

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

2005 SEP 15 PM 3

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

|  |   |   |
|--|---|---|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER   |   | 5. Lease Serial No.<br>NM 0272  |
| 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  |
| 2. Name of Operator<br>McElvain Oil & Gas Properties, Inc.   |   | 7. If Unit or CA Agreement, Name and No.<br>NM - 75992                      |
| 3a. Address<br>1050 17th Street, Suite 1800<br>Denver, CO 80265-1801   | 3b. Phone No. (include area code)<br>303.893.0933x302 | 8. Lease Name and Well No.<br>Davis No. 1A                                  |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *)<br>At surface 835' FNL-1340' FEL, Section 4, T26N, R2W, NMPM<br>At proposed prod. zone same                             |   | 9. API Well No.<br>30-039-29663   |
| 14. Distance in miles and direction from nearest town or post office*<br>15 miles north of Lindrith, New Mexico  |   | 10. Field and Pool, or Exploratory<br>Blanco Mesa Verde                     |
| 15. Distance from proposed* location to nearest property or lease line, ft.<br>(Also to nearest drig. unit line, if any) 835   | 16. No. of acres in lease<br>160                      | 11. Sec., T. R. M. or Blk. and Survey or Area<br>Section 4, T26N, R2W, NMPM |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. NA  | 19. Proposed Depth<br>6204'                           | 12. County or Parish<br>Rio Arriba  |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.)<br>7250' GL  | 22. Approximate date work will start*<br>10/01/2005   | 13. State<br>NM   |
| 23. Estimated duration<br>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:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

|   |   |                    |
|---|---|--------------------|
| 25. Signature<br><i>Robert E. Fielder</i> | Name (Printed/Typed)<br>Robert E. Fielder | Date<br>09/14/2005 |
|---|---|--------------------|

Title  
Agent

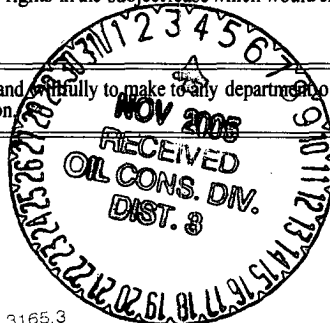
|   |                             |                 |
|---|-----------------------------|-----------------|
| Approved by (Signature)<br><i>[Signature]</i> | Name (Printed/Typed)<br>AFM | Date<br>11/2/05 |
|---|-----------------------------|-----------------|

Title  
Office

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  
IN COMPLIANCE WITH ATTACHED  
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

|                                    |   |                     |                                |  |
|------------------------------------|---|---------------------|--------------------------------|--|
| *API Number<br><b>30-039-29663</b> |   | *Pool Code<br>72319 | *Pool Name<br>BLANCO MESAVERDE |  |
| *Property Code<br>21150            | *Property Name<br>DAVIS                         |                     | *Well Number<br>1A             |  |
| *GRID No.<br>22044                 | *Operator Name<br>McELVAIN OIL & GAS PROPERTIES |                     | *Elevation<br>7250'            |  |


<sup>10</sup> 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             | 4       | 26N      | 2W    |         | 835           | NORTH            | 1340          | EAST           | RIO ARriba |

