

**19.15.14.1218 ADJUDICATORY HEARINGS THAT SHALL BE HELD BEFORE THE COMMISSION:**

Notwithstanding any other provisions of these rules, the hearing on any matter shall be held before the commission if:

- A.** it is a hearing pursuant to NMSA 1978, Section 70-2-13; or
- B.** the division director directs the commission to hear the matter.

[19.15.14.1218 NMAC - Rp, 19.15.14.1216 NMAC, 09/30/05]

Field inspection of proposed drill locations for McElvain Oil Co, Rio Arriba, County, NM.

On September 26, 2008 Steve Hayden performed onsite inspections of the location for the Badger 11 #1A and #1B wells proposed by McElvain Oil. These wells will be located on the same pad, about 26 feet apart. The site is in the NE/4 of Section 11, T25N, R2W, Rio Arriba County, NM. The location is approximately 2 miles NE of the settlement of Gavilan just off of NM 95 and is on the western slope, i.e. not in the Rio Chama drainage. The wells will be in a flat area between ridges that has no stream course or eroded channels and no evidence of confined flow within 300 feet of the wellsite. Vegetation is dry land type giant sage community, sage, chamisa, bunch grasses and forbes, with no pheatophytes.

The nine section block with Section 11 in the center has 39 active wells in the Gavilan Pictured Cliffs Gas Pool, the Blanco Mesaverde Gas Pool and the Gavilan Mancos Oil Pool. Some of these wells have been producing since the 1950s in the Gavilan Pictured Cliffs Pool.

OSE Waters Database shows 2 waterwells in the NW/4 of Section 11. These wells are between 1000'-1500' from the proposed location. These are both domestic water wells for the same house and the earlier one, drilled in 1983 had first water at 90 feet. The later, replacement well drilled in 2004 shows first water at 160 feet. Both wells produce(d) from ~230' to 250'.

| POD Number | Tws | Rng | Sec | q | q | q | Zone | X | Y |
|------------|-----|-----|-----|---|---|---|------|---|---|
| SJ 01751   | 25N | 02W | 11  | 1 | 2 | 3 |      |   |   |

Driller Licence: 620 MORROW, JOE DRILLING CO.

Driller Name: MORROW, MIKE

Source:

Shallow

Drill Start Date: 07/18/1983  
07/19/1983

Drill Finish Date:

Log File Date: 08/05/1983

PCW Received Date:

Pump Type:

Pipe Discharge Size:

Casing Size: 5

Estimated Yield: 10

Depth Well: 372

Depth Water: 90

| Water Bearing Stratifications: | Top | Bottom | Description |
|--------------------------------|-----|--------|-------------|
|                                | 75  | 90     | Shallow     |
| Alluvium/Basin Fill            |     |        |             |
|                                | 225 | 240    |             |
| Sandstone/Gravel/Conglomerate  |     |        |             |
|                                | 290 | 340    |             |
| Sandstone/Gravel/Conglomerate  |     |        |             |
|                                | 340 | 355    |             |
| Sandstone/Gravel/Conglomerate  |     |        |             |
| Casing Perforations:           | Top | Bottom |             |
|                                | 232 | 252    |             |
|                                | 332 | 352    |             |

| POD Number | Tws | Rng | Sec | q | q | q | Zone | X      | Y       |
|------------|-----|-----|-----|---|---|---|------|--------|---------|
| SJ 03461   | 25N | 02W | 11  | 1 | 2 | 3 | C    | 272432 | 1971609 |

Driller Licence: 1394 INGRAM, LOYD A.

Driller Name: INGRAM, LOYD A.

Source:

Shallow

Drill Start Date: 08/25/2004  
08/25/2004

Drill Finish Date:

Log File Date: 09/13/2004

PCW Received Date:

Pump Type:  
Casing Size: 4.5  
Depth Well: 265

Pipe Discharge Size:  
Estimated Yield: 6  
Depth Water: 160

| Water Bearing Stratifications: | Top | Bottom | Description |
|--------------------------------|-----|--------|-------------|
| Alluvium/Basin Fill            | 230 | 245    | Shallow     |
| Casing Perforations:           | Top | Bottom |             |
|                                | 225 | 265    |             |

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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

Form C-101  
June 16, 2008

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

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

|                                                                                        |  |                           |  |                    |  |
|----------------------------------------------------------------------------------------|--|---------------------------|--|--------------------|--|
| McElvain Oil & Gas Properties, Inc.<br>1050 17th St Suite 1800<br>Denver CO 80265-1801 |  | Operator Name and Address |  | OGRID Number 22044 |  |
| Property Code 28462                                                                    |  | Property Name Badger 11   |  | Well No 1A         |  |
| Proposed Pool 1 Blanco Mesa Verde                                                      |  | Proposed Pool 2           |  |                    |  |

Surface Location

|                |            |              |          |         |                    |                        |                    |                     |                   |
|----------------|------------|--------------|----------|---------|--------------------|------------------------|--------------------|---------------------|-------------------|
| UL or lot no G | Section 11 | Township 25N | Range 2W | Lot 1dn | Feet from the 2238 | North/South line North | Feet from the 2298 | East/West line East | County Rio Arriba |
|----------------|------------|--------------|----------|---------|--------------------|------------------------|--------------------|---------------------|-------------------|

Proposed Bottom Hole Location If Different From Surface

|                |            |              |          |         |                    |                        |                    |                     |                   |
|----------------|------------|--------------|----------|---------|--------------------|------------------------|--------------------|---------------------|-------------------|
| UL or lot no C | Section 11 | Township 25N | Range 2W | Lot 1dn | Feet from the 1000 | North/South line North | Feet from the 1980 | East/West line West | County Rio Arriba |
|----------------|------------|--------------|----------|---------|--------------------|------------------------|--------------------|---------------------|-------------------|

Additional Well Information

|                  |                                   |                  |                         |                              |
|------------------|-----------------------------------|------------------|-------------------------|------------------------------|
| Work Type Code N | Well Type Code G                  | Cable/Rotary R   | Lease Type Code P       | Ground Level Elevation 7356' |
| Multiple No      | Proposed Depth 6024' TVD/6337' MD | Formation Mancos | Contractor D&J Drilling | Spud Date September 15, 2008 |

Proposed Casing and Cement Program

| Hole Size | Casing Size | Casing weight/foot | Setting Depth       | Sacks of Cement | Estimated TOC |
|-----------|-------------|--------------------|---------------------|-----------------|---------------|
| 12 250"   | 9 625"      | 36                 | 600'                | 310             | surface       |
| 8 750"    | 7 000"      | 20                 | 3901' TVD/4150' MD  | Stg 1-400       | DV            |
|           |             |                    | DV @ 1682 MD        | Stg 2-190       | surface       |
| 6 250"    | 4 500"      | 10 5               | 3791' TVD/4030' MD  | 240             | liner top     |
|           |             |                    | -6024' TVD/6337' MD |                 |               |

Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary. See attached drilling program and directional plan. Blowout prevention program described in at f BOPE attached.

A COMPLETE C 144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOC FOR A PIT CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD PURSUANT TO NMOC PART 19 15 17 PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS

Hold C104

for Directional Survey  
and As Drilled plat

NOTIFY AZTEC OGD 24 HRS.  
PRIOR TO CASING & CEMENT

|                                                                                                               |                    |                                                          |                 |
|---------------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------|-----------------|
| I hereby certify that the information given above is true and complete to the best of my knowledge and belief |                    | OIL CONSERVATION DIVISION                                |                 |
| Signature Robert E Fielder                                                                                    |                    | Approved by                                              |                 |
| Printed name Robert E Fielder                                                                                 |                    | Title                                                    |                 |
| Title Agent                                                                                                   |                    | Approval Date                                            | Expiration Date |
| E-mail Address pmc1@advantas net                                                                              |                    |                                                          |                 |
| Date 9/4/2008                                                                                                 | Phone 505 320 1435 | Conditions of Approval Attached <input type="checkbox"/> |                 |

District I  
1625 N. French Dr., Dallas, TX 75246  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Grande Rd., Artesia, NM 87410  
District IV  
1210 S. 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 October 12, 2005  
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>30 039-30501</b> | Post Code<br><b>72319</b>                                 | Post Name<br><b>Blanco Mesa Verde</b> |
| Property Code<br><b>28462</b>     | Property Name<br><b>BADGER 11</b>                         | Well Number<br><b>1A</b>              |
| OCBID No.<br><b>22044</b>         | Operator Name<br><b>McELVAIN OIL &amp; GAS PROPERTIES</b> | Direction<br><b>7356</b>              |

**10 Surface Location**

|                           |                      |                        |                    |         |                               |                                  |                               |                               |                             |
|---------------------------|----------------------|------------------------|--------------------|---------|-------------------------------|----------------------------------|-------------------------------|-------------------------------|-----------------------------|
| UL or lot no.<br><b>G</b> | Section<br><b>11</b> | Township<br><b>25N</b> | Range<br><b>2W</b> | Let Ebn | Post from line<br><b>2238</b> | North/South line<br><b>North</b> | Post from line<br><b>2298</b> | East/West line<br><b>East</b> | County<br><b>Rio Arriba</b> |
|---------------------------|----------------------|------------------------|--------------------|---------|-------------------------------|----------------------------------|-------------------------------|-------------------------------|-----------------------------|

**11 Bottom Hole Location If Different From Surface**

|                           |                      |                        |                    |         |                               |                                  |                               |                               |                             |
|---------------------------|----------------------|------------------------|--------------------|---------|-------------------------------|----------------------------------|-------------------------------|-------------------------------|-----------------------------|
| UL or lot no.<br><b>C</b> | Section<br><b>11</b> | Township<br><b>25N</b> | Range<br><b>2W</b> | Let Ebn | Post from line<br><b>1000</b> | North/South line<br><b>North</b> | Post from line<br><b>1980</b> | East/West line<br><b>West</b> | County<br><b>Rio Arriba</b> |
|---------------------------|----------------------|------------------------|--------------------|---------|-------------------------------|----------------------------------|-------------------------------|-------------------------------|-----------------------------|

|                               |                 |                    |           |
|-------------------------------|-----------------|--------------------|-----------|
| Dedicated Acres<br><b>320</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<br>80.00 Ch.<br>West<br>Bottom Hole<br>1000 FNL<br>1980 FNL<br>N 39°08'44" W,<br>1835.06'<br>Sec.<br>11<br>N 89°59' W,<br>80.07 Ch. | 80.08 Ch.<br>2238'<br>Let 35.41353° N<br>Long 107.61838° W<br>2298' | <b>11 OPERATOR CERTIFICATION</b><br>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization neither owns a working lease nor a mineral interest in the land including the proposed bottom hole location. I have a right to drill at this location pursuant to the contract with owner of such mineral or working interest, or to an industry pooling agreement or a unitization pooling order having been entered by the division.<br>Signature: <i>Robert E. Felder</i> 9/4/08<br>Robert E. Felder<br>Printed Name |
|                                                                                                                                        | 80.00 Ch.<br>N 0°01' W<br>80.01' W                                  | 80.07 Ch.<br>N 0°01' W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

McElvain Oil & Gas Properties, Inc.  
 Badger 11 No. 1A  
 2238' FNL & 2298' FEL (Surface)  
 1000' FNL & 1980' FWL (Bottomhole)  
 Section 11, T25N, R2W, NMPM  
 Rio Arriba County, New Mexico

TEN POINT DRILLING PROGRAM

1. Surface Formation: San Jose
2. Surface Elevation: 7356' GL.
3. Estimated Formation Tops:

| <u>Formation</u> | <u>Top(TVD)-ft</u> | <u>Top(MD)-ft</u> | <u>Expected Production</u> |
|------------------|--------------------|-------------------|----------------------------|
| Nacimiento       | 1644               | 1682              |                            |
| Ojo Alamo        | 3144               | 3322              |                            |
| Fruitland        | 3394               | 3595              | Gas                        |
| Pictured Cliffs  | 3519               | 3731              | Gas                        |
| Lewis            | 3719               | 3950              |                            |
| Huerfanito       | 3979               | 4234              |                            |
| Chacra           | 4479               | 4779              |                            |
| Cliff House      | 5254               | 5567              | Gas                        |
| Menefee          | 5369               | 5682              | Gas                        |
| Pt. Lookout      | 5699               | 6012              | Gas                        |
| Upper Mancos     | 5874               | 6187              |                            |
| TOTAL DEPTH      | 6024               | 6337              |                            |

4. Surface Hole Program:

**Bit** Drill a 12 1/4" hole to 600' (MD/TVD) 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 - 500              | 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 310 sacks (365.8 cf) 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 BOPE and wellhead to full working pressure Drill out cement to within 20 feet of shoe. Test BOPE and surface casing to a minimum of 600 psig for 15 minutes

**Drilling Program**  
**McElvain Oil & Gas Properties, Inc.**  
**Badger 11 No. 1A**  
Page Two

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

**Centralizers:** Run four (4) 9 $\frac{3}{4}$ " X 12  $\frac{3}{4}$ " 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  $\frac{3}{4}$ " hole to 700' (TVD/MD) using TCI, IADC Class 447 bits. WOB: 35-45K. RPM: 60 - 75 Pick up directional tools and begin 3°/ 100 foot build section Drill build section to 1474' TVD/1497' MD to build inclination to 23.8° Drill 23.80° hold section to 3901' TVD/ 4150' MD. All directional section will be on a 320° 89° azimuth.

