Form 3160-3
(September 2001)

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: **NM04083**

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.: NMNM 076430

1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.: **Howard Federal 15 No. 1A** 24756

2. Name of Operator: **McElvain Oil & Gas Properties, Inc.** 22044

9. API Well No.: 30-039-29700

3a. Address: **1050 17th Street, Suite 1800, Denver, CO 80265-1801**

3b. Phone No. *(include area code)*: **303.893.0933x302**

10. Field and Pool, or Exploratory: **Blanco Mesa Verde** 72319

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface: **920' FNL-1640' FEL, Section 15, T25N, R2W, NMPM**
At proposed prod. zone: **same**

11. Sec., T. R. M. or Blk. and Survey or Area: B **Section 15, T25N, R2W, NMPM**

14. Distance in miles and direction from nearest town or post office*: **7 miles northeast of Lindrith, NM**

12. 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)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
920 / 920	160	E/2 - 320.0 acs.
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
450	5922'	LPM4138223
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
7313' GL	12/10/2005	20 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.

25. Signature: Robert E. Fielder — Name *(Printed/Typed)*: **Robert E. Fielder** — Date: **11/09/2005**

Title: **Agent**

Approved by *(Signature)*: Jim Lovato — Name *(Printed/Typed)*: — Date: 12/14/05

Title: Acting AFM — Office:

DEC 2005 BLM OIL CONS. DIV. DIST. 3

Application approval does not warrant or certify that 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 page 2)*

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

NMOCD

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer DD, Artesia, NM 88211-0719

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹API Number	²Pool Code	³Pool Name
30-039-29700	72319	BLANCO MESAVERDE

⁴Property Code	⁵Property Name	⁶Well Number
24756	HOWARD FEDERAL 15	1A

⁷OGRID No.	⁸Operator Name	⁹Elevation
22044	McELVAIN OIL & GAS PROPERTIES	7313'

¹⁰ Surface Location

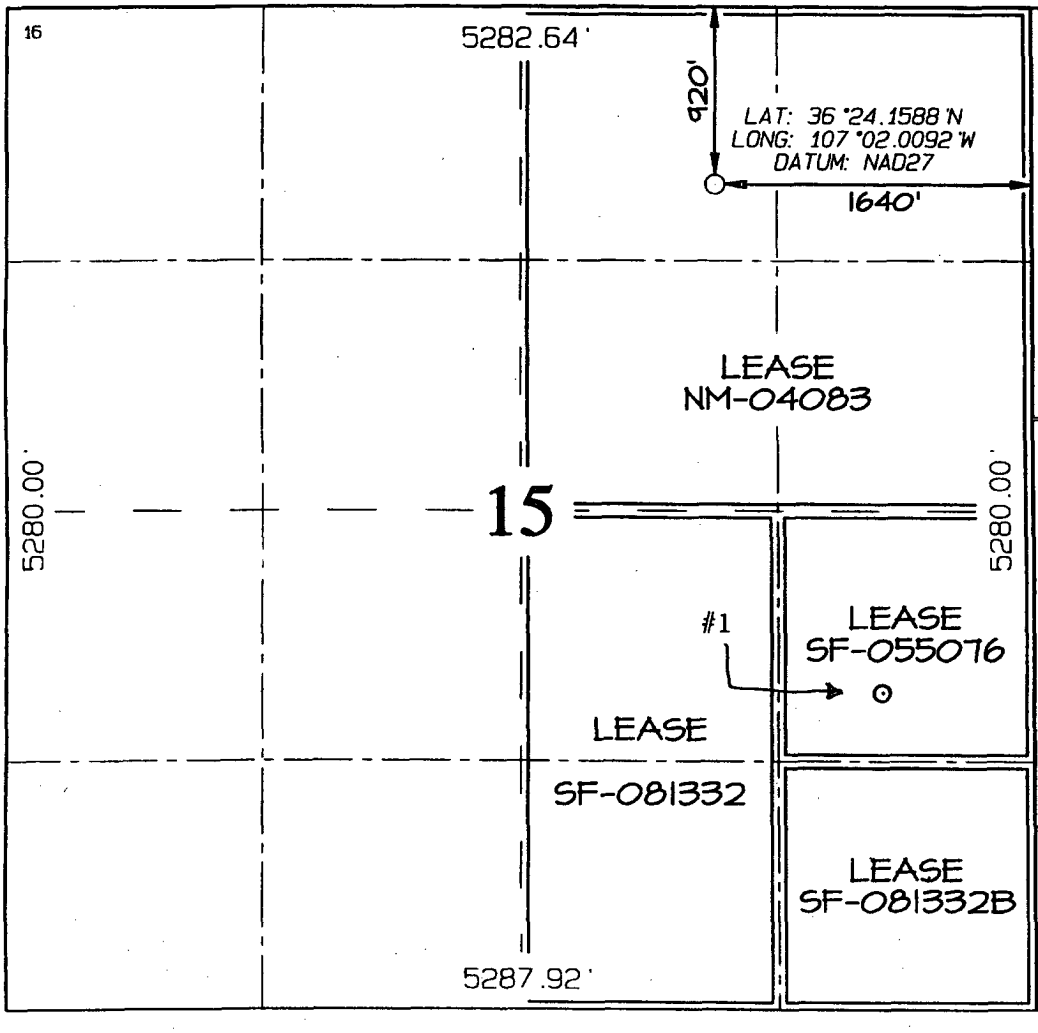
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	15	25N	2W		920	NORTH	1640	EAST	RIO ARRIBA

