_CODE DATE / <u>-3_0</u>	0/3UNI	TED STATES	(Other inst reverse	TRIPLICATE rucțions on side)	OMB NO. 1004-0136 Expires: February 28, 1995
10.30-041-		LAND MANAGE			5. LEASE DEBIGNATION AND REBIAL RO NM 107394
APPI	LICATION FOR P	ERMIT TO DI	RILL OR DEEPEN		6. IF INDIAN. ALLOTTEE OR TRIBE NAME
	RILL 😨	DEEPEN]		NA 7. UNIT AGENEMENT NAME
b. TYPE OF WELL OIL WELL	CAS OTHER		SINGLE MUL	TIPLE	B. MARM OR LEASE NAME WELL NO.
2. NAME OF OPERATOR	<u></u>			·	Roughrider Federal
Morexc	o, Inc.				9. AT WELL NO. CUM
3. ADDRESS AND TELEPHONEN	0.				30-041 2090
	591, Roswell, NN				10. FIELD AND POOL OF WILDCAT
4. LOCATION OF WBLL (At surface	Beport location clearly and	d in accordance with	avy State requirements.*)		Wildcat
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At proposed prod. z	o ne) /7			AND GUEVET OR AREA
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for oil. If productive, 5 1/2" casing will be cemented at T.D. If non-productive, the well will be plugged and abandoned in a manner consistent with B.L.M. specifications. Specific programs as per Onshore Oil and Gas Order #1 are outlined in the following attachments:

Drilling	g Pro	ogram
Surface	Use	and Operating Plan
Exhibit	1 -	B.O.P. Diagram and Specifications
Exhibit	2 -	Location and Elevation Plat
Exhibit	3 -	Planned Access Roads

Exhibit 4 - One-mile Radius Map Exhibit 5 - Drilling Rig Layout H2S Drilling Operations Plan

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM. If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give penjnest data on subsurface locations and measured and true venical depths. Give blowout preventer program, if any.

SIGNED Hoth Dr	TITLE President	DATE <u>12-17-02</u>
(This space for Federal or State office use)	 √² 	

PERMIT NO.

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APPROVAL DATE _

Application approval does not warrant or certify that the applicant bolds legal or equilable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

ATTROVED BY TILLE	Assistant Field Manag Lands And Minerals	CI ,	DEC 3 1 2002
*See Instru	ctions On Reverse Side		APPROVED FOR I VEAR

מאי זה שהתביני זה אתמיינארה שלא האימים איזיאוואיי ארא שלהלינית ארא שהליעהרא הראשה נוסי מהלא מרוח הראשו או או א אוארדערדסס איזיאר עניתון פרערראנדספאת או יוסי ייס איזי או ייס או או איזיאר או איזיא איזיא איזיא איזיא או איזיא

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Drilling Program Morexco, Inc. Roughrider Fed. #1 Roosevelt County, New Mexico

- 1. Geologic Name of Surface Formation: Quarternary
- 2. Estimated Tops of Important Geologic Makers:

Rusler	1920'
Yates	2205'
San Andres	3340'
Tubb	6120 ′
Abo	6930 '
Wolfcamp Lime	7810′
3 Brothers	8065 ′
Bough-B	8255 ′
Canyon Sand	8775 ′
Mississippian	9135 ′

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

Upper Permian Sands	300'	fresh water
Permo-Penn	8200'	oil

No other formations are expected to give up oil, gas, or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 8 5/8" casing at 400' and circulating cement to the surface. Any shallower zones above T. D. which contain commercial quantities of oil and/or gas will have cement circulated across them.

4. Casing Program:

	Hole Size	Interval	OD Casing	Weight Grade
	17 1/4"	0 - 450'	13 3/8"	48#, J-55
	12 1/4"	0 - 4,000'	8 5/8″	32#, J-55 [.]
	7 7/8"	0 - 9,300'	5 1/2"	17#, N-80 (
5.	Cement Program:			nuces Er

A. 13 3/8 surface casing: Cemented to surface with 450 sxs. "C" with 4% gel with 2% cacl and 1/2#/sx Flocele.

B. 8 5/8 surface casing: Cemented to surface with 775 sxs. $^{\circ}C''$ with 4% gel with 2% cacl and 1/2#/sx Flocele.

C. 5 1/2" production casing: Cemented with 250 sxs. "C" 3% SMS with 1/4#/sx. Flocele, plus 700 sxs.. "H" 0.8% FL-62 with .2% CD32 and .2% SMS.