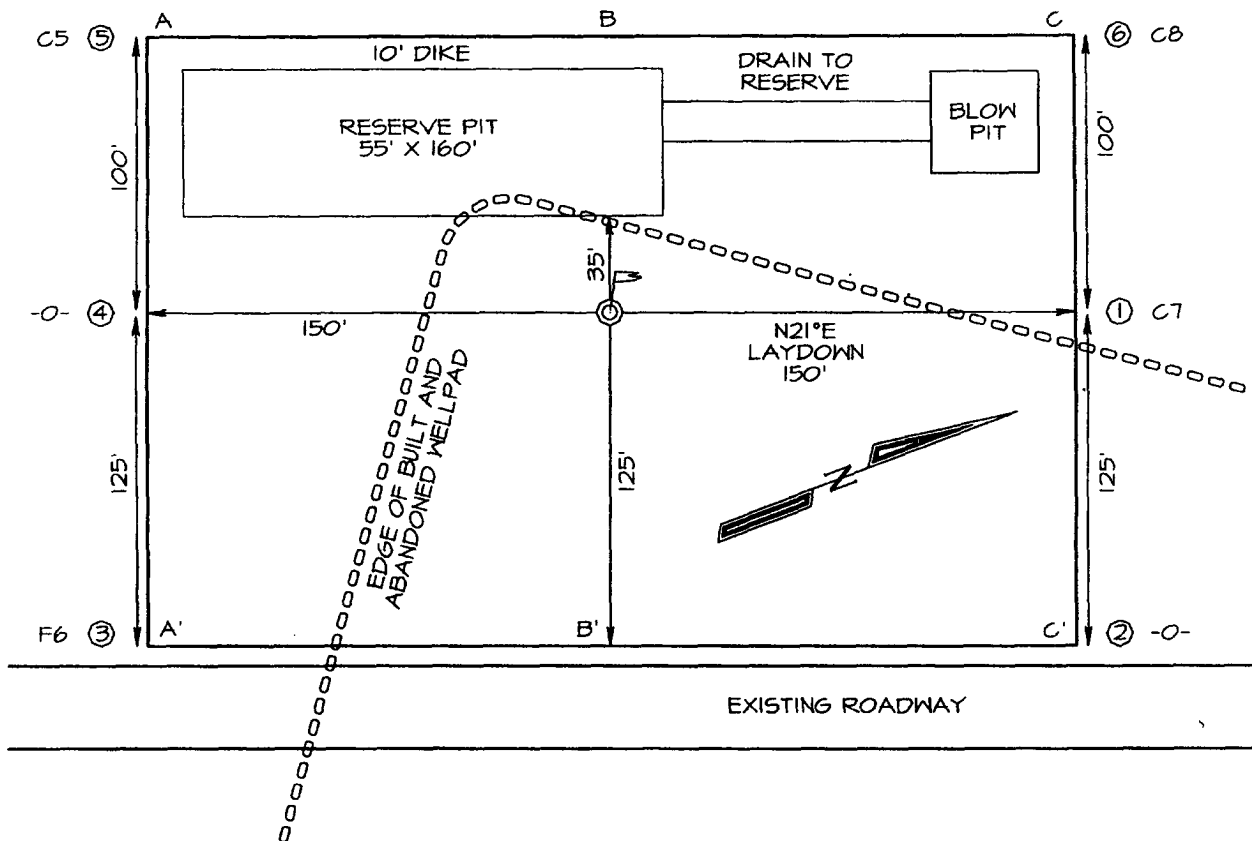
<sup>11</sup> Bottom Hole Location If Different From Surface

| UL or lot no.                                       | Section | Township | Range | Lot Idn | Feet from the                 | North/South line                 | Feet from the           | East/West line | County |
|---|---------|----------|-------|---------|-------------------------------|----------------------------------|-------------------------|----------------|--------|
|   |         |          |       |         |                               |                                  |                         |                |        |
| <sup>12</sup> Dedicated Acres<br>315.92 Acres - N/2 |         |          |       |         | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> Order No. |                |        |