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

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
320.0 Acres - E/2			

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



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Robert E. Fielder
Signature

Robert E. Fielder
Printed Name

Agent
Title

September 23, 2005
Date

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 belief.

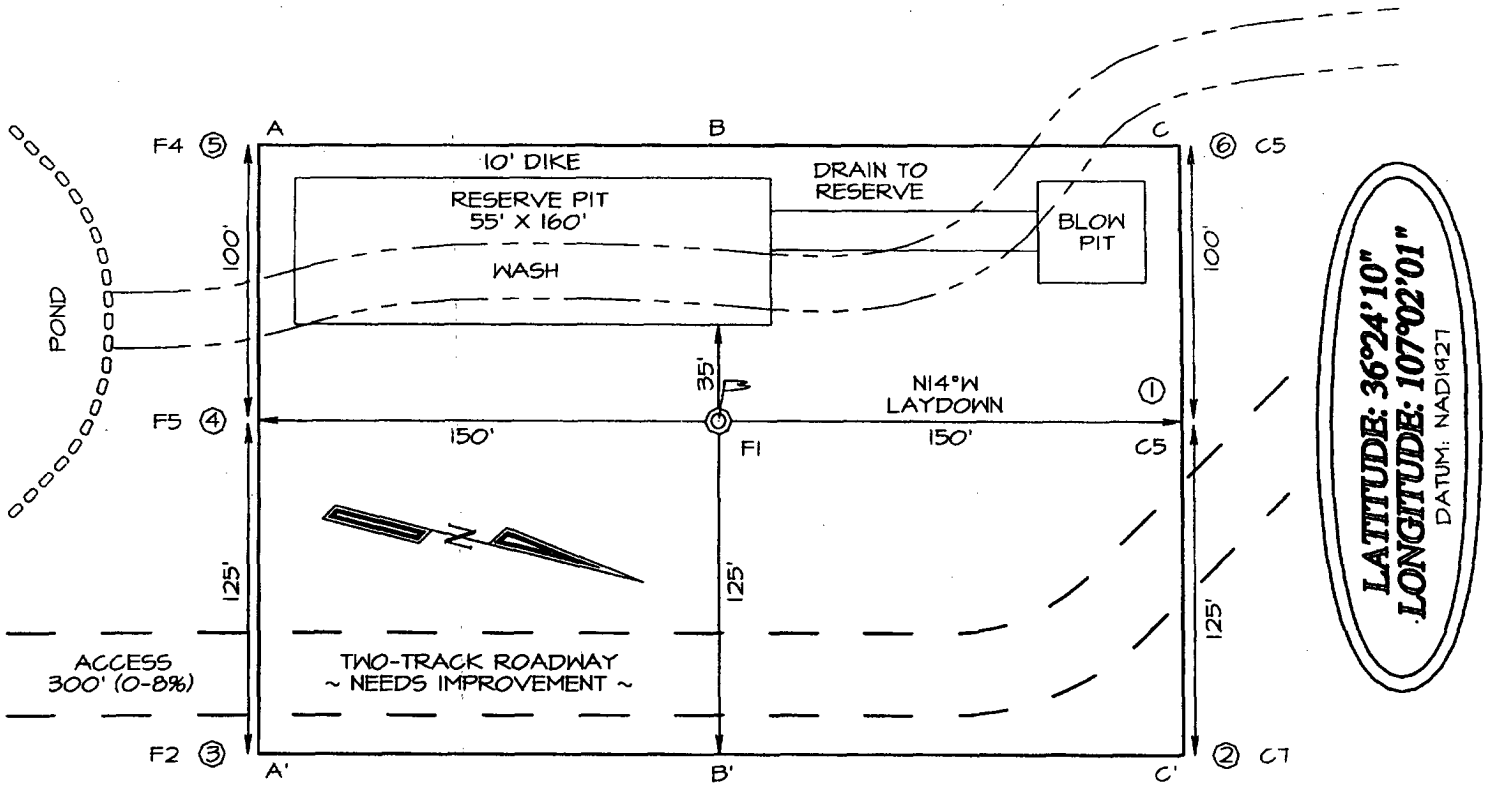
Survey Date: APRIL 22, 2005

Signature and Seal of Professional Surveyor

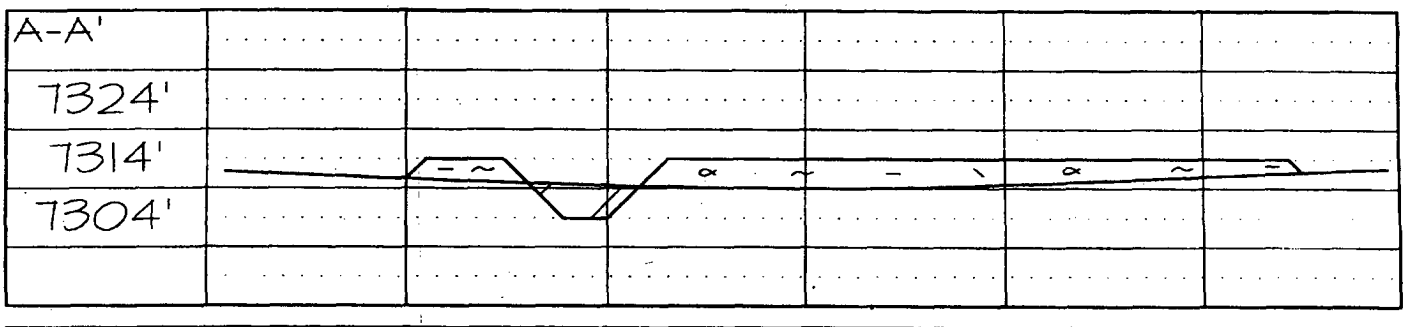
JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

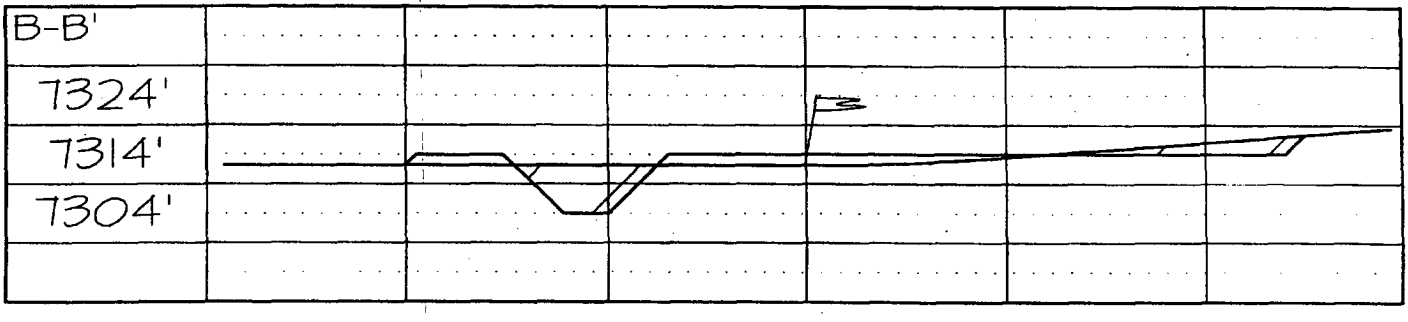
JASON C. EDWARDS
Certificate Number 15269

