

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

5. Lease Designation and Serial No.

SF-078481A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement, Name and No.

8. Lease Name and Well No.

GRAHAM #1B

9. API Well No.

30-045-32645

10. Field and Pool, or Exploratory

BLANCO MESAVERDE

11. Sec., T., R., M., or Blk. and Survey or Area

Sec 4, T-27-N, R-8-W

12. County or Parish,

San Juan

13. State

New Mexico

17. Spacing Unit dedicated to this well

320.79 Acres E/2

1a. Type of Work

☒ DRILL

☐ REENTER

1b. Type of Well:

☐ Oil Well

☒ Gas Well

☐ Other

☐ Single Zone

☒ Multiple Zone

2. Name of Operator

M&G Drilling Company Inc.

NM OGRID # 141852

3a. Address

c/o Mike Pippin LLC

3b. Phone Number

3104 N. Sullivan, Farmington, NM 87401

(505) 327-4573

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

At surface:

Unit H, 2615' FNL, 660' FEL

At proposed prod. Zone:

Same

14. Distance in miles and direction from nearest town or post office*

~13 Miles South of Bloomfield, NM

15. Distance from proposed*

location to nearest

660'

property or lease line, ft.

(Also to nearest drig. Unit line, if any)

16. No of Acres in lease

320

18. Distance from proposed*

location to nearest well

919'

19. Proposed Depth

4600'

20. BLM/BIA Bond No. on file

21. Elevation (Show whether DF, KDB, RT, GL, etc.)

5887' GL

22. Approximate date work will start*

June 1, 2005

23. Estimated duration

30 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.

2. A Drilling Plan

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.

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).

5. Operator certification.

6. Such other site specific information and/or plans as may be required by the authorized officer

Size of Hole	Grade, Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
12-1/4"	9-5/8" H-40	32.3#	200'	106 Sxs, 125 ft3 - 100% Excess
8-3/4"	7" K-55	20#	1800'	214 Sxs, 393 ft3 - 45% Excess
6-1/4"	4-1/2" K-55	11.6#	4600'	313 Sxs, 627 ft3 - 45% Excess

The on-site inspection was on 10/12/04 by Brice Barlan

Archy is by DCA.

EA is by Nelson

SEE ATTACHED APD INFORMATION

Latitude: 36 Deg, 36 Min, 14 Sec N

Longitude: 107 Deg, 40 Min, 46 Sec W

25. Signature

Mike Pippin

Name (Printed/Typed)

Mike Pippin

Date

October 25, 2004

Title

Petroleum Engineer

Approved by (Signature)

Original Signed: Stephen Mason

Name (Printed/Typed)

Office

Date

DEC 22 2004

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.

*(Instructions on reverse)

NMOC

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4

DISTRICT II
811 South First, Artesia, N.M. 86210

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

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-32645	*Pool Code 72319	*Pool Name BLANCO MESAVERDE
*Property Code 16598	*Property Name GRAHAM	*Well Number 1B
*OGRID No. 141852	*Operator Name M & G DRILLING COMPANY	*Elevation 5887'

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
H	4	27-N	8-W		2615	NORTH	660	EAST	SAN JUAN

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
¹² Dedicated Acres 320 E/2			¹³ Joint or Infill Y		¹⁴ Consolidation Code		¹⁵ 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**

18

<p>LOT 4</p>	<p>FD. 3 1/4" BC. 1916 GLO</p> <p>LOT 3</p>	<p>N 89°42'42" W 2639.4' (C)</p> <p>LOT 2</p>	<p>CALC'D COR</p> <p>LOT 1</p>	<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><u>Mike Pippin</u> Signature</p> <p><u>MIKE PIPPIN</u> Printed Name</p> <p><u>AGENT - PETR. ENGR.</u> Title</p> <p><u>10-26-04</u> Date</p>
		<p>DEC 2004</p> <p>OL. COR. DIV.</p> <p>DET. 3</p>	<p>2615'</p> <p>660'</p>	<p>18 SURVEYOR CERTIFICATION</p> <p>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.</p> <p><u>JOHN A. VUKOBICH</u> Date of Survey</p> <p><u>SEP 26 2004</u> Signature and Seal of Professional Surveyor</p> <p><u>14831</u> Certificate Number</p>
	<p>4</p> <p>LAT. 36°36'14" N. (NAD 83) LONG. 107°40'46" W. (NAD 83)</p>	<p>S 02°25'44" W 5413.0' (C)</p>	<p>FD. 3 1/4" BC. 1955 B.L.M.</p>	

