

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. CONTRACT 461
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name JICARILLA APACHE
2. Name of Operator MALLON OIL COMPANY <i>Black Hills</i> Contact: ART CHILDERS E-Mail: artchilder@bhbp.com		7. If Unit or CA Agreement, Name and No.
3a. Address 350 INDIANA STREET, SUITE 400 GOLDEN, CO 80401	3b. Phone No. (include area code) Ph: 720.210.1300	8. Lease Name and Well No. JIC 461-13 11
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWNW 1000FNL 1000FWL At proposed prod. zone		9. API Well No. 30-039-29309
14. Distance in miles and direction from nearest town or post office* 57 MILES EAST OF BLOOMFIELD, NEW MEXICO		10. Field and Pool, or Exploratory EAST BLANCO PICTURED CLIFFS
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1,000' FNL - LEASE	16. No. of Acres in Lease 1920.00	11. Sec., T., R., M., or Blk. and Survey or Area Sec 13 T30N R3W Mer NMP 0
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 2,400' - JIC 461-13 #13	19. Proposed Depth 4000 MD	12. County or Parish RIO ARRIBA
21. Elevations (Show whether DF, KB, RT, GL, etc.) 7400 GL	22. Approximate date work will start 10/05/2004	13. State NM
23. Estimated duration 45-60 DAYS		17. Spacing Unit dedicated to this well 160.00 NW/4
20. BLM/BIA Bond No. on file 1318288		

24. Attachments

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.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification  |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature (Electronic Submission)	Name (Printed/Typed) KATHY L. SCHNEEBECK (AGENT) Ph: 303.820.4480	Date 09/01/2004
Title AGENT		
Approved by (Signature) <i>Wayne Townsend</i>	Name (Printed/Typed) Wayne Townsend	Date 7/26/05
Title <i>Acting AFM</i>	Office FFO	

Application approval does not warrant or certify 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.

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.

Additional Operator Remarks (see next page)

Electronic Submission #35316 verified by the BLM Well Information System  
For MALLON OIL COMPANY, sent to the Rio Puerco  
Committed to AFMSS for processing by ANGIE MEDINA-JONES on 09/02/2004 ()

NMOCD

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

DISTRICT I  
1625 N. French Dr., Hobbs, N.M. 88240

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

DISTRICT III  
1000 Rio Brazos Rd., Afton, N.M. 87410

DISTRICT IV  
1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102

Revised June 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <u>30-039-29309</u>		*Pool Code <u>72400</u>	*Pool Name <u>E. Blanco/Pictured Cliffs</u>
*Property Code <u>24245</u>	*Property Name <u>JICARILLA 461-13</u>		*Well Number <u>11</u>
*OGED No. <u>013925</u>	*Operator Name <u>MALLON OIL COMPANY</u>		*Elevation <u>7400'</u>

<sup>10</sup> Surface Location

UL or lot no. <u>D</u>	Section <u>13</u>	Township <u>30-N</u>	Range <u>3-W</u>	Lot Idn	Feet from the <u>1000</u>	North/South line <u>NORTH</u>	Feet from the <u>1000</u>	East/West line <u>WEST</u>	County <u>RIO ARriba</u>
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<sup>11</sup> 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
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*Dedicated Acres <u>160 NW</u>	*Joint or Infill	*Consolidation Code	*Order No.
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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

FD. 2 1/2" BC. U.S.G.L.O. 1917 1000' 1000'	N 89-53-28 E 5259.76' (M) LAT. 36-49-01 N (NAD 83) LONG 107-06-28 W (NAD 83)	FD. 2 1/2" BC. U.S.G.L.O. 1917	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief  <u>Kathy L. Schneebeck</u> Signature <u>Kathy L. Schneebeck</u> Printed Name Agent for Mallon Oil Company Title <u>August 30, 2004</u> Date
FD. 2 1/2" BC. U.S.G.L.O. 1917	13		18 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 supervision, and that the same is true and correct to the best of my knowledge.  <u>JOHN A. VUKOBREDA</u> Date of Survey Signature and Seal of Professional Surveyor: 14831 14831 Certificate Number
LOT 1	LOT 2	LOT 3	LOT 4