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

| <u>Interval (ft) (TVD/MD)</u> | <u>Weight (ppg)</u> | <u>Ph</u> | <u>Vis (sec/qt)</u> | <u>Water Loss</u> |
|-------------------------------|---------------------|-----------|---------------------|-------------------|
| 700 - 3215/3400               | 8 6 - 8 8           | 9 0-9 5   | 28 - 35             | 10 - 12           |
| 3215/3400 - 3901/4150         | 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.

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.**  
**Badger 11 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 full working pressure. BOPE and surface casing will be 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** None

**Casing and Cementing Program:** Run 7" 20# J-55 production casing from surface to Intermediate TD and cement in 2 stages with a DV tool installed at  $\pm 1644'$  (TVD)/ $1682'$  (MD). **Stage 1** will be cemented with 300 sacks (636.0 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 Type V with 5 pps Gilsonite and 0.25 pps celloflake mixed at 15.2 ppg to yield 1.26 cf/sk. **Stage 2** will be cemented with 140 sacks (296.8 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 Type V with 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 150% 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 3/4" bowspring centralizers will be run across all prospective pays and 5 - 7" X 8 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. Additional centralizers will be placed between these two groups and top of hole to insure standoff of the pipe from the lower hole wall.

**Float Equipment** Cement nose float shoe, 1 joint 7" casing, float collar, and 1 - DV tool.

**Drilling Program**  
**McElvain Oil & Gas Properties, Inc.**  
**Badger 11 No. 1A**  
Page Four

**6. Production Hole Program:**

**Bits:** Drill a 6 1/4" hole to 4353' (TVD)/4644' (MD) with TCI, IADC class 637 bit and directional tools holding angle at 23.8° on an azimuth of 320.89°. Drill to 5124' (TVD)/5437' (MD) dropping 3°/100' on 320.89° azimuth. Drill to TD holding angle at 0°.

**Mud:** This interval will be drilled using a fresh water based low solids non dispersed system with the following properties:

| <u>Interval (ft) (TVD/MD)</u> | <u>Weight (ppg)</u> | <u>pH</u> | <u>Vis (sec/qt)</u> | <u>Water Loss</u> |
|-------------------------------|---------------------|-----------|---------------------|-------------------|
| 3901/4150 - 6024/6337         | 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 full working pressure after cutoff of 7" casing. Casing and BOP will be 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 140 sacks (296.8 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. Follow with 100 sacks (126.0 cf) of Type V with 5 pps gilsonite and 0.25 pps celloflake mixed at 15.2 PPG to yield 1.26 cf/sk.

Slurry volumes assume a 79% 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. Additional rigid centralizers will be spaced between these and the intermediate casing shoe to insure standoff of the pipe from the lower hole wall.

**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.  
Badger 11 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:

September 15, 2008

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

# **McElvain Oil & Gas**

**Rio Arriba County, NM (NAD 27)**

**Badger Com 11**

**Badger Com 11-1A**

**11-1A**

**Plan: Plan #2**

## **Standard Planning Report**

**07 February, 2007**



**Scientific Drilling**  
Planning Report



|                 |                               |                                    |                                   |
|-----------------|-------------------------------|------------------------------------|-----------------------------------|
| <b>Database</b> | EDM 2003 14 Single User Db    | <b>Local Co-ordinate Reference</b> | Well Badger Com 11-1A             |
| <b>Company</b>  | McElvain Oil & Gas            | <b>TVD Reference</b>               | 11-1A @ 7369 50ft (KB Elev 11-1A) |
| <b>Project</b>  | Rio Arriba County NM (NAD 27) | <b>MD Reference</b>                | 11-1A @ 7369 50ft (KB Elev 11-1A) |
| <b>Site</b>     | Badger Com 11                 | <b>North Reference</b>             | Gnd                               |
| <b>Well</b>     | Badger Com 11-1A              | <b>Survey Calculation Method</b>   | Minimum Curvature                 |
| <b>Wellbore</b> | 11-1A                         |                                    |                                   |
| <b>Design</b>   | Plan #2                       |                                    |                                   |

|                   |                                      |                     |                |
|-------------------|--------------------------------------|---------------------|----------------|
| <b>Project</b>    | Rio Arriba County, NM (NAD 27)       |                     |                |
| <b>Map System</b> | US State Plane 1927 (Exact solution) | <b>System Datum</b> | Mean Sea Level |
| <b>Geo Datum</b>  | NAD 1927 (NADCON CONUS)              |                     |                |
| <b>Map Zone</b>   | New Mexico West 3003                 |                     |                |

|                             |               |                    |                 |                         |                  |
|-----------------------------|---------------|--------------------|-----------------|-------------------------|------------------|
| <b>Site</b>                 | Badger Com 11 |                    |                 |                         |                  |
| <b>Site Position</b>        |               | <b>Northing</b>    | 1,970,782.28 ft | <b>Latitude</b>         | 36° 24' 48.708 N |
| <b>From</b>                 | Lat/Long      | <b>Easting</b>     | 739,796.31 ft   | <b>Longitude</b>        | 107° 1' 6.168 W  |
| <b>Position Uncertainty</b> | 0.00 ft       | <b>Slot Radius</b> | ft              | <b>Grid Convergence</b> | 0.48 °           |

|                      |                  |         |                    |                 |              |                  |
|----------------------|------------------|---------|--------------------|-----------------|--------------|------------------|
| Well                 | Badger Com 11-1A |         |                    |                 |              |                  |
| Well Position        | +N/-S            | 0 00 ft | Northing           | 1 970 782 28 ft | Latitude     | 36° 24' 48 708 N |
|                      | +E/-W            | 0 00 ft | Easting            | 739,796 31 ft   | Longitude    | 107° 1' 6 168 W  |
| Position Uncertainty |                  | 0 00 ft | Wellhead Elevation | 7 369 50 ft     | Ground Level | 7 356 00 ft      |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | 11-1A             |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF200510        | 2007-02-07         | 10.05                  | 63.43                | 51,090                     |

|                         |                         |                   |                     |                      |  |
|-------------------------|-------------------------|-------------------|---------------------|----------------------|--|
| <b>Design</b>           | Plan #2                 |                   |                     |                      |  |
| <b>Audit Notes</b>      |                         |                   |                     |                      |  |
| <b>Version</b>          | <b>Phase</b>            | PLAN              | <b>Tie On Depth</b> | 700.00               |  |
| <b>Vertical Section</b> | <b>Depth From (TVD)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b>   | <b>Direction (°)</b> |  |
|                         | 0.00                    | 0.00              | 0.00                | 320.89               |  |

|                            |                        |                    |                            |                   |                   |                              |                             |                            |                |               |
|----------------------------|------------------------|--------------------|----------------------------|-------------------|-------------------|------------------------------|-----------------------------|----------------------------|----------------|---------------|
| <b>Plan Sections</b>       |                        |                    |                            |                   |                   |                              |                             |                            |                |               |
| <b>Measured Depth (ft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b> | <b>Dogleg Rate (°/100ft)</b> | <b>Build Rate (°/100ft)</b> | <b>Turn Rate (°/100ft)</b> | <b>TFO (°)</b> | <b>Target</b> |
| 700.00                     | 0.00                   | 0.00               | 700.00                     | 0.00              | 0.00              | 0.00                         | 0.00                        | 0.00                       | 0.00           |               |
| 1,493.35                   | 23.80                  | 320.89             | 1,470.73                   | 128.02            | -102.46           | 3.00                         | 3.00                        | 0.00                       | 320.89         |               |
| 4,643.27                   | 23.80                  | 320.89             | 4,352.77                   | 1,112.32          | -904.38           | 0.00                         | 0.00                        | 0.00                       | 0.00           |               |
| 5,436.62                   | 0.00                   | 0.00               | 5,123.50                   | 1,238.34          | -1,006.84         | 3.00                         | -3.00                       | 0.00                       | 180.00         |               |
| 6,336.62                   | 0.00                   | 0.00               | 6,023.50                   | 1,238.34          | -1,006.84         | 0.00                         | 0.00                        | 0.00                       | 0.00           | PBHL-11-1A    |

## Scientific Drilling

## Planning Report



|          |                               |                             |                                   |
|----------|-------------------------------|-----------------------------|-----------------------------------|
| Database | EDM 2003 14 Single User Db    | Local Co-ordinate Reference | Well Badger Com 11-1A             |
| Company  | McElvan Oil & Gas             | TVD Reference               | 11-1A @ 7369 50ft (KB Elev 11-1A) |
| Project  | Rio Arriba County NM (NAD 27) | MD Reference                | 11-1A @ 7369 50ft (KB Elev 11-1A) |
| Site     | Badger Com 11                 | North Reference             | Grnd                              |
| Well     | Badger Com 11-1A              | Survey Calculation Method   | Minimum Curvature                 |
| Wellbore | 11-1A                         |                             |                                   |
| Design   | Plan #2                       |                             |                                   |

