Form 3160-3 (August 1999)

# UNITED STATES

FORM APPROVED OMB No. 1004-0136 Expires November 30, 2000

Geol Surf / Appyl

DEPARTMENT OF THE INTERI	OR .			
BUREAU OF LAND MANAGEM	5. Lease Serial No. CONTRACT 462			
APPLICATION FOR PERMIT TO DRILL	6. If Indian, Allottee or Tri	be Name		
		Name and Na		
Ia. Type of Work: DRILL REENTER		7. If Unit or CA Agreemen		
1b. Type of Well: Oil Well Gas Well Other	Single Zone	8. Lease Name and Well N JIC 462-22 22	0.	
2. Name of Operator Contact: ROBERT BL MALLON OIL COMPANY E-Mail: rolaylock	@bhep.com	9. API Well No. 30-039-2		
3a. Address 350 INDIANA STREET, SUITE 400 GOLDEN, CO 80401  3b. Phone No. Ph: 720.21 Fx: 720.21		10. Field and Pool, or Expl EAST BLANCO/PIC	oratory TURED CLIFFS	
4. Location of Well (Report location clearly and in accordance with any S	tate requirements.	11. Sec., T., R., M., or Blk.	and Survey or Area	
At surface SENW 1975FNL 2050FWL At proposed prod. zone SENW 1975FNL 2050FWL	JUN 2004	Sec 22 T30N R3W SME: BIA	Mer NMP	
74. Distance in miles and direction from nearest town or post office* 56 MILES EAST OF BLOOMFIELD, NEW MEXICO		2. County or Parish RIO ARRIBA	13. State NM	
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig, unit line, if any)	cres in Lease	)17. Spacing Unit dedicated	to this well	
1975 FEÉT 1920.00		160.00 NWH		
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.	Depth Col-	20. BLM/BIA Bond No. on	file	
2,400 FEET - JIC 462-22 #1 SHUT IN 4000 ME		1318288		
21. Elevations (Show whether DF, KB, RT, GL, etc. 7209 GL 22. Approximately 22. Approximately 22. Approximately 23. Approximately 24. Approximately 25. Appr	nate date work will start 04	23. Estimated duration 45-60 DAYS		
2	4. Attachments			
The following, completed in accordance with the requirements of Onshore Oil at	nd Gas Order No. 1, shall be attached to t	his form:		
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).</li> </ol>	<ul> <li>4. Bond to cover the operation Item 20 above).</li> <li>5. Operator certification</li> <li>6. Such other site specific influent authorized officer.</li> </ul>	·	,	
25. Signature Name (Printer (Electronic Submission) Name (Name (Printer KATHY))	Typed) SCHNEEBECK Ph: 303.820.4	4480	Date 04/01/2004	
Title AGENT	<del></del>		<u> </u>	
Approved by (Signature) Name (Printer	I/Typed)		JUN 2 2 2004	
Title Assistant Field Manager Office			<u> </u>	
Application approval does not warrant or certify the applicant holds legal or equipperations thereon.  Conditions of approval, if any, are attached.	table title to those rights in the subject le	ase which would entitle the ap	plicant to conduct	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime States any false, fictitious or fraudulent statements or representations as to any n	for any person knowingly and willfully to natter within its jurisdiction.	make to any department or ag	gency of the United	
Additional Operator Remarks (see next page)			AFMSS	
Electronic Submission #29090	verified by the BLM Well Inform	ation System Ad	ud arry	
For MALLON OIL CO	OMPANY, sent to the Rio Puero	En En	gr	

