New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

POTASH

OPER. OGRID NO. 14049
PROPERTY NO. 33018
POOL CODE 80750 97224
EFF. DATE 10-31-03
API NO. 30-025-36470

RECEIVED
2003 SEP 3 PM 12 28
BUREAU OF LAND MGMT.
CARLSBAD FIELD OFFICE

Form 3160-3
(September 2001)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

0008

5. Lease Serial No. NM35612
6. If Indian, Allottee or Tribe Name
7. If Unit or CA Agreement, Name and No.
8. Lease Name and Well No. String Bean Federal Com #1
9. API Well No. 30-025-36470
10. Field and Pool, or Exploratory (wildcat) ~~Lusk~~ Morrow
11. Sec., T., R., M., or Blk. and Survey or Area Sec. 31 T19S, R32E
12. County or Parish Lea
13. State NM

1a. Type of Work: [X] DRILL [ ] REENTER

1b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [ ] Single Zone [ ] Multiple Zone

2. Name of Operator: Marbob Energy Corporation

3a. Address: PO Box 227, Artesia, NM 88211-0227

3b. Phone No. (include area code): 505-748-3303 Fax 505-746-2523

4. Location of Well (Report location clearly and in accordance with any State requirements.*)
At surface: 660' FSL & 660' FWL
At proposed prod. zone: 660' FSL & 660' FWL
M
R-111-P Potash

14. Distance in miles and direction from nearest town or post office*

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

17. Spacing Unit dedicated to this well: 320

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.

19. Proposed Depth: 13200'

20. BLM/BIA Bond No. on file

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3502' GL

22. Approximate date work will start*: September 30 2003

23. Estimated duration: 21 Days

OCT 2003 RECEIVED Hobbs OCD

24. Attachments

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

25. Signature: Melanie Parker — Name (Printed/Typed): Melanie J. Parker — Date: 08/18/03

Title: Authorized Representative

Approved by (Signature): /s/ Linda S. C. Rundell — Name (Printed/Typed): /s/ Linda S. C. Rundell — Date: OCT 22 2003

Title: STATE DIRECTOR — Office: NM STATE OFFICE

Application approval does not warrant or certify the 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)

DECLARED WATER BASIN
CEMENT BEHIND THE 13 3/8" CASING MUST BE CIRCULATED TO SURFACE

R-111-P Potash + CAPITAN REEF

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

CEMENT BEHIND THE 8 5/8" CASING MUST BE CIRCULATED TO SURFACE

CEMENT BEHIND THE 5 1/2" CASING MUST BE CIRCULATED TO SURFACE

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

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

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

AUG 04 2003

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-36478	97224	Wildcat; ~~LUSK~~ MORROW

Property Code	Property Name	Well Number
32988	STRINGBEAN FEDERAL COM	1

OGRID No.	Operator Name	Elevation
14049	MARBOB ENERGY CORPORATION	3502'