## Planned Survey

| Measured Depth (ft)           | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|-------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 700.00                        | 0.00            | 0.00        | 700.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| <b>KOP - build 3.00°/100'</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 800.00                        | 3.00            | 320.89      | 799.85              | 2.03       | -1.65      | 2.62                  | 3.00                  | 3.00                 | 0.00                |
| 900.00                        | 6.00            | 320.89      | 899.63              | 8.12       | -6.60      | 10.46                 | 3.00                  | 3.00                 | 0.00                |
| 1000.00                       | 9.00            | 320.89      | 998.77              | 18.24      | -14.83     | 23.51                 | 3.00                  | 3.00                 | 0.00                |
| 1100.00                       | 12.00           | 320.89      | 1,097.08            | 32.38      | -26.33     | 41.74                 | 3.00                  | 3.00                 | 0.00                |
| 1,200.00                      | 15.00           | 320.89      | 1,194.31            | 50.49      | -41.05     | 65.08                 | 3.00                  | 3.00                 | 0.00                |
| 1,300.00                      | 18.00           | 320.89      | 1,290.18            | 72.53      | -58.97     | 93.48                 | 3.00                  | 3.00                 | 0.00                |
| 1,400.00                      | 21.00           | 320.89      | 1,384.43            | 98.42      | -80.02     | 126.85                | 3.00                  | 3.00                 | 0.00                |
| 1,493.35                      | 23.80           | 320.89      | 1,470.73            | 126.02     | -102.46    | 162.42                | 3.00                  | 3.00                 | 0.00                |
| 1,496.79                      | 23.80           | 320.89      | 1,473.88            | 127.10     | -103.34    | 163.81                | 0.00                  | 0.00                 | 0.00                |
| <b>EOC - hold 23.80°</b>      |                 |             |                     |            |            |                       |                       |                      |                     |
| 1,500.00                      | 23.80           | 320.89      | 1,476.81            | 128.11     | -104.16    | 165.11                | 0.00                  | 0.00                 | 0.00                |
| 1,600.00                      | 23.80           | 320.89      | 1,568.31            | 159.42     | -129.62    | 205.46                | 0.00                  | 0.00                 | 0.00                |
| 1,682.18                      | 23.80           | 320.89      | 1,643.50            | 185.15     | -150.54    | 238.62                | 0.00                  | 0.00                 | 0.00                |
| <b>Nacimiento</b>             |                 |             |                     |            |            |                       |                       |                      |                     |
| 1,700.00                      | 23.80           | 320.89      | 1,659.81            | 190.73     | -155.07    | 245.82                | 0.00                  | 0.00                 | 0.00                |
| 1,800.00                      | 23.80           | 320.89      | 1,751.30            | 222.04     | -180.53    | 286.17                | 0.00                  | 0.00                 | 0.00                |
| 1,900.00                      | 23.80           | 320.89      | 1,842.80            | 253.35     | -205.99    | 328.53                | 0.00                  | 0.00                 | 0.00                |
| 2,000.00                      | 23.80           | 320.89      | 1,934.29            | 284.66     | -231.45    | 366.88                | 0.00                  | 0.00                 | 0.00                |
| 2,100.00                      | 23.80           | 320.89      | 2,025.79            | 315.98     | -256.91    | 407.24                | 0.00                  | 0.00                 | 0.00                |
| 2,200.00                      | 23.80           | 320.89      | 2,117.28            | 347.29     | -282.36    | 447.59                | 0.00                  | 0.00                 | 0.00                |
| 2,300.00                      | 23.80           | 320.89      | 2,208.78            | 378.60     | -307.82    | 487.95                | 0.00                  | 0.00                 | 0.00                |
| 2,400.00                      | 23.80           | 320.89      | 2,300.28            | 409.91     | -333.28    | 528.30                | 0.00                  | 0.00                 | 0.00                |
| 2,500.00                      | 23.80           | 320.89      | 2,391.77            | 441.22     | -358.74    | 568.66                | 0.00                  | 0.00                 | 0.00                |
| 2,600.00                      | 23.80           | 320.89      | 2,483.27            | 472.53     | -384.20    | 609.01                | 0.00                  | 0.00                 | 0.00                |
| 2,700.00                      | 23.80           | 320.89      | 2,574.76            | 503.85     | -409.65    | 649.37                | 0.00                  | 0.00                 | 0.00                |
| 2,800.00                      | 23.80           | 320.89      | 2,666.26            | 535.16     | -435.11    | 689.72                | 0.00                  | 0.00                 | 0.00                |
| 2,900.00                      | 23.80           | 320.89      | 2,757.75            | 566.47     | -460.57    | 730.08                | 0.00                  | 0.00                 | 0.00                |
| 3,000.00                      | 23.80           | 320.89      | 2,849.25            | 597.78     | -486.03    | 770.43                | 0.00                  | 0.00                 | 0.00                |
| 3,100.00                      | 23.80           | 320.89      | 2,940.75            | 629.09     | -511.49    | 810.79                | 0.00                  | 0.00                 | 0.00                |
| 3,200.00                      | 23.80           | 320.89      | 3,032.24            | 660.41     | -536.95    | 851.14                | 0.00                  | 0.00                 | 0.00                |
| 3,300.00                      | 23.80           | 320.89      | 3,123.74            | 691.72     | -562.40    | 891.50                | 0.00                  | 0.00                 | 0.00                |
| 3,321.60                      | 23.80           | 320.89      | 3,143.50            | 698.48     | -567.90    | 900.22                | 0.00                  | 0.00                 | 0.00                |
| <b>Ojo Alamo</b>              |                 |             |                     |            |            |                       |                       |                      |                     |
| 3,400.00                      | 23.80           | 320.89      | 3,215.23            | 723.03     | -587.86    | 931.85                | 0.00                  | 0.00                 | 0.00                |
| 3,500.00                      | 23.80           | 320.89      | 3,306.73            | 754.34     | -613.32    | 972.21                | 0.00                  | 0.00                 | 0.00                |
| 3,594.84                      | 23.80           | 320.89      | 3,393.50            | 784.04     | -637.46    | 1,010.48              | 0.00                  | 0.00                 | 0.00                |
| <b>Fruitland</b>              |                 |             |                     |            |            |                       |                       |                      |                     |
| 3,600.00                      | 23.80           | 320.89      | 3,398.22            | 785.65     | -638.78    | 1,012.56              | 0.00                  | 0.00                 | 0.00                |
| 3,700.00                      | 23.80           | 320.89      | 3,489.72            | 816.96     | -664.24    | 1,052.92              | 0.00                  | 0.00                 | 0.00                |
| 3,731.46                      | 23.80           | 320.89      | 3,518.50            | 826.81     | -672.24    | 1,065.61              | 0.00                  | 0.00                 | 0.00                |
| <b>Pictured Cliffs</b>        |                 |             |                     |            |            |                       |                       |                      |                     |
| 3,800.00                      | 23.80           | 320.89      | 3,581.21            | 848.28     | -689.69    | 1,093.28              | 0.00                  | 0.00                 | 0.00                |
| 3,900.00                      | 23.80           | 320.89      | 3,672.71            | 879.59     | -715.15    | 1,133.63              | 0.00                  | 0.00                 | 0.00                |
| 3,950.05                      | 23.80           | 320.89      | 3,718.50            | 895.26     | -727.89    | 1,153.83              | 0.00                  | 0.00                 | 0.00                |
| <b>Lewis</b>                  |                 |             |                     |            |            |                       |                       |                      |                     |
| 4,000.00                      | 23.80           | 320.89      | 3,764.21            | 910.90     | -740.61    | 1,173.99              | 0.00                  | 0.00                 | 0.00                |
| 4,100.00                      | 23.80           | 320.89      | 3,855.70            | 942.21     | -768.07    | 1,214.34              | 0.00                  | 0.00                 | 0.00                |
| 4,200.00                      | 23.80           | 320.89      | 3,947.20            | 973.52     | -791.53    | 1,254.70              | 0.00                  | 0.00                 | 0.00                |
| 4,234.21                      | 23.80           | 320.89      | 3,978.50            | 984.24     | -800.24    | 1,268.50              | 0.00                  | 0.00                 | 0.00                |
| <b>Huerfano</b>               |                 |             |                     |            |            |                       |                       |                      |                     |
| 4,300.00                      | 23.80           | 320.89      | 4,038.69            | 1,004.83   | -818.99    | 1,295.05              | 0.00                  | 0.00                 | 0.00                |

**Scientific Drilling**  
Planning Report



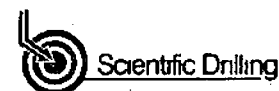
|                 |                                |                                    |                                   |
|-----------------|--------------------------------|------------------------------------|-----------------------------------|
| <b>Database</b> | EDM 2003 14 Single User Db     | <b>Local Co-ordinate Reference</b> | Well Badger Com 11-1A             |
| <b>Company</b>  | McElvain Oil & Gas             | <b>TVD Reference</b>               | 11-1A @ 7369 50ft (KB Elev 11-1A) |
| <b>Project</b>  | Rio Arriba County, NM (NAD 27) | <b>MD Reference</b>                | 11-1A @ 7369 50ft (KB Elev 11-1A) |
| <b>Site</b>     | Badger Com 11                  | <b>North Reference</b>             | Gnd                               |
| <b>Well</b>     | Badger Com 11-1A               | <b>Survey Calculation Method</b>   | Minimum Curvature                 |
| <b>Wellbore</b> | 11-1A                          |                                    |                                   |
| <b>Design</b>   | Plan #2                        |                                    |                                   |

| Planned Survey        |                 |             |                     |            |            |                       |                       |                      |                     |
|-----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft)   | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 4 400 00              | 23 80           | 320 89      | 4 130 19            | 1 036 15   | -842 44    | 1 335 41              | 0 00                  | 0 00                 | 0 00                |
| 4 500 00              | 23 80           | 320 89      | 4 221 68            | 1 067 46   | -867 90    | 1 375 76              | 0 00                  | 0 00                 | 0 00                |
| 4 600 00              | 23 80           | 320 89      | 4 313 18            | 1 098 77   | -893 36    | 1 416 12              | 0 00                  | 0 00                 | 0 00                |
| 4 627 02              | 23 80           | 320 89      | 4 337 91            | 1 107 23   | -900 24    | 1 427 02              | 0 00                  | 0 00                 | 0 00                |
| KOP - drop 3 00°/100' |                 |             |                     |            |            |                       |                       |                      |                     |
| 4 643 27              | 23 80           | 320 89      | 4 352 77            | 1 112 32   | -904 38    | 1 433 58              | 0 00                  | 0 00                 | 0 00                |
| 4 700 00              | 22 10           | 320 89      | 4 405 01            | 1 129 48   | -918 33    | 1 455 70              | 3 00                  | -3 00                | 0 00                |
| 4 778 68              | 19 74           | 320 89      | 4 478 50            | 1 151 28   | -936 05    | 1 483 79              | 3 00                  | -3 00                | 0 00                |
| Chacra                |                 |             |                     |            |            |                       |                       |                      |                     |
| 4 800 00              | 19 10           | 320 89      | 4 498 60            | 1 158 78   | -940 52    | 1 490 88              | 3 00                  | -3 00                | 0 00                |
| 4 900 00              | 18 10           | 320 89      | 4 593 91            | 1 180 23   | -959 59    | 1 521 11              | 3 00                  | -3 00                | 0 00                |
| 5 000 00              | 13 10           | 320 89      | 4 690 67            | 1 199 79   | -975 49    | 1 546 31              | 3 00                  | -3 00                | 0 00                |
| 5 100 00              | 10 10           | 320 89      | 4 788 62            | 1 215 38   | -988 17    | 1 566 41              | 3 00                  | -3 00                | 0 00                |
| 5 200 00              | 7 10            | 320 89      | 4 887 49            | 1 226 98   | -997 60    | 1 581 36              | 3 00                  | -3 00                | 0 00                |
| 5 300 00              | 4 10            | 320 89      | 4 987 00            | 1 234 55   | -1 003 76  | 1 591 12              | 3 00                  | -3 00                | 0 00                |
| 5 400 00              | 1 10            | 320 89      | 5 086 88            | 1 238 07   | -1 006 62  | 1 595 65              | 3 00                  | -3 00                | 0 00                |
| 5 423 82              | 0 38            | 320 89      | 5 110 70            | 1 238 31   | -1 006 81  | 1 595 96              | 3 00                  | -3 00                | 0 00                |
| EOC - hold 0 00°      |                 |             |                     |            |            |                       |                       |                      |                     |
| 5 436 62              | 0 00            | 0 00        | 5 123 50            | 1 238 34   | -1 006 84  | 1 596 00              | 3 00                  | -3 00                | 0 00                |
| 5 566 62              | 0 00            | 0 00        | 5 253 50            | 1 238 34   | -1 006 84  | 1 596 00              | 0 00                  | 0 00                 | 0 00                |
| Mesaverde-Cliff House |                 |             |                     |            |            |                       |                       |                      |                     |
| 5 681 62              | 0 00            | 0 00        | 5 368 50            | 1 238 34   | -1 006 84  | 1 596 00              | 0 00                  | 0 00                 | 0 00                |
| Menefee               |                 |             |                     |            |            |                       |                       |                      |                     |
| 6 011 62              | 0 00            | 0 00        | 5 698 50            | 1 238 34   | -1 006 84  | 1 596 00              | 0 00                  | 0 00                 | 0 00                |
| Point Lookout         |                 |             |                     |            |            |                       |                       |                      |                     |
| 6 186 62              | 0 00            | 0 00        | 5 873 50            | 1 238 34   | -1 006 84  | 1 596 00              | 0 00                  | 0 00                 | 0 00                |
| Upper Mancos          |                 |             |                     |            |            |                       |                       |                      |                     |
| 6 336 62              | 0 00            | 0 00        | 6 023 50            | 1 238 34   | -1 006 84  | 1 596 00              | 0 00                  | 0 00                 | 0 00                |
| PBHL-11-1A            |                 |             |                     |            |            |                       |                       |                      |                     |

| Targets            |               |             |          |            |            |               |              |                 |                  |
|--------------------|---------------|-------------|----------|------------|------------|---------------|--------------|-----------------|------------------|
| Target Name        | Dip Angle (°) | Dip Dir (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude        | Longitude        |
| - hit/miss target  |               |             |          |            |            |               |              |                 |                  |
| - Shape            |               |             |          |            |            |               |              |                 |                  |
| PBHL-11-1A         | 0 00          | 0 00        | 6 023 50 | 1 238 34   | -1 006 84  | 1 972 020 63  | 738 789 47   | 36° 25' 1 037 N | 107° 1' 18 358 W |
| - plan hits target |               |             |          |            |            |               |              |                 |                  |
| - Point            |               |             |          |            |            |               |              |                 |                  |

| Casing Points       |                     |      |                      |                    |
|---------------------|---------------------|------|----------------------|--------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (ft) | Hole Diameter (ft) |
| 650 00              | 9 5/8               |      | 9 62500              | 12 25000           |

