

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM 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		<del>CONFIDENTIAL</del>	
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		5. Lease Serial No. CONTRACT 464	
2. Name of Operator MALLON OIL COMPANY		6. If Indian, Allottee or Tribe Name JICARILLA APACHE	
3a. Address 350 INDIANA STREET, SUITE 400 GOLDEN, CO 80401		7. If Unit or CA Agreement, Name and No.	
3b. Phone No. (include area code) Ph: 720.210.3100		8. Lease Name and Well No. JIC 464-32 15	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface NESE 1890FSL 980FEL At proposed prod. zone		9. API Well No. 30-039-29305	
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) 980' FEL - LEASE		11. Sec., T., R., M., or Blk. and Survey or Area I Sec 32 T30N R3W Mer NMP	
16. No. of Acres in Lease 2560.00		12. County or Parish RIO ARRIBA	
17. Spacing Unit dedicated to this well 160.00 SE/4		13. State NM	
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 1,800' - JIC 30-03-33 #4		19. Proposed Depth 4000 MD	
20. BLM/BIA Bond No. on file 1318288		21. Elevations (Show whether DF, KB, RT, GL, etc.) 7040 GL	
22. Approximate date work will start 10/01/2004		23. Estimated duration 45-60 DAYS	

## 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 Ph: 303.820.4480	Date 09/01/2004
Title AGENT		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 5-5-05
Title AFM	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 #35046 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 ()

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

NMOC

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., Aztec, 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 <b>30-039-29305</b>		Pool Code <b>72400</b>	Pool Name <b>E. Blanco/Pictured Cliffs</b>
Property Code <b>24245 22/85</b>	Property Name <b>JICARILLA 464-32</b>		Well Number <b>15</b>
OGRID No. <b>013925</b>	Operator Name <b>MALLON OIL COMPANY</b>		Elevation <b>7040'</b>

**10 Surface Location**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	32	30-N	3-W		1890	SOUTH	980	EAST	RIO ARRIBA

**11 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 <b>1.60</b>					Joint or Infill		Consolidation Code		Order No.

**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 SEC. CORNER FD. MARKED STONE	LAT. 36°45'58"N LONG. 107°10'04"W (NAD 83) (NAD 83)	32	5215.8' (M)	1890'	980'	N 00-00-10 W	5267.97' (M)	17 <b>OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief  <i>Kathy L. Schneebeck</i> Signature <b>Kathy L. Schneebeck</b> Printed Name <b>Agent for Mallon Oil Company</b> Title <b>September 1, 2004</b> Date
								18 <b>SURVEYOR CERTIFICATION</b> 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.  <b>JOHN A. VUKOBRA</b> Date of Survey Signature and Seal of Professional Surveyor <b>14831</b> Certificate Number

1301 W. 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: <u>Mallon Oil Company</u> Telephone: <u>720-210-1300</u> e-mail address: <u>artchilder@bhpe</u>		
Address: <u>350 Indiana Street, Suite 400 Golden, CO 80401</u>		
Facility or well name: <u>Jicarilla 464-32 15</u> API #: <u>Pending</u> U/L or Qtr/Qtr <u>NESE</u> Sec <u>32</u> T <u>30N</u> R <u>3W</u>		
County: <u>Rio Arriba</u> Latitude <u>36°45'58" N</u> Longitude <u>107°10'04" W</u> NAD: 1927 <input type="checkbox"/> 1983 <input checked="" type="checkbox"/> Surface Owner Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Indian <input checked="" type="checkbox"/>		
<b>Pit</b> Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input type="checkbox"/> Unlined <input checked="" type="checkbox"/> Liner type: Synthetic <input type="checkbox"/> Thickness <u>    </u> mil Clay <input checked="" type="checkbox"/> Pit Volume <u>±17,811</u> bbl	<b>Below-grade tank</b> Volume: <u>    </u> bbl Type of fluid: <u>    </u> Construction material: <u>    </u> Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not: <u>    </u>	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) (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 No	(20 points) (0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) (0 points)
Ranking Score (Total Points)		0 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>Supply distances prior to construction of well pad or pits</i>

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:

