1 1005			SUBMIT IN TRI	6V 101.TV	EODM ADDDONED
uly 1992)	UNITE	ED STATES	(Other instruc		FORM APPROVED OMB NO. 1004-0136
	DEPARTMENT OF THE INTERIOR reverse side)			Expires February 28, 1995	
		ND MANAGEMENT			5. LEASE DESIGNATION AND SERIAL NO
a TYPE OF WORK	APPLICATION FOR PE	RMIT TO DRILL OF	DEEPEN		MDA 701-98-0013
	Drill X	Deepen			6. IF INDIAN, ALLOTTEE OR TRIBE NAM Jicarilla Apache
TYPE OF WELL Oil Well	Gas Well X Other				7. UNIT AGREEMENT NAME
NAME OF OPERAT		Sil	ngle Zone Multiple Zone	<u> </u>	N/A Z4
	Mallon Oil Company	13925			8. FARM OR LEASE NAME, WELL NO. Jicarilla 29-92-99 No. 2
ADDRESS AND TE	P.O. Box 2797	4	23456		9. APIWELL NO. 39- 26%
LOCATION OF WE	Durango, CO 81302  LL (Report location clearly and in accordance)	(970) 382-9108	· · · · ·		10. FIELD AND POOL, OR WILDCAT
t surface	800' FNL and 460' FWL (N				E. Blanco, Pictured Cliffs  11. SEC., T., R., M., OR BLK.
t proposed prod. zon	800' FNL and 460' FWL (N	W/NW) Unit	75. 11. 11.		AND SURVEY OR AREA Sec. 9, T29N-R02W
DISTANCE IN MIL	es and direction from nearest to 70 miles east of Bloomfield	WN OR POST OF NCE:	OII OFFT 9		12. COUNTY OR PARISH 13. STATE
DISTANCE FROM	PROPOSED*	, INEW MEXICO	O. OF ACRES IN LEASE	17 NO	Rio Arriba NM OF ACRES ASSIGNED
DOATION TO NEARE		NS C	20201 21 11	TO THE	SWELL
ROPERTY OR LEASI		IMDA 💛	वह प्रकृति है।		160NW
B. DISTANCE FROM	PROPOSED LOCATION*	19. P	ROPOSED DEPTH	20. RO	TARY OR CABLE TOOLS
R APPLIED FOR, ON	DRILLING, COMPLETED,	2,242' lic29-02-08 #3	4000'	-	D
	DW WHETHER DF, RT, GR, Etc.)		ODOV DATE MORKING STATE		Rotary 07/15/01
3.	PRC		PROX.DATE WORK WILL START CEMENTING PROGRAM	<del></del>	0//15/01
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOO		PTH	75 QUANTITY OF CEMENT
12-1/4"	8-5/8"	24#	250		110 sx, circ. to surface.
7-7/8"	5-1/2"	15.5#	4000		900 sx, circ. to surface.
					out one to durade.
	<u></u>				
EXHIBIT A: LO EXHIBIT B: Ro EXHIBIT C: On ABOVE SPACE DES	m  Dw Out Preventor Equipment cation and Elevation Plat ads and Pipelines ads and Pipelines be Mile Radius Map acribe Proposed Program If propo- sionally, give pertinent data on subsurface to	Exh Exh Exh sal is to deepen, give data on p	ibit D: Drilling Site Laibit E: Production Faibit F: H2S Continge ibit G: Environmenta resent productive zone and propose vertical depths. Give blowout present productive zone and propose vertical depths.	icilities incy Pla I Asses sed new pr	sment oductive zone. If proposal is
GNED: Tel	rry Lindeman	TITLE: Ope	rations Superintenden	t	DATE 06/5/2001
his space for Federal	or State office use)				
ERMIT NO.			APPROVAL	DATE	
oplication approval do	es not warrant or certify that the applicant h	olds legal or equitable title to the	nose rights in the subject lease whi	ch would e	ntitle the applicant to conduct
ONDITIONS OF APPI	ROVAL, IF ANY:				
	2015 p. 12 71. 0 mg	THE Acting	AFM DA	ATE	007 3 0 1 1
PPROVED BY			n Pavarca Sida		
PPROVED BY		*See Instructions O	ii iteverse side		

