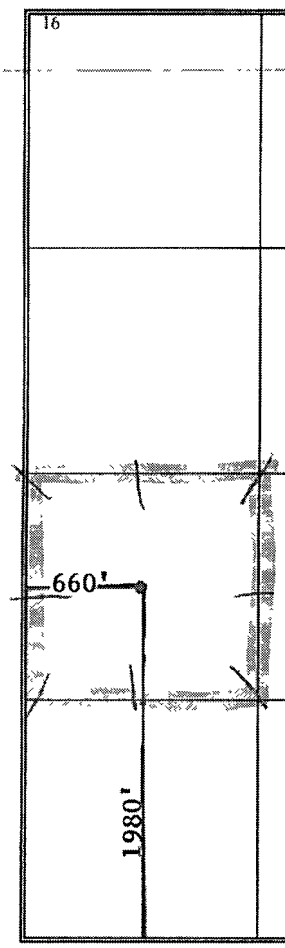
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	18	17S	31E		1980'	South	660'	West	Eddy

[11] 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

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] 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.



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained 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 a mineral or working interest or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division

Nancy T Agnew — 11/20/09
Signature — Date

Nancy T. Agnew
Printed Name

[18] 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.

Date of Survey

Signature and Seal of Professional Surveyor

Certificate Number

Be sure to fill in all info!

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
SINCLAIR OIL & GAS COMPANY	TURNER "A" SP	37

Unit Letter	Section	Township	Range	County
L	18	17 SOUTH	31 EAST	EDDY

Actual Footage Location of Well:
1980 feet from the SOUTH line and 660 feet from the WEST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
	CISCO	WILDCAT	~~40~~ Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

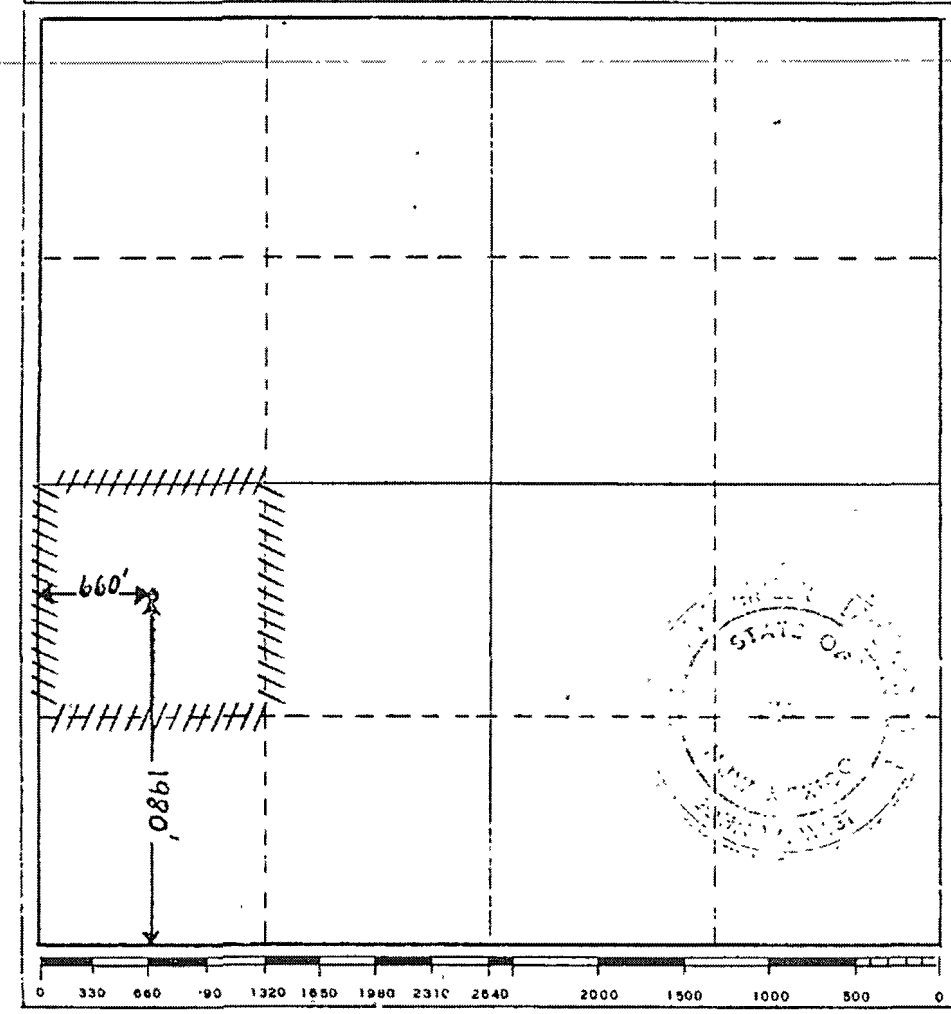
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

R E Cross Jr.

Name: R. E. CROSS, JR.

Position: ADMINISTRATIVE CLERK

Company: SINCLAIR OIL & GAS CO.

Date: MAY 2, 1968

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 knowledge and belief.