Surface Location

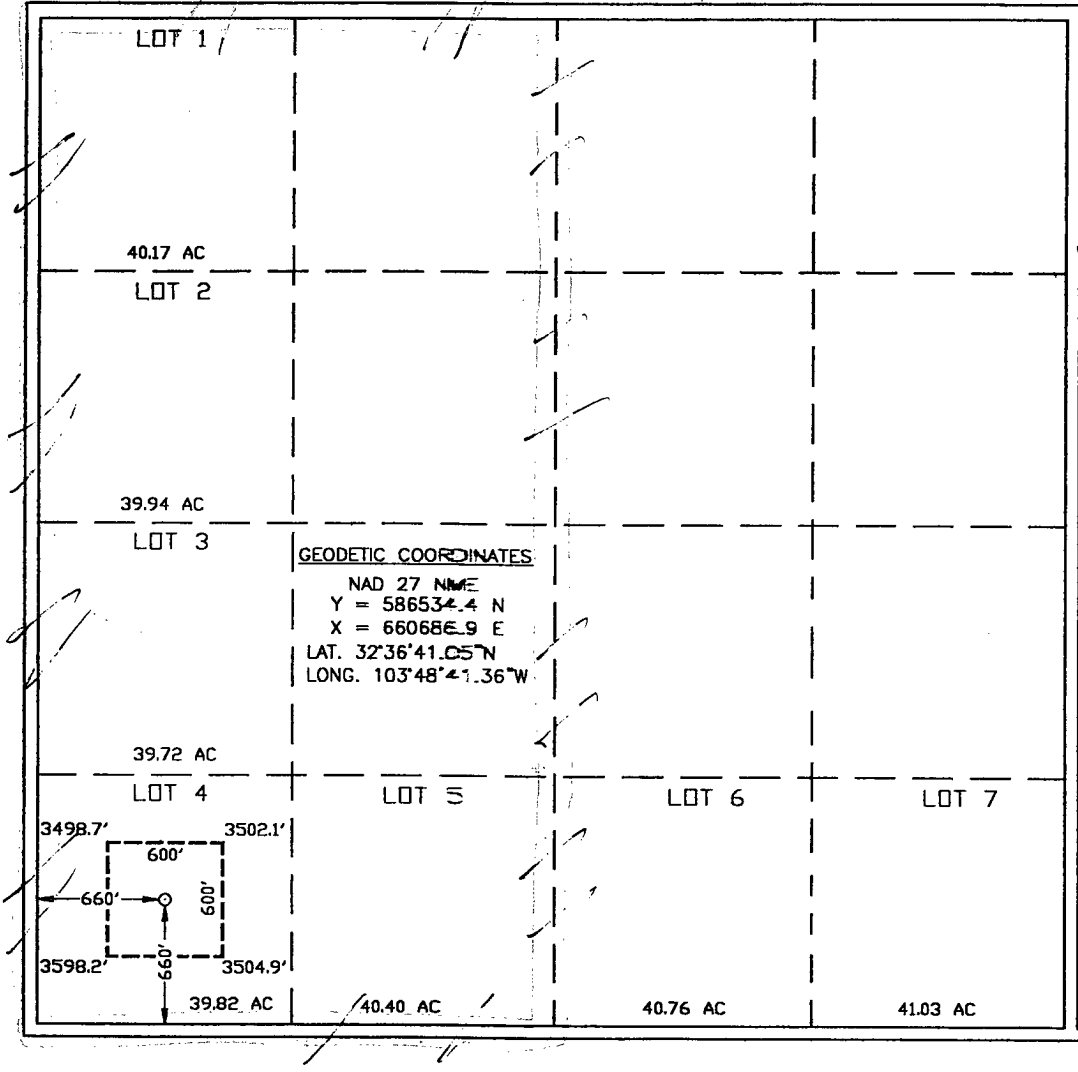
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	31	19-S	32-E		660'	SOUTH	660'	WEST	LEA

Bottom Hole Location If Different From Surface

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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



OPERATOR CERTIFICATION

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

Signature

Melanie J. Parker
Printed Name

Land Department
Title

08/18/03
Date

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 supervison, and that the same is true and correct to the best of my belief.

July 28, 2003
Date Surveyed A.W.B

Signature & Seal of Professional Surveyor

GARY L. EIDSON
NEW MEXICO
12641
REGISTERED PROFESSIONAL SURVEYOR

7/31/03

03.11.0789
Certificate No. RONALD J. EIDSON 3239
GARY L. EIDSON 12641

DRILLING PROGRAM

Attached to Form 3160-3
Marbob Energy Corporation
String Bean Federal Com No. 1
660' FSL and 660' FWL
Section 31-19S-32E
Lea County, New Mexico

1. Geologic Name of Surface Formation:

   Permian

2. Estimated Tops of Important Geologic Markers:

Permian	Surface	Bone Springs	7300'
Anhy.	850'	Wolfcamp	10700'
Yates	2550'	Strawn	11400'
Seven Rivers	2950'	Atoka	11800'
Delaware	4000'	Morrow	12600'

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

Yates	2550'	Oil
Delaware	4400'	Oil
Strawn	11400'	Oil
Morrow	12600'	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 900' 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 show joint into the 13 3/8 production casing which will be run at TD.

4. Casing Program:

Hole Size	Interval	OD Casing	Wt.	Grade	Type
17 1/2"	0 – 900'	13 3/8"	48#	H-40	STC
12 1/4"	900 – 4500'	8 5/8"	32#	J-55	STC
7 7/8"	4500 – 13200'	5 1/2"	17#	S-95/P110	LTC

Cement Program:

13 3/8 Surface Casing: Cemented to surface with 450 sx of Class C w/2% cc.

8 5/8 Intermediate Casing: Cemented to surface with 2200 sx of Class C w/2% cc.

5 1/2 Production Casing: Cemented sufficient to cover 200' above all oil and gas horizons.

5. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) will consist of a double ram-type preventer and a bag-type (Hydril) preventer. Both units will be hydraulically operated and the ram type BOP will be equipped with blind rams and 5 ½" drill pipe rams. A 3000 psi WP BOP will be installed on the 13 3/8" casing and tested per order #2 to 70% of casing burst. This BOP will be utilized until the 8 5/8" casing is run. A 5000 psi WP BOP will be installed on the 8 5/8" surface casing and utilized continuously until total depth is reached. As per BLM Drilling Operations Order #2, prior to drilling out the 8 5/8" casing shoe, the BOP's and Hydril will be tested.