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
March 4, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO.
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other		5. Indicate Type of Lease Federal STATE <input type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator M & G DRILLING COMPANY		6. State Oil & Gas Lease No. Federal: SF-078481A
3. Address of Operator c/o Agent, Mike Pippin LLC 3104 N. Sullivan, Farmington, NM 87401 505-327-4573		7. Lease Name or Unit Agreement Name GRAHAM
4. Well Location Unit Letter <u>H:</u> <u>2615</u> feet from the <u>North</u> line and <u>660</u> feet from the <u>East</u> line Section <u>4</u> Township <u>27N</u> Range <u>8W</u> NMPM San Juan County		8. Well Number #1B
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5887' GL		9. OGRID Number 141852
Pit or Below-grade Tank Application (For pit or below-grade tank closures, a form C-144 must be attached) Pit Location: UL <u>H</u> Sect <u>4</u> Twp <u>27N</u> Rng <u>8W</u> Pit type: <u>Drilling</u> Depth to Groundwater <u>>100'</u> Distance from nearest fresh water well <u>>1000'</u> Distance from nearest surface water <u>200'-1000'</u> Below-grade Tank Location UL <u> </u> Sect <u> </u> Twp <u> </u> Rng <u> </u> ; feet from the <u> </u> line and <u> </u> feet from the <u> </u> line		

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☐

OTHER: Drilling Pit Registration ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

We intend to drill a new MV well. The drilling pit will be built and lined according to our general pit guidelines on file at the NMOCD in Aztec, NM.

When this drilling pit is closed, it will be closed as per our general pit closing guidelines on file at the NMOCD.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any 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 ☐.

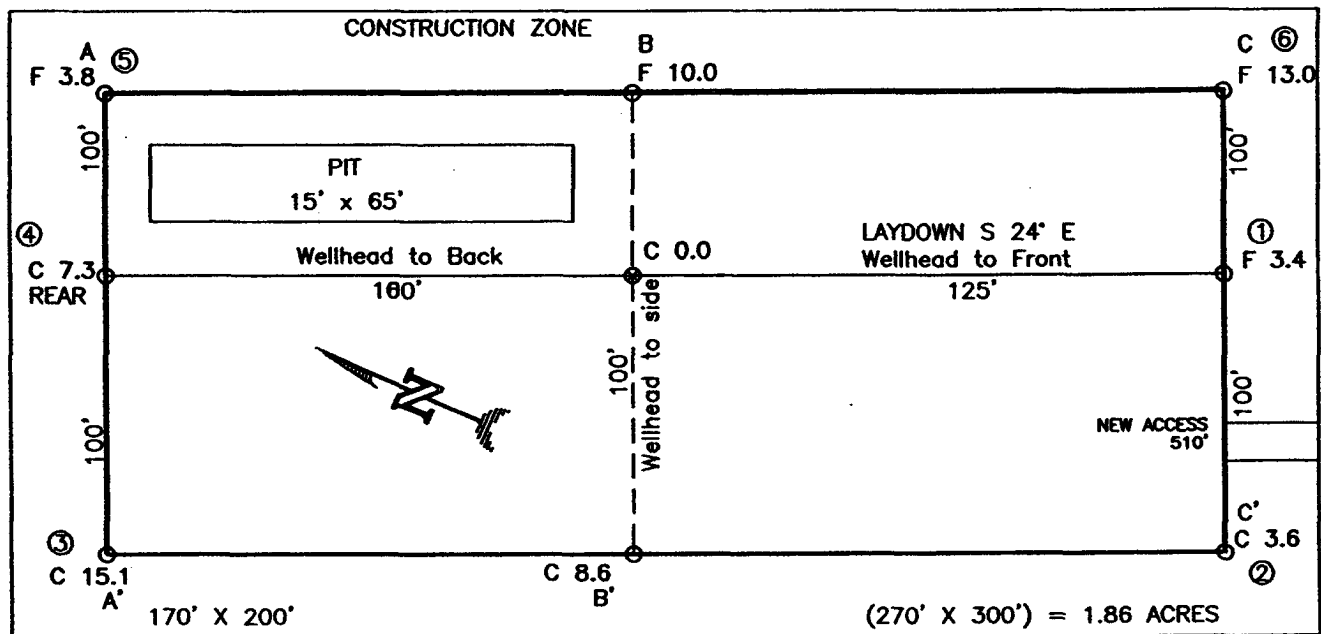
SIGNATURE Mike Pippin TITLE Agent - Petroleum Engineer DATE October 25, 2004