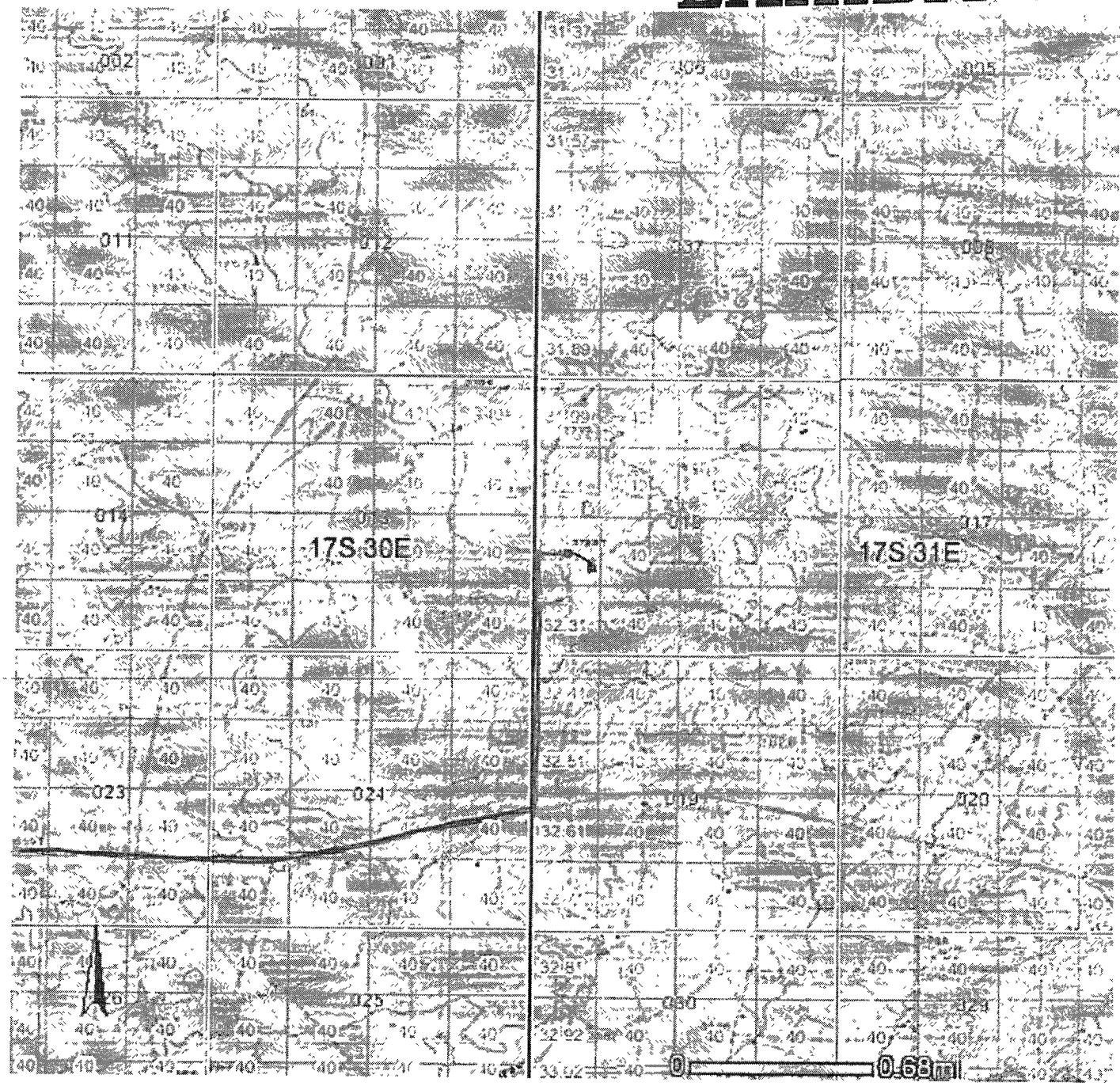
Date Surveyed: May 2, 1968

Registered Professional Engineer and/or Land Surveyor

John W West

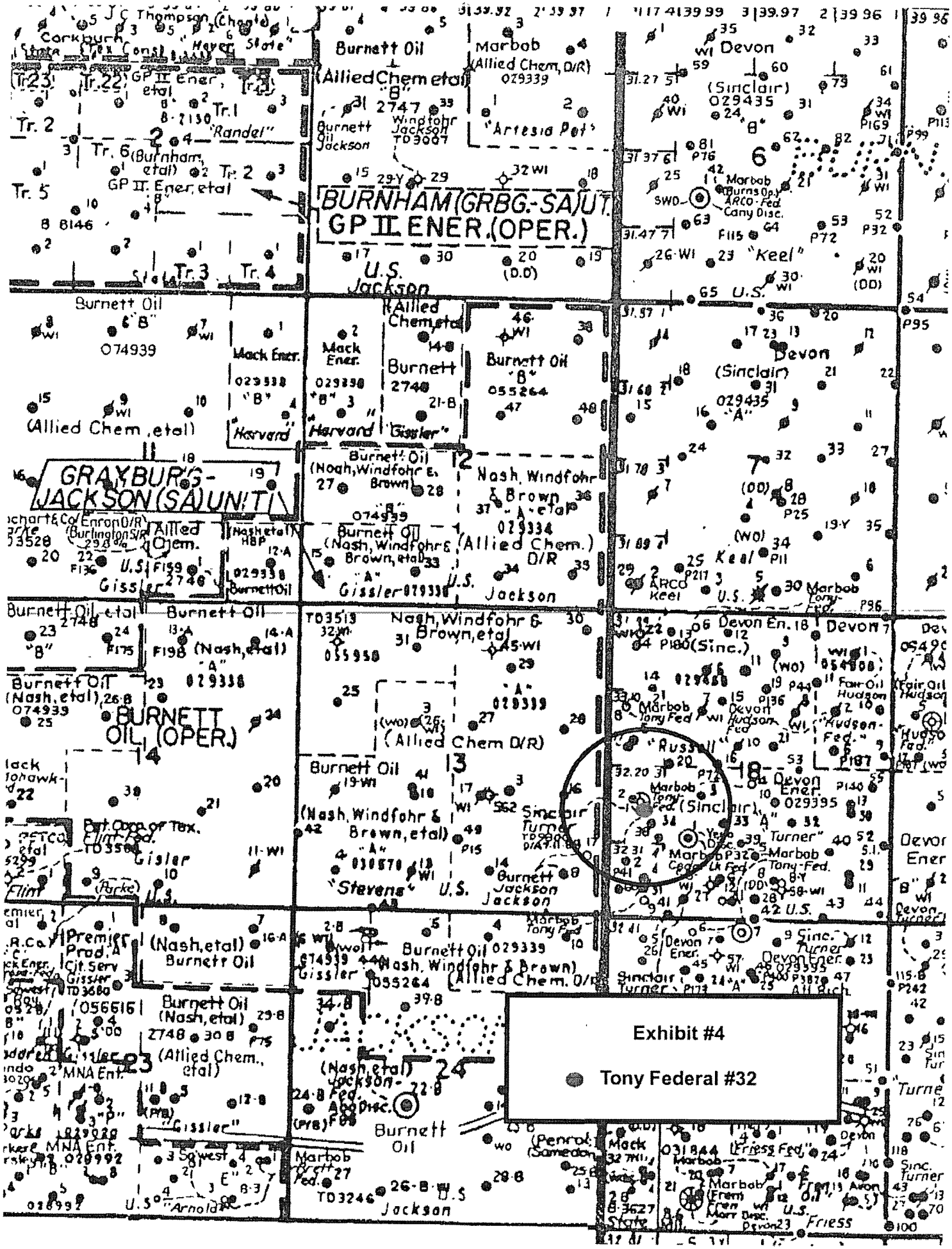
Certificate No. 676

EXHIBIT #2



Existing Roads
Proposed Flowline

11\23\2009


BURNHAM (GRBG.-SA) UT.
GP II ENER. (OPER.)
GRAYBURG-JACKSON (SA) UNIT
BURNETT OIL (OPER.)
Exhibit #4
Tony Federal #32

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

Re-Entry
Tony Federal #32
(Previously "Turner "A" SP #37")
Surf: 1980' FSL & 660' FWL
Section 18, T17S, R31E
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:**

Rustler	300'
TOS	600'
BOS	1300'
Yates	1447'
7 Rivers	1760'
Queen	2363'
San Andres	3109'
Glorieta	4584'
Yeso	4640'
Tubb	6142'
Abo	6708'

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

7 Rivers	1760'	Oil
Queen	2363'	Oil
San Andres	3109'	Oil
Yeso	4640'	Oil

Abo 6708' ? ? - Tubb ?

No other formations are expected to give up oil, gas, or fresh water in measurable quantities. The surface fresh water sands are protected by 13 3/8" casing at 403' with cement circulated to surface.

Surrounding wells require artificial lift to bring fluid to surface.

4. **Casing Program: (13 3/8" and 8 5/8" Casings Are In Place)**

Hole Size	Interval	OD Casing	New or Used	Wt	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17 ½"	0'–403'	13 3/8" In Place	New	48#	STC	H-40	N/A	N/A	N/A
11"	0'-3900'	8 5/8" In Place	New	24, 32#	-	J55	N/A	N/A	N/A
7 7/8"	0'-6900'	5 ½"	New	17#	LTC	J55	1.52	1.125	2.44

Cement Program:

13 3/8" set at 403' and cemented with 400 sx. Cement to surface (in place).
8 5/8" set at 3900' and cemented with 2000 sx cement with TOC 240' by temperature survey (in place).
5 ½" will be set at 6900', DV tool approx 3700', 1st stage cemented with 825 CF cement (approximately 500 sx. Super H), 2nd stage cemented to surface with 775 CF cement (approximately 375 sx. Halliburton Light).

5. **Minimum Specifications for Pressure Control:**

Nipple up on 8 5/8" int. with 3M double ram system tested to 300 psi for 30 minutes then 2000 psi for 30 minutes with reverse unit pump and chart recorder.

BOP will be operationally checked each 24 hour period. BOP 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.