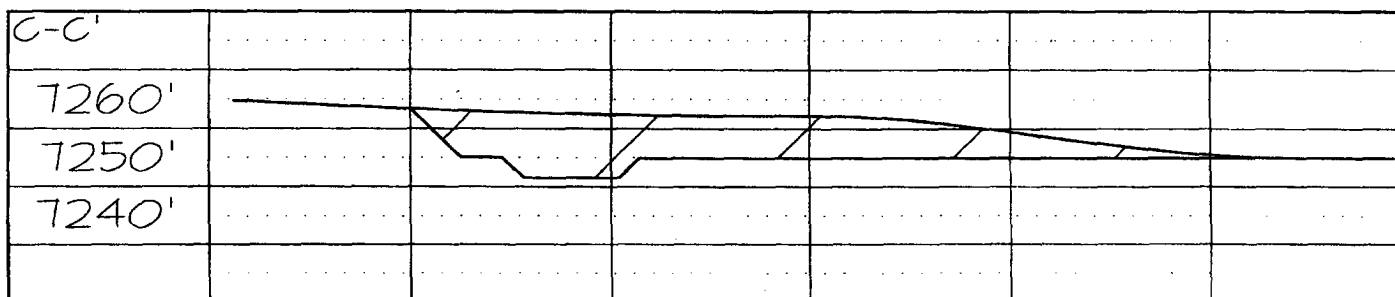
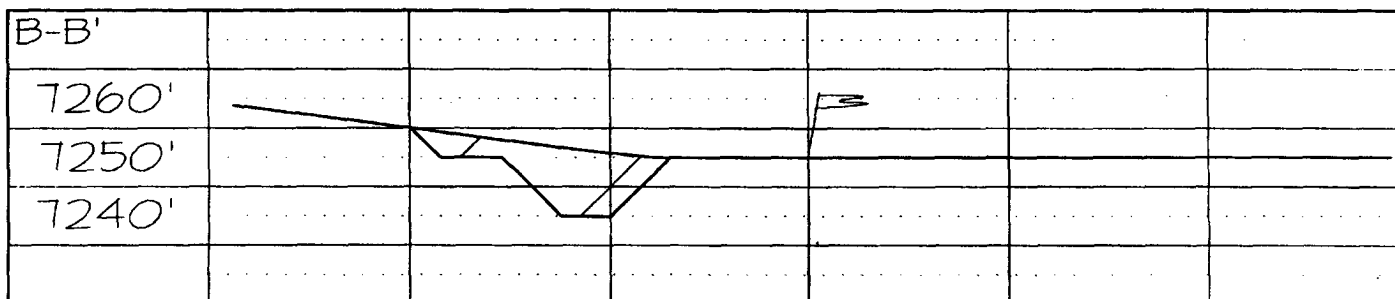
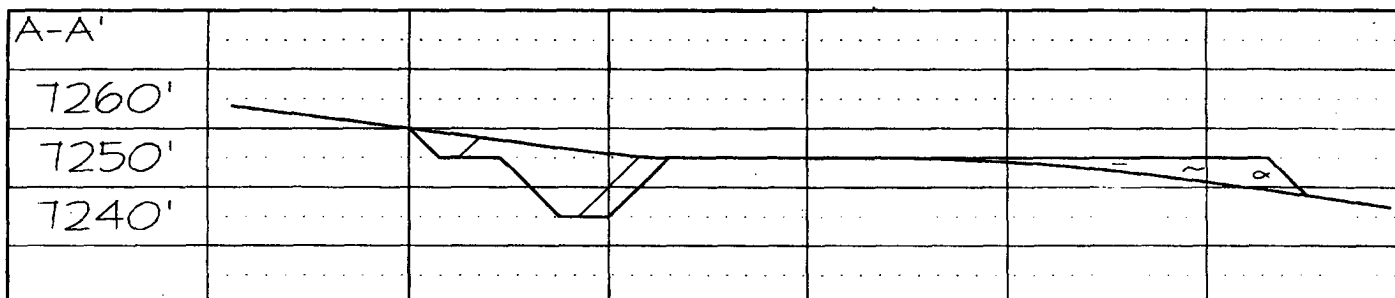
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

|  |                   |   |                            |  |  |
|--|-------------------|---|----------------------------|--|--|
| <sup>16</sup><br>LOT 4<br>1283.04'<br>1320.00'<br>2640.00' | LOT 3<br>5280.00' | LOT 2<br>835'<br>LAT: 36°31.1298' N<br>LONG: 107°03.0310' W<br>DATUM: NAD27<br>5282.64' | LOT 1<br>1289.64'<br>1340' | <sup>17</sup> OPERATOR CERTIFICATION<br>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief<br><i>Robert E. Fielder</i><br>Signature<br>Robert E. Fielder<br>Printed Name<br>Agent<br>Title<br>September 13, 2005<br>Date   |  |
|  |                   |   |                            | <sup>18</sup> SURVEYOR CERTIFICATION<br>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<br>Survey Date: APRIL 8, 2005<br>Signature and Seal of Professional Surveyor<br><br>JASON C. EDWARDS<br>Certificate Number 15269 |  |