6. Minimum Specifications for Pressure Control: The B. O. P. shown on Exhibit 1 will consist of a double ram-type (3000 psi WP) preventer and a bag-type (hydril) preventer (3000 psi WP). Both will be operated hydraulically and the ram-type preventor will be equipped with blind rams on top and 4 1/2" drill pipe rams on bottom. Both B. O. P.s will be nippled up on the 13 3/8" surface casing and used continuously until T. D. is reached. The B. O. P.s and accessory equipment will be tested to 1000 psi before drilling out surface casing. Before drilling out intermediate casing, the ram-type B. O. P. and accessory equipment will be tested to 3000 psi and the hydril to 70% (2100 psi) of rated working pressure.

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 3" choke line will be included in the drilling spool located below the ram-type B. O. P. Other accessories to the B. O. P. equipment will include a kelly cock and floor safety valve (inside B. O. P.) and choke lines and choke manifold with 3000 psi rating.

7. Types and Characteristics of the mud System: The well will be drilled to T. D. with a combination of brine, cut brine and polymer/KCI mud system. The applicable depths and properties of this system are as follows:

Depth	Туре	Weigh Visco	sity W	aterloss
		(ppg)	(sec)	(cc)
0' - 450'	fresh water (spud)	8.5	40 - 45	n.c
450' - 4000'	cut brine	8.8 - 9.2	28	n.c
4000' - T.D.	fresh water	8.5	40 - 45	20 w.l.

Sufficient mud materials to maintain mud properties and meet minimum circulation loss and weight increase requirements will be kept at the site at all times.

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8. Auxiliary Well Control and Monitoring Equipment:

A. A kelly cock will be kept in the drill string at all at times.

B. A full-opening drill pipe stabbing value (inside B. O. P. O_{C} with proper drill pipe connections will be on the rig floor at all times.

C. A mud logging unit complete with hydrogen sulfide detector will continuously monitor drilling penetration rate and hydrocarbon shows to T. D.

9. Logging, Testing and Coring Program:

A. Drill stem tests may be run on the basis of drilling shows.

B. The electric logging program will consist of GR-CNL from T. D. to surface casing, and GR-CNL from T. D. to surface. Selected cores may be taken in zones of interest.

C. No conventional coring is anticipated.

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

10. Abnormal Conditions, Pressures, Temperatures, or Potential Hazards: No abnormal pressures or temperatures are anticipated. The estimated bottom hole temperature at T. D. is 140 degrees Fahrenheit. The estimated maximum bottom hole pressure is 3000 psig. No hydrogen sulfide is known to exist at this depth in this area. No major circulation loss zones have been reported in offsetting wells.

11. Anticipated Starting Date and Duration of Operations: Road and location work will begin after receiving B. L. M. approval. The anticipated spud date is December 26, 2002. Once commenced, the drilling operations should be finished in approximately 30 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made to install permanent facilities.

Surface Use and Operating Plan Morexco, Inc. Roughrider Federal #1 Roosevelt County, New Mexico

1. Existing Roads:

A. The well location and acreage dedication plat for the proposed well is shown on Exhibit 2. The location was staked by Stanford Surveying Co.

B. All roads to the location are shown in Exhibit 3. 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 on-site inspection.

C. Travel 13 miles south from Elida, New Mexico on Road 404. Turn east on C.R. 35 and travel 6 miles. Turn south on lease road and travel \sim 1300 feet to location.

D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operation continues on the lease.

2. Proposed Access Road: Exhibit 3 shows that there will be no new access road to be constructed. 1265 Dab 12/30/02

3. Location of Existing Wells: Exhibit 4 shows all exising wells within a one-mile radius of this well. A list of these wells is shown on the attachment to Exhibit 4.

4. Location of Existing and/or Proposed Facilities:

A. Morexco, Inc. does operate any other production facilities on this lease. $\begin{array}{c} \gamma_{\mathcal{L}_{\mathcal{L}}} \\ \gamma_{\mathcal{C}\mathcal{D}\mathcal{L}} \\ \gamma_{\mathcal{C}\mathcal{D}\mathcal{L}} \\ \mathcal{C}\mathcal{C} \end{array}$

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B. If the well is productive, contemplated facilities will be as follows:

1. The tank battery and facilities, including all flowlines and piping, will be installed according to A. P. I. specifications.

2. Any additional caliche which is required for firewalls, etc., will be obtained from a B. L. M. approved caliche pit. Any additional construction materials will be purchased from contractors.

3. No power will be required if the well is productive of gas. If the well is productive of oil, it may be necessary to run electrical power to the well.