Well is currently cased from 3900' to surface and is subnormally pressured. The Yeso zone requires artificial lift to bring fluid to surface. Because well is already cased to 3900' and the Yeso is subnormally pressured, we request approval for the modified 3M BOP and choke manifold shown on the attached schematic diagram.

6. **Estimated BHP:** 2870 psi – No abnormal conditions expected. Surrounding wells require artificial lift to bring fluid to surface. Est. BHT: 120°F

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

Depth	Type System	Mud Weight	Viscosity (sec)	Waterloss (cc)
0 – 6900'	Cut Brine	8.7-9.0		

No Fluid Loss Control

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 when reentry operations start until cleaned out to 6,900'. If any H2S is detected, detection equipment will remain in operation until well work is completed.

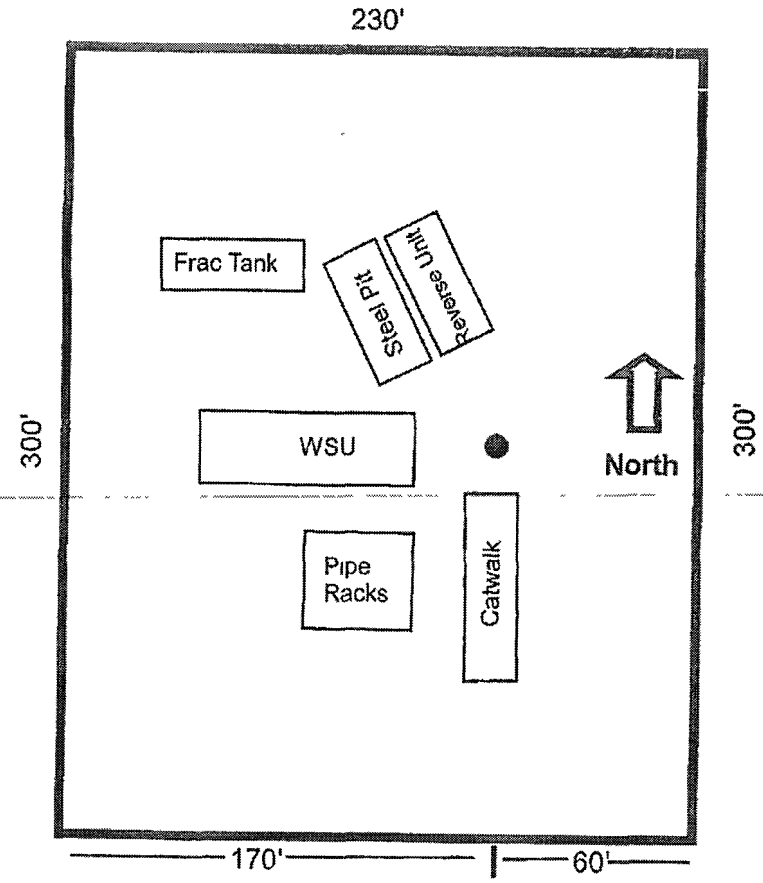
10. **Testing, Logging and Coring Program:**
Run porosity and resistivity logs from 6900'-3900'.

11. **Potential Hazards:**
a. No abnormal pressures or temperatures are expected. There is H2S in this area in the 7R-Qn-Grbg-SA-Yeso. 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: 2870 psi.

The Yeso is subnormally pressured.

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. Reentry and completion operations are expected to take 14 days.