K

DISTRICT I P.O. Box 1980, Hobbs, N.M. 88241-1980

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102 Revised February 21, 1994 Instructions on back

Instructions on back Submit to Appropriate District Office

State Lease - 4 Copies Fee Lease - 3 Copies

☐ AMENDED REPORT

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

DISTRICT III 1000 Rio Brazos Rd., Azteo, N.M. 67410

DISTRICT IV PO Box 2088, Santa Fe, NM 87504-2088 OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

Line was a second of the Man Manager Dedication PLAT			
30-039-2686S	72400	*Pool Name East Blanco; Pictured Cliffs	
Property Code Z4Z47	Property Name  JICARILLA 29-02-09		
O13925		oll COMPANY 7365	

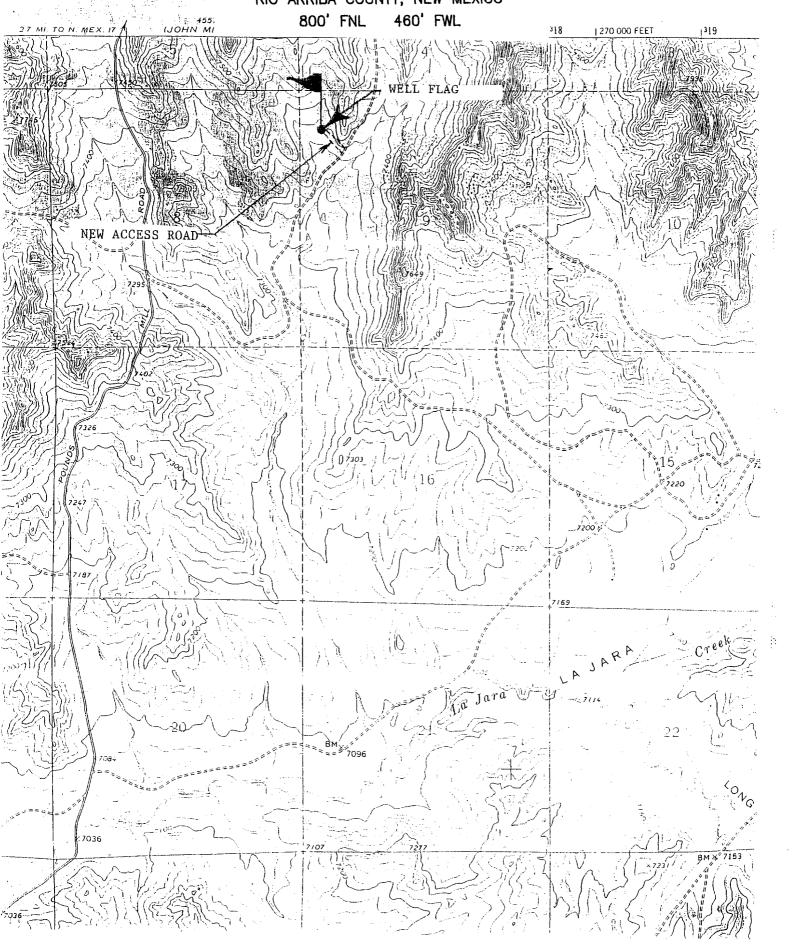
Surface Location UL or lot no. Section Township Range lot Idn Peet from the North/South line Feet from the East/West line County D 9 29-N 2-W 800 **NORTH** 460 WEST RIO ARRIBA "Bottom Hole Location If Different From Surface UL or lot no. Section Township Range Lot Idn Feet from the North/South line Feet from the East/West line County Dedicated Acres u Joint or Infill 14 Consolidation Code 15 Order No. 158.5 160

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

16	OR A NON-STANDARD UNIT HAS B	EEN APPROVED BY	THE DIVISION
CALC. CORNER	N 89-24-14 E 5239.9'	CALC. CORNER	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and beltaf
518	LAT. 36'44'40" N LONG. 107'03'22" W		
01-06-02 E 5271.1'	9	CONTRIBIATION OF THE STREET OF	Signature Terry Lindeman Printed Name Operations Superintendent Title 6/5/01 Date  18 SURVEYOR CERTIFICATION
M	23.23		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 Surveys the first surveyor:
SEC. CORNER FD. P & C LS 8894			394 September 1 394 Solution 1 394 S