C. If the well is productive, rehabilitation plans are as follows:

1. The reserve pit will be back-filled after the contents are dry, within 120 days after well completion.

2. Caliche from unused portions of the drill pad will be removed. Top soil 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 levell, as nearly as possible, and reseeded per B. L. M. specifications.

D. In the event that gas production is established, plans for permanent gas lines will be submitted to the appropriate agencies for approval.

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 existing and proposed access roads as shown in Exhibit 3. If a commercial fresh water source is nearby, fasline may be laid along existing roads 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 proposed new access road will be obtained from a B. L. M. approved caliche pit. All roads and pads will be constructed of 6" rolled and compacted caliche.

7. Methods of Handling Water Disposal;

A. Drill cuttings not retained for evaluation will be disposed into the reserve pit. $h_{\rm c}$

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B. Drilling fluids will be contained in lined $earthen_{UD}$ bits. 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 150' x 6' deep and fenced of three sides prior to drilling. The reserve pit will be fenced on the fourth side immediately following rig removal. The reserve pit will be plastic-lined (5 - 7 mil. thick) 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 fiberglass or steel tanks and 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 location for human waste during drilling and completion operations.

E. Garbage and trash produced during drilling and/or completion operations will be stored and removed from a separate trash trailer. 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 materials will be produced by this operation.

F. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned-up within 30 days. No adverse materials will be left on location. The reverse pit will be completely fenced and netted and kept closed until it has dried. When the reverse pit is dry enough to breakout and fill, as weather permits, the unused portion of the well site will be leveled and reseeded per B. L. M. specifications. Only the 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 Stanford Surveying Co., is shown in Exhibit 5. Dimensions of the pad and pits and location of major rig components are shown. Top soil, if available, will be stock-piled per B. L. M. specifications determined during the on-site inspection. Because the pad is almost level, no major cuts will be required.

B. Exhibit 5 shows the planned orientation of the $\frac{h_{\text{rig}}\ell_{\text{l}}}{h_{\text{and}}}$ associated drilling equipment, reserve pit, pipe racks, turf around and parking areas, and access road. No permanent living facilities are planned. A temporary foreman/toolpusher will be on location during the drilling operations.

C. The reserve pit will be high quality plastic-lined.

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 dried, 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 as possible, the original topography. The 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 of 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 B. L. M.

C. The four-sided fence around the reserve pit will remain in place until the pit area is cleaned and leveled. No oil will be left on the surface of the fluid in the pit. The entire reserve pit will be fenced until the fluid has completely evaporated.

D. Upon completion of the proposed operations, if the well is completed, the reserve pit will be treated as outlined within the same prescribed time. The caliche from any area of the original site 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 the facilities will be obtained from a B. L. M. 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 B. L. M. instructions.

11. Surface Ownership: The site and lease is located entirely on Fee surface and owned by Tucker Ranch, c/o Buna Jean Tucker Glenn, 3120 S. Roosevelt Road #27, Elida, New Mexico 88116.

12. Other information

A. The area around the site is grassland and the soil sandy. The veqetation is native scrub grasses with abundant oakbrush and sagebrush.

B. There is no permanent or live water in the immediate area.

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C. A cultural resources examination has been requested and will be forwarded to your office in the neat future.

12. Operator's Representatives: The Morexco, Inc. representatives responsible for assuring compliance with this surface use plan are as follows:

Donald G. Becker, Jr.	office phone:	505-627-1290
P. O. Box 1591	mobile phone:	505-365-7038
Roswell, NM 88202		

Certification: I hereby certify that I, or persons under my district supervision, have inspected the proposed site and access route; that I am familiar with the conditions which currently exist; that the statements made herein are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by Morexco, Inc. its contractors and subcontractors in conformity with this plan and the terms and conditions with which it is approved.

Dated this 17th day of December, 2002.

MOREXCO, INC.

Becker Donald G. President Jr.



MINIMUM BLOWOUT PREVENTER REQUIREMENTS

J.000 csi Warxing Pressure

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STACK REQUIREMENTS

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MINIMUM CHOKE MANIFOLD 3.000, 5.300 and 10.300 PSI Working Pressure

3 MWP - 5 MWP - 10 MWP



			MININ	IUM RECUI	REMENTS					
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1	7 Varves Gate C	21/3	•	3.300	3-1/8	•	5.300	2-1/3	•	10.000

(1) Convional required in Class 24.

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

(C) Remote operated hydraulid anoxe required on 5,000 psi and 10,000 psi for dnilling,

EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.