**Scientific Drilling**  
Planning Report



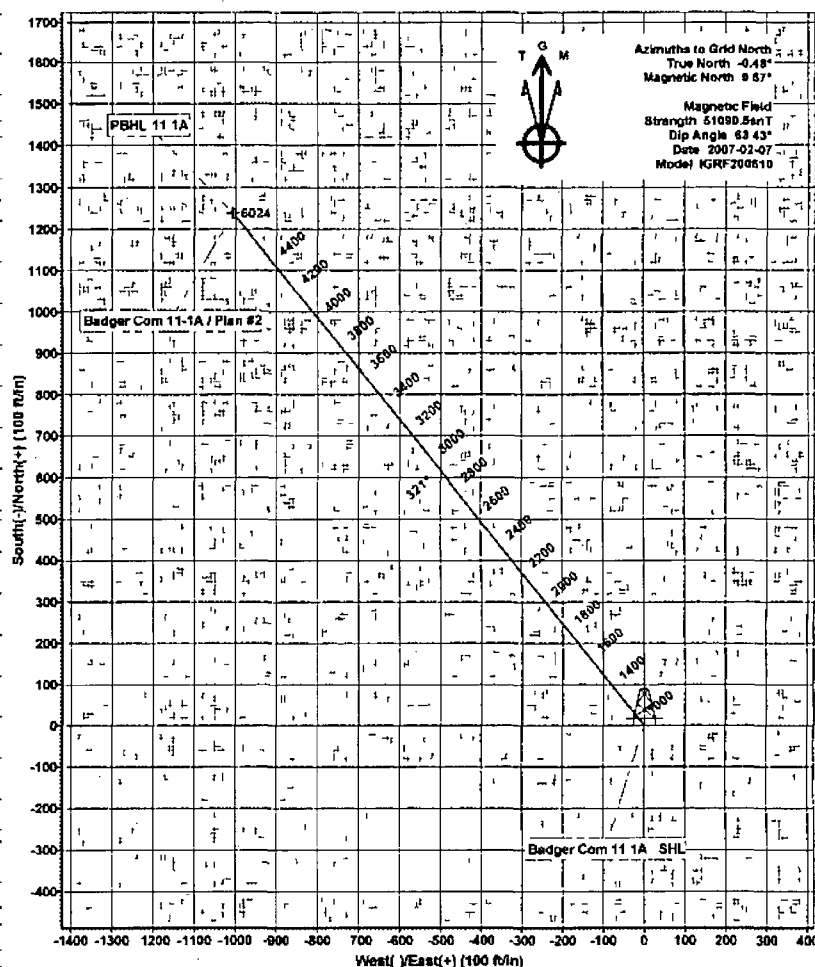
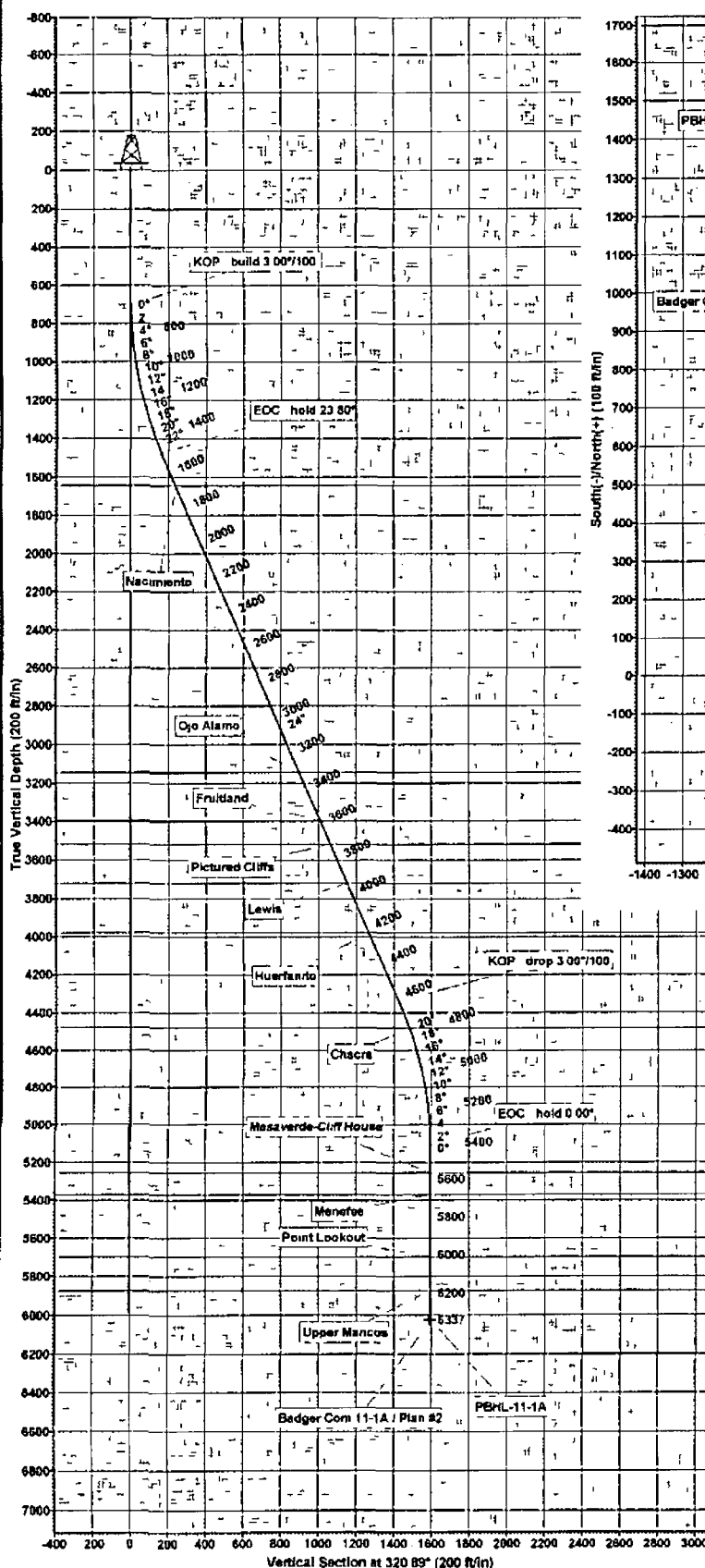
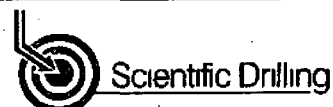
|                        |                                |                                    |                                   |
|------------------------|--------------------------------|------------------------------------|-----------------------------------|
| <b>Database</b>        | EDM 2003 14 Single User Db     | <b>Local Co-ordinate Reference</b> | Well Badger Com 11-1A             |
| <b>Company</b>         | McElvain Oil & Gas             | <b>TVD Reference</b>               | 11-1A @ 7369 50ft (KB Elev 11-1A) |
| <b>Project</b>         | Rio Arriba County, NM (NAD 27) | <b>MD Reference</b>                | 11-1A @ 7369 50ft (KB Elev 11-1A) |
| <b>Site</b>            | Badger Com 11                  | <b>North Reference</b>             | Gnd                               |
| <b>Well</b>            | Badger Com 11-1A               | <b>Survey Calculation Method</b>   | Minimum Curvature                 |
| <b>Wellbore Design</b> | 11-1A<br>Plan #2               |                                    |                                   |

| Formations          |                     |                       |           |                   |
|---------------------|---------------------|-----------------------|-----------|-------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name                  | Lithology | Dip Direction (°) |
| 5,566 62            | 5,253 50            | Mesaverde-Cliff House |           | 0 00              |
| 3,950 05            | 3,718 50            | Lewis                 |           | 0 00              |
| 4 778 68            | 4 478 50            | Chacra                |           | 0 00              |
| 1,682 18            | 1,643 50            | Nacimiento            |           | 0 00              |
| 3,321 60            | 3,143 50            | Ojo Alamo             |           | 0 00              |
| 3,731 46            | 3,518 50            | Pictured Cliffs       |           | 0 00              |
| 5,661 62            | 5 368 50            | Menefee               |           | 0 00              |
| 4,234 21            | 3,978 50            | Huerfano              |           | 0 00              |
| 6 011 62            | 5 698 50            | Point Lookout         |           | 0 00              |
| 6 186 62            | 5 873 50            | Upper Mancos          |           | 0 00              |
| 3,594 84            | 3 393 50            | Fruitland             |           | 0 00              |

| Plan Annotations    |                     |                   |            |                        |
|---------------------|---------------------|-------------------|------------|------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment                |
|                     |                     | +N/-S (ft)        | +E/-W (ft) |                        |
| 700 00              | 700 00              | 0 00              | 0 00       | KOP - build 3 00"/100' |
| 1,496 79            | 1,473 88            | 127 10            | -103 34    | EOC - hold 23 80"      |
| 4,627 02            | 4,337 91            | 1,107 23          | -900 24    | KOP - drop 3 00"/100'  |
| 5,423 82            | 5,110 70            | 1,238 31          | -1 008 81  | EOC - hold 0 00"       |

# McElvain Oil & Gas

Project Rio Arriba County, NM (NAD 27)  
 Site Badger Com 11  
 Well Badger Com 11-1A  
 Wellbore 11-1A  
 Design Plan #2



## SECTION DETAILS

| Sec | MD       | Inc   | Azi    | TVD     | +N-S    | +E-W     | DLeg | IFace  | VSec    | Target     |
|-----|----------|-------|--------|---------|---------|----------|------|--------|---------|------------|
| 1   | 700.00   | 0.00  | 0.00   | 700.00  | 0.00    | 0.00     | 0.00 | 0.00   | 0.00    |            |
| 2   | 1493.35  | 23.80 | 320.89 | 1470.73 | 126.02  | -102.46  | 3.00 | 320.89 | 162.42  |            |
| 3   | 3463.27  | 23.80 | 320.89 | 4352.77 | 1112.32 | -904.36  | 0.00 | 0.00   | 1433.58 |            |
| 4   | 45436.62 | 0.00  | 0.00   | 5123.50 | 1238.34 | -1006.84 | 3.00 | 180.00 | 1596.00 |            |
| 5   | 8336.62  | 0.00  | 0.00   | 6023.50 | 1238.34 | -1006.84 | 0.00 | 0.00   | 1596.00 | PBHL-11-1A |

## WELL DETAILS Badger Com 11 1A

| +N-S | +E-W | Northing   | Ground Level | Easting          | 7356.00         | Latitude | Longitude | Slot |
|------|------|------------|--------------|------------------|-----------------|----------|-----------|------|
| 0.00 | 0.00 | 1976782.25 | 739796.31    | 36° 24' 48.708 N | 107° 1' 6.188 W |          |           |      |

## WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

| Name       | TVD     | +N-S    | +E-W    | Latitude        | Longitude        | Shape |
|------------|---------|---------|---------|-----------------|------------------|-------|
| PBHL 11 1A | 6023.50 | 1238.34 | 1006.84 | 36° 25' 1.037 N | 107° 1' 18.358 W | Point |

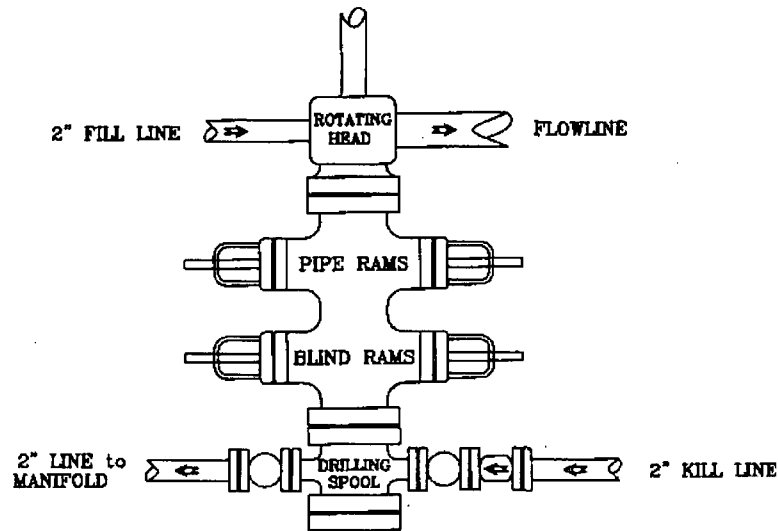
## PROJECT DETAILS Rio Arriba County, NM (NAD 27)

Plan Plan #2 (Badger Com 11-1A/11 1A)

| Geodetic System | US State Plane 1927 (Exact solution) | Created By | Julio Pina | Date | 07-Feb-07 |
|-----------------|--------------------------------------|------------|------------|------|-----------|
| Datum           | NAD 1927 (NADCON CONUS)              | Checked    |            | Date |           |
| Ellipsoid       | Clarke 1866                          | Reviewed   |            | Date |           |
| Zone            | New Mexico West 3003                 | Approved   |            | Date |           |
| System Datum    | Mean Sea Level                       |            |            |      |           |