**McELVAIN OIL & GAS PROPERTIES DAVIS #1A**  
**835' FNL, 1340' FEL, SECTION 4, T26N, R2W, NMPM**  
**RIO ARriba COUNTY, NM GROUND ELEVATION: 7250'**



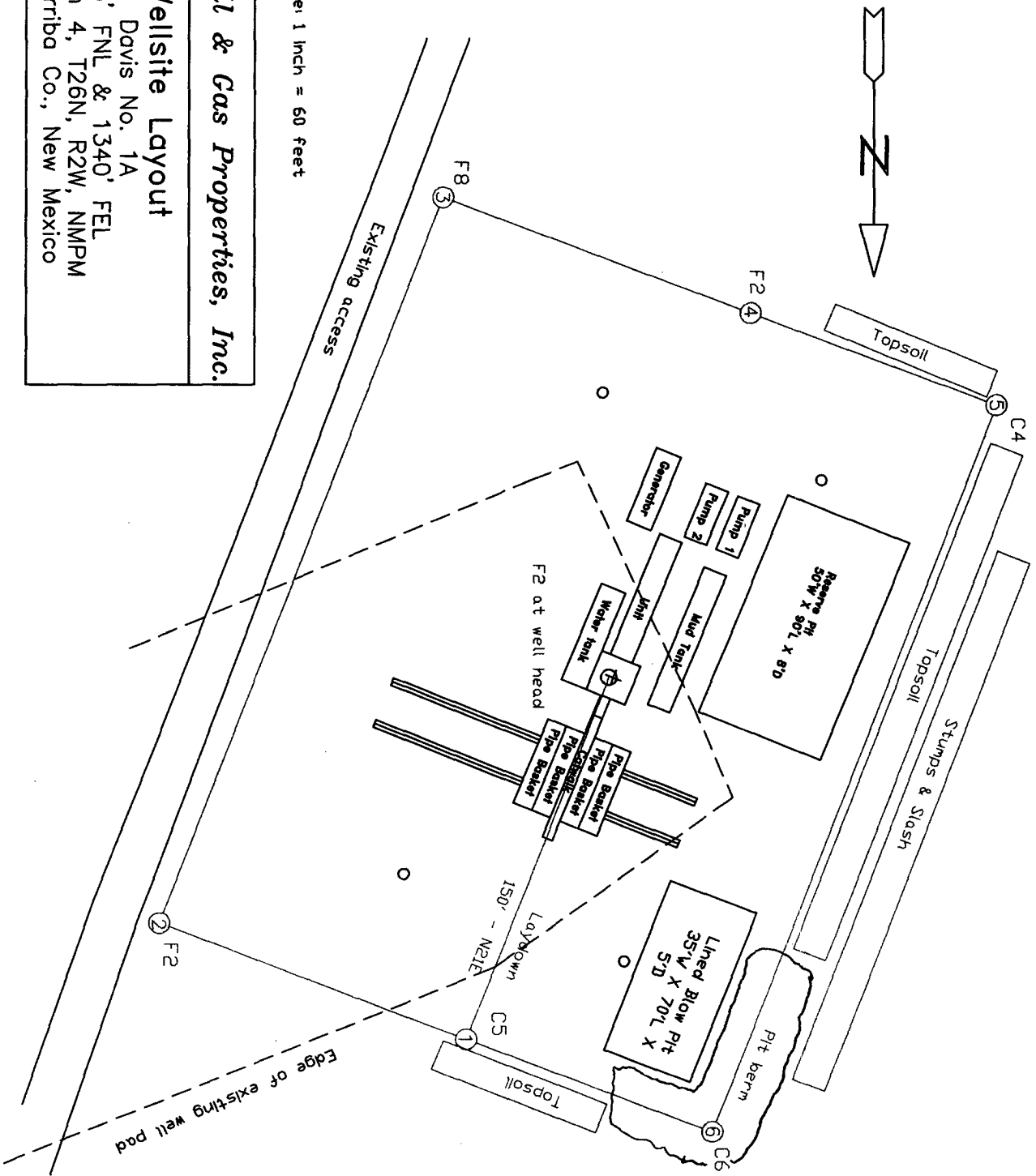
**LATITUDE: 36°31'08"**  
**LONGITUDE: 107°03'02"**  
 DATUM: NAD1927