Pipe rams will be operationally checked each 24 hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having 5000 psi WP rating.

6. Types and Characteristics of the Proposed Mud System:

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

Depth	Type	Weight	Viscosity	Waterloss
0-900	Fresh Water (Spud)	8.5	28	N.C.
900-4500	Brine	9.8-10.2	40 - 45	N.C.
4500- TD	Cut Brine	8.6-9.4	28 - 36	N.C. / 10cc

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. Drill Stem tests will be used as determined during drilling.

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

C. No conventional coring is anticipated.

D. Further testing procedures will be determined after the 5 1/2" production casing has been cemented at TD based on drill shows, and log evaluation, and drill stem test results.

9. Abnormal Conditions, Pressures, Temperatures, and Potential Hazards:

No abnormal pressures or temperatures are anticipated. The estimated bottom hole temperature (BHT) at TD is 150° and estimated bottom hole pressure (BHP) is 4500 psig.

10. Anticipated Starting Date and Duration of Operations:

Location and road work will not begin until approval has been received from the BLM. Once commenced, the drilling operation should be finished in approximately 45 days. If the well is productive, an additional 30 to 60 days will be required for completion and testing before a decision is made to install permanent facilities.

SURFACE USE AND OPERATING PLAN

Attached to Form 3160-3
Marbob Energy Corporation
String Bean Federal Com No. 1
660' FSL and 660' FWL
Section 31-19S-32E
Lea County, New Mexico

1. Existing Roads:

   A. All roads to the location are shown in Exhibit #2. 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.

   B. Directions to location: From Loco Hills proceed east on U.S. 82 5.6 miles to state road 529. Proceed southeast on NM 529 7.1 miles. Turn south on Lea county road #126 (Maljamar Road) and proceed south 12 miles. Turn west on lease road and proceed for 1.2 miles. Turn south and proceed to location.

   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.

2. Proposed Access Road:

   A new access road of 1444' 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 will construct facilities on well pad if well is productive.

B. If the well is productive, power will be obtained from Lea County Electric. Lea County Electric will apply for ROW for their power lines.

C. If the well is productive, 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. Methods of Handling Water Disposal:

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. The reserve pit will be an earthen pit, approximately 130' X 130' X 6" deep. The reserve pit will be plastic-lined to minimize loss of drilling fluids and saturation of the ground with brine water.

C. Water produced from the well during completion may be disposed into the reserve pit.

D. Garbage and trash produced during drilling or completion operations will be hauled off. 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.

E. 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.

5. Well Site Layout:

A. The drill pad layout, is shown in Exhibit #3. 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.

6. Surface Ownership:

The wellsite and lease is located on Federal Surface.

7. Lessee's and Operator's Representative:

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

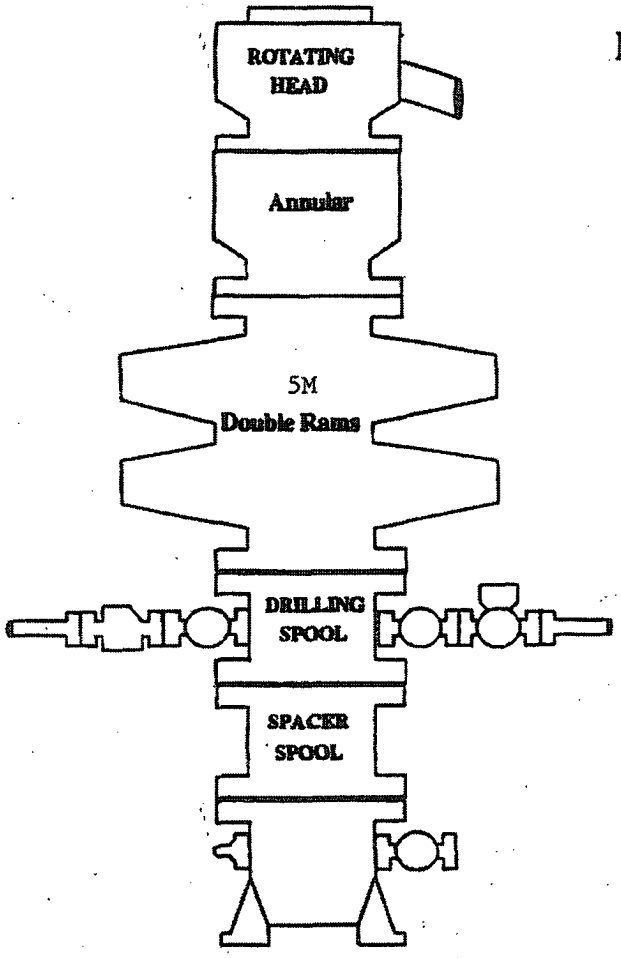
Johnny C. Gray
Marbob Energy Corporation
324 West Main, Suite 103
Post Office Box 227
Artesia, New Mexico 88211-0227
Phone: 505/748-3303 (office)
505/885-3879 (home)

