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BLM Roswell District Modified Form No. NMO60-3160-2 ch

UNITED STATES DEPARTMENT OF THE INTERIOR

			THE INTERIOR		5. LEASE DESIGNA	ATION AND BERIAL NO.
	Bl	JREAU OF LAND	MANAGEMENT		LC-028784	Α
APPLICA	TION FOR	PERMIT TO DR	ILL, DEEPEN, O	R PLUG BACK	G. IF INDIAN, ALL	OTTEE OR TRIBE NAME
la. TYPE OF WORK	DDU L [V]	ה	FORNI [T]	DILLO DACK	7. UNIT AGREEMI	ENT NAME
b. TYPE OF WELL	DRILL 🗵	טבו	EPEN 🗌	PLUG BACK		
OIL X	GAS U	OTHER	RINGLE ZONE	MULTIPLE ZONE	8. FABM OR LEAS	E NAME
2. NAME OF OPERA			3a.	. Area Code & Phone	_ reely A i	Federal
Marbob E	nergy Corpo.	ration 🗸	5.	05-748-3303	9. WELL NO.	
			240	nu Carrell	30	OOL, OR WILDCAT
4. LOCATION OF W	ELL (Report locati	rtesia, NM 88	210 dance with any State requ	Irementa.*)		•
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14. DISTANCE IN	MILES AND DIRECT	ON FROM NEAREST TOW	N OR POST OFFICE			ARISH 13. STATE
East of A	rtesia on H	wy 82 approxim	nately 21 miles	ES IN LEASE 17. ?	Eddy	NM
LOCATION TO PROPERTY OR	NEAREST Leabe line, ft.	0.51		7	TO THIS WELL	
18. DISTANCE PRO	est drig. unit line,	ion*	19. PROPOSED I	20. 1	40 ROTARY OR CABLE TOOL	8
	WELL, DRILLING, CO , on this lease, Pt		4600'		rotary	
21. ELEVATIONS (S	how whether DF, R	T, GR, etc.)	1000			ATE WORK WILL START®
	3610.7'				Jūly 1,	1993
23.		PROPOS	SED CASING AND CEMEN	TING PROGRAM		
HOLE SIZE	CASING SIZE	WE IGHT/FOOT	GRADE	THREAD TYPE	BETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 5/8".	24#	J-55	LTCCIRC		300 sx
7 7/8"	5 1/2":	17#	J - 55	LTC(+ie be	ck)4600'	1100 sx
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(This space	for Federal or Sta	te office use)	TITLE TIOUTE		DATE	
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APPROVED BY		HARD L. MANU	· · · · · · · · · · · · · · · · · · ·	a manager	DATE	IUN 2 1 1993
	KEPSUBJEC AL REQUIRE L STIPULAT	Ments and Ions	See Instructions On R	A 3	* 1873 8 US	

JECT NA. The new parties knowingly and willfully to make to any denartment or agency of the

Submit to Appropriate District Office State Lease - 4 copies Fee Lease - 3 copies

State of New Mexico Energy, Minerals and Natural Resources Department

Form C-102 Revised 1-1-89

C

OIL CONSERVATION DIVISION

DISTRICT I P.O. Box 1980, Hobbs, NM 88240 P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT II P.O. Drawer DD, Artesia, NM 88210

WELL LOCATION AND ACREAGE DEDICATION PLAT

DISTRICT III 1000 Rio Brasos Rd., Axtec, NM 87410

All Distances must be from the outer boundaries of the section

Well No. Lease Operator MARBOB ENERGY CORPORATION Keely A Federal County Township Unit Letter Section **EDDY** 29 EAST 17 SOUTH NMPM N Actual Footage Location of Well: 2615 SOUTH line feet from the 25 line and feet from the Dedicated Acreage: Producing Formation Ground Level Elev. Grbg Jackson SR Q Grbg SA 3610.7 Grayburg San Andres 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 interest of all owners been consolidated by communitization, unitization, force-pooling, etc.? ☐ No If answer is "yes" type of consolidation If answer is "no" list of owners and tract descriptions which have actually been consolidated. (Use reverse side of this form necessary. No allowable will be assigned to the well unit all interests have been consolidated (by communitization, unitization, forced-pooling, otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division OPERATOR CERTIFICATION I hereby certify the the information ed herein is true and complete to the ny knowledge and belief. $1/\omega \sigma \gamma$ Printed Name Rhonda Nelson Position Production Clerk Company Marbob Energy Corporation <u>April 29, 1993</u> 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 supervisors and that the some is true correct to the best of my knowledge co Date Surveyed 3609.6 3612.4 FEBRUARY 9, 1993 -25 Signature & Seal of 2615 Professional Surveyor 3606.91 360B.4 323 A FRISA RONAL D 1000 990 1320 1650 1980 2310 2640 2000 1500 93-11-0165