**McElvain Oil & Gas Properties, Inc.**

**Wellsite Layout**  
 Davis No. 1A  
 835' FNL & 1340' FEL  
 Section 4, T26N, R2W, NMPM  
 Rio Arriba Co., New Mexico

Scale: 1 inch = 60 feet



**McElvain Oil & Gas Properties, Inc.**  
**Davis No. 1A**  
**835' FNL & 1340' FEL**  
**Section 4, T26N, R2W, NMPM**  
**Rio Arriba County, New Mexico**

**TEN POINT DRILLING PROGRAM**

1. **Surface Formation:** San Jose
2. **Surface Elevation:** 7250' GL.
3. **Estimated Formation Tops:**

| <u>Formation</u> | <u>Top - feet</u> | <u>Expected Production</u> |
|------------------|-------------------|----------------------------|
| Nacimiento       | 1514              |                            |
| Ojo Alamo        | 3254              |                            |
| Fruitland        | 3454              |                            |
| Pictured Cliffs  | 3554              | GAS                        |
| Lewis            | 3804              |                            |
| Intermediate TD  | 4004              |                            |
| Huerfanito       | 4104              |                            |
| Chacra           | 4604              |                            |
| Cliff House      | 5494              | GAS                        |
| Menefee          | 5574              | GAS                        |
| Pt. Lookout      | 5859              | GAS                        |
| Upper Mancos     | 6054              |                            |
| TOTAL DEPTH      | 6204              |                            |

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:

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

**Casing and Cementing:** A string of 9 5/8" 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<sub>2</sub> 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 12 1/4" by 9 5/8" 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.

**Drilling Program**  
**McElvain Oil & Gas Properties, Inc.**  
**Davis No. 1A**  
Page Two

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

**Centralizers:** Run three (3) 9 $\frac{5}{8}$ " X 12  $\frac{1}{4}$ " 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  $\frac{1}{4}$ " hole to 4004' 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:

| <u>Interval (ft)</u> | <u>Weight (ppg)</u> | <u>Ph</u> | <u>Vis(sec/qt)</u> | <u>Water Loss</u> |
|----------------------|---------------------|-----------|--------------------|-------------------|
| 300 - 3454           | 8.6 - 8.8           | 9.0-9.5   | 28 - 35            | 10 - 12           |
| 3454 - 4004          | 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.

**Drilling Program**  
**McElvain Oil & Gas Properties, Inc.**  
**Davis No. 1A**  
Page Three

**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/Compensated 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 <sup>intermediate</sup> production casing from surface to Intermediate TD and cement in 2 stages with a mechanical DV tool installed  $\pm$  2000'. **Stage 1** (4004' - 2000') will be cemented with 155 sacks (328.6 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%  $\text{CaCl}_2$ , 5 pps gilsonite and 0.25 pps celloflake mixed at 15.2 ppg to yield 1.26 cf/sk. **Stage 2** (2000' - surface) will be cemented with 185 sacks (392.2 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%  $\text{CaCl}_2$ , 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 8 $\frac{3}{4}$ " bowspring centralizers will be run across all prospective pays and 5 - 7" X 8 $\frac{3}{4}$ " 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.

**Drilling Program**  
**McElvain Oil & Gas Properties, Inc.**  
**Davis No. 1A**  
Page Four

**6. Production Hole Program:**

**Bits:** Drill a 6 1/4" hole to 6204' 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.

| <u>Interval (ft)</u> | <u>Weight (ppg)</u> | <u>pH</u> | <u>Vis(sec/qt)</u> | <u>Water Loss</u> |
|----------------------|---------------------|-----------|--------------------|-------------------|
| ? - 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 1/2" 10.5# J-55 production liner from TD to 120 feet into intermediate casing. Cement in a single stage with 135 sacks (271.35 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 - 4 1/2" X 6 1/2" 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 4 1/2" X 7" liner hanger.