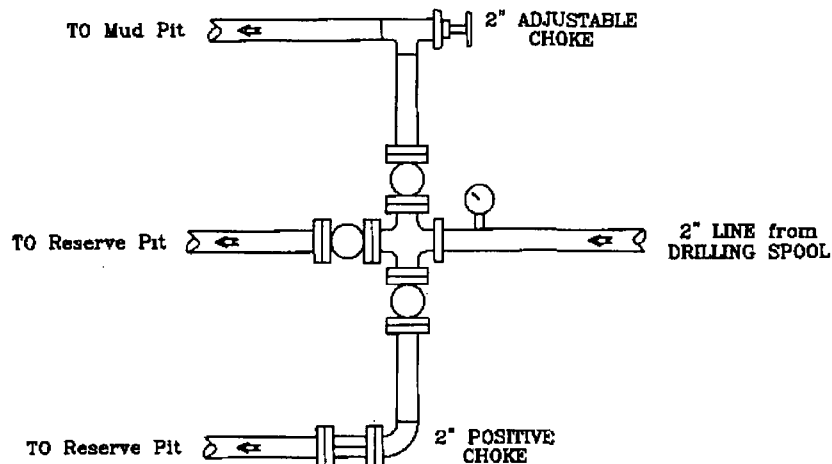
# PRESSURE CONTROL

## 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.*

Badger 11 No. 1A  
2238' FNL - 2298' FEL (surface)  
Section 11, T25N, R02W, NMPM  
Rio Arriba County, New Mexico

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

Form C-101  
June 16, 2008

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

Submit to appropriate District Office

☐ AMENDED REPORT  
RCVD SEP 22 '08  
OIL CONS. DIV.  
DIST. 3

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN,  
PLUGBACK, OR ADD A ZONE

|                                                                                                                                                |                                         |                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------|
| <sup>1</sup> Operator Name and Address<br>McElvian Oil & Gas Properties, Inc<br>1050 17 <sup>th</sup> St., Suite 1800<br>Denver, CO 80265-1801 |                                         | <sup>2</sup> OGRID Number<br>22044      |
|                                                                                                                                                |                                         | <sup>3</sup> API Number<br>30-039-35502 |
| <sup>3</sup> Property Code<br>28462                                                                                                            | <sup>5</sup> Property Name<br>Badger II | <sup>6</sup> Well No<br>1B              |
| <sup>9</sup> Proposed Pool 1<br>Blanco Mesa Verde                                                                                              |                                         | <sup>10</sup> Proposed Pool 2           |

<sup>7</sup> Surface Location

| UL or lot no | Section | Township | Range | Lot Idn | Feet from the | North/Southline | Feet from the | East/West line | County     |
|--------------|---------|----------|-------|---------|---------------|-----------------|---------------|----------------|------------|
| G            | 11      | 25N      | 2W    |         | 2262          | North           | 2307          | East           | Rio Arriba |

<sup>8</sup> Proposed 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     |
|--------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|------------|
| E            | 11      | 25N      | 2W    |         | 1980          | North            | 660           | West           | Rio Arriba |

Additional Well Information

|                                   |                                                   |                                   |                                          |                                               |
|-----------------------------------|---------------------------------------------------|-----------------------------------|------------------------------------------|-----------------------------------------------|
| <sup>11</sup> Work Type Code<br>N | <sup>12</sup> Well Type Code<br>G                 | <sup>13</sup> Cable/Rotary<br>R   | <sup>14</sup> Lease Type Code<br>P       | <sup>15</sup> Ground Level Elevation<br>7355' |
| <sup>16</sup> Multiple<br>No      | <sup>17</sup> Proposed Depth<br>6014'TVD/6688' MD | <sup>18</sup> Formation<br>Mancos | <sup>19</sup> Contractor<br>D&J Drilling | <sup>20</sup> Spud Date<br>September 15, 2008 |

<sup>21</sup> Proposed Casing and Cement Program

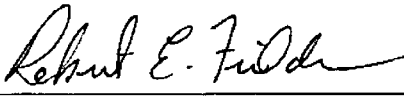
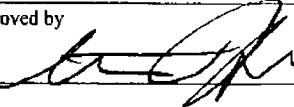
| Hole Size | Casing Size | Casing weight/foot | Setting Depth      | Sacks of Cement | Estimated TOC |
|-----------|-------------|--------------------|--------------------|-----------------|---------------|
| 12 250"   | 9 625"      | 36                 | 600                | 310             | surface       |
| 8.750"    | 7.000"      | 23                 | 3879'TVD/4438'MD   | Stg 1-450       | DV            |
|           |             |                    | DV@ 1700'MD        | Stg.2-190       | surface       |
| 6 250"    | 4 500"      | 10.5               | 3781'TVD/4318'MD   | 250             | Liner top     |
|           |             |                    | - 6014'TVD/6688'MD |                 |               |

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.  
See attached drilling program and directional plan. Blowout prevention program described in attached drilling program. Schematic of wellbore attached.

NOTIFY AZTEC OCD 24 HRS.  
PRIOR TO CASING & CEMENT

A COMPLETE C-144 MUST BE SUBMITTED TO AND  
APPROVED BY THE NMOCD FOR A PIT CLOSED  
LOOP SYSTEM, BELOW GRADE TANK, OR  
PROPOSED ALTERNATIVE METHOD, PURSUANT TO  
NMOCD PART 19.15.17, PRIOR TO THE USE OR  
CONSTRUCTION OF THE ABOVE APPLICATIONS

Hold C104  
for Directional Survey  
and "As Drilled" plat

|                                                                                                                             |                       |                                                                                                     |                 |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------------------------------------------------------|-----------------|
| <sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief |                       | OIL CONSERVATION DIVISION                                                                           |                 |
| Signature<br>                            |                       | Approved by<br> |                 |
| Printed name<br>Robert E. Fielder                                                                                           |                       | Title                                                                                               |                 |
| Title<br>Agent                                                                                                              |                       | Approval Date                                                                                       | Expiration Date |
| E-mail Address<br>pniev@advantas.net                                                                                        |                       |                                                                                                     |                 |
| Date<br>September 4, 2008                                                                                                   | Phone<br>505 320 1435 | Conditions of Approval Attached <input type="checkbox"/>                                            |                 |

District I  
 1625 N. French Dr., Santa Fe, NM 87505  
 District II  
 1201 W. Grand Avenue, Arroyo, NM 87008  
 District III  
 1800 Rio Herman Rd., Arroyo, NM 87008  
 District IV  
 1225 E. 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 October 12, 2005  
 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>30-039-30502</b> | Well Code<br><b>72319</b>                                 | Well Name<br><b>Bianco Mesa Verde</b> |
| Property Code<br><b>28462</b>     | Property Name<br><b>BADGER 11</b>                         | Well Number<br><b>1B</b>              |
| OCRD No.<br><b>22044</b>          | Operator Name<br><b>McELVAIN OIL &amp; GAS PROPERTIES</b> | Elevation<br><b>7355</b>              |

**10 Surface Location**

| UL or lot no. | Section   | Township   | Range     | Lot 1/4 | Feet from the | North/South line | Feet from the | East/West line | County            |
|---------------|-----------|------------|-----------|---------|---------------|------------------|---------------|----------------|-------------------|
| <b>G</b>      | <b>11</b> | <b>25N</b> | <b>2W</b> |         | <b>2282</b>   | <b>North</b>     | <b>2307</b>   | <b>East</b>    | <b>Rio Arriba</b> |

**11 Bottom Hole Location If Different From Surface**

| UL or lot no. | Section   | Township   | Range     | Lot 1/4 | Feet from the | North/South line | Feet from the | East/West line | County            |
|---------------|-----------|------------|-----------|---------|---------------|------------------|---------------|----------------|-------------------|
| <b>E</b>      | <b>11</b> | <b>25N</b> | <b>2W</b> |         | <b>1980</b>   | <b>North</b>     | <b>660</b>    | <b>West</b>    | <b>Rio Arriba</b> |

|                               |                 |                  |           |
|-------------------------------|-----------------|------------------|-----------|
| Indicated Acres<br><b>320</b> | Block or Infill | Commodities 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<br>West<br>80.08 Ch.<br>2382'<br>Bottom Hole<br>1980' FUL<br>660' FUL, X<br>N 83°03'57" W<br>2035.07'<br>Sec. 11<br>2307'<br>N 0°01' W<br>N 89°59' W<br>80.07 Ch. | <b>17 OPERATOR CERTIFICATION</b><br>I hereby certify that the information furnished herein is correct and complete to the best of my knowledge and belief, and that the information is true and correct to the best of my knowledge and belief.<br>Signature: <u>Robert E. Felder</u> 9/4/08<br>Date: _____<br>Printed Name: <u>Robert E. Felder</u><br>Title: _____        |
|                                                                                                                                                                      | <b>18 SURVEYOR CERTIFICATION</b><br>I hereby certify that the well location shown on this plat was placed 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>Date of Survey: _____<br>Signature: _____<br>Printed Name: <u>William E. Mahoney</u><br>Certificate Number: <u>8466</u> |

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

**Badger 11 No. 1B**

**2262' FNL & 2307' FEL (Surface)**

**1980' FNL & 660' FWL (Bottomhole)**

**Section 11, T25N, R2W, NMPM**

**Rio Arriba County, New Mexico**

**TEN POINT DRILLING PROGRAM**

1. **Surface Formation:** San Jose

2. **Surface Elevation:** 7355' GL.

3. **Estimated Formation Tops:**

| <u>Formation</u> | <u>Top(TVD) -ft</u> | <u>Top(MD) -ft</u> | <u>Expected Production</u> |
|------------------|---------------------|--------------------|----------------------------|
| Nacimiento       | 1624                | 1664               |                            |
| Ojo Alamo        | 3124                | 3506               |                            |
| Fruitland        | 3374                | 3814               | Gas                        |
| Pictured Cliffs  | 3499                | 3969               | Gas                        |
| Lewis            | 3699                | 4216               |                            |
| Huerfanito       | 3959                | 4537               |                            |
| Chacra           | 4459                | 5116               |                            |
| Cliff House      | 5239                | 5914               | Gas                        |
| Menefee          | 5354                | 6028               | Gas                        |
| Pt. Lookout      | 5684                | 6358               | Gas                        |
| Upper Mancos     | 5859                | 6533               |                            |
| TOTAL DEPTH      | 6014                | 6688               |                            |

4. **Surface Hole Program:**

**Bit:** Drill a 12 1/4" hole to 600' (MD/TVD) 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 - 600              | 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 310 sacks (365.8 cf) 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 BOPE and wellhead to full working pressure. Drill out cement to within 20 feet of shoe. Test BOPE and surface casing to a minimum of 600 psig for 15 minutes.

**Drilling Program**  
**McElvain Oil & Gas Properties, Inc.**  
**Badger 11 No. 1B**  
Page Two

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

**Centralizers:** Run four (4) 9 $\frac{1}{2}$ " 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  $\frac{3}{4}$ " hole to 700' (TVD/MD) using TCI, IADC Class 447 bits. WOB: 35-45K. RPM: 60 - 75 Pick up directional tools and begin 3°/ 100 foot build section Drill build section to 1820' TVD/1897' MD to build inclination to 35.9°. Drill 35 90° hold section to 3879' TVD/ 4438' MD All directional section will be on a 276.93° azimuth.

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

| <u>Interval (ft) (TVD/MD)</u> | <u>Weight (ppg)</u> | <u>Ph</u> | <u>Vis(sec/qt)</u> | <u>Water Loss</u> |
|-------------------------------|---------------------|-----------|--------------------|-------------------|
| 700 - 3200/3600               | 8 6 - 8 8           | 9 0-9 5   | 28 - 35            | 10 - 12           |
| 3200/3600 - 3879/4438         | 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.

**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.**  
**Badger 11 No. 1B**  
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 full working pressure. BOPE and surface casing will be 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:** None

**Casing and Cementing Program** Run 7" 23# J-55 production casing from surface to Intermediate TD and cement in 2 stages with a DV tool installed at  $\pm 1655'$  (TVD) /  $1700'$  (MD). **Stage 1** will be cemented with 350 sacks (742.0 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 Type V with 5 pps Gilsonite and 0.25 pps celloflake mixed at 15.2 ppg to yield 1.26 cf/sk. **Stage 2** will be cemented with 140 sacks (296.8 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 Type V with 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 150% 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 3/4" bowspring centralizers will be run across all prospective pays and 5 - 7" X 8 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. Additional centralizers will be placed between these two groups and top of hole to insure standoff of the pipe from the lower hole wall.

**Float Equipment:** Cement nose float shoe, 1 joint 7" casing, float collar, and 1 - DV tool.

**Drilling Program**  
**McElvain Oil & Gas Properties, Inc.**  
**Badger 11 No. 1B**  
Page Four

**6. Production Hole Program:**

**Bits** Drill a 6 1/4" hole to 4043' (TVD)/4642' (MD) with TCI, IADC class 637 bit and directional tools holding angle at 35.9° on an azimuth of 276 93° Drill to 5164' (TVD)/5838' (MD) dropping 3°/100' on 276 93° azimuth Drill to TD holding angle at 0°.