**DISTRICT I**  
1625 N. French Dr., Hobbs, NM 88240  
**District II**  
1301 W. Grand Avenue, Artesia, NM 88210  
**District III**  
1000 Rio Brazos Road, Aztec, NM 87410  
**District IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144  
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: Mallon Oil Company Telephone: 720-210-1300 e-mail address: artchilder@bhep.com  
Address: 350 Indiana Street, Suite 400 Golden, CO 80401  
Facility or well name: Jicarilla 461-13 11 API #: Pending U/L or Qtr/Qtr NWNW Sec 13 T 30N R 3W  
County: Rio Arriba Latitude 36°49'01" N Longitude 107°06'28" W NAD: 1927 ☐ 1983 ☒ Surface Owner Federal ☐ State ☐ Private ☐ Indian ☒

**Pit**

Type: Drilling ☒ Production ☐ Disposal ☐  
Workover ☐ Emergency ☐  
Lined ☐ Unlined ☒  
Liner type: Synthetic ☐ Thickness        mil Clay ☒  
Pit Volume ±17,811 bbl

**Below-grade tank**

Volume:        bbl Type of fluid:         
Construction material:         
Double-walled, with leak detection? Yes ☐ If not, explain why not.       

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)

Less than 50 feet	(20 points)
50 feet or more, but less than 100 feet	(10 points)
100 feet or more	(0 points)

Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)

Yes	(20 points)
No	(0 points)

Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet	(20 points)
200 feet or more, but less than 1000 feet	(10 points)
1000 feet or more	(0 points)

Ranking Score (Total Points) 70 points

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☐ If offsite, name of facility       . (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface        ft. and attach sample results. (5)

Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 09/01/04

Printed Name/Title Kathy L. Schneebeck

Signature Kathy L. Schneebeck

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval: **DEPUTY OIL & GAS INSPECTOR, DIST. I**

Printed Name/Title       

Signature       

Date:       

**JUL 28 2005**

Mallon Oil Company  
**Jicarilla 461-13 11**  
1,000' FNL 1,000' FWL (NW/4 NW/4)  
Sec. 13 T30N R3W  
Rio Arriba County, New Mexico  
Lease: Contract 461

**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 August 11, 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 – 7,400'

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

San Jose	Surface	Sandstone, shales & siltstones
Nacimientos	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

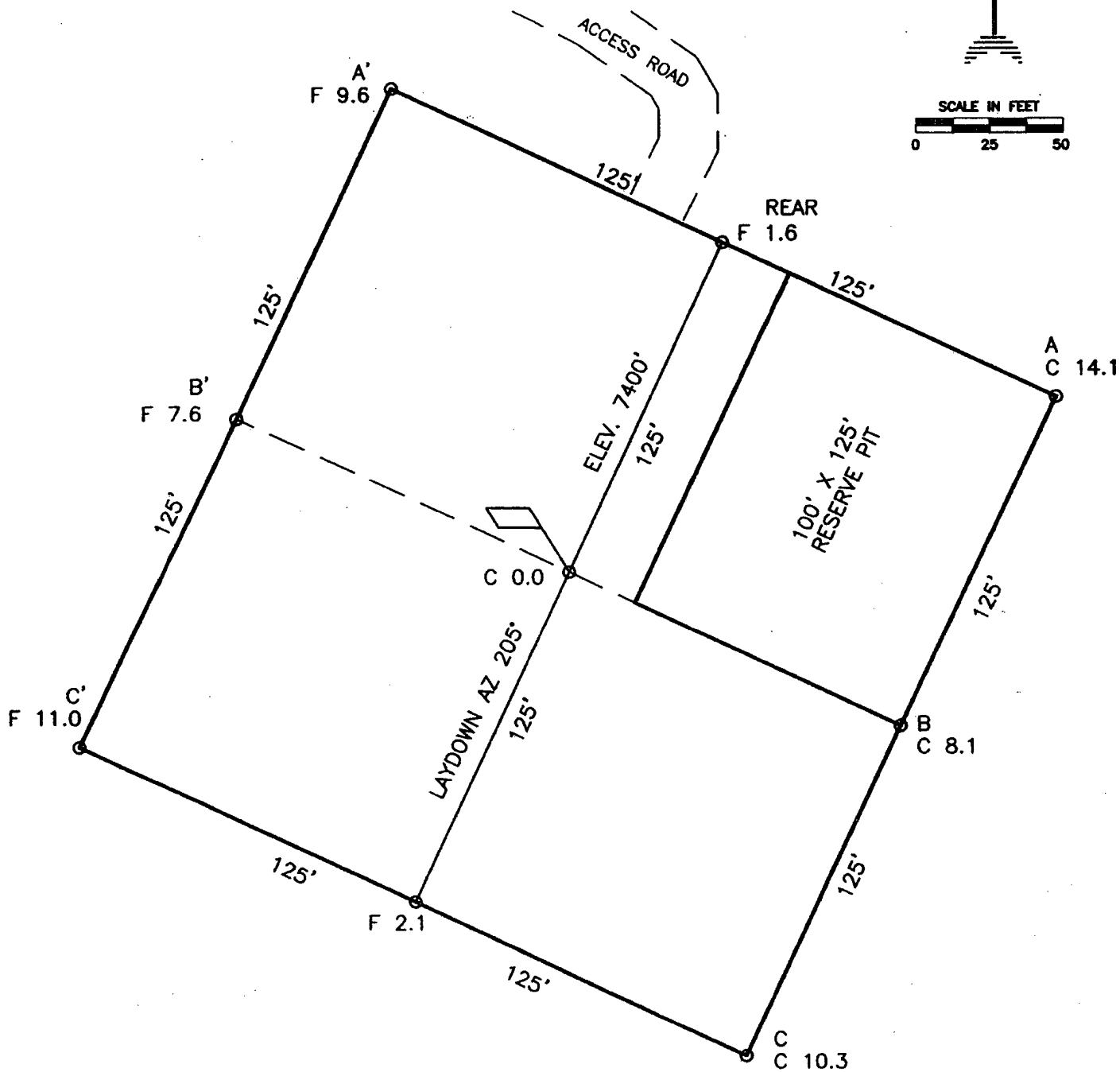
San Jose	surface	Gas
Nacimientos	1,977'	Gas
Ojo Alamo	3,185'	Gas
Fruitland	3,611'	Gas
Pictured Cliffs	3,700'	Gas