**Drilling Program**  
**McElvain Oil & Gas Properties, Inc.**  
**Davis No. 1A**  
Page Five

**7. Auxiliary Equipment:**

An upper kelly cock will be utilized. The handle will be available on rig floor at all times

**8. Logging Program:**

Gamma Ray Induction and Epithermal Neutron / Formation Density will be run from TD to intermediate casing shoe. Bulk density will be presented on a 5 " scale through the coals in the Menefee. Deep induction curve will be merged onto the porosity log.

**Coring and Testing Program:**

No cores or drill stem tests are planned.

**9. Abnormal Pressure:**

Although not expected, abnormal pressures are possible in the Fruitland formation.

**Estimated Bottom Hole Pressure:**

1500 - 2000 psig.

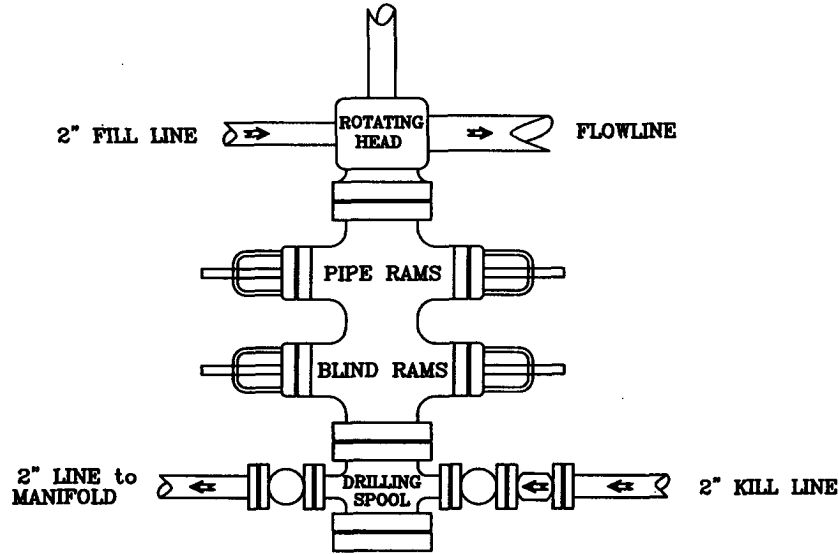
**10. Anticipated Starting Date:**

October 1, 2005

**Duration of Operations:** It is estimated a total of 10 days will be required for drilling operations and 10 days for the completion operation.

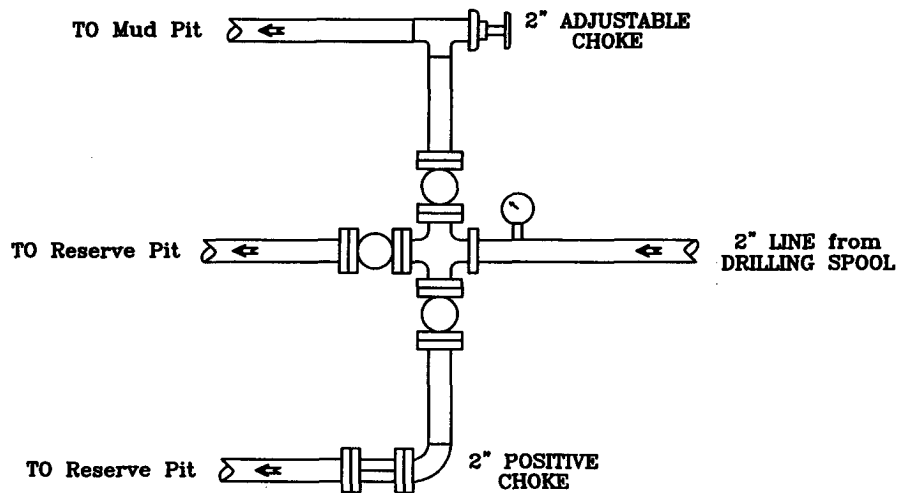
# PRESSURE CONTROL

## 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.*

Davis No. 1A  
835' FNL - 1340' FEL  
Section 4, T26N, R2W, NMPM  
Rio Arriba County, New Mexico