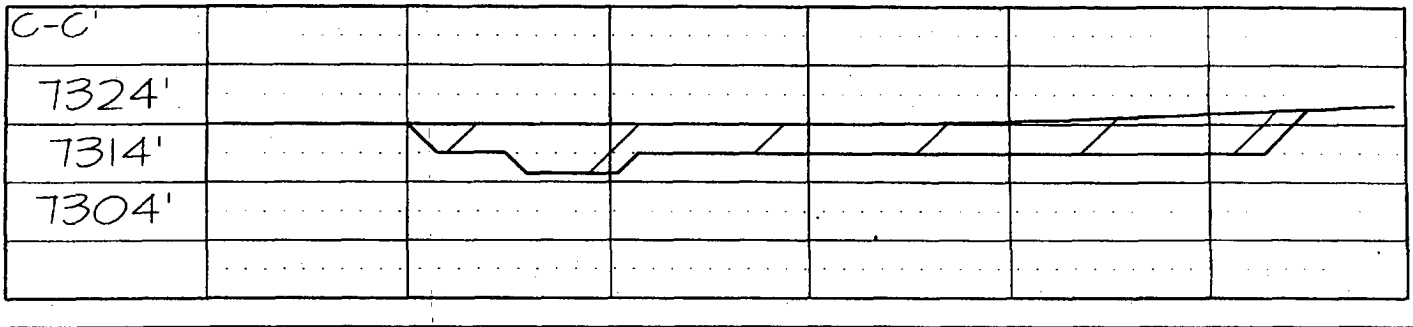
McELVAIN OIL & GAS PROPERTIES HOWARD FEDERAL 15 #1A
920' FNL, 1640' FEL, SECTION 15, T25N, R2W, NMPM
RIO ARRIBA COUNTY, NM GROUND ELEVATION: 7313'



LATITUDE: 36°24'10"
LONGITUDE: 107°02'01"
DATUM: NAD1927







FILENAME: 25215BT	SHEET 2 OF 3	NCE SURVEYS, INC.	DRAWN BY: EDO	CHECKED BY: JCE

McElvain Oil & Gas Properties, Inc.
Howard Federal [redacted]15 No. 1A
920' FNL & 1640' FEL
Section 15, T25N, R2W, NMPM
Rio Arriba County, New Mexico

TEN POINT DRILLING PROGRAM

1. **Surface Formation:** San Jose

2. **Surface Elevation:** 7313'GL.

3. **Estimated Formation Tops:**

Formation	Top - feet	Expected Production
Nacimiento	1612	
Ojo Alamo	3112	
Fruitland	3312	
Pictured Cliffs	3412	GAS
Lewis	3642	
Intermediate TD	3842	
Huerfanito	3902	
Chacra	4402	
Cliff House	5132	GAS
Menefee	5282	GAS
Pt. Lookout	5597	GAS
Upper Mancos	5772	
TOTAL DEPTH	5922	

4. **Surface Hole Program:**

Bit: Drill a 12 1/4" hole to 300' using a retip mill tooth, IADC Class 115 or 116, bit. WOB: all. RPM: 70 - 100.

Mud: Use a fresh water base spud mud with the following properties:

Interval (ft)	Weight (ppg)	Ph	Vis(sec/qt)	Water Loss
0 - 300	8.6 or less	9.0-9.5	40 - 50	No Control

Casing and Cementing: A string of 9⅝" 36# J-55 or K-55 ST&C casing will be set and cemented to the surface in a single stage with 160 sacks of Class "B" cement (yield = 1.18 cf/sk) containing 3% $CaCl_2$ and 0.25 pps celloflake. Slurry volume assumes 100% excess over calculated hole volume. If cement does not circulate to surface, cement will be topped off using 1" pipe down the 12¼" by 9⅝" annulus. Minimum clearance between couplings and hole is 0.8125". Prior to drilling out the shoe, casing and BOPE will be tested to a minimum of 600 psig. Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8.

WOC 12 HOURS. Nipple up 11" 2000# BOPE. Pressure test surface casing and BOPE to 600 psi for 15 minutes.

4. **Surface Hole Program:** - continued

Centralizers: Run three (3) 9⅝" X 12 ¼" regular bowspring centralizers. Install first one on stop ring in middle of shoe joint.

Float Equipment: Cement nose guide shoe run on bottom of first joint. Self fill insert float valve run in top of first joint. Thread lock shoe and connection between first and second joint run.

5. **Intermediate Hole Program:**

Bit: Drill an 8 ¾" hole to 3842' using TCI, IADC Class 447 bit. WOB: 35-45K. RPM: 60 - 75. Reduce RPM to 55 - 65 through Ojo Alamo.

Mud: Use a fresh water base LSND mud with the following properties:

Interval (ft)	Weight (ppg)	Ph	Vis(sec/qt)	Water Loss
300 - 3312	8.6 - 8.8	9.0-9.5	28 - 35	10 - 12
3312 - 3842	8.9 - 9.2	9.0-9.5	35 - 50	8 - 10

Fresh water will be used for dilution and building volume. Sufficient materials will be on location at all times to maintain mud properties and to control any lost circulation problem or unforeseen abnormal pressures. The mud volume in the rig pits will be visually monitored and recorded on a routine basis.