Printed Name/Title Steve Hayden

Signature Steve Hayden

MAY - 9 2005

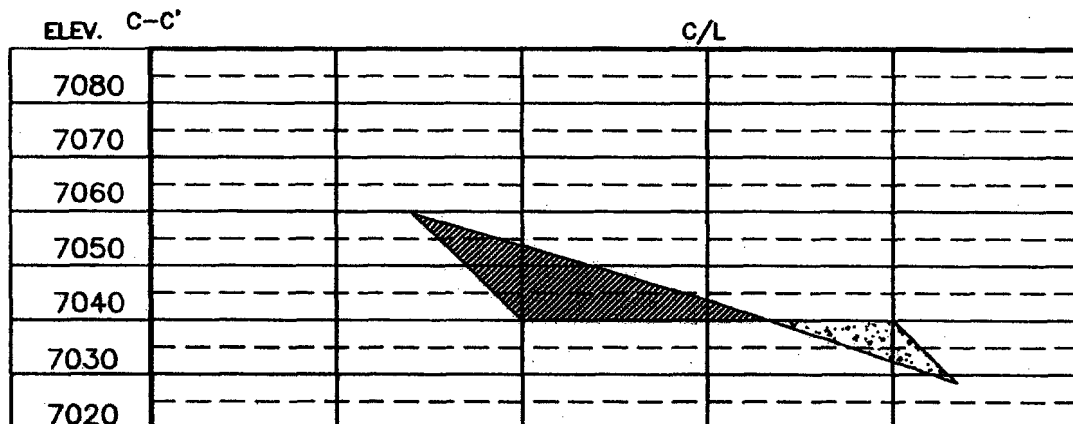
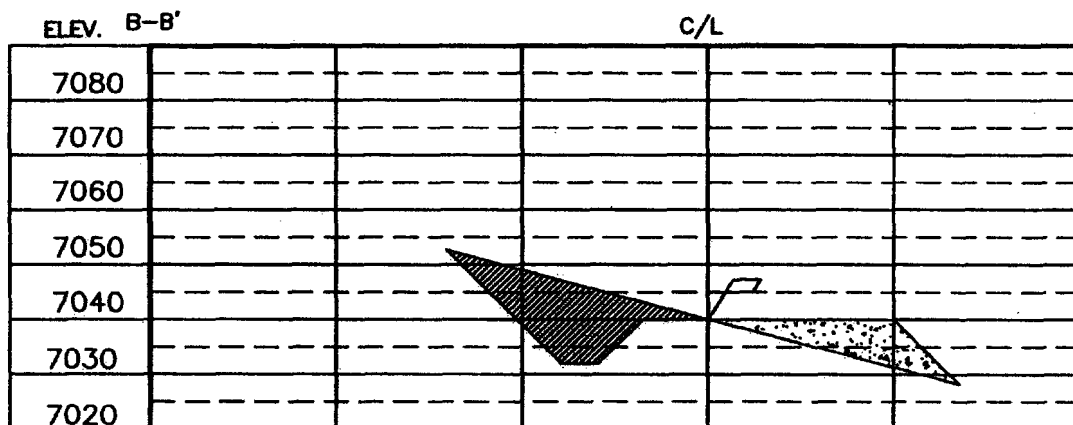
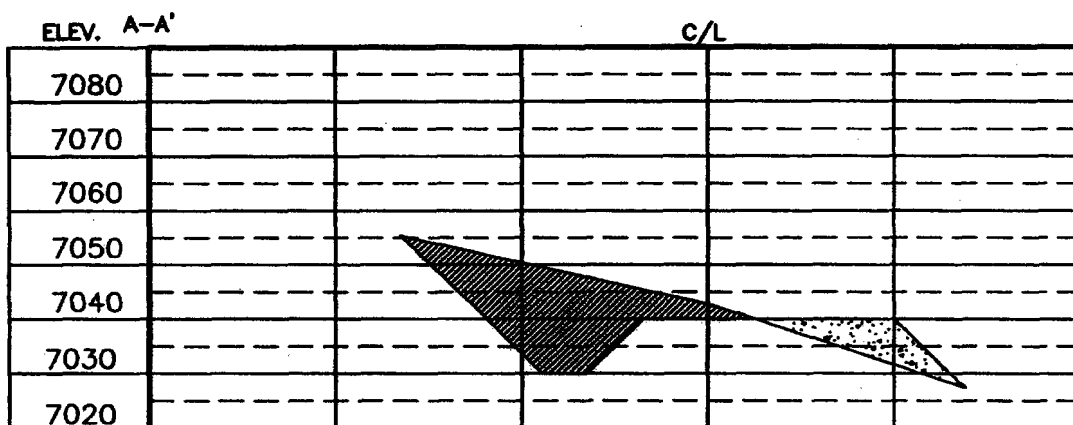
Date:     