## MALLON OIL COMPANY JICARILLA 29-02-09 #2

NW/4 SEC. 9, T-29-N, R-2-W, N.M.P.M. RIO ARRIBA COUNTY, NEW MEXICO



### **DRILLING PROGRAM**

Attached to Form 3160-3

Mallon Oil Company

Jicarilla 29-02-09 No. 2

800' FNL and 460' FWL (NW/NW) Unit D

Sec. 9, T29N- R02W

Rio Arriba County, New Mexico

## **LEASE NUMBER: MDA** 701-98-0013

1. Geologic name of surface formation: San Jose

## 2. Estimated tops of important geologic markers:

San Jose	Surface
Nacimiento	2600'
Ojo Alamo	3030'
Kirtland	3358'
Fruitland	3468'
Pictured Cliffs	3660'
Lewis	3800°
Total Depth	4000°

## 3. Estimated depths of anticipated fresh water, oil, or gas:

San Jose	1300'	Gas
Nacimiento	2600'	Gas
Ojo Alamo	3030'	Gas
Fruitland	3468'	Gas
Pictured Cliffs	3660'	Gas

No other formations are expected to produce oil, gas, or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 8-5/8" casing at 250' and circulating cement back to surface.

### 4. Proposed casing program:

Hole Size	<u>Interval</u>	Casing OD	Casing weight, grade, and thread
12-1/4"	0-250°	8-5/8"	24 lb/ft, K55, ST&C
7-7/8"	0-4000°	5-1/2"	15.5 lb/ft, K55, LT&C

#### Cement program:

8-5/8" surface casing: Cemented to surface with 110 sx Class B, or Type III cement containing 2% CaCl<sub>2</sub>, 1/4 lb/sk Celloflake, slurry to be mixed at 15.6 lb/gal, yield 1.18 cu ft/sk. Circulate cement to surface.

5-1/2" production casing: 900 sks 50/50 POZ 2% Gel, with 6-1/4 lb/sk Gilsonite, 3% KCl, mixed at 13.7 lb/gal, 1.26 cu ft/sk, 30% excess. Circulate cement to surface.

## 5. Minimum specifications for pressure control (2M System):

The blowout preventor equipment (BOP) shown in Exhibit 1 will consist of a double ram-type (2000 psi WP) preventor. The unit will be hydraulically operated and the ram-type preventor will be equipped with blind rams on top and drill pipe rams on bottom. The BOP will be nippled up on the 8-5/8" surface casing and used continuously until TD is reached. BOP and accessory equipment will be tested to 1000 psi before drilling out of surface casing. Pipe 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 2" 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, and choke lines and choke manifold with 2000 psi WP rating.

### 6. Types and characteristics of the proposed mud system:

The well will be drilled to TD with a combination of fresh water and fresh water polymer mud system. The applicable depths and properties of this system are as follows:

<u>Depth</u>	Type	Weight (ppg)	Viscosity (sec)	Water loss (cc)
0-250'	FW	$\pm 8.5$ ner) $\pm 9.0$	30-33	NC
250' - TD	FW (Gel polyn		32-35	10 - 20 cc

### 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.
- C. The drilling fluids systems will be visually monitored at all times.

### 8. Testing, logging, and coring program:

Drill stem tests:

None anticipated

Logging:

TD to surface casing, Open Hole GR, SP, Neutron, Density, Induction

Coring:

None planned

### 9. Abnormal conditions, pressures, temperatures, and potential hazards:

No abnormal pressures or temperatures are anticipated. The proposed mud program will be modified to control excess pressure if abnormal pressures are encountered. The estimated bottom-hole pressure (BHP) is 1200 psig. Hydrogen sulfide gas is potentially present in the San Jose and Ojo Alamo formation and an H<sub>2</sub>S drilling plan is attached.

#### 10. Anticipated starting date: July 1, 2001

Anticipated completion of drilling operations: Expected duration of 6 days

# **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  $\rm H_2S$  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:

- 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.
- 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  $\rm H_2S$  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<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.
  - 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 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 20 ppm are reached.

### D. Visual warning systems:

- 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:

1. 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.

#### 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  $\rm H_2S$  service.
- 2. All elastomers used for packing and seals shall be  $\rm H_2S$  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.