- 1. All connections in choxa manifold shall be welded, studded, llanged or Cameron clamp of comparable rating,
- 2. All flanges shall be API 68 or 68X and ring gaskets shall be API RX or 8X. Use only 8X for 10 MWP.
- 3. All lines snail be securely anonored.
- 4. Choxes shall be equipped with tungstan carbide seats and needles, and rectadaments shall be available.
- 5. Chose manifold pressure and standolpe pressure gauges shall be available at the chose manifold to assist in regulating choses. As an alternate with automatic choses, a chose manifold pressure gauge shall be located on the ng floor in conjunction with the standolpe pressure gauge.
- Line from chilling specific checke manifold should be as straight as possible. Lines cownetream from checkes shall make turns by larce denos or 90° bends using buil plugged tees.

Notes Regarding Blowout Preventers Morexco, Inc. Roughrider Federal #1 Roosevelt County, New Mexico

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal B. O. P. bore.

2. Wear ring will be properly installed in head.

3. B. O. P and all associated fittings will be in operable condition to withstand a minimum 3000 psi working pressure.

4. All fittings will be flanged.

5. A full bore safety valve tested to a minimum 3000psi W. P. with proper thread connections will be available on the rotary rig floor at all times.

6. All choke lines will be anchored to prevent movement.

7. All B. O. P. equipment will be equal to or larger in bore than the internal diameter of the last casing string.

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8. Will maintain a kelly cock attached to the kelly.

9. Hand wheels and wrenches will be properly installed and tested for safe operation.

10. Hydraulic floor control for B. O. P. will be located as near in proximity to driller's controls as possible.

11. All B. O. P. equipment will meet A. P. I. standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

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999 9 STATUS OF WELLS WITHIN ONE-MILE RADIUS AS OF NOVEMBER 1, 2002 Morexco, Inc. Roughrider Federal #1 ROOSEVELT COUNTY, NEW MEXICO





Exhibit 5

Hydrogen Sulfide drilling Operations Plan Morexco, Inc. Roughrider Federal #1 Roosevelt County, New Mexico

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 (H2S).

2. The proper use and maintenance of personal protective equipment and life support systems.

3. The proper use of H2S 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 H2S on metal components. If high tensile \uparrow tubulars are to be used, personnel will be trained in their special maintenance requirements. h_i

2. Corrective action and shut-in procedures when drilling \mathcal{O}_{U}^{Σ} reworking a well and blowout prevention and well control procedures.

3. The contents and requirements of the H2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500') and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. This Plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

II. H2S Safety Equipment and Systems; All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500' above, or 3 days prior to penetrating the first zone containing or reasonably expected to contain H2S.

1. Well Control Equipment:

A. Flare line with electronic igniter or continuous pilot.

B. Choke manifold with a minimum of 1 remote choke.

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

D. Auxiliary equipment will include annular preventer, mud-gas separator, rotating head, and flare gun with flares.

2. Protective equipment for essential personnel is 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 H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.

B. 1 portable S02 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 the 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. When ξD appropriate, bilingual signs will be used.

5. Mud Program:

A. The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

B. A mud-gas separator and an H2S gas buster will be utilized.

6. Metallurgy:

A. All drill strings, casings, tubing, wellhead, B. O. P.s, drilling spool, kill lines, choke manifold and lines, and values shall be suitable for H2S service.

B. All elastomers used for packing and seals shall be H2S trim.

7. Communication:

A. Radio communications in company vehicles included cellular telephone and 2-way radio.

B. Telephone communications at field office.

8. Well Testing: Drill stem testing will be performed with the minimum number of personnel in the immediate area necessary to safely and adequately conduct the testing. 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.

Hobbs

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

Morexco, Inc. P. O. Box 1591 Roswell, New Mexico 88202-1591

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Lease Number:

NM-107394

Mississippian

Statewide Federal Bond

Legal Description of Land:

Township 7 South, Range 33 East, N.M.P.M. Section 9: NE4NE4 990' FNL, 990' FEL, Unit A Roosevelt County, New Mexico

Formation:

Bond Coverage:

BLM bond file number:

NM 1583

Authorized Signature:

Title:

Owner/Operator

Date:

December 17, 2002

District I PO Box 1980, Hobbs District II	s, NM 88241-	1980		Er		New Mexico tural Resources Depa	rtment		Form C-102 Revised February 10, 1994 Submit to Appropriate District Office State Lease -4 Copies
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District IV PO Box 2088, Santa	o Fe, NM 8750	04-2088							
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