DRILLING PROGRAM

Attached to Form 3160-3 Marbob Energy Corporation Keely A Federal No. 30 25' FSL & 2615' FWL SESW, Sec. 13, T-17S, R-29E Eddy County, New Mexico

1. Geologic Name of Surface Formation:

Permian

2. Estimated Tops of Important Geologic Markers:

Permian Salt Base of Salt Yates Seven Rivers Queen Grayburg San Andres	Surface 360' 780' 930' 1145' 1815' 2140'	Glorietta	3900'
San Andres	2310		

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

Upper Permian Sands	100'	Fresh Water
Yates	930'	Oil
Seven Rivers	1145'	Oil
Oueen	1815'	Oil
Grayburg	2140'	Oil
San Andres	2510'	Oil
Glorietta	3900'	Oil

DRILLING PROGRAM PAGE 2

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 5½" production casing which will be run at TD.

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

<u>Hole Size</u>	<u>Interval</u>	OD csq	Weight,	Grade,	Jt.	Cond.	Type
12 1/4"	0 - 350'	8 5/8"	24#	J-55	LTC	NEW	R-3
7 7/8"	0 - TD	5 1/2"	17#	J-55	LTC	NEW	R-3

Cement Program:

8 5/8" Surface Casing: Cemented to surface with 300 sx of

Class C w/2% cc.

5 1/2" Production Casing: Cemented with 1100 sx Class C attempt to circulate to surface.

5. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (3000 psi wp) preventer This unit will by hydraulically operated and the ram-type preventer will be equipped with blind rams on top and $\frac{4-1}{2}$ " drill pipe rams on bottom. This BOP will be nippled up on the 8 5/8"" surface csg and used continuously until TD is reached. All BOP's and accessory equipment will be tested to 1000 psi before drilling out of surface casing.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A 2" kill line and a 3" choke line will be included in the drilling spool located below the ram-type BOP. Other accessories to the BOP equipment will include a kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold with 3000 psi WP rating.

DRILLING PROGRAM PAGE 3

6. Types and Characteristics of the Proposed Mud System:

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

<u>Depth</u>	Туре	Weight (ppg)	Viscosity (sec)	Waterloss (cc)
0 - 350'	Fresh Water	8.5	40-45	N.C.
350'-4600'	(Spud) Brine	9.8 - 10.2	28	N.C.

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) No Drillstem tests are anticipated.
- (B) The electric logging program will consist of GR-Dual Laterolog-MSFL and GR-Sonic from TD to intermediate casing and GR-Compensated Neutron-Density from TD to surface. Selected SW cores will be taken in zones of interest.
- (C) No conventional coring is anticipated.
- (D) Further testing procedures will be determined after the 5½ production casing has been cemented at TD based on drill shows, and log evaluation, and drill stem test results.

DRILLING PROGRAM PAGE 4

9. <u>Abnormal Conditions, Pressures, Temperatures, & Potential</u> Hazards:

No abnormal pressures or temperatures are anticipated. The estimated bottom hole temperature (BHT) at TD is 104' and estimated bottom hole pressure (BHP) is 2250 psig.

10. Anticipated Starting Date and Duration of Operations:

Location and road work will not begin until approval has been received from the BLM. The anticipated spud date is July 1, 1993. Once commenced, the drilling operation should be finished in approximately 21 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.

Attached to Form 3160-3 Keely A Federal No. 30 25' FSL & 2615' FWL SESW, Sec. 13, T-17S, R-29E Eddy County, New Mexico

1. Existing Roads:

- A. The well site and elevation plat for the proposed well is shown in on Form C-102. It was staked by John West Engineering.
- B. 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.