Type or print name Mike Pippin E-mail address: mpippin@ddbroadband.net Telephone No. 505-327-4573

(This space for State use)

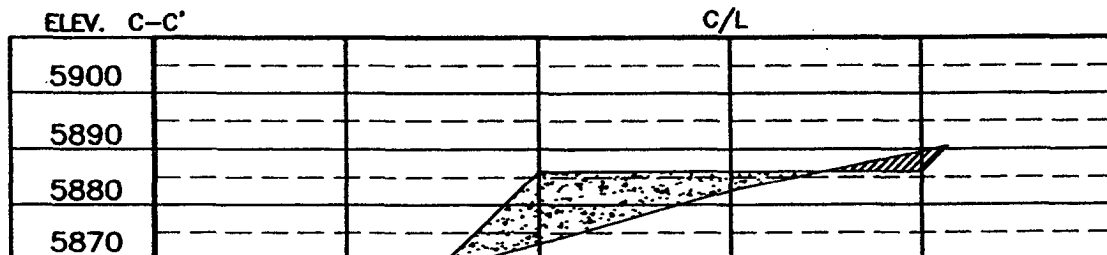
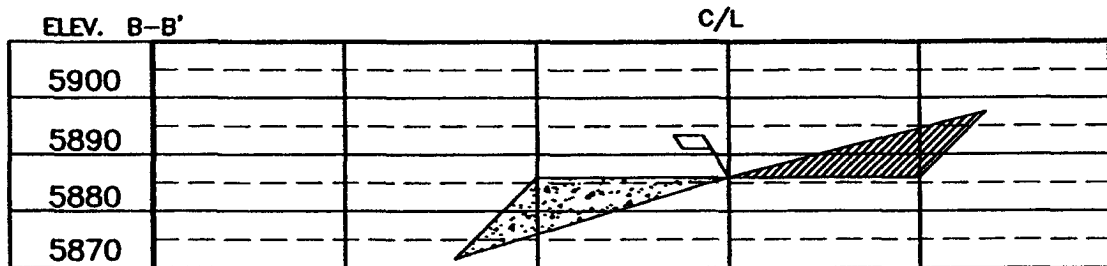
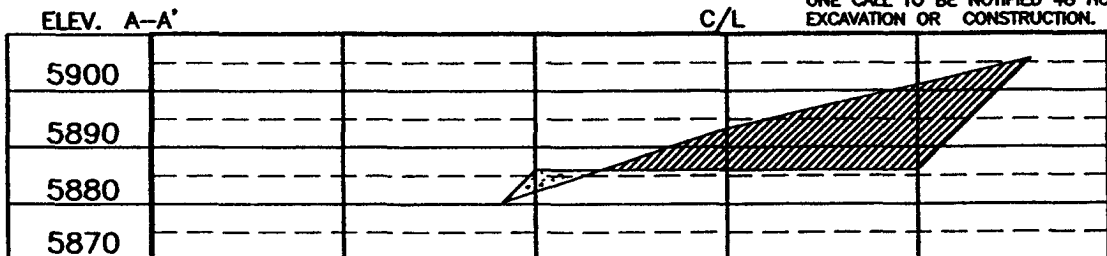
APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. IV DATE DEC 27 2005
Conditions of approval, if any:

M & G DRILLING COMPANY
 GRAHAM No. 1B, 2615 FNL 660 FEL
 SECTION 4, T27N, R8W, N.M.P.M., SAN JUAN COUNTY, N. M.
 GROUND ELEVATION: 5887, DATE: SEPTEMBER 08, 2004



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.



NOTE: CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES
 OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

PAGE #12

REVISION	DATE	REVISION BY

Daggett Enterprises, Inc.
 Surveying and Oil Field Services
 P. O. Box 15088 • Farmington, NM 87401
 Phone (505) 328-1772 • Fax (505) 328-8019
 NEW MEXICO L.S. No. 14831
 Surveyor: MARGOT B. S. BROWN
 DATE: 09/22/04

BROWN BY: A.C.
 ROW: MARGOT B.

M & G DRILLING COMPANY

GRAHAM #1B MV

2615' FNL, 660' FEL

Unit H Sec. 4 T27N R8W

San Juan County, NM

Drilling Program

1. ESTIMATED FORMATION TOPS (KB)

<u>Formation Name</u>	<u>Depth</u>
Ojo Alamo	1204'
Kirtland	1314'
Fruitland	1844'
Pictured Cliffs	2094'
Chacra	3066'
Cliffhouse	3767'
Menefee	3796'
Point Lookout	4324'
TD (4-1/2")	4600'

2. NOTABLE ZONES

<u>Gas or Oil Zones</u>	<u>Water Zones</u>	<u>Coal Zone</u>
Fruitland	Ojo Alamo	Fruitland
Pictured Cliffs	Kirtland	
Chacra		
Cliffhouse		
Menefee		
Point Lookout		

Water zones will be protected with casing, cement, and weighted mud. Fresh water found while drilling will be recorded. Oil or gas shows will be tested for commercial potential based on the engineer's recommendations.

3. PRESSURE CONTROL

Maximum expected pressure is ~800 psi. The drilling contract has not yet been awarded, thus the exact BOP model to be used is not yet known. A typical 11" 3,000 psi model BOP and choke manifold is on PAGE #5 & #6.

BOP equipment and all accessories will meet or exceed BLM requirements in 43 CFR Part 3160 for a 3000 psi system. A 3000 psi double ram hydraulic BOP will be used.

M & G DRILLING COMPANY

GRAHAM #1B MV

2615' FNL, 660' FEL

Unit H Sec. 4 T27N R8W

San Juan County, NM

Accumulator system capacity will be sufficient to close all BOPE with a 50% safety factor. Fill, kill, and choke manifold lines will be 2". Accessories will include upper and lower Kelly cocks with handles, stabbing valve to fit drill pipe on floor at all times, string float at bit, 3000 psi choke manifold with 2" adjustable and 2" positive chokes, and pressure gauge. BOPs will be tested every 24 hours. Tests will be recorded on IADC log.

4. CASING & CEMENT

<u>Hole Size</u>	<u>O.D.</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Age</u>	<u>Connection</u>	<u>GL Setting Depth</u>
12-1/4"	9-5/8"	32.3#	H-40	New	ST&C	200'
8-3/4"	7"	20#	K-55	New	ST&C	1800'
6-1/4"	4-1/2"	11.6#	K-55	New	ST&C	4600'

Surface Casing will be cemented to the surface with ~125 cu. ft. (~106 sx) Class "B" cmt or equivalent (1.18 ft³/sx yield, 15.6 ppg, & 5.2 gps) with 2% CaCl₂ and 1/4#/sx celloflake. Volume based on 100% excess. We plan to run a minimum of at least 3 centralizers. A wooden wiper plug will be displaced to within 20' of the shoe. WOC = 12 hours. Surface casing will be tested to 500 psi for 15 minutes.