**Mud:** This interval will be drilled using a fresh water based low solids non dispersed system with the following properties:

| <u>Interval (ft) (TVD/MD)</u> | <u>Weight (ppg)</u> | <u>pH</u> | <u>Vis(sec/qt)</u> | <u>Water Loss</u> |
|-------------------------------|---------------------|-----------|--------------------|-------------------|
| 3879/4438 - 6014/6688         | 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 full working pressure after cutoff of 7" casing Casing and BOP will be 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 150 sacks (318 0 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. Follow with 100 sacks (126.0 cf) of Type V with 5 pps gilsonite and 0.25 pps celloflake mixed at 15.2 PPG to yield 1.26 cf/sk.

Slurry volumes assume a 79% 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 Additional rigid centralizers will be spaced between these and the intermediate casing shoe to insure standoff of the pipe from the lower hole wall

**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.  
Badger 11 No. 1B  
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:

September 15, 2008

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

# **McElvain Oil & Gas**

**Rio Arriba County, NM (NAD 27)**

**Badger Com 11**

**Badger Com 11-1B**

**11-1B**

**Plan: Plan #2**

## **Standard Planning Report**

**07 February, 2007**



**Scientific Drilling**  
Planning Report



|                 |                                |                                    |                                  |
|-----------------|--------------------------------|------------------------------------|----------------------------------|
| <b>Database</b> | EDM 2003 14 Single User Db     | <b>Local Co-ordinate Reference</b> | Well Badger Com 11-1B            |
| <b>Company</b>  | McElvay Oil & Gas              | <b>TVD Reference</b>               | Well @ 7368 50ft (KB Elev 11-1B) |
| <b>Project</b>  | Rio Arriba County, NM (NAD 27) | <b>MD Reference</b>                | Well @ 7368 50ft (KB Elev 11-1B) |
| <b>Site</b>     | Badger Com 11                  | <b>North Reference</b>             | Grd                              |
| <b>Well</b>     | Badger Com 11-1B               | <b>Survey Calculation Method</b>   | Minimum Curvature                |
| <b>Wellbore</b> | 11-1B                          |                                    |                                  |
| <b>Design</b>   | Plan #2                        |                                    |                                  |

|                   |                                      |                     |                |
|-------------------|--------------------------------------|---------------------|----------------|
| <b>Project</b>    | Rio Arriba County, NM (NAD 27)       |                     |                |
| <b>Map System</b> | US State Plane 1927 (Exact solution) | <b>System Datum</b> | Mean Sea Level |
| <b>Geo Datum</b>  | NAD 1927 (NADCON CONUS)              |                     |                |
| <b>Map Zone</b>   | New Mexico West 3003                 |                     |                |

|                      |               |             |                 |                  |                  |
|----------------------|---------------|-------------|-----------------|------------------|------------------|
| Site                 | Badger Com 11 |             |                 |                  |                  |
| Site Position        |               | Northing    | 1,970,782.28 ft | Latitude         | 36° 24' 48.708 N |
| From                 | Lat/Long      | Easting     | 739,796.31 ft   | Longitude        | 107° 1' 6.168 W  |
| Position Uncertainty | 0.00 ft       | Slot Radius | ft              | Grid Convergence | 0.48 °           |

|                      |                  |         |                    |                 |              |                  |
|----------------------|------------------|---------|--------------------|-----------------|--------------|------------------|
| Well                 | Badger Com 11-1B |         |                    |                 |              |                  |
| Well Position        | +N/-S            | 0.00 ft | Northing           | 1,970,760.37 ft | Latitude     | 36° 24' 48.492 N |
|                      | +E/-W            | 0.00 ft | Easting            | 739,787.87 ft   | Longitude    | 107° 1' 6.276 W  |
| Position Uncertainty |                  | 0.00 ft | Wellhead Elevation | 7,368.50 ft     | Ground Level | 7,355.00 ft      |

|                  |                   |                    |                           |                         |                               |
|------------------|-------------------|--------------------|---------------------------|-------------------------|-------------------------------|
| <b>Wellbore</b>  | 11-1B             |                    |                           |                         |                               |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b><br>(°) | <b>Dip Angle</b><br>(°) | <b>Field Strength</b><br>(nT) |
|                  | IGRF200510        | 2007-02-07         | 10.05                     | 63.43                   | 51,090                        |

|                         |                                 |                      |                      |                         |
|-------------------------|---------------------------------|----------------------|----------------------|-------------------------|
| <b>Design</b>           | Plan #2                         |                      |                      |                         |
| <b>Audit Notes</b>      |                                 |                      |                      |                         |
| <b>Version</b>          | <b>Phase</b>                    | PLAN                 | <b>Tie On Depth</b>  | 700.00                  |
| <b>Vertical Section</b> | <b>Depth From (TVD)</b><br>(ft) | <b>+N/-S</b><br>(ft) | <b>+E/-W</b><br>(ft) | <b>Direction</b><br>(°) |
|                         | -5.00                           | 0.00                 | 0.00                 | 276.93                  |

|                      |                    |                |                      |              |              |                          |                          |                          |            |               |
|----------------------|--------------------|----------------|----------------------|--------------|--------------|--------------------------|--------------------------|--------------------------|------------|---------------|
| <b>Plan Sections</b> |                    |                |                      |              |              |                          |                          |                          |            |               |
| <b>Measured</b>      | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical</b>      | <b>+N/-S</b> | <b>+E/-W</b> | <b>Dogleg</b>            | <b>Build</b>             | <b>Turn</b>              | <b>TFO</b> | <b>Target</b> |
| <b>Depth</b><br>(ft) | <b>(°)</b>         | <b>(°)</b>     | <b>Depth</b><br>(ft) | <b>(ft)</b>  | <b>(ft)</b>  | <b>Rate</b><br>(°/100ft) | <b>Rate</b><br>(°/100ft) | <b>Rate</b><br>(°/100ft) | <b>(°)</b> |               |
| 700.00               | 0.00               | 0.00           | 700.00               | 0.00         | 0.00         | 0.00                     | 0.00                     | 0.00                     | 0.00       |               |
| 1,896.50             | 35.90              | 276.93         | 1,819.75             | 43.79        | -360.04      | 3.00                     | 3.00                     | 0.00                     | 276.93     |               |
| 4,641.66             | 35.90              | 276.93         | 4,043.75             | 238.11       | -1,957.88    | 0.00                     | 0.00                     | 0.00                     | 0.00       |               |
| 5,838.36             | 0.00               | 0.00           | 5,183.50             | 281.90       | -2,317.92    | 3.00                     | -3.00                    | 0.00                     | 180.00     |               |
| 6,688.36             | 0.00               | 0.00           | 6,013.50             | 281.90       | -2,317.92    | 0.00                     | 0.00                     | 0.00                     | 0.00       | PBHL-11-1B    |

# Scientific Drilling

## Planning Report



|          |                                |                             |                                  |
|----------|--------------------------------|-----------------------------|----------------------------------|
| Database | EDM 2003 14 Single User Db     | Local Co-ordinate Reference | Well Badger Com 11-1B            |
| Company  | McElvain Oil & Gas             | TVD Reference               | Well @ 7368 50ft (KB Elev 11-1B) |
| Project  | Rio Arriba County, NM (NAD 27) | MD Reference                | Well @ 7368 50ft (KB Elev 11-1B) |
| Site     | Badger Com 11                  | North Reference             | Gnd                              |
| Well     | Badger Com 11-1B               | Survey Calculation Method   | Minimum Curvature                |
| Wellbore | 11-1B                          |                             |                                  |
| Design   | Plan #2                        |                             |                                  |

| Planned Survey           |                 |             |                     |           |           |                       |                       |                      |                     |
|--------------------------|-----------------|-------------|---------------------|-----------|-----------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft)      | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N-S (ft) | +E-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 700.00                   | 0.00            | 0.00        | 700.00              | 0.00      | 0.00      | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| 800.00                   | 3.00            | 276.93      | 799.95              | 0.32      | -2.60     | 2.62                  | 3.00                  | 3.00                 | 0.00                |
| 900.00                   | 6.00            | 276.93      | 899.63              | 1.26      | -10.39    | 10.46                 | 3.00                  | 3.00                 | 0.00                |
| 1,000.00                 | 9.00            | 276.93      | 998.77              | 2.84      | -23.34    | 23.51                 | 3.00                  | 3.00                 | 0.00                |
| 1,100.00                 | 12.00           | 276.93      | 1,097.08            | 5.04      | -41.43    | 41.74                 | 3.00                  | 3.00                 | 0.00                |
| 1,200.00                 | 15.00           | 276.93      | 1,194.31            | 7.86      | -64.60    | 65.08                 | 3.00                  | 3.00                 | 0.00                |
| 1,300.00                 | 18.00           | 276.93      | 1,290.18            | 11.28     | -92.79    | 93.48                 | 3.00                  | 3.00                 | 0.00                |
| 1,400.00                 | 21.00           | 276.93      | 1,384.43            | 15.31     | -125.92   | 126.85                | 3.00                  | 3.00                 | 0.00                |
| 1,500.00                 | 24.00           | 276.93      | 1,476.81            | 19.93     | -163.91   | 165.12                | 3.00                  | 3.00                 | 0.00                |
| 1,600.00                 | 27.00           | 276.93      | 1,567.06            | 25.13     | -206.64   | 208.16                | 3.00                  | 3.00                 | 0.00                |
| 1,663.90                 | 28.92           | 276.93      | 1,623.50            | 28.75     | -236.38   | 238.12                | 3.00                  | 3.00                 | 0.00                |
| <b>Macmillento</b>       |                 |             |                     |           |           |                       |                       |                      |                     |
| 1,700.00                 | 30.00           | 276.93      | 1,654.93            | 30.89     | -254.00   | 255.87                | 3.00                  | 3.00                 | 0.00                |
| 1,800.00                 | 33.00           | 276.93      | 1,740.18            | 37.20     | -305.86   | 308.12                | 3.00                  | 3.00                 | 0.00                |
| 1,891.54                 | 35.75           | 276.93      | 1,815.73            | 43.44     | -357.16   | 359.79                | 3.00                  | 3.00                 | 0.00                |
| <b>EOC - hold 35.90°</b> |                 |             |                     |           |           |                       |                       |                      |                     |
| 1,896.50                 | 35.90           | 276.93      | 1,819.75            | 43.79     | -360.04   | 362.70                | 3.00                  | 3.00                 | 0.00                |
| 1,900.00                 | 35.90           | 276.93      | 1,822.59            | 44.03     | -362.08   | 364.75                | 0.00                  | 0.00                 | 0.00                |
| 2,000.00                 | 35.90           | 276.93      | 1,903.60            | 51.11     | -420.28   | 423.38                | 0.00                  | 0.00                 | 0.00                |
| 2,100.00                 | 35.90           | 276.93      | 1,984.61            | 58.19     | -478.48   | 482.01                | 0.00                  | 0.00                 | 0.00                |
| 2,200.00                 | 35.90           | 276.93      | 2,065.62            | 65.27     | -536.68   | 540.64                | 0.00                  | 0.00                 | 0.00                |
| 2,300.00                 | 35.90           | 276.93      | 2,146.63            | 72.35     | -594.89   | 599.27                | 0.00                  | 0.00                 | 0.00                |
| 2,400.00                 | 35.90           | 276.93      | 2,227.64            | 79.43     | -653.09   | 657.90                | 0.00                  | 0.00                 | 0.00                |
| 2,500.00                 | 35.90           | 276.93      | 2,308.64            | 86.50     | -711.29   | 716.53                | 0.00                  | 0.00                 | 0.00                |
| 2,600.00                 | 35.90           | 276.93      | 2,389.65            | 93.58     | -769.49   | 775.16                | 0.00                  | 0.00                 | 0.00                |
| 2,700.00                 | 35.90           | 276.93      | 2,470.66            | 100.66    | -827.69   | 833.79                | 0.00                  | 0.00                 | 0.00                |
| 2,800.00                 | 35.90           | 276.93      | 2,551.67            | 107.74    | -885.89   | 892.42                | 0.00                  | 0.00                 | 0.00                |
| 2,900.00                 | 35.90           | 276.93      | 2,632.68            | 114.82    | -944.09   | 951.05                | 0.00                  | 0.00                 | 0.00                |
| 3,000.00                 | 35.90           | 276.93      | 2,713.69            | 121.89    | -1,002.30 | 1,009.68              | 0.00                  | 0.00                 | 0.00                |
| 3,100.00                 | 35.90           | 276.93      | 2,794.70            | 128.97    | -1,060.50 | 1,068.31              | 0.00                  | 0.00                 | 0.00                |
| 3,200.00                 | 35.90           | 276.93      | 2,875.71            | 136.05    | -1,118.70 | 1,126.94              | 0.00                  | 0.00                 | 0.00                |
| 3,300.00                 | 35.90           | 276.93      | 2,956.72            | 143.13    | -1,176.90 | 1,185.57              | 0.00                  | 0.00                 | 0.00                |
| 3,400.00                 | 35.90           | 276.93      | 3,037.73            | 150.21    | -1,235.10 | 1,244.20              | 0.00                  | 0.00                 | 0.00                |
| 3,500.00                 | 35.90           | 276.93      | 3,118.74            | 157.29    | -1,293.30 | 1,302.83              | 0.00                  | 0.00                 | 0.00                |
| 3,505.88                 | 35.90           | 276.93      | 3,123.50            | 157.70    | -1,296.72 | 1,306.28              | 0.00                  | 0.00                 | 0.00                |
| <b>Ojo Alamo</b>         |                 |             |                     |           |           |                       |                       |                      |                     |
| 3,600.00                 | 35.90           | 276.93      | 3,199.75            | 164.36    | -1,351.50 | 1,361.46              | 0.00                  | 0.00                 | 0.00                |
| 3,700.00                 | 35.90           | 276.93      | 3,280.76            | 171.44    | -1,409.71 | 1,420.09              | 0.00                  | 0.00                 | 0.00                |
| 3,800.00                 | 35.90           | 276.93      | 3,361.76            | 178.52    | -1,467.91 | 1,478.72              | 0.00                  | 0.00                 | 0.00                |
| 3,814.49                 | 35.90           | 276.93      | 3,373.50            | 179.55    | -1,476.34 | 1,487.22              | 0.00                  | 0.00                 | 0.00                |
| <b>Fruitland</b>         |                 |             |                     |           |           |                       |                       |                      |                     |
| 3,900.00                 | 35.90           | 276.93      | 3,442.77            | 185.60    | -1,526.11 | 1,537.35              | 0.00                  | 0.00                 | 0.00                |
| 3,968.79                 | 35.90           | 276.93      | 3,498.50            | 190.47    | -1,566.14 | 1,577.68              | 0.00                  | 0.00                 | 0.00                |
| <b>Pictured Cliffs</b>   |                 |             |                     |           |           |                       |                       |                      |                     |
| 4,000.00                 | 35.90           | 276.93      | 3,523.78            | 192.68    | -1,584.31 | 1,595.98              | 0.00                  | 0.00                 | 0.00                |
| 4,100.00                 | 35.90           | 276.93      | 3,604.79            | 199.75    | -1,642.51 | 1,654.61              | 0.00                  | 0.00                 | 0.00                |
| 4,200.00                 | 35.90           | 276.93      | 3,685.80            | 206.83    | -1,700.71 | 1,713.24              | 0.00                  | 0.00                 | 0.00                |
| 4,215.67                 | 35.90           | 276.93      | 3,698.50            | 207.94    | -1,709.83 | 1,722.43              | 0.00                  | 0.00                 | 0.00                |
| <b>Lewis</b>             |                 |             |                     |           |           |                       |                       |                      |                     |
| 4,300.00                 | 35.90           | 276.93      | 3,766.61            | 213.91    | -1,758.91 | 1,771.87              | 0.00                  | 0.00                 | 0.00                |
| 4,400.00                 | 35.90           | 276.93      | 3,847.82            | 220.99    | -1,817.11 | 1,830.50              | 0.00                  | 0.00                 | 0.00                |
| 4,500.00                 | 35.90           | 276.93      | 3,928.83            | 228.07    | -1,875.32 | 1,889.13              | 0.00                  | 0.00                 | 0.00                |
| 4,536.63                 | 35.90           | 276.93      | 3,958.50            | 230.66    | -1,896.63 | 1,910.61              | 0.00                  | 0.00                 | 0.00                |