C. Directions to location:

From Artesia proceed East on Highway 82 for a distance of 21 miles. Turn North (left) on County Road 215 and proceed .6 miles. Turn east (right) at the third road and proceed .5 miles. The access road will be on your right.

D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

2. Proposed Access Road:

Exhibit #2 shows the new access road to be constructed and is illustrated in yellow. The 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 reserve pit or the nearest Federal, State, or Private 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 Wells:

Exhibit #3 shows all existing wells within a ½-mile radius of this well.

4. Location of Existing and/or Proposed Facilities:

- A. Marbob Energy Corporation already has a collection facility set up for this lease. A satellite collection point is located in Unit Letter H, Sec. 13-17S-29E (Satellite C) which then sends the oil to a central tank battery location in Unit Letter J, Section 24, T-17S, R-29E.
- B. If the well is productive, a 2" or 3" plastic flowline will be laid on the surface following the existing lease road Right-of-Way to the Satellite or to the central tank battery. If the production from the well exceeds the capacity of the Satellite vessel.
- 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 120 days after the well is completed).
 - (2) Caliche from unused portions of the drill pad will be removed. 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.

5. Location and Type of Water Supply:

The well will be drilled with a combination brine and fresh water mud system as outlined in the drilling program. The water will be obtained from commercial water stations in the area and hauled to the location by transport truck over the existing and proposed access roads shown in Exhibit #2. If a commercial fresh water source is nearby, fasline may be laid along existing road ROW's and fresh water pumped to the well. No water well will be drilled on the location.

6. Source of Construction Materials:

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

7. 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 70' X 280' 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 or a steel tank (depending on the rates). After the well is permanently placed on production, produced water will be collected in tanks (fiberglass or steel) until hauled by transport to an approved disposal system; produced oil will be collected in steel tanks until sold.

- D. A portable chemical toilet will be provided on the location for human waste during the drilling and completion operations.
- E. 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.
- F. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned-up within 30 days. No adverse materials will be left on the location. The reserve pit will be completely fenced and netted and kept closed until it has dried. When the reserve pit is dry enough to breakout and fill and, as weather permits, the unused portion of the well site will be leveled and reseeded as per BLM specifications. Only that part of the pad required for production facilities will be kept in use. In the event of a dry hole, only a dry hole marker will remain.

8. Ancillary Facilities:

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

9. Well Site Layout:

- A. The drill pad layout, with elevations staked by John West Engineering, is shown in Exhibit #4. Dimensions of the pad and pits and location of major rig components are shown. Top soil, if available, will be stockpiled per BLM specifications as determined at the on-site inspection. Because the pad is almost level no major cuts will be required.
- B. The reserve pit will be lined with a high-quality plastic sheeting.

10. Plans for Restoration of the Surface:

A. Upon completion of the proposed operations, if the

well is to be abandoned, the caliche will be removed from the location and road and returned to the pit from which it was taken. The pit area, after allowing to dry, will be broken out and leveled. The original top soil will be returned to the entire location which will be leveled and contoured to as nearly the original topography as possible.

All trash, garbage, and pit lining will be hauled away in order to leave the location in an aesthetically pleasing condition. All pits will be filled and the location leveled within 120 days after abandonment.

- B. The disturbed area will be revegetated by reseeding during the proper growing season with a seed mixture of native grasses as recommended by the BLM.
- C. Three sides of the reserve pit will be fenced prior to and during drilling operations. At the time that the rig is removed, the reserve pit will be fenced on the rig (fourth) side and netted to prevent livestock or wildlife from being entrapped. The fencing and netting will remain in place until the pit area is cleaned-up and leveled. No oil will be left on the surface of the fluid in the pit. The entire reserve pit will be netted until the fluid has completely evaporated.
- D. Upon completion of the proposed operations, if the well is completed, the reserve pit area will be treated as outlined above within the same prescribed time. The caliche from any area of the original drillsite not needed for production operations or facilities will be removed and used for construction of thicker pads or firewalls for the tank battery installation. Any additional caliche required for facilities will be obtained from a BLM approved caliche pit. Topsoil removed from the drill site will be used to recontour the pit area and any unused portions of the drill pad to the original natural level and reseeded as per BLM specifications.