Note: Raise **viscosity** to 55 - 60 for logging. Thin to 40 - 45 viscosity to run casing.

pH is to be maintained with lime or caustic soda at the recommended levels to assure drill pipe corrosion protection.

Drispac will be used for control of fluid loss.

Hole will be drilled to top of Fruitland using polymer and drispac additions to water. Mud up before drilling into Fruitland.

Lost Circulation is expected and can occur in the Fruitland Coal and Pictured Cliffs formation. Mud weights should be controlled as low as possible with solids control equipment then as low as practical with water dilution.

5. **Intermediate Hole Program:** - continued

Pressure Control: A 2M psi BOP well control system will be utilized. BOP's and choke manifold will be installed and pressure tested to a minimum of 600 psig before drilling out from under surface casing. Mechanical operation of pipe rams will be checked daily and blind rams will be checked on each trip out of hole. 7" rams will be installed before running intermediate casing.

A full opening internal blowout preventor or drill pipe safety valve will be on the drill floor at all times and will be capable of fitting all connections.

Logging Program: Run Dual Induction and Formation Density/Epithermal Neutron logs from Intermediate TD to surface casing shoe. Merge deep induction curve onto porosity log.

Casing and Cementing Program: Run 7" 20# J-55 production casing from surface to Intermediate TD and cement in 2 stages with a mechanical DV tool installed ± 1920'. **Stage 1** (3842' - 1920') will be cemented with 145 sacks (307.4 cf) of 65/35 Class B Poz containing 5 pps Gilsonite, and 0.25 pps celloflake mixed at 12.1 PPG to yield 2.12 cf/sk. Tail in with 100 sacks (126.0 cf) of Class B with 2% $CaCl_2$, 5 pps gilsonite and 0.25 pps celloflake mixed at 15.2 ppg to yield 1.26 cf/sk. **Stage 2** (1920' - surface) will be cemented with 175 sacks (371.0 cf) of 65/35 Class B Poz with 5 pps gilsonite and 0.25 pps celloflake mixed at 12.1 PPG to yield 2.12 cf/sk. Follow with 50 sacks (63.0 cf) of Class B with 2% $CaCl_2$, 5 pps gilsonite and 0.25 pps celloflake mixed at 15.2 PPG to yield 1.26 cf/sk.

Circulate and WOC between stages for four (4) hours.

Slurry volumes assume a 50% excess over gauge hole volume. Minimum clearance between couplings and hole is 0.5470". Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8.

WOC 12 HOURS from plug down on first stage. Pressure test intermediate casing and BOPE to 1500 psi for 15 minutes.

Centralizers: 10 - 7" X 8¾" bowspring centralizers will be run across all prospective pays and 5 - 7" X 8¾" turbolizers will be spaced such that one (1)is just below the Basal Fruitland Coal, two (2)across base of Ojo Alamo, and two (2) across base of Nacimiento.

Float Equipment: Cement nose float shoe, 1 joint 7" casing, float collar, and 1 - mechanical DV tool with 2 cement baskets below the DV.

6. Production Hole Program:

Bits: Drill a 6 1/4" hole to 5922' feet using air hammer. WOB: 5 - 25K. RPM: to be determined by drilling conditions. If hole gets wet use TCI, IADC class 637 to finish hole.

Mud: Air from Intermediate casing shoe to TD. If hole gets wet use a fresh water based low solids non dispersed system with the following properties: **Note:** Pull into intermediate casing to mud up.

Interval (ft)	Weight (ppg)	pH	Vis(sec/qt)	Water Loss
? - TD	8.6 - 9.0	9.0-9.5	28 - 40	8 - 10 cc

Pressure Control: A 2M psi BOP well control system will be utilized. BOP's and choke manifold will be installed and pressure tested to a minimum of 1500 psig before drilling out from under intermediate casing. Mechanical operation of pipe rams will be checked daily and blind rams will be checked on each trip out of hole. 4 1/2" rams will be installed before running production casing.

A full opening internal blowout preventor or drill pipe safety valve will be on the drill floor at all times and will be capable of fitting all connections.

Logging Program: Gamma Ray Induction and Compensated Density/Epithermal neutron logs from TD to intermediate casing shoe. Merge deep induction curve onto porosity logs.