Well Site Lay-Out Plat

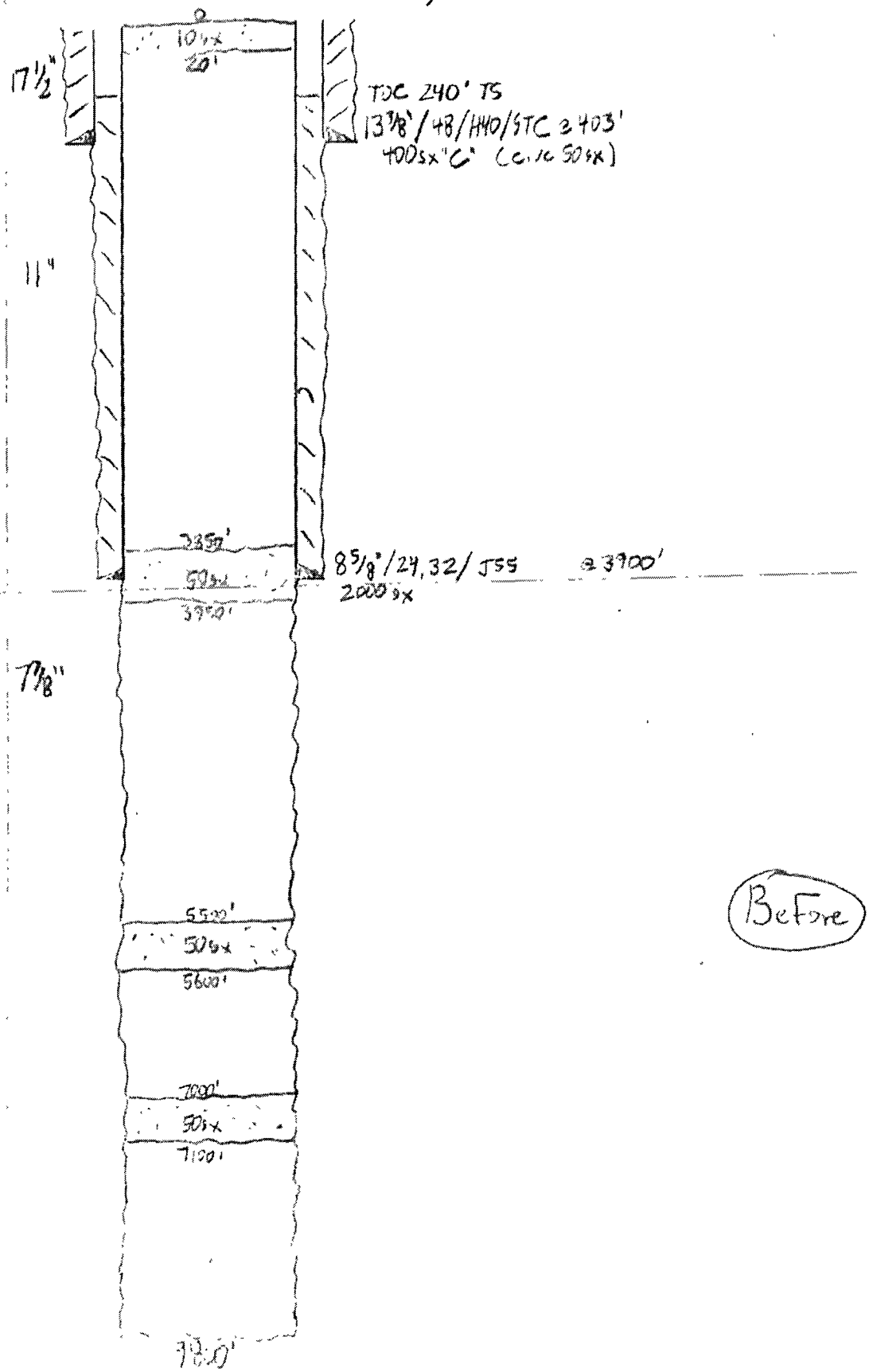


Re-Entry
Tony Federal #32
(Previously "Turner "A" SP #37")
Surf: 1980' FSL & 660' FWL
Section 18, T17S, R31E
Eddy County, New Mexico

EXHIBIT THREE

30-015-20142

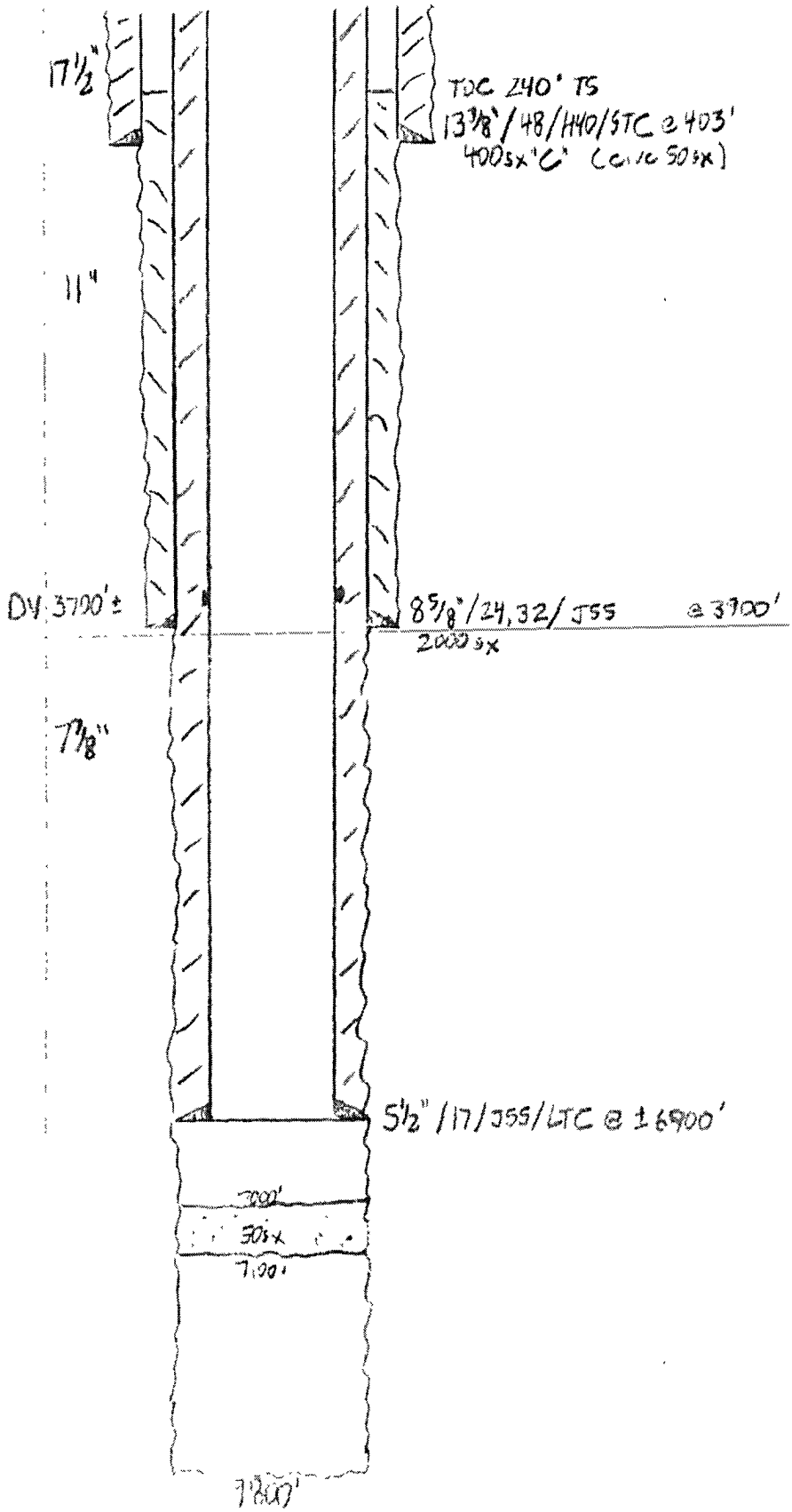
Tony Fed 30 32
(Formerly Sinclair Turner "A" SP-37)
1980' FSL, 660' FWL
L-18-17S-31E
Eddy NM