11. Surface Ownership:

The wellsite and lease is located on Federal Surface.

A. The area around the well site is grassland and the top soil is sandy. The vegetation is native scrub grasses with abundant oakbrush, sagebrush, yucca, and prickly pear.

- There is no permanent or live water in the immediate В. area.
- A Cultural Resources Examination has been requested and will be forwarded to your office in the near future.

13. Lessee's and Operator's Representative:

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

Johnny C. Gray Marbob Energy Corporation 324 W. Main, Suite 103 P. O. Drawer 217 Artesia, New Mexico 88210 Phone: 505/748-3303 (office) 505/885-3879 (home)

Certification:

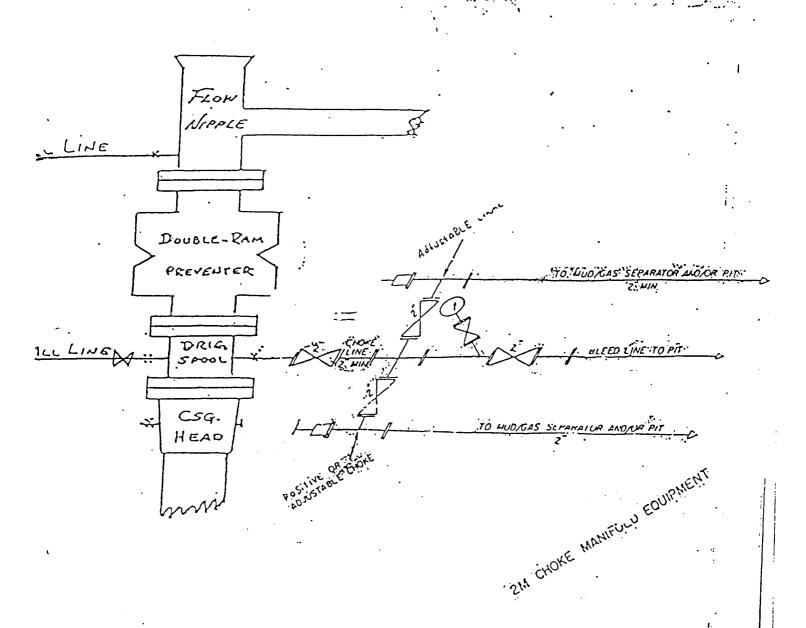
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by Marbob Energy Corporation and its contractors and subcontractors in conformity with this plan and the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date: May 4, 1993 Signed:

Johnny C. Grav Vice-President

E U P & CHOKE MANIFOLD

10"/900 Cameron SS Space Saver 3000# Working Pressure 3000# Working Pressure Choke Manifold