Intermediate casing will be cemented to surface with a single stage. Total cement = 393 cu. ft (214 sx). Volumes are calculated at 45% excess. If cement does not circulate to surface, then a temperature survey will be run to determine the actual cement top as needed. WOC = 12 hours. Test to 1000 psi for 15 minutes.

Lead cement will be ~282 cu. ft. (~134 sx) Premium Lite w/2% CaCl₂, 1/4#/sx cello flake, 6-1/4#/sx gilsonite, 8% gel mixed at 11.0 gps, 12.1 ppg for a yield of 2.11 cu. ft. per sx.

Tail cement will be ~111 cu. ft. (~80 sx) Type III w/2% CaCl₂, 1/4#/sx Cello flake mixed at 6.7 gps, 14.6 ppg for a yield of 1.39 cu. ft. per sx.

Cementing equipment will include a guide shoe, and autofill float collar will be run 20' off bottom. We plan on running at least 10 centralizers.

Production Casing will be cemented to surface with a single stage. Total cement = ~627 cu. ft. (~313sx). Volumes are calculated at 45% excess in the lead cmt. If cement does not circulate to surface, then a temperature survey or CBL will be run to determine the actual cement top as needed. WOC = 12 hours. Casing will be tested to 3800 psi for 15 minutes during completion operations.

Lead cement will be ~571 cu. ft. (~273 sx) Class "B" cmt or equivalent w/2% SM, 1/4#/sx cello flake, 3#/sx gilsonite mixed at 11.9 gps, 12.5 ppg for a yield of 2.09 cu. ft. per sx.

M & G DRILLING COMPANY

GRAHAM #1B MV

2615' FNL, 660' FEL

Unit H Sec. 4 T27N R8W

San Juan County, NM

Tail cement will be ~56 cu. ft. (~40 sx) Class "B" cmt or equivalent w/1% gel, 2% Cacl₂, 1/4#/sx cello flake, 3#/sx gilsonite mixed at 6.8 gps, 14.5 ppg for a yield of 1.4 cu. ft. per sx.

Cementing equipment will include a guide shoe, and autofill float collar will be run 20' off bottom. We plan on running at least 10 centralizers.

5. MUD PROGRAM

<u>Depth</u>	<u>Type</u>	<u>Wt./ppg.</u>	<u>Vis.</u>	<u>Fluid Loss</u>	<u>PH</u>
0'-200'	FW gel/lime spud mud	8.4-8.7	30-50	NC	10
200'-1800'	FW gel/Polymer	8.3-8.6	30-35	<20cc's	9.5
1800'-4600'	FW gel/Polymer	8.3-8.6	30-35	<20cc's	9.5

Lost circulation and absorption material will be on location.

6. CORING, TESTING, & LOGGING

No cores or drill stem tests are planned. Open hole logs will include GR, Neutron-Density, Caliper, Induction, and SP from TD to the intermediate casing shoe.