Before

30-015-20142

Tony Fed 3Q 2
(Formerly Sinclair Turner "A" SP-37)
1780' FSL, 660' FWL
L-18-17S-31E
Eddy NM



Slg 1: 825 CF cmt 3700-6900'
Slg 2: 1775 CF cmt 0-3700'

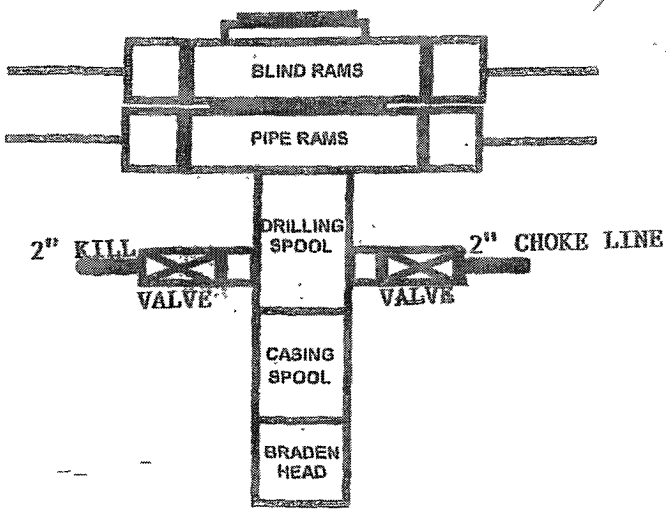
After

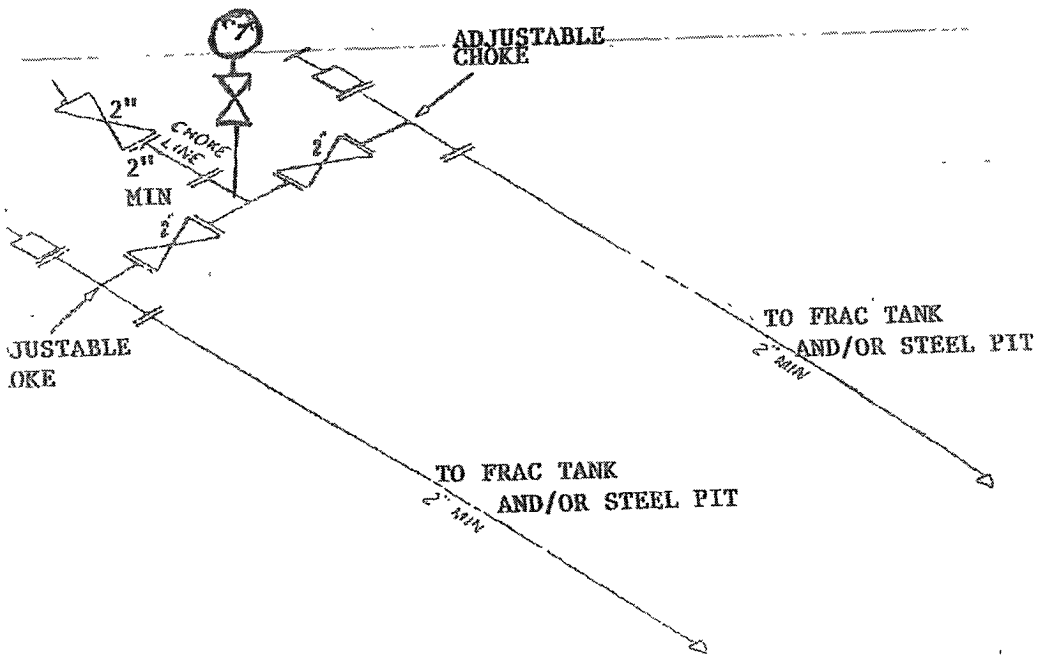
SH SYSTEM

C ED HOLE, SUBNORMAL PRESSURE

2M

Does not meet
C.C.E requirements for
3M.