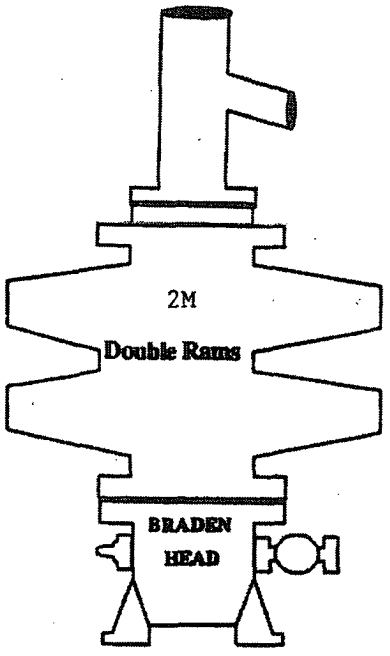
Certification:

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 provision of 18 U.S.C. 1001 for the filing of a false statement.

Date: 9-2-2003 Signed: Dean Chumbley

BOPE SCHEMATIC





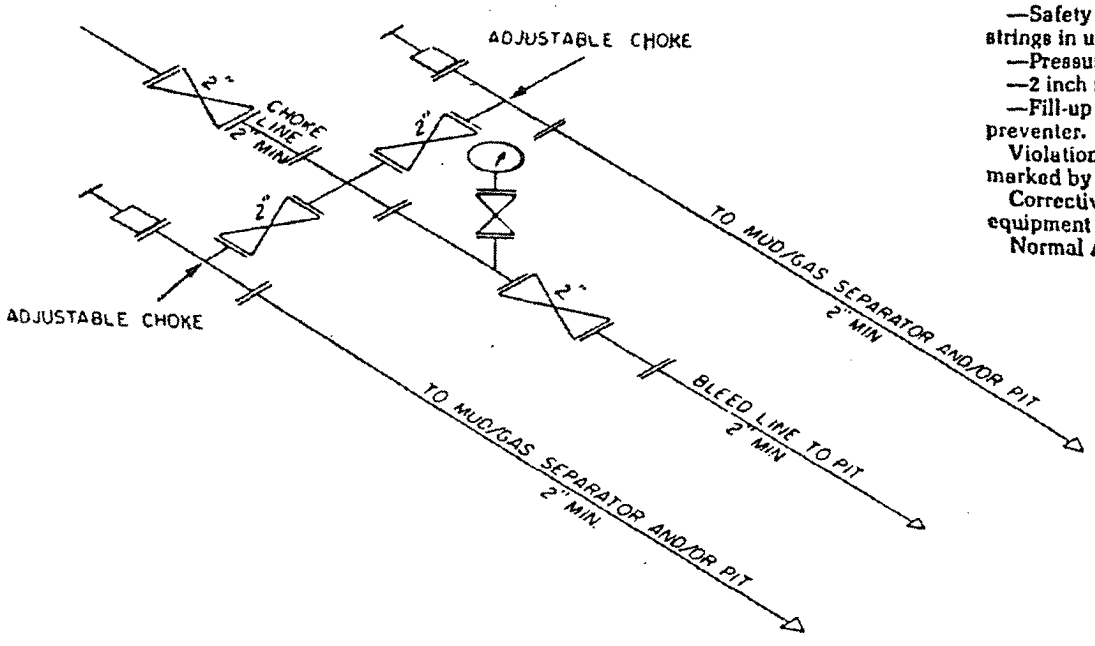
ONSHORE OIL AND GAS ORDER NO. 2

2M system:
—Annular preventer, or, double ram, or two rams with one being blind and one being a pipe ram *
—Kill line (2 inch minimum)
—1 kill line valve (2 inch minimum)
—1 choke line valve
—2 chokes (refer to diagram in Attachment 1)
—Upper kelly cock valve with handle available
—Safety valve and subs to fit all drill strings in use
—Pressure gauge on choke manifold
—2 inch minimum choke line
—Fill-up line above the uppermost preventer.