DEPUTY OIL & GAS INSPECTOR, DIST. 00

COMPANY: MALLON OIL COMPANY  
 LEASE: JICARILLA 464-32 No. 15  
 FOOTAGE: 1890' FSL, 980' FEL  
 SEC.: 32, TWN: 30-N, RNG: 3-W, NMPPM  
 ELEVATION: 7040'

**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.



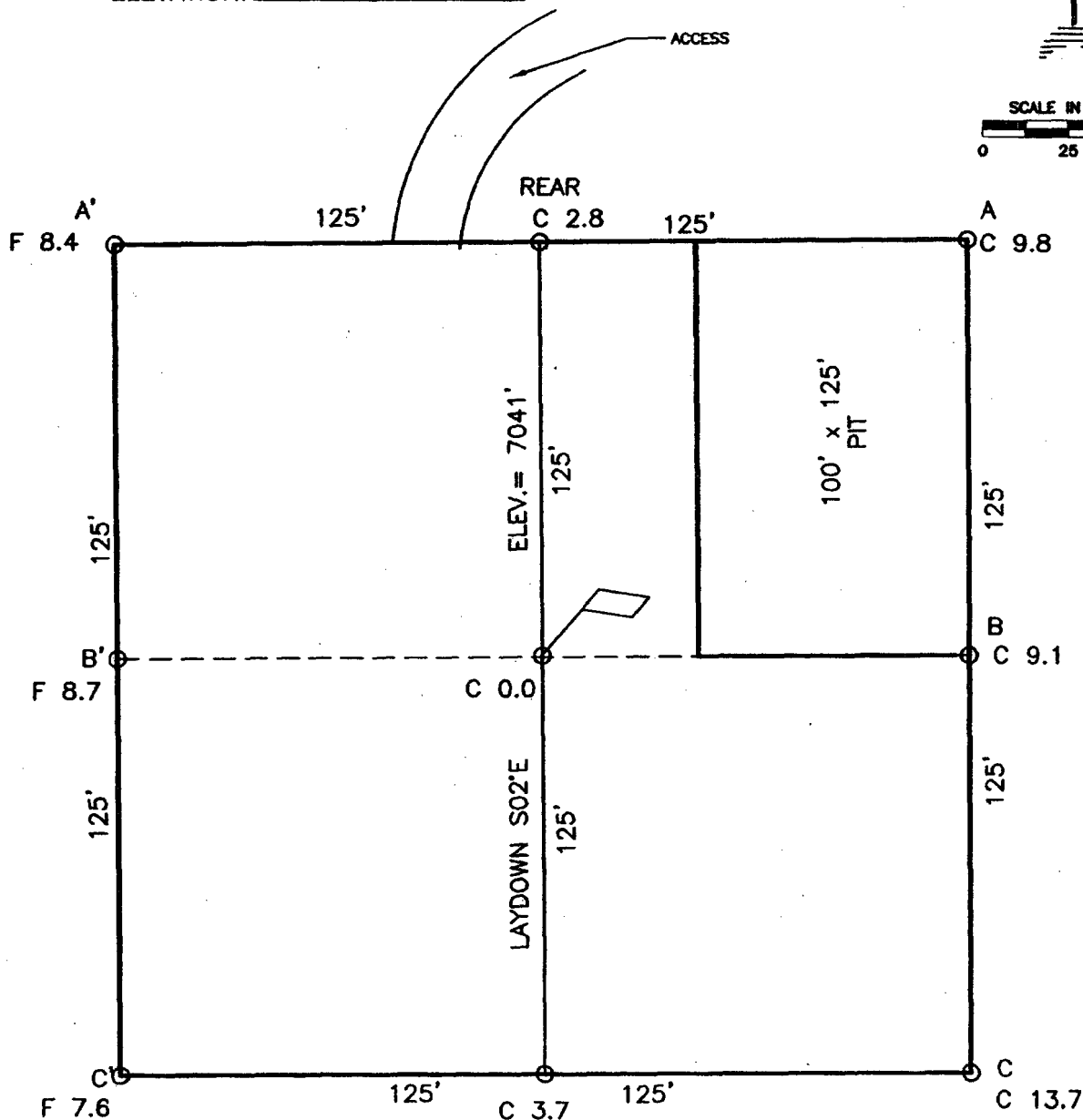
	<b>Daggett Enterprises, Inc.</b> Surveying and Oil Field Services P. O. Box 15068 • Farmington, NJ 07401 Phone (505) 338-1772 • Fax (505) 328-8019 NEW MEXICO L.S. 14831		DATE: 07/19/04 BY: B.L.
	DRAWN BY: B.L. CHECKED BY: B.L.		DATE: 08/24/04 BY: B.L.