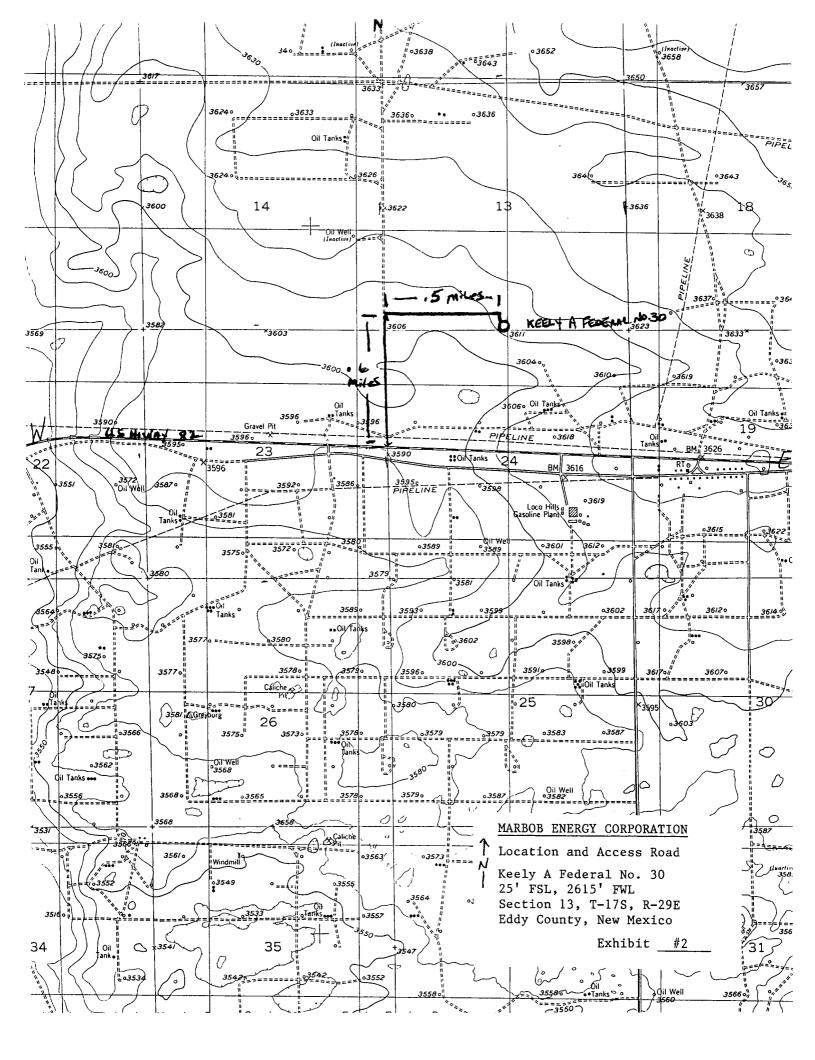


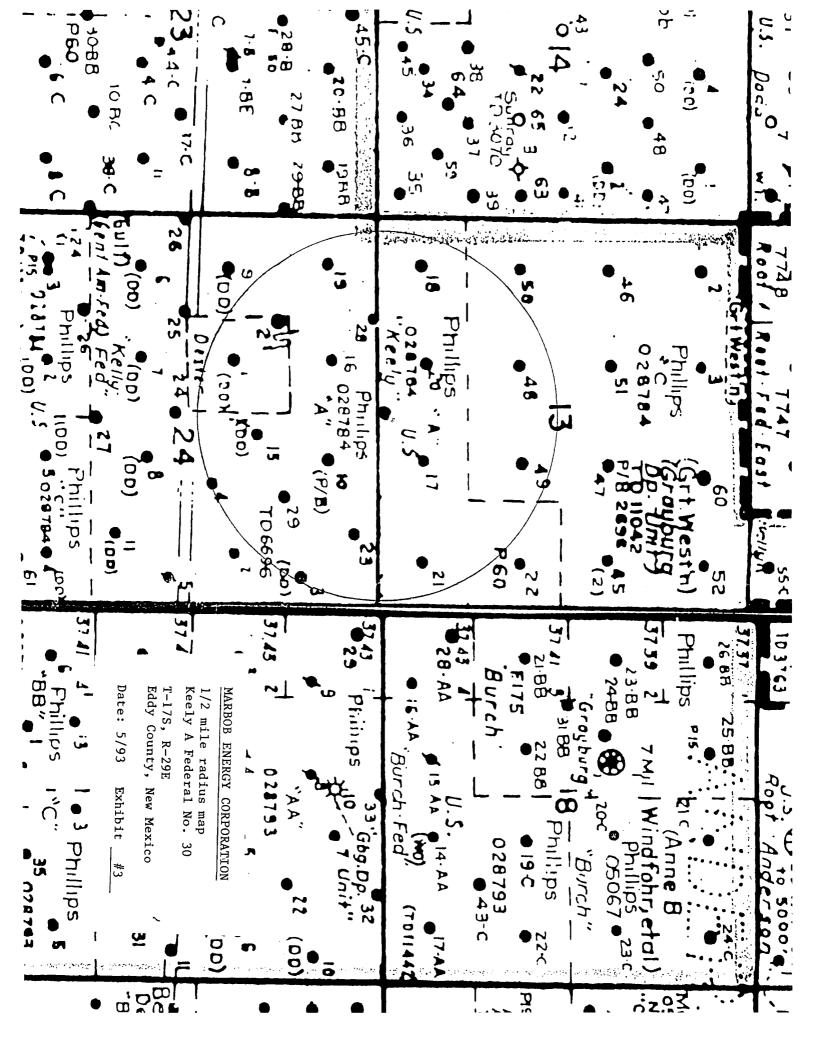
MARBOB ENERGY CORPORATION

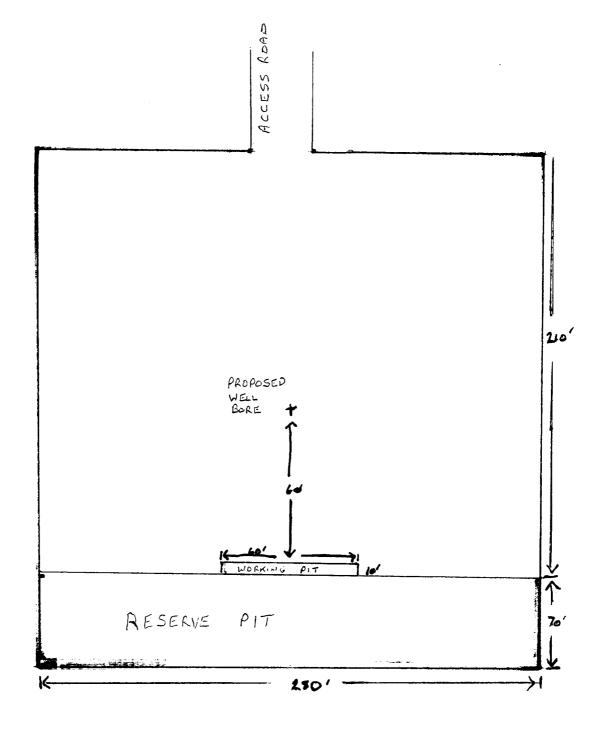
Keely A Federal No. 30: 25' FSL & 2615' FWL : Section 13, T-17S, R-29E Eddy County, New Mexico Date: 5/93 Exhibit #1:

Attachment to Exhibit #1 NOTES REGARDING THE BLOWOUT PREVENTERS

- 1. Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum I.D. equal to preventer bore.
- 2. Wear ring to be properly installed in head.
- 3. Blow out preventer and all fittings must be in good condition, 3000 psi W.P. minimum.
- 4. All fittings to be flanged.
- 5. Safety valve must be available on rig floor at all times with proper connections, valve to be full bore 3000 psi W.P. minimum.
- 6. All choke and fill lines to be securely anchored, especially ends of choke lines.
- 7. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
- 8. Kelly cock on kelly.
- 9. Extension wrenches and hand wheels to be properly installed.
- 10. Blow out preventer control to be located as close to driller's position as feasible.
- 11. Blow out preventer closing equipment to include minimum 40 gallon accumulator, two independent sources of pump power on each closing unit installation, and meet all API specifications.







MARBOB ENERGY CORPORATION

Proposed Well Pad

Keely A Federal No. 30

Eddy County, New Mexico

Date: 5/93 Exhibit #4

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:

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

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

- 1. The effects of H_2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- 3. The contents and requirements of the H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable $\rm H_2S$ zone (within 3 days or 500 feet) and weekly $\rm H_2S$ and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific $\rm H_2S$ 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. Hos safety equipment and systems