Violation: Minor (all items unless marked by asterisk).

Corrective Action: Install the equipment as specified.

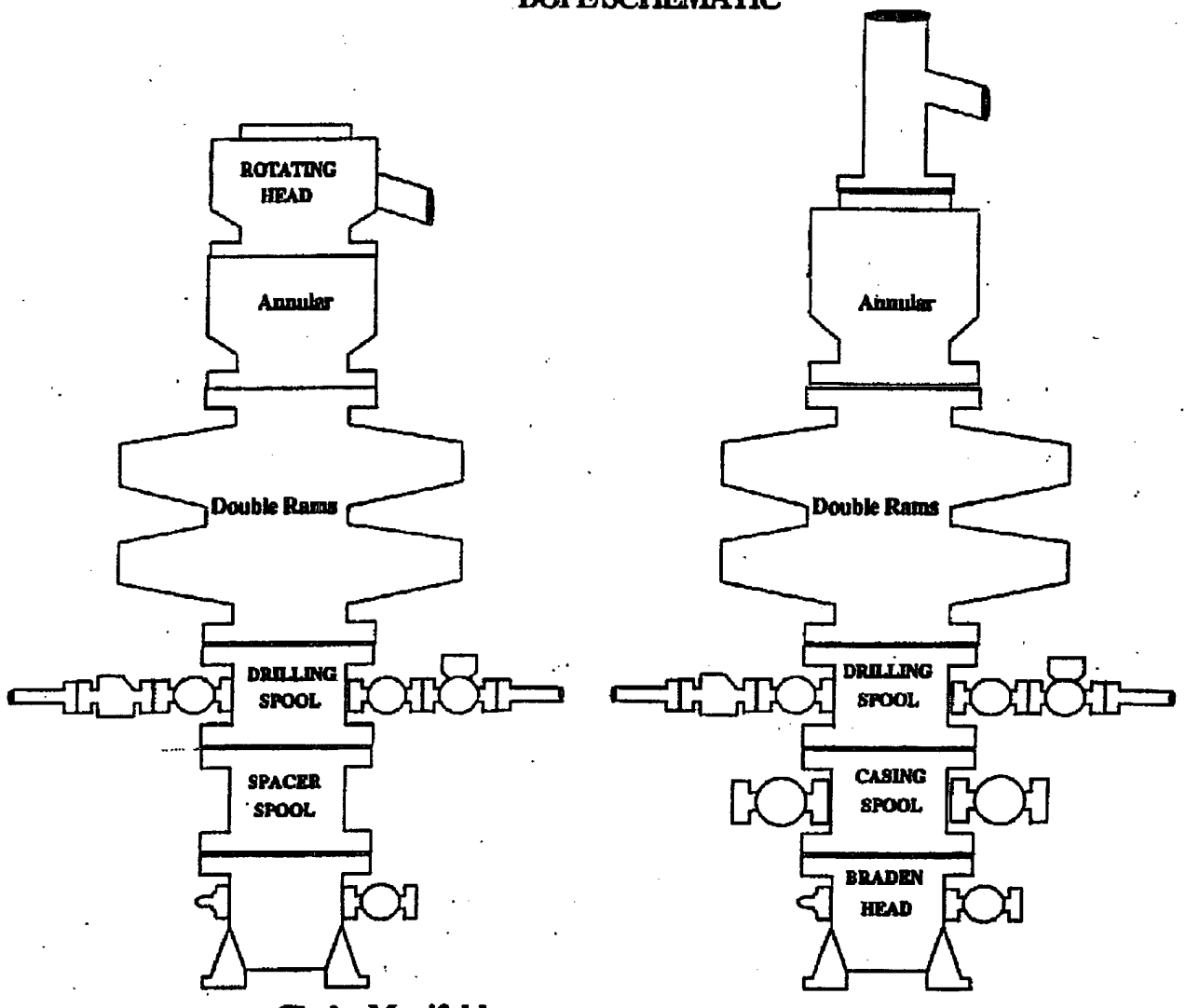
Normal Abatement Period: 24 hours.