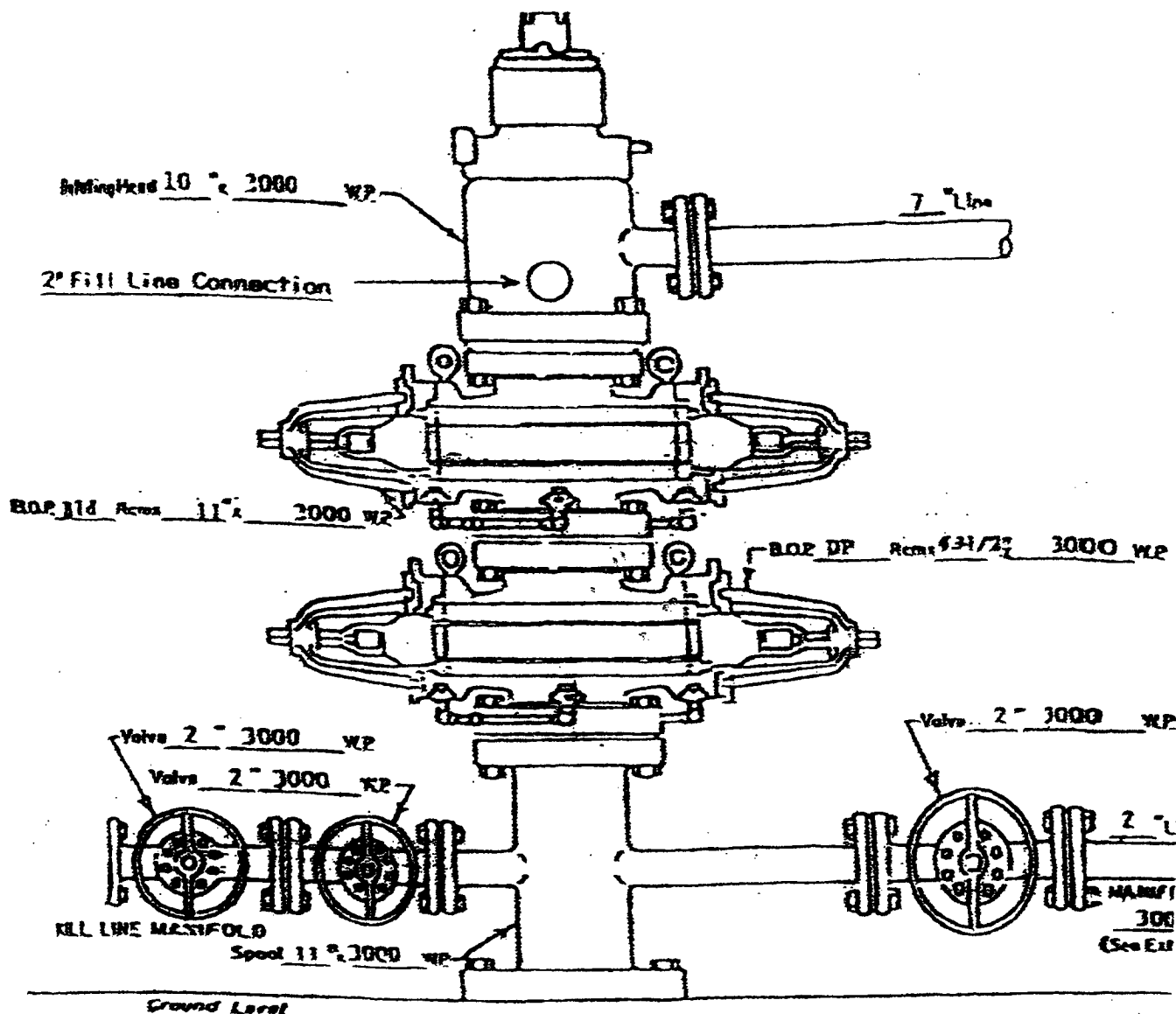
7. DOWN HOLE CONDITIONS

No abnormal pressures, temperatures, nor hydrogen sulfide are expected. Maximum pressure will be ~800 psi.

8. OTHER INFORMATION

The anticipated spud date is June 1, 2005. It is expected it will take ~7 days to drill and ~7 days to complete the well. Completion will start about one month after the spud and will include hydraulic fracturing.

M & G Drilling Company
San Juan County, New Mexico



WELL HEAD B.O.P.
3000 #W.P.