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H_2S .

- 1. Well Control Equipment:
 - A. Flare line with electronic igniter or continuous pilot.
 - B. Choke manifold with a minimum of one remote choke.
 - C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
 - D. Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head, and flare gun with flares.
- 2. Protective equipment for essential personnel:
 - A. Mark II Surviveair 30-minute units located in the dog house and at briefing areas, as indicated on well site diagram.
- 3. H₂S detection and monitoring equipment:
 - A. 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.
 - B. 1 portable SO2 monitor positioned near flare line.
- 4. Visual warning systems:
 - A. Wind direction indicators as shown on well site diagram.
 - B. Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

5. Mud Program:

A. The mud program has been designed to minimize the volume of H_2S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H_2S scavengers will minimize hazards when penetrating H_2S

bearing zones.

B. A mud-gas separator and an H_2S gas buster will be utilized.

6. Metallurgy:

- A. All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for $\rm H_2S$ service.
- B. All elastomers used for packing and seals shall be ${\rm H}_2{\rm S}$ trim.

7. Communication:

- A. Radio communications in company vehicles including cellular telephone and 2-way radio.
- B. Land line (telephone) communications at field office.

8. Well testing:

A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill stem testing operations conducted in an H₂S environment will use the closed chamber method of testing.

WARNING

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