2M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

Exhibit One

BOPE SCHEMATIC



Choke Manifold

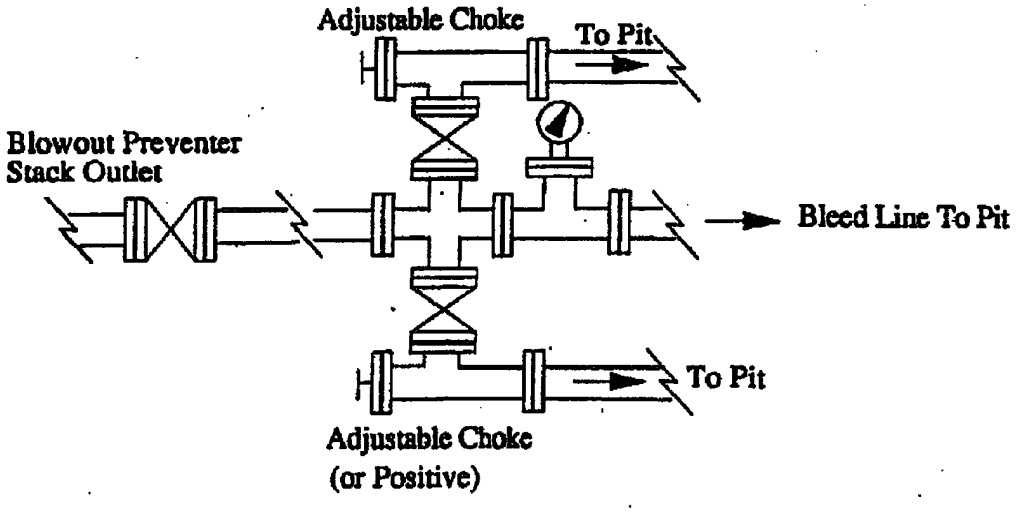
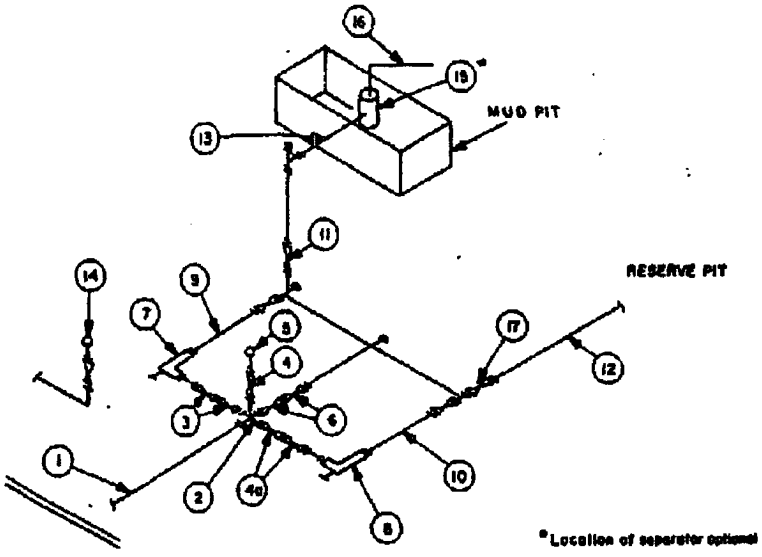


Exhibit One

MINIMUM CHOKE MANIFOLD
3,000, 5,000 and 10,000 PSI Working Pressure

3 MWP - 5 MWP - 10 MWP



BEYOND SUBSTRUCTURE

MINIMUM REQUIREMENTS										
		3,000 MWP			5,000 MWP			10,000 MWP		
No.		I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING
1	Line from drilling spool		3"	3,000		3"	5,000		3"	10,000
2	Cross 3"x3"x3"x2"			3,000			5,000			
	Cross 3"x3"x3"x3"									10,000
3	Valves(1) Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
4	Valve Gate ☐ Plug ☐(2)	1-13/16"		3,000	1-13/16"		5,000	1-13/16"		10,000
4a	Valves(1)	2-1/16"		3,000	2-1/16"		5,000	3-1/8"		10,000
5	Pressure Gauge			3,000			5,000			10,000
6	Valves Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
7	Adjustable Choke(3)	2"		3,000	2"		5,000	2"		10,000
8	Adjustable Choke	1"		3,000	1"		5,000	2"		10,000
9	Line		3"	3,000		3"	5,000		3"	10,000
10	Line		2"	3,000		2"	5,000		3"	10,000
11	Valves Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
12	Lines		3"	1,000		3"	1,000		3"	2,000
13	Lines		3"	1,000		3"	1,000		3"	2,000
14	Remote reading compound standpipe pressure gauge			3,000			5,000			10,000
15	Gas Separator		2'x5'			2'x5'			2'x5'	
16	Line		4"	1,000		4"	1,000		4"	2,000
17	Valves Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000

(1) Only one required in Class 3M.