Casing and Cementing Program: Run 4 ½" 10.5# J-55 production liner from TD to 120 feet into intermediate casing. Cement in a single stage with 125 sacks (251.25 cf) of 65/35 Class H Poz containing 5 pps gilsonite and 0.25 pps celloflake mixed at 12.3 PPG to yield 2.01 cf/sk. Followed with 100 sacks (133.0 cf) of 50/50 Class H POZ with 2% gel, 5 pps gilsonite, 0.25 pps celloflake, .2% FR and .4% FLA mixed at 13.7 PPG to yield 1.33 cf/sk.

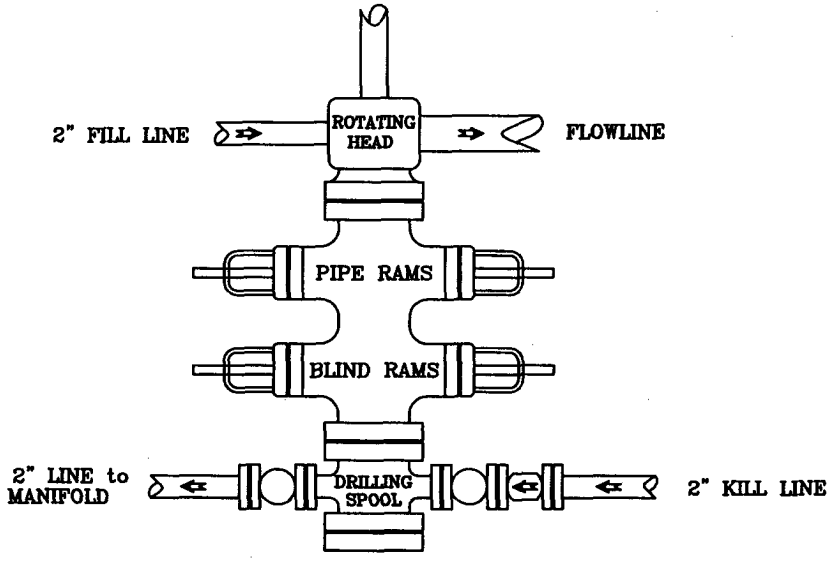
Slurry volumes assume a 70% excess over gauge hole volume to bring cement back into the intermediate casing. Cement volume is subject to change after review of open hole caliper log to caliper volume + 30%. Minimum clearance between couplings and hole is 0.625". Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8.

Centralizers: 7 - 4½" X 6⅛" rigid centralizers will be run across prospective pays of the Mesa Verde.

Float Equipment: Cement nose float shoe, 1 joint 4 1/2" 10.5 # casing, and plug landing collar. TIW 4½" X 7" liner hanger.

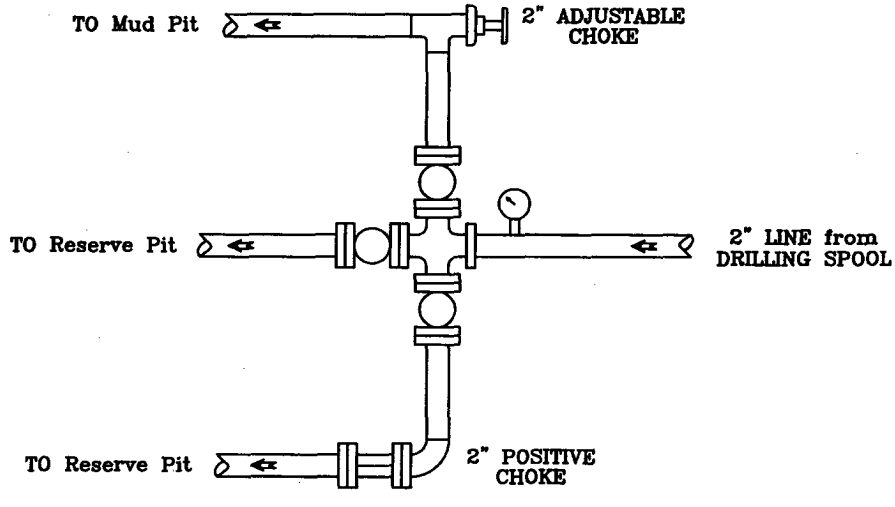
PRESSURE CONTROL

Wellhead Assembly



Preventer and Spools are to have a
6" Bore or larger and a 2000 PSI
or higher Pressure Rating

Choke Manifold



McElvain Oil & Gas Properties, Inc.

Howard Federal 43–15 No. 1A

920' FNL – 1640' FEL

Section 15, T25N, R2W, NMPM

Rio Arriba County, New Mexico