IM CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES

MAY VARY

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.

Marbob Energy has conducted a review to determine if an H2S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal. H2S concentrations of wells in this area from surface to TD are low enough; therefore we do not believe that an H2S Contingency Plan would be necessary.

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

1-575-748-3303

EMERGENCY CALL LIST

	Office	Mobile	Home
Marbob Energy Corp.	575-748-3303		
Shane Gray	575-748-3303	575-748-5959	575-746-0860
Johnny C. Gray	575-748-3303	575-748-5983	575-885-3879
Raye Miller	575-748-3303	575-513-0176	575-746-9577
Dean Chumbley	575-748-3303	575-748-5988	575-748-2426

EMERGENCY RESPONSE NUMBERS
Eddy County, New Mexico

State Police	575-748-9718
Eddy County Sheriff	575-746-2701
Emergency Medical Services (Ambulance)	911 or 575-746-2701
Eddy County Emergency Management (Harry Burgess)	575-887-9511
State Emergency Response Center (SERC)	575-476-9620
Carlsbad Police Department	575-885-2111
Carlsbad Fire Department	575-885-3125
New Mexico Oil Conservation Division	575-748-1283
Indian Fire & Safety	800-530-8693
Halliburton Services	800-844-8451

MARBOB ENERGY CORPORATION
MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Re-Entry
Tony Federal #32
(Previously "Turner "A" SP #37")
Surf: 1980' FSL & 660' FWL
Section 18, T17S, R31E
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 Loco Hills, New Mexico proceed east on highway 82 for 4 miles to mile marker 136. Turn north on Skelly Road (CR 221) and proceed .9 miles. Turn east on lease road and proceed .1 miles.

2. PLANNED ACCESS ROAD:

Marbob will be using existing access roads. See directions above.

3. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. In the event the well is found productive, the Tony Federal Central 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 a third party electrical provider.
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 cut brine water (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 Mexico

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 (575)748-3303
Cell (575)748-5988

B. Reentry/Completion Operations
Donnie Hill, Operations Manager
Marbob Energy Corporation
P. O. Box 227
Artesia, NM 88211-0227
Phone (575)748-3303
Cell (575)748-5566

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 3, 2009

Lease #: NMLC029395A
Tony Federal #32

Legal Description: Sec. 18-T17S-R31E
Eddy County, New Mexico

Formation(s): Permian

Bond Coverage: Statewide

BLM Bond File #: NMB000412

Marbob Energy Corporation

Nancy T. Agnew
Land Department

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

12/3/09
Date

Nancy Agnew
Land Department

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Marbob Energy Corp
LEASE NO.:	NMLC029395A
WELL NAME & NO.:	Tony Federal # 32
SURFACE HOLE FOOTAGE:	1980' FSL & 660' FWL
BOTTOM HOLE FOOTAGE	Same
LOCATION:	Section 18, T. 17 S., R 31 E., NMPM
COUNTY:	Eddy County, New Mexico

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms. Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

An irregular-shaped caliche pad will be required in order to avoid a large excavation to the east of the proposed well-site. The pad dimensions will be 230 X 300, off-setting the pad to extend 170' to the west of the well-bore and only 60' to the east of the wellbore. No access road is required.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 8 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. RESERVE PITS

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 150' X 150' on the West side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

Tanks are required for drilling operations: No Pits.

D.
FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the
Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning

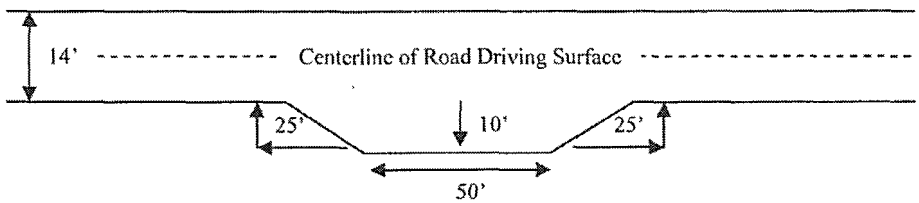
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Turnouts

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

Standard Turnout – Plan View

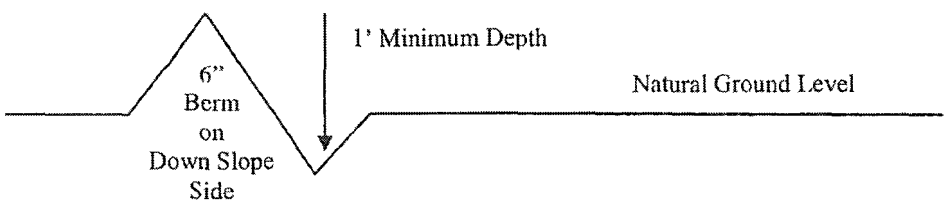


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} \div 100' = 200'$ lead-off ditch interval