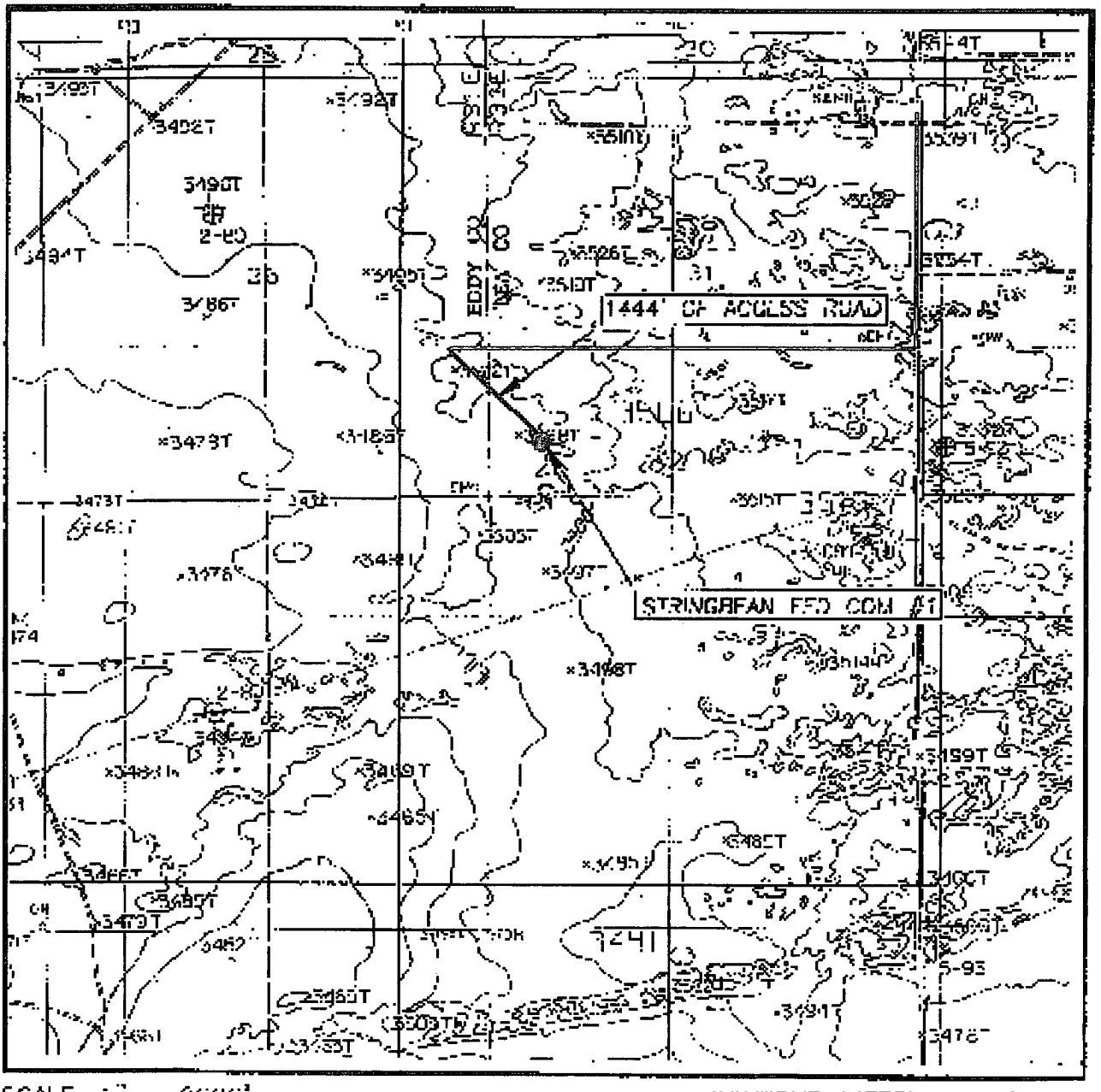
(2) Gate valves only shall be used for Class 10M.

(3) Remote operated hydraulic choke required on 5,000 psi and 10,000 psi for drilling.

EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS

1. All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
2. All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
3. All lines shall be securely anchored.
4. Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
5. Choke manifold pressure and standpipe pressure gauges shall be available at the choke manifold to assist in regulating chokes. As an alternate with automatic chokes, a choke manifold pressure gauge shall be located on the rig floor in conjunction with the standpipe pressure gauge.
6. Line from drilling spool to choke manifold should be as straight as possible. Lines downstream from chokes shall make turns by large bends or 90° bends using bull plugged tees.

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'

SEC. 31 TWP. 19-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 660' FSL & 660' FWL

ELEVATION 3602'

OPERATOR MARBOB ENERGY CORPORATION

LEASE STRINGBEAN FEDERAL COM

U.S.G.S. TOPOGRAPHIC MAP
WILLIAMS SINK, N.M.