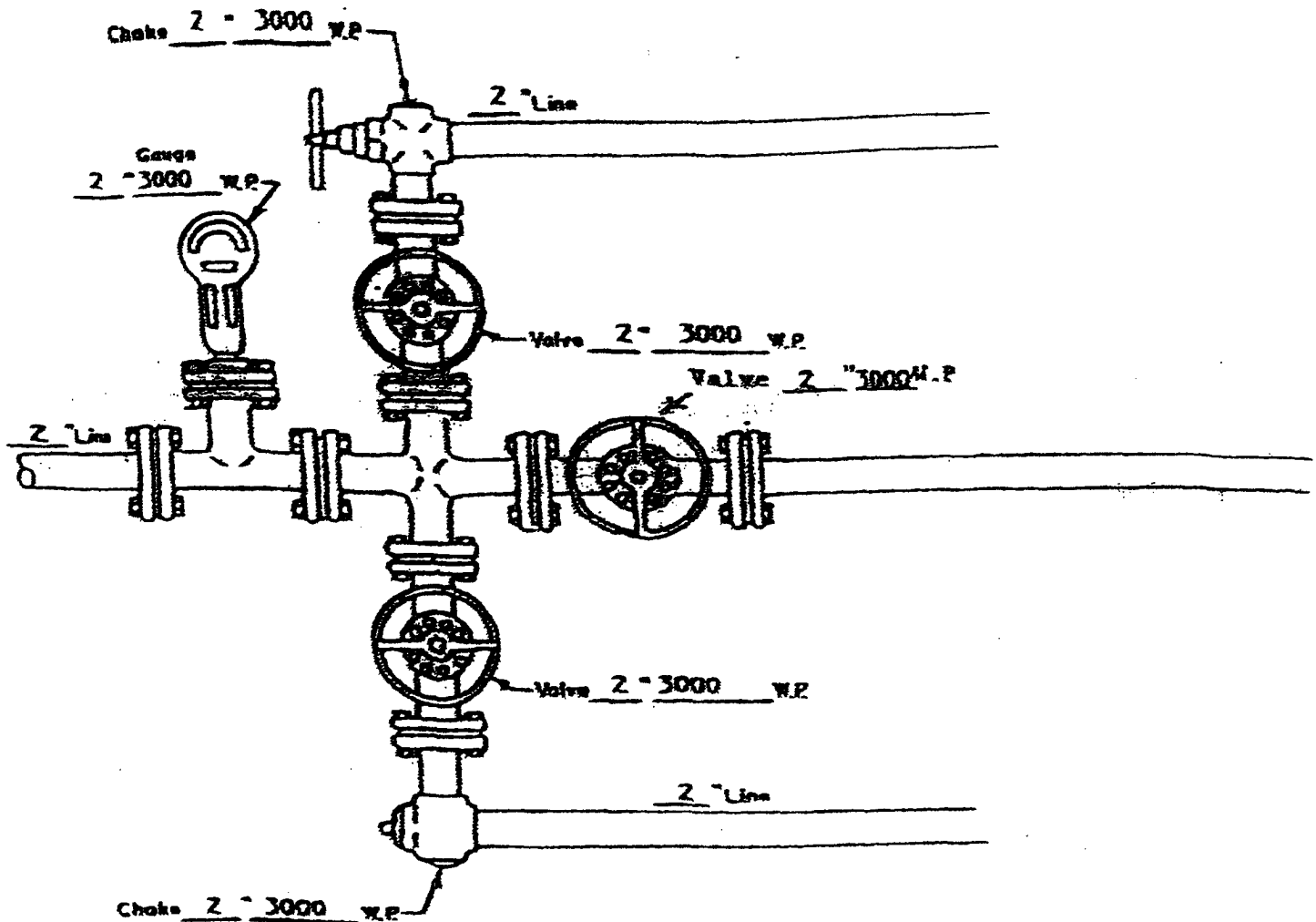
☐ Manual

☒ Hydraulic

NOTE: Although 3000 psi BOP equipment will be used, equipment determination and line sizing are based on the requirements for 2000 psi BOP equipment due to the known drilling and reservoir conditions.

PAGE #5

M & G DRILLING COMPANY
SAN JUAN COUNTY, NM



MANIFOLD

3000 #W.P.

☒ Manual

☐ Hydraulic

8-5/8" 23# LS X-42 CASING
0.250" WALL
CALLAPSE = 1016 PSI
INTERNAL YIELD = 1040 PSI

PAGE #6
ATTACHMENT NO. 2