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

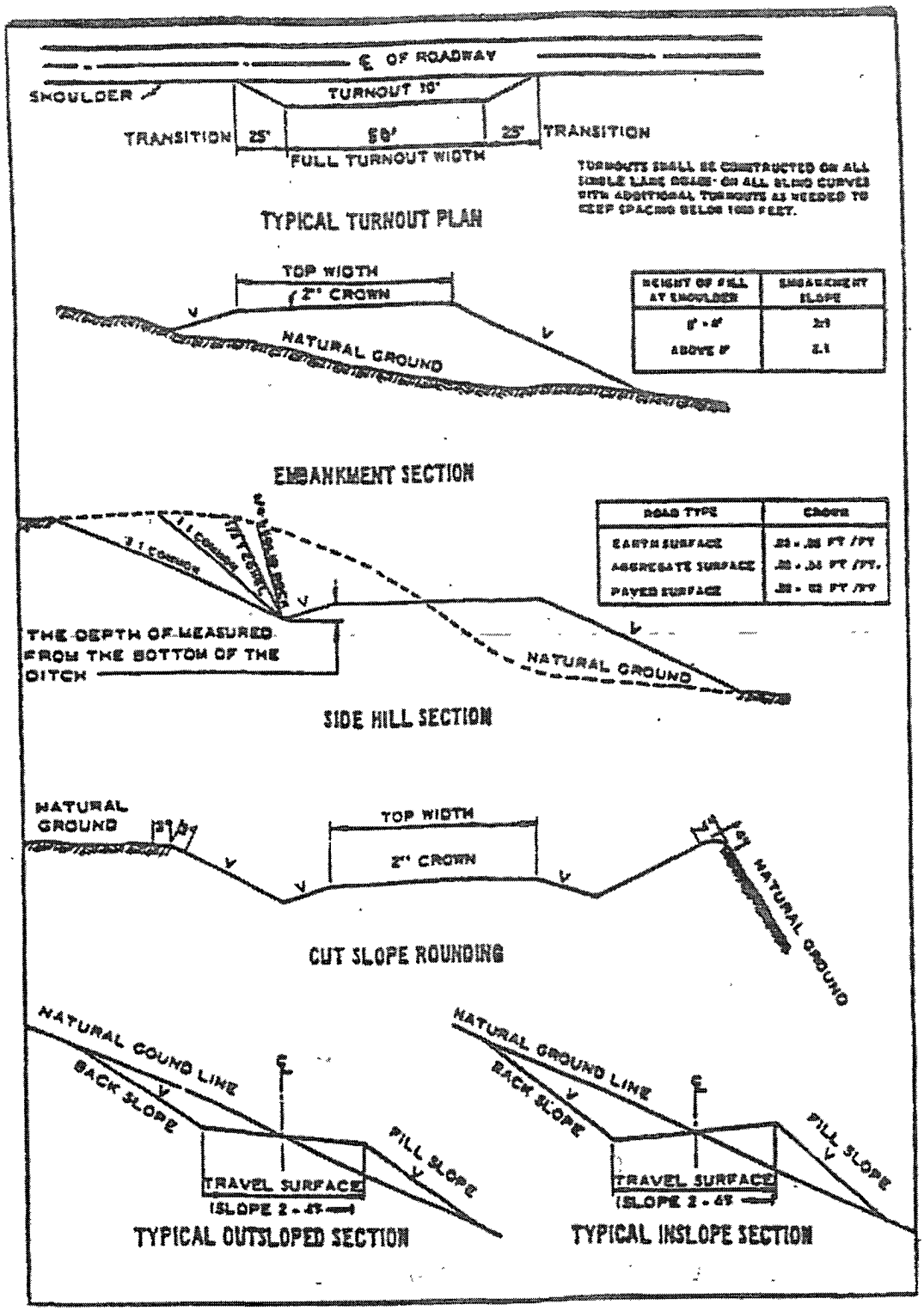
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING – RE-ENTRY

A. DRILLING OPERATIONS REQUIREMENTS

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

a. Starting re-entry
b. CIT test on 8-5/8" casing
c. Setting and Cementing of production casing string
d. BOPE tests

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

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling out the plug at the bottom of the 8-5/8" casing. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. **The logs will be submitted to the BLM office 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies.**

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Possible lost circulation in the Grayburg and San Andres formations.

1. **The 13-3/8" surface casing is set at 403 feet with cement circulated to surface.**

2. **The 8-5/8" intermediate casing is set at 3900 feet with a TOC of 240' by temperature survey. Per schematic submitted, well was not plugged properly at the surface.**

A CIT is to be performed on the 8-5/8" casing per Onshore Oil and Gas Order 2.III.B.1.h prior to drilling the plug at 3850 feet. CIT pressure to be 1500 psi.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

DV tool to be set a minimum of 50' below intermediate shoe to provide required cement across the intermediate shoe.

a. First stage to DV tool, cement shall:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool, cement shall:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Additional cement may be required as excess cement calculates to 11%.**

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **8-5/8"** intermediate casing shoe shall be **2000 (2M)** psi.

3. 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.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

MAK/WWI 123109

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

B. PIPELINES – not requested in APD

C. ELECTRIC LINES – not requested in APD

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RESERVE PIT CLOSURE

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A
**Four-winged Saltbush	5lbs/A

* This can be used around well pads and other areas where caliche cannot be removed.

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.