# WELL PAD DIAGRAM

COMPANY: MALLON OIL COMPANY  
 LEASE: JICARILLA 464-32 No. 15  
 FOOTAGE: 1890 FSL 980 FEL  
 SEC.: 32 TWN: 30-N RNG: 3-W NMPM  
 ELEVATION: 7040'




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. MN304CF8 WELL PAD CROSS SECTION

REVISION	DATE	REMOVED BY
RESTAKE WELL LOC.	07/19/04	B.L.
 Daggett Enterprises, Inc. 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: MN304PL8	
DATE: MN304	DATE: 6/24/04	

Mallon Oil Company  
**Jicarilla 464-32 15**  
1,890' FSL 980' FEL (NE/4 SE/4)  
Sec. 32 T30N R3W  
Rio Arriba County, New Mexico  
Lease: Contract 464

**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 July 1, 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 – 7,040'

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	surface	Gas
Nacimiento	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 ( $\pm 175$ sxs Class B)
0' - T.D.	7-7/8"	5-1/2"	J-55 15.5# LT&C New	TD to surface ( $\pm 630$ sxs lite or 65:35 poz and $\pm 270$ 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: None is anticipated.
- 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.



Jicarilla 464-32 15  
 1,890' FSL 980' FEL ( NE 1/4 SE 1/4 )  
 Sec. 32 T 30N R 3W  
 Rio Arriba County, New Mexico  
 Jicarilla Contract 464

### SURFACE CASING AND CENTRALIZER DESIGN

Proposed Total Depth: 4,000 '  
 Proposed Depth of Surface Casing: 250 '  
 Estimated Pressure Gradient: 0.31 psi/ft  
 Bottom Hole Pressure at 4,000 '  
      $0.31 \text{ psi/ft} \times 4,000' = 1,240 \text{ psi}$   
 Hydrostatic Head of gas/oil mud: 0.22 psi/ft  
      $0.22 \text{ psi/ft} \times 4,000' = 880 \text{ psi}$

#### Maximum Design Surface Pressure

Bottom Hole Pressure      -      Hydrostatic Head      =  
 (  $0.31 \text{ psi/ft} \times 4,000'$  ) - (  $0.22 \text{ psi/ft} \times 4,000'$  ) =  
     1,240    psi                      -                      880            psi                      =      360 psi

#### Casing Strengths      8-5/8" J-55 24# ST&C

Wt.	Tension (lbs)	Burst (psi)	Collapse (psi)
24 #	244,000	2,950	1,370
32 #	372,000	3,930	2,530

#### Safety Factors

Tension (Dry):      1.8                      Burst:      1.0                      Collapse:      1.125

Tension (Dry):      24 # / ft x      250 '      =      6,000 #  
                                  Safety Factor =       $\frac{244,000}{6,000}$       =      40.67                      ok

Burst:                      Safety Factor =       $\frac{2,950 \text{ psi}}{360 \text{ psi}}$       =      8.19                      ok

Collapse:                      Hydrostatic      =       $0.052 \times 9.0 \text{ ppg} \times 250' = 117 \text{ psi}$   
                                  Safety Factor =       $\frac{1,370 \text{ psi}}{117 \text{ psi}}$       =      11.71                      ok

Use 250' 8-5/8" J-55 24# ST&C

Use 2,000 psi minimum casinghead and BOP's but will test to 1,000 psi

#### Centralizers

5 Total  
 1 near surface at 40'  
 2 -1 each at middle of bottom joint, second joint  
 2 -1 each at every other joint ±40' spacing

Total centralized      ± 200 ' (      50 ' -      250 ' )

Note that field experience indicates that additional centralizers greatly increase the chance of "sticking" the surface casing prior to reaching surface casing total depth.

# 2-M SYSTEM

MALLON OIL COMPANY

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