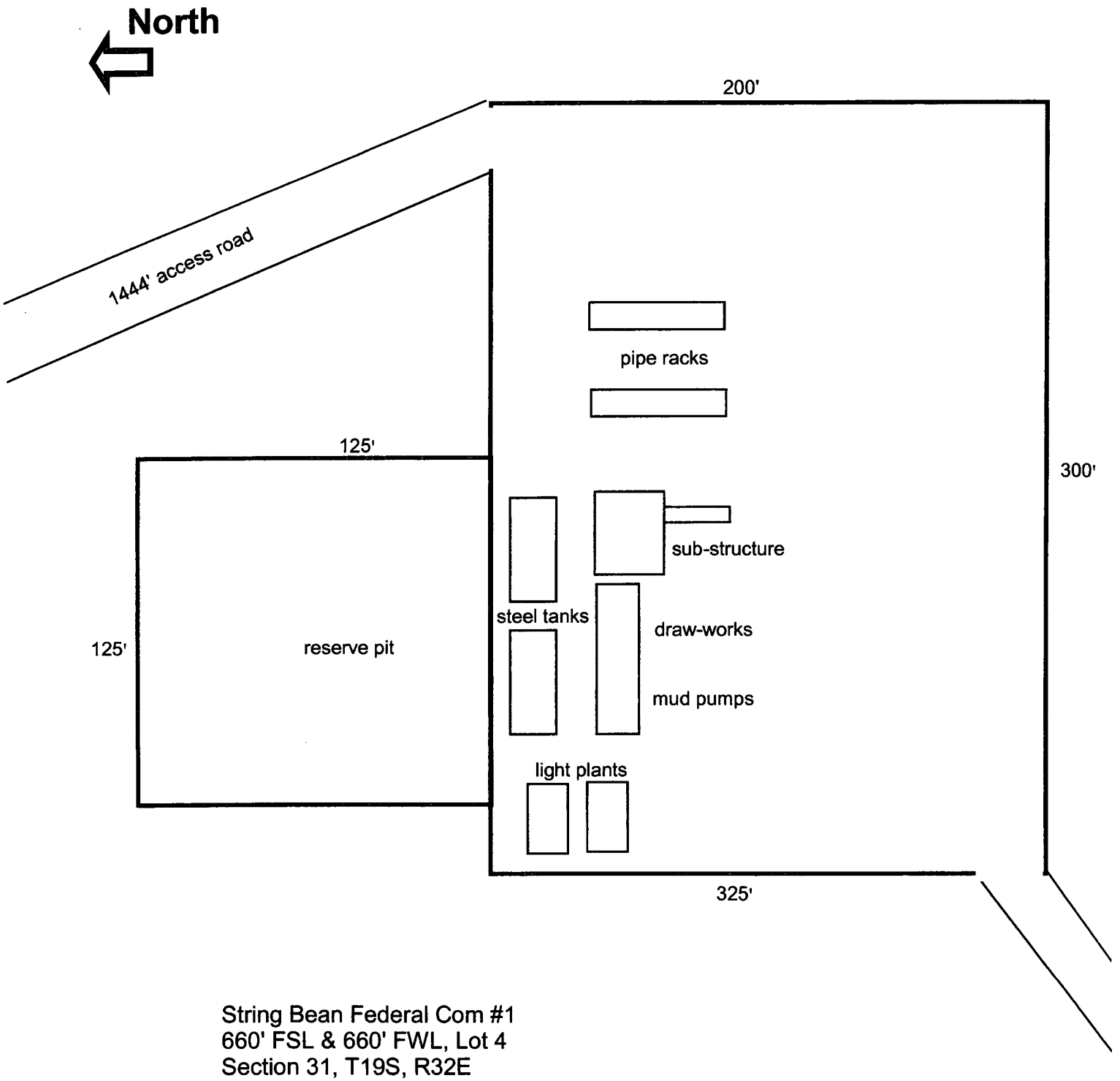
JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117

Existing Road

Proposed Access Road

EXHIBIT TWO

Well Site Lay-Out Plat



String Bean Federal Com #1
660' FSL & 660' FWL, Lot 4
Section 31, T19S, R32E
Lea County, New Mexico

EXHIBIT THREE

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: September 2, 2003

Lease #: NM35612
String Bean Federal Com

Legal Description: Sec. 31-T19S-R32E
Eddy County, New Mexico

Formation(s): Lusk Morrow

Bond Coverage: Statewide

BLM Bond File #: 585716

Melanie J. Parker
Land Department