## Scientific Drilling

## Planning Report



|          |                                |                             |                                  |
|----------|--------------------------------|-----------------------------|----------------------------------|
| Database | EDM 2003 14 Single User Db     | Local Co-ordinate Reference | Well Badger Com 11-1B            |
| Company  | McElvain Oil & Gas             | TVD Reference               | Well @ 7368 50ft (KB Elev 11-1B) |
| Project  | Rio Arriba County, NM (NAD 27) | MD Reference                | Well @ 7368 50ft (KB Elev 11-1B) |
| Site     | Badger Com 11                  | North Reference             | Gnd                              |
| Well     | Badger Com 11-1B               | Survey Calculation Method   | Minimum Curvature                |
| Wellbore | 11-1B                          |                             |                                  |
| Design   | Plan #2                        |                             |                                  |

| Planned Survey               |                 |             |                     |            |            |                       |                       |                      |                     |  |
|------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|--|
| Measured Depth (ft)          | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |  |
| <b>Huerfano</b>              |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 4,600 00                     | 35 90           | 276 93      | 4 009 84            | 235 15     | -1,933 52  | 1,947 76              | 0 00                  | 0 00                 | 0 00                |  |
| 4,636 86                     | 35 90           | 276 93      | 4,039 70            | 237 75     | -1,954 87  | 1,969 37              | 0 00                  | 0 00                 | 0 00                |  |
| <b>KOP - drop 3 00°/100'</b> |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 4,641 86                     | 35 90           | 276 93      | 4 043 75            | 238 11     | -1,957 88  | 1 972 30              | 0 00                  | 0 00                 | 0 00                |  |
| 4,700 00                     | 34 15           | 276 93      | 4 091 36            | 242 14     | -1,991 00  | 2 005 67              | 3 00                  | -3 00                | 0 00                |  |
| 4,800 00                     | 31 15           | 276 93      | 4,175 55            | 248 65     | -2,044 55  | 2 059 62              | 3 00                  | -3 00                | 0 00                |  |
| 4,900 00                     | 28 15           | 276 93      | 4,262 44            | 254 62     | -2 093 66  | 2,109 08              | 3 00                  | -3 00                | 0 00                |  |
| 5 000 00                     | 25 15           | 276 93      | 4 351 81            | 260 04     | -2 138 18  | 2,153 93              | 3 00                  | -3 00                | 0 00                |  |
| 5 100 00                     | 22 15           | 276 93      | 4,443 40            | 264 88     | -2 178 00  | 2,194 04              | 3 00                  | -3 00                | 0 00                |  |
| 5 116 28                     | 21 66           | 276 93      | 4,458 50            | 265 61     | -2,184 02  | 2,200 12              | 3 00                  | -3 00                | 0 00                |  |
| <b>Chacra</b>                |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 5 200 00                     | 19 15           | 276 93      | 4,536 96            | 269 14     | -2,213 00  | 2,229 31              | 3 00                  | -3 00                | 0 00                |  |
| 5,300 00                     | 16 15           | 276 93      | 4,632 24            | 272 80     | -2,243 10  | 2,259 62              | 3 00                  | -3 00                | 0 00                |  |
| 5 400 00                     | 13 15           | 276 93      | 4,728 98            | 275 85     | -2,268 20  | 2,284 91              | 3 00                  | -3 00                | 0 00                |  |
| 5,500 00                     | 10 15           | 276 93      | 4,826 91            | 278 29     | -2,288 25  | 2,305 11              | 3 00                  | -3 00                | 0 00                |  |
| 5,600 00                     | 7 15            | 276 93      | 4,925 76            | 280 10     | -2,303 18  | 2,320 15              | 3 00                  | -3 00                | 0 00                |  |
| 5,700 00                     | 4 15            | 276 93      | 5,025 26            | 281 29     | -2,312 95  | 2,329 99              | 3 00                  | -3 00                | 0 00                |  |
| 5,800 00                     | 1 15            | 276 93      | 5,125 15            | 281 85     | -2,317 54  | 2,334 61              | 3 00                  | -3 00                | 0 00                |  |
| 5 833 40                     | 0 15            | 276 93      | 5,158 54            | 281 89     | -2,317 92  | 2,334 99              | 3 00                  | -3 00                | 0 00                |  |
| <b>EOC - hold 35 90°</b>     |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 5,838 36                     | 0 00            | 0 00        | 5,163 50            | 281 90     | -2,317 92  | 2,335 00              | 3 00                  | -3 00                | 0 00                |  |
| 5,913 36                     | 0 00            | 0 00        | 5,238 50            | 281 90     | -2,317 92  | 2,335 00              | 0 00                  | 0 00                 | 0 00                |  |
| <b>Mesaverde-Cliff House</b> |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 6,028 36                     | 0 00            | 0 00        | 5,353 50            | 281 90     | -2,317 92  | 2,335 00              | 0 00                  | 0 00                 | 0 00                |  |
| <b>Monofee</b>               |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 6,358 36                     | 0 00            | 0 00        | 5,683 50            | 281 90     | -2,317 92  | 2 335 00              | 0 00                  | 0 00                 | 0 00                |  |
| <b>Point Lookout</b>         |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 6,533 36                     | 0 00            | 0 00        | 5,858 50            | 281 90     | -2 317 92  | 2 335 00              | 0 00                  | 0 00                 | 0 00                |  |
| <b>Upper Mancos</b>          |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 6,688 36                     | 0 00            | 0 00        | 6 013 50            | 281 90     | -2 317 92  | 2 335 00              | 0 00                  | 0 00                 | 0 00                |  |
| <b>PBHL-11-1B</b>            |                 |             |                     |            |            |                       |                       |                      |                     |  |

| Targets            |               |             |          |            |            |               |              |                  |                  |  |
|--------------------|---------------|-------------|----------|------------|------------|---------------|--------------|------------------|------------------|--|
| Target Name        | Dip Angle (°) | Dip Dir (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude         | Longitude        |  |
| - hit/miss target  |               |             |          |            |            |               |              |                  |                  |  |
| - Shape            |               |             |          |            |            |               |              |                  |                  |  |
| PBHL-11-1B         | 0 00          | 0 00        | 6,013 50 | 281 90     | -2,317 92  | 1 971,042 26  | 737,469 75   | 36° 24' 51 472 N | 107° 1' 34 604 W |  |
| - plan hits target |               |             |          |            |            |               |              |                  |                  |  |
| - Point            |               |             |          |            |            |               |              |                  |                  |  |

| Casing Points       |                     |      |                      |                    |  |
|---------------------|---------------------|------|----------------------|--------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (ft) | Hole Diameter (ft) |  |
| 650 00              | 9 5/8" Casing       |      | 9 62500              | 12 25000           |  |