# WELL PAD DIAGRAM

COMPANY: MALLON OIL COMPANY  
 LEASE: JICARILLA 461-13 #11  
 FOOTAGE: 1000 FNL, 1000 FWL  
 SEC.: 13, TWN: 30-N, RNG: 3-W, NMPM  
 ELEVATION: 7400'




SCALE IN FEET  
 0 25 50



## NOTE:

DAGGETT ENTERPRISES, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. NEW MEXICO ONE CALL TO BE NOTIFIED 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION.

REF. DWG. MN323CF8 CROSS-SECT. DIAGRAM

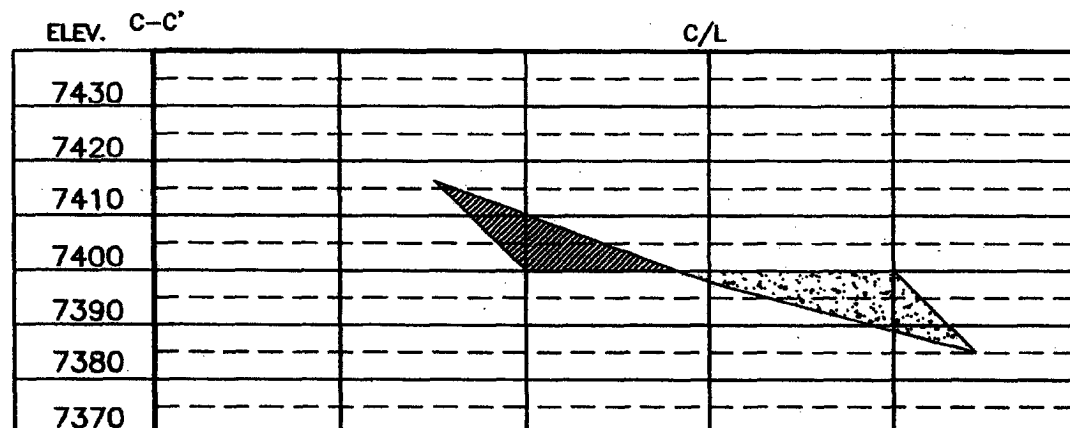
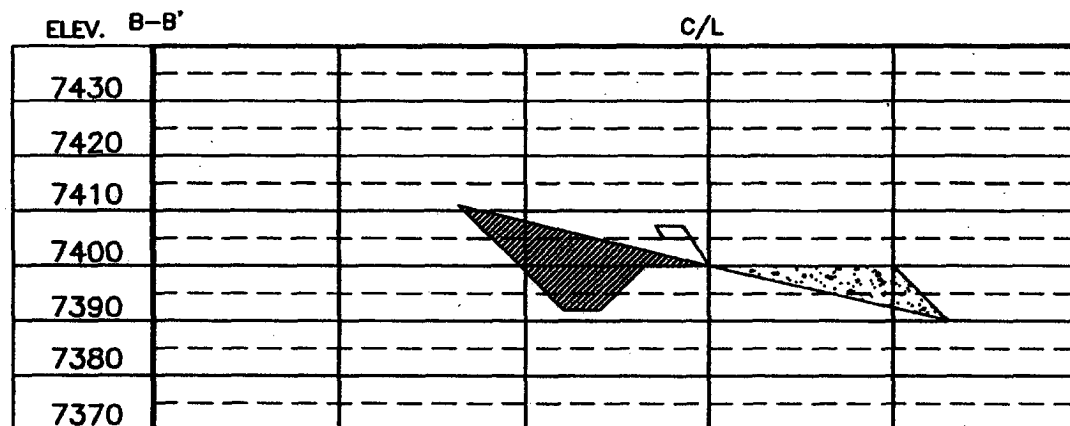
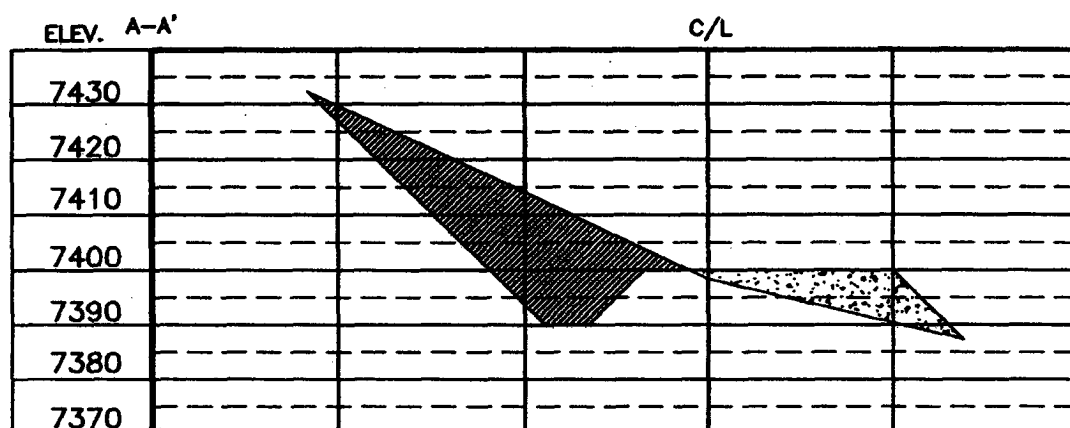
REVISION	DATE	REVISION BY
 <b>Daggett Enterprises, Inc.</b> Surveying and Oil Field Services P. O. Box 15068 • Farmington, NM 87401 Phone (505) 326-1772 • Fax (505) 326-6019 NEW MEXICO L.S. 14831		
DRAWN BY B.L.	CHECKED MN323PLB	
NOV- MN323	DATE 07/15/04	

# WELL PAD CROSS-SECTIONAL DIAGRAM

COMPANY: MALLON OIL COMPANY  
 LEASE: JICARILLA 461-13 #11  
 FOOTAGE: 1000 FNL, 1000 FWL  
 SEC.: 13, TWN: 30-N, RNG: 3-W, NMPM  
 ELEVATION: 7400'

## NOTE:

DAGGETT ENTERPRISES, INC. IS NOT LIABLE FOR  
 UNDERGROUND UTILITIES OR PIPELINES. NEW MEXICO  
 ONE CALL TO BE NOTIFIED 48 HOURS PRIOR TO  
 EXCAVATION OR CONSTRUCTION.



REF. DWG. MN323PUS WELL PAD DIAGRAM

DATE: 07/14/04

REVISIONS:

Daggett Enterprises, Inc.  
 Surveying and Oil Field Services  
 P. O. Box 15068 • Farmington, NM 87401  
 Phone (505) 326-1772 • Fax (505) 326-8019  
 NEW MEXICO L.S. 14831

DATE: 07/14/04

BY: [Signature]

DATE: 07/14/04

BY: [Signature]

**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)*

\* Actual cement volume to be determined by caliper log.