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

1626 N. French Dr., Hobbs, N.M. 88240

# State of New Mexico Energy, Minerals & Natural Resources Department

Form C-102 Revised June 10, 2003

DISTRICT II 1301 W. Grand Avenue, Artesia, N.M. 88210

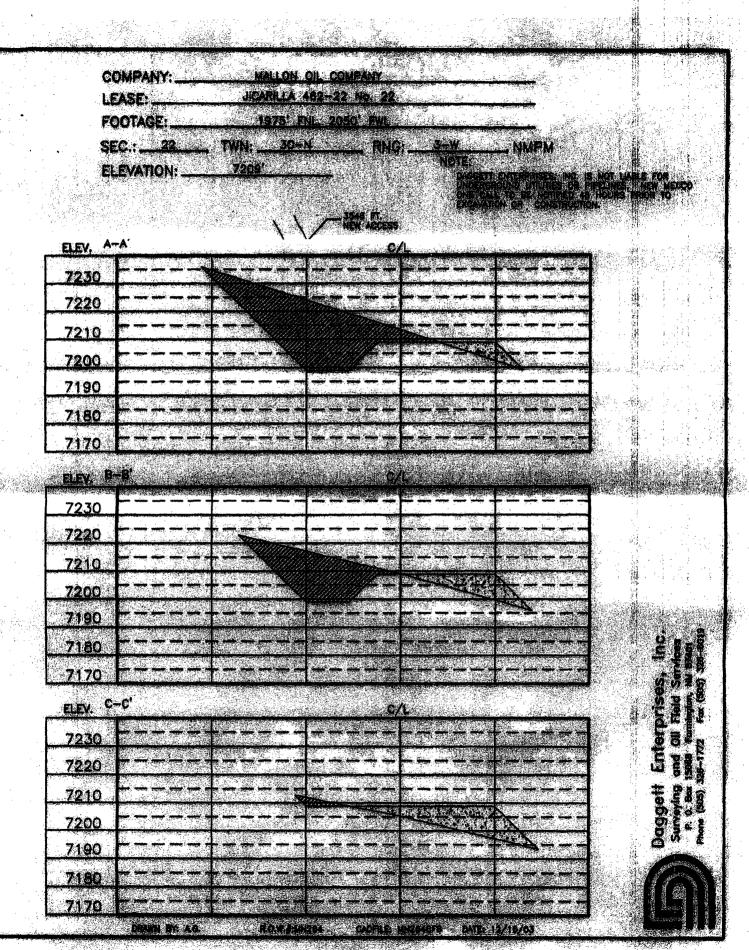
DISTRICT III

OIL CONSERVATION DIVISION

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

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DISTRICT IV 1220-South St. Francis Dr., Santa Pe, I	NM 87505						AMENI	DED REPOR
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Property Code			*Property				• yell	Number
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**************************************	•		*Operator MALLON OIL		•			levation 209
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SURVEYOR CERTIFICATION



# Mallon Oil Company **Jicarilla 462-22 #22**1,975' FNL 2,050' FWL (SE/4 NW/4) Sec. 22 T30N R3W

Rio Arriba County, New Mexico Lease: Jicarilla Contract 462

#### CONFIDENTIAL

# DRILLING PROGRAM (Per Rule 320)

This Application for Permit to Drill (APD) was initiated under the NOS process as stated in Onshore Order No. 1 and supporting Bureau of Land Management (BLM) documents. This NOS process includes an onsite meeting which was held on March 9, 2004 as determined by Bureau of Land Management (BLM), Bureau of Indian Affairs (BIA) and Jicarilla Oil & Gas Administration (JOGA), and at which time the specific concerns of Mallon Oil Company (Mallon), BLM, BIA and JOGA were discussed.

# MALLON RESPECTFULLY REQUESTS THAT ALL INFORMATION REGARDING THIS WELL BE KEPT CONFIDENTIAL.

**SURFACE FORMATION** – San Jose

GROUND ELEVATION - 7,209'

#### ESTIMATED FORMATION TOPS - (Water, oil, gas and/or other mineral-bearing formations)

San Jose	Surface	Sandstone, shales & siltstones
Nacimiento /	1,977'	Sandstone, shales & siltstones
Ojo Alamo	3,185'	Sandstone, shales & siltstones
Fruitland	3,611'	Sandstone, shales & siltstones
Pictured Cliffs	3,700'	Sandstone, shales & siltstones
Lewis	3,808'	Sandstone, shales & siltstones

TOTAL DEPTH 4,000'

Estimated depths of anticipated fresh water, oil, or gas:

**Tertiary** 

San Jose	V	surface	Gas
Nacimiento	W	1,977'	Gas
Ojo Alamo		3,185'	Gas
Fruitland		3,611'	Gas
Pictured Cliffs		3,700'	Gas

CASING PROGRAM

Depth	Hole Diameter	Casing Diameter	Casing Weight and Grade	Cement
0' - 250'	12-1/4"	8-5/8"	J-55 24# ST&C New	To surface (±175 sxs Class B)
0' - T.D.	7-7/8"	5-1/2"	J-55 15.5# LT&C New	TD to surface (±630 sxs lite or 65:35 poz-and ±270 sxs 50:50 poz)*

<sup>\*</sup> Actual cement volume to be determined by caliper log.

Yields:

Class B yield =  $1.18 \text{ ft}^3/\text{sx}$ 

65:35 Poz yield =  $1.62 \text{ ft}^3/\text{sx}$ 50:50 Poz yield =  $1.26 \text{ ft}^3/\text{sx}$ 

All fresh water and prospectively valuable minerals encountered during drilling, will be recorded by depth and protected.

#### PRESSURE CONTROL

BOPs and choke manifold will be installed and pressure tested before drilling out under surface casing (subsequent pressure test will be performed whenever pressure seals are broken), and then will be checked daily as to mechanical operating condition. BOP's will be pressure tested at least once every 30 days. Ram type preventors and related pressure control equipment will be pressure tested to 1,000 psi. Annular type preventor will be pressure tested to 50% of the rated working pressure, not to exceed 1,000 psi. All casing strings will be pressure tested to 0.22 psi/ft. or 1,000 psi, whichever is greater, not to exceed 70% of internal yield.