# Scientific Drilling

## Planning Report



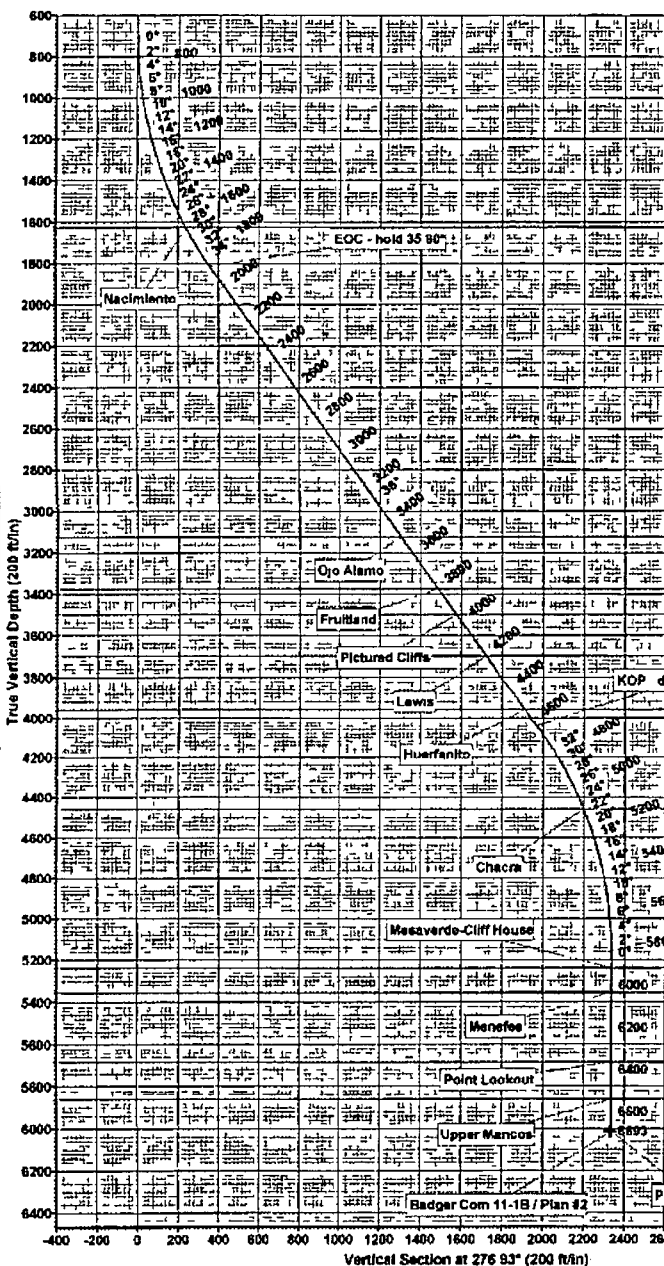
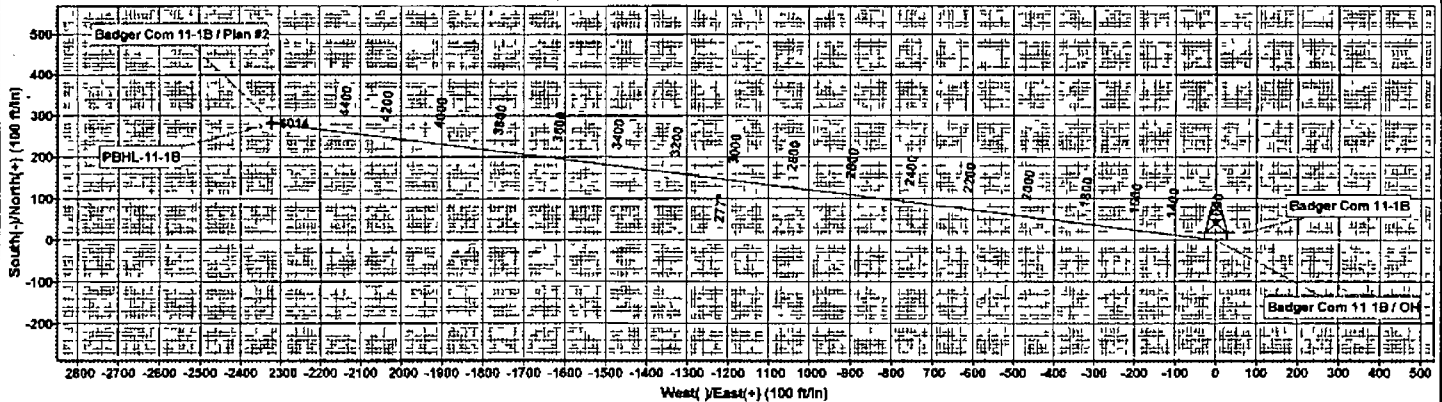
|                 |                                |                                    |                                  |
|-----------------|--------------------------------|------------------------------------|----------------------------------|
| <b>Database</b> | EDM 2003 14 Single User Db     | <b>Local Co-ordinate Reference</b> | Well Badger Com 11-1B            |
| <b>Company</b>  | McElvain Oil & Gas             | <b>TVD Reference</b>               | Well @ 7368 50ft (KB Elev 11-1B) |
| <b>Project</b>  | Rio Arriba County, NM (NAD 27) | <b>MD Reference</b>                | Well @ 7368 50ft (KB Elev 11-1B) |
| <b>Site</b>     | Badger Com 11                  | <b>North Reference</b>             | Grid                             |
| <b>Well</b>     | Badger Com 11-1B               | <b>Survey Calculation Method</b>   | Minimum Curvature                |
| <b>Wellbore</b> | 11-1B                          |                                    |                                  |
| <b>Design</b>   | Plan #2                        |                                    |                                  |

| Formations          |                     |                       |           |         |                   |  |
|---------------------|---------------------|-----------------------|-----------|---------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name                  | Lithology | Dip (°) | Dip Direction (°) |  |
| 1 663 90            | 1 623 50            | Nacimiento            |           | 0 00    |                   |  |
| 4 215 67            | 3 688 50            | Lewis                 |           | 0 00    |                   |  |
| 4 536 63            | 3 958 50            | Huerfano              |           | 0 00    |                   |  |
| 6 028 36            | 5 353 50            | Menefee               |           | 0 00    |                   |  |
| 3 814 49            | 3 373 50            | Fruitland             |           | 0 00    |                   |  |
| 3 505 88            | 3 123 50            | Ojo Alamo             |           | 0 00    |                   |  |
| 6 358 36            | 5 683 50            | Point Lookout         |           | 0 00    |                   |  |
| 3 968 79            | 3 498 50            | Pictured Cliffs       |           | 0 00    |                   |  |
| 6 533 36            | 5 858 50            | Upper Mancos          |           | 0 00    |                   |  |
| 5 913 36            | 5 238 50            | Mesaverde-Cliff House |           | 0 00    |                   |  |
| 5 116 28            | 4 458 50            | Chacra                |           | 0 00    |                   |  |

| Plan Annotations    |                     |                   |            |                        |
|---------------------|---------------------|-------------------|------------|------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment                |
|                     |                     | +N/-S (ft)        | +E/-W (ft) |                        |
| 695 00              |                     |                   |            | KOP - build 3 00°/100' |
| 1 891 54            | 1 815 73            | 43 44             | -357 18    | EOC - hold 35 90°      |
| 4 636 86            | 4 039 70            | 237 75            | -1 954 97  | KOP - drop 3 00°/100'  |
| 5 833 40            | 5 158 54            | 281 89            | -2 317 92  | EOC - hold 35 90°      |

# McElvain Oil & Gas

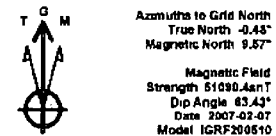
Project: Rio Arriba County, NM (NAD 27)  
Site: Badger Com 11  
Well: Badger Com 11-1B  
Wellbore: 11-1B  
Design: Plan #2



| Sec | MD       | Inc   | Az     | TVD     | +N-S   | +E-W     | DLog | TFace  | VSec    | Target     |
|-----|----------|-------|--------|---------|--------|----------|------|--------|---------|------------|
| 1   | 700.00   | 0.00  | 0.00   | 700.00  | 0.00   | 0.00     | 0.00 | 0.00   | 0.00    |            |
| 2   | 1896.50  | 35.90 | 278.93 | 1818.75 | 43.78  | -360.04  | 3.00 | 276.93 | 352.70  |            |
| 3   | 3484.86  | 35.90 | 278.93 | 4043.75 | 238.11 | -1957.88 | 0.00 | 0.00   | 1972.30 |            |
| 4   | 45838.36 | 0.00  | 0.00   | 5183.50 | 281.90 | -2317.92 | 3.00 | 180.00 | 2335.00 |            |
| 5   | 58688.38 | 0.00  | 0.00   | 6013.50 | 281.90 | -2317.92 | 0.00 | 0.00   | 2335.00 | PBHL 11-1B |

| WELL DETAILS Badger Com 11 1B |      |            |              |                  |                 |      |  |
|-------------------------------|------|------------|--------------|------------------|-----------------|------|--|
| +N-S                          | +E-W | Northing   | Ground Level | 7355.00          | Longitude       | Slot |  |
| 0.00                          | 0.00 | 1970760.37 | 738787.67    | 36° 24' 45.482 N | 107° 1' 0 276 W |      |  |

| WELLBORE TARGET DETAILS (MAP CO-ORDINATES) |         |        |          |                  |                  |       |  |
|--------------------------------------------|---------|--------|----------|------------------|------------------|-------|--|
| Name                                       | TVD     | +N-S   | +E-W     | Latitude         | Longitude        | Shape |  |
| PBHL 11 1B                                 | 6013.50 | 281.90 | -2317.92 | 36° 24' 51.472 N | 107° 1' 34.804 W | Point |  |

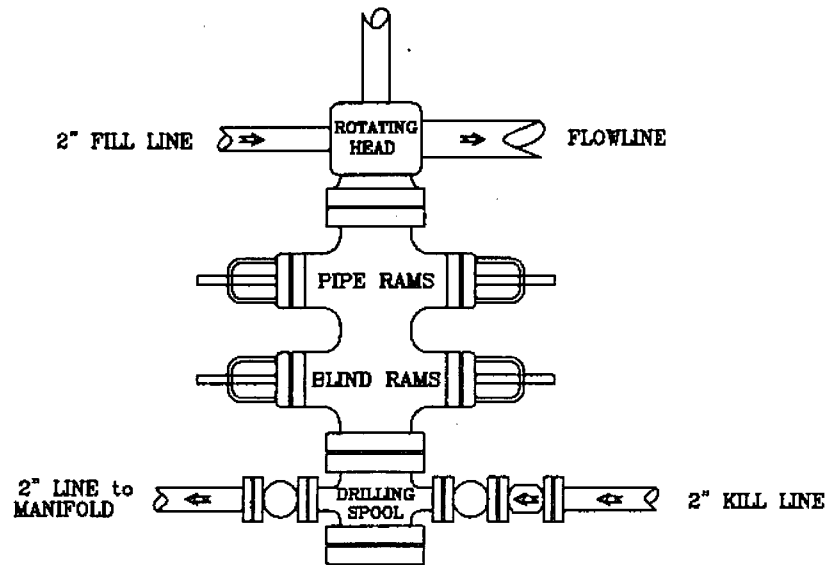


| PROJECT DETAILS Rio Arriba County, NM (NAD 27) |                                      |
|------------------------------------------------|--------------------------------------|
| Geodetic System                                | US State Plane 1927 (Exact solution) |
| Datum                                          | NAD 1927 (NADCON CONUS)              |
| Ellipsoid                                      | Clarke 1866                          |
| Zone                                           | New Mexico West 3003                 |
| System Datum                                   | Mean Sea Level                       |

| Plan Plan #2 (Badger Com 11-1B/11 1B) |            |
|---------------------------------------|------------|
| Created By                            | Julio Pila |
| Date                                  | 07-Feb-07  |
| Checked                               |            |
| Date                                  |            |
| Reviewed                              |            |
| Date                                  |            |
| Approved                              |            |
| Date                                  |            |

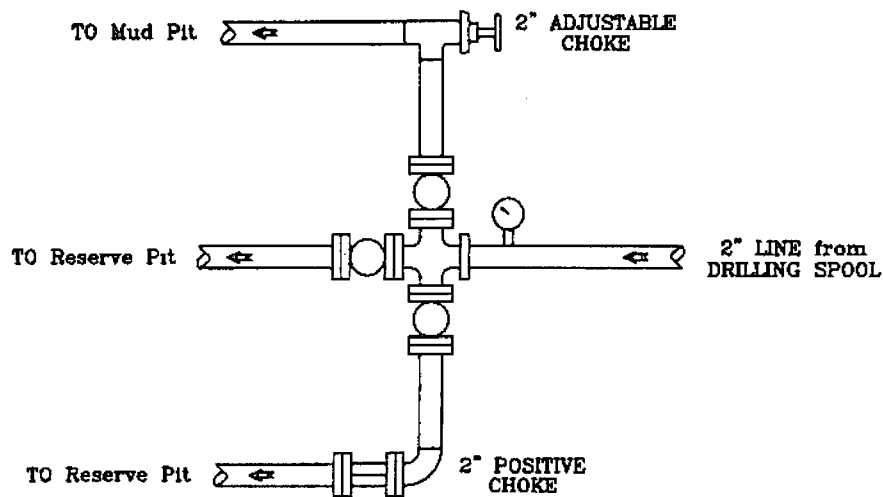
# PRESSURE CONTROL

## 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.*

Badger 11 No. 1B  
2262' FNL - 2307' FEL (surface)  
Section 11, T25N, R02W, NMPM  
Rio Arriba County, New Mexico

CMD :  
OG6CBBD

ONGARD  
CAPTURE BLANKET BONDS

09/29/08 15:14:37  
OGODLP -TPSW

OGRID Identifier : 122912 Bond Idn : 252707 Bond Status : A  
Operator Name, Address : KC RESOURCES INC  
P.O. BOX 6749  
SNOWMASS VILLAGE, CO 81615

Bond Details- Type (Cash/Surety - C/S): S Bond Co Idn: 12 Amount: 50000.00  
Company OGRID Identifier: 36116  
Company Name, Address : MID-CONTINENT CASUALTY CO  
P.O. BOX 1409  
TULSA, OK 74101-1409

Limited as to future Liability (Y/N) : N If Limited, End Date :

Effective Date : 01-01-1900 Cancellation Date : 12-31-9999

Issuer Bond No : 11631

M0015: Table update is successful.

|           |      |            |              |      |              |
|-----------|------|------------|--------------|------|--------------|
| PF01 HELP | PF02 | PF03 EXIT  | PF04 GoTo    | PF05 | PF06 CONFIRM |
| PF07      | PF08 | PF09 PRINT | PF10 NXTBOND | PF11 | PF12         |