Yields:     Class B yield = 1.18 ft<sup>3</sup>/sx  
               65:35 Poz yield = 1.62 ft<sup>3</sup>/sx  
               50:50 Poz yield = 1.26 ft<sup>3</sup>/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: See attached H<sub>2</sub>S plan in event H<sub>2</sub>S is encountered.
- D) Estimated bottomhole pressure: 1,240 psi

ANTICIPATED START DATE

October 5, 2004

COMPLETION

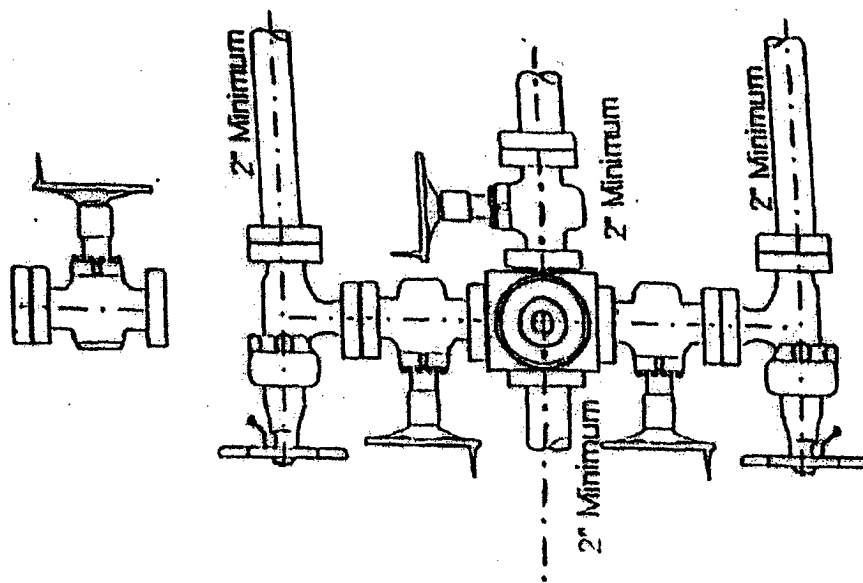
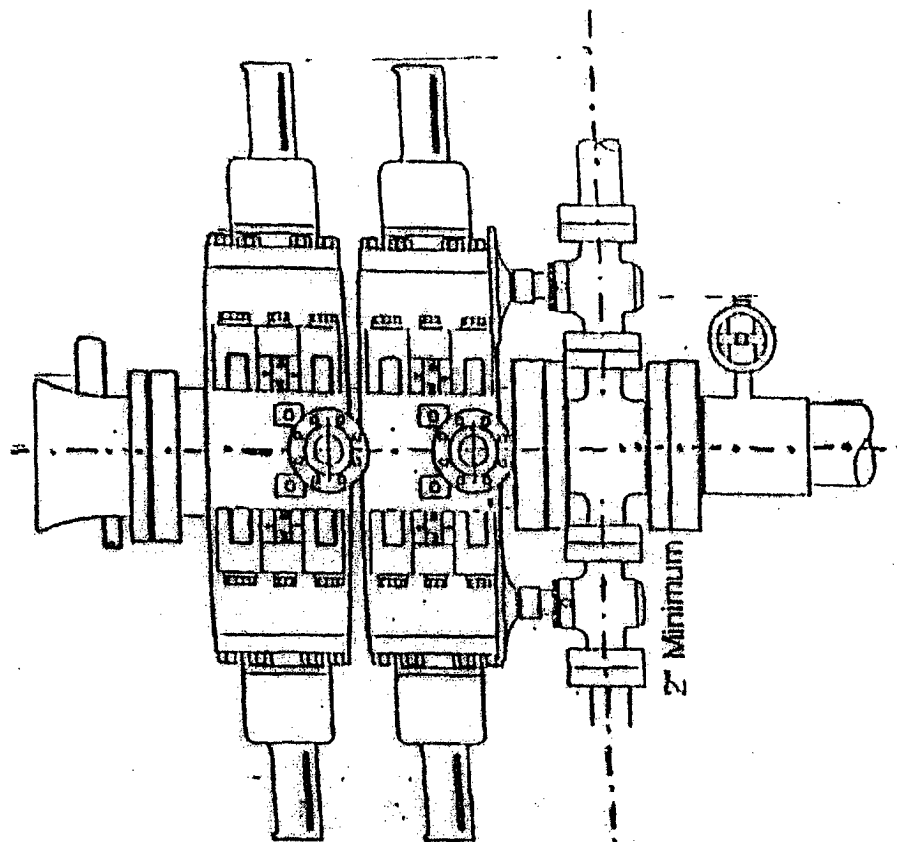
The location pad will be of sufficient size to accommodate all completion activities and equipment. A string of 2-3/8" J-55 4.7#/ft tubing will be run for a flowing string. A Sundry Notice will be submitted with a revised completion program if warranted.



## 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 ( $H_2S$ ).
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  $H_2S$  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. $H_2S$ 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:**

1. 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.
2. 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<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:**

1. 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.