BOP to be either double gate rams or an annular preventor as per Onshore Order No. 2.

#### Statement on Accumulator System and Location of Hydraulic Controls

The drilling rig has not yet been selected for this well. Selection will take place after approval of this application. Manual and/or hydraulic controls will be in compliance with Onshore Order No. 2 for 2M systems.

A remote accumulator will be used. Pressures, capacities, location of remote hydraulic and manual controls will be identified at the time of the BLM supervised BOP test.

#### **MUD PROGRAM**

0' - 250' Fresh water - M.W. 8.5 ppg, Vis 30-33
250' - TD Fresh water - Low solids non-dispersed
M.W. 8.5 - 9.2 ppg
Vis - 28 - 50 sec
W.L. 15cc or less

Sufficient mud materials to maintain mud properties, control lost circulation and to contain "kick" will be available at wellsite.

#### **AUXILIARY EQUIPMENT**

- A) A Kelly cock will be kept in the drill string at all times
- B) Inside BOP or stab-in valve (available on rig floor)
- C) Mud monitoring will be visually observed

#### LOGGING, CORING, TESTING PROGRAM

A) Logging: DIL-CNL-FDC-GR - TD - BSC (GR to surface)

Sonic (BSC to TD)

B) Coring: None

C) Testing: Possible DST - None anticipated. Drill stem tests may be run on shows of interest

#### ABNORMAL CONDITIONS

A) Pressures: No abnormal conditions are anticipated

Bottom hole pressure gradient - 0.31 psi/ft

B)

Temperatures: No abnormal conditions are anticipated

C) H<sub>2</sub>S: None is anticipated.

D) Estimated bottomhole pressure: 1,240 psi

#### **ANTICIPATED START DATE**

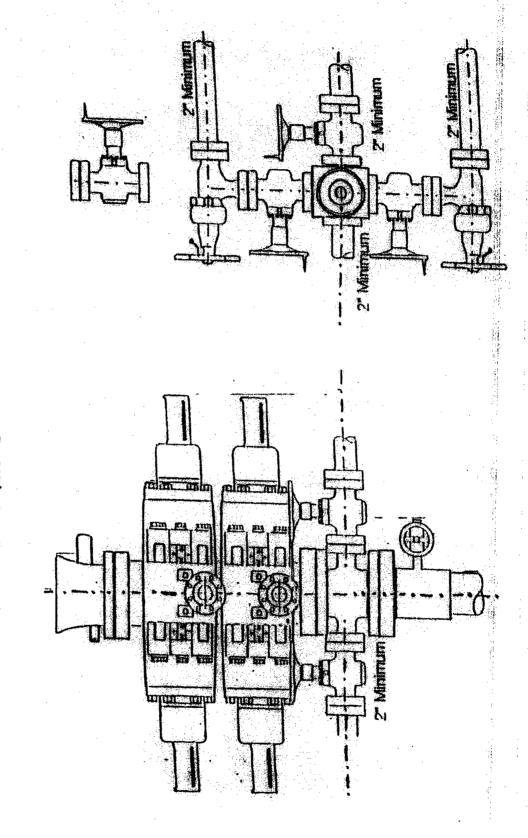
May 5, 2004

#### COMPLETION

The location pad will be of sufficient size to accommodate all completion activities and equipment. A string of 2-3/8" J-55 4.7#/ft tubing will be run for a flowing string. A Sundry Notice will be submitted with a revised completion program if warranted.

# 2-M SYSTEM MALLON OIL COMPANY

ANNULAR PREVENTOR MAY BE SUBSTITUTED FOR DOUBLE GATE PREVENTORS BOP PRESSURE TEST TO 1,000 PSI





### 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<sub>2</sub>S).
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- 3. The proper use of H<sub>2</sub>S 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:

- The effects of H<sub>2</sub>S 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.
- The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S 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<sub>2</sub>S 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  $H_2S$ .

- A. Well control equipment:
  - 1. Choke manifold with a minimum of one remote choke.
  - 2. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- B. Protective equipment for essential personnel.
  - 1. Mark II Surviveair 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.





#### C. H<sub>2</sub>S detection and monitoring equipment:

Two portable H<sub>2</sub>S monitors positioned on location for best coverage and response.
 These units have warning lights and audible sirens when H<sub>2</sub>S levels of 10 ppm are reached.

#### D. Visual warning systems:

- 1. Wind direction indicators as shown on well site diagram.
- 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<sub>2</sub>S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H<sub>2</sub>S scavengers will minimize hazards when penetrating H<sub>2</sub>S bearing zones.

#### F. Metallurgy:

- 1. All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H<sub>2</sub>S service.
- 2. All elastomers used for packing and seals shall be H<sub>2</sub>S trim.

#### G. Communication:

1. Cellular telephone communications in company vehicles.

#### H. Well testing:

 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 H<sub>2</sub>S environment will use the closed chamber method of testing.