

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  
May 27, 2004

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

<sup>1</sup> Operator Name and Address McElvain Oil & Gas Properties, Inc. 1050 17 <sup>th</sup> Street, Suite 1800 Denver, CO 80265-1801		<sup>2</sup> OGRID Number 22044
		<sup>3</sup> API Number 30-045-33299
<sup>4</sup> Property Code 34984	<sup>5</sup> Property Name Sadie	<sup>6</sup> Well No. 2
<sup>9</sup> Proposed Pool 1 Basin Fruitland Coal		<sup>10</sup> Proposed Pool 2

<sup>7</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	8	30N	11W		1095	South	800	West	San Juan

<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

Additional Well Information

<sup>11</sup> Work Type Code N	<sup>12</sup> Well Type Code G	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Code P	<sup>15</sup> Ground Level Elevation 5597'
<sup>16</sup> Multiple N	<sup>17</sup> Proposed Depth 2333'	<sup>18</sup> Formation Lewis	<sup>19</sup> Contractor D&D Service	<sup>20</sup> Spud Date November 1, 2005
Depth to Groundwater		Distance from nearest fresh water well		Distance from nearest surface water
Pit: Liner: Synthetic <input type="checkbox"/> _____ mils thick Clay <input type="checkbox"/> Pit Volume: _____ bbls Drilling Method: Closed-Loop System <input checked="" type="checkbox"/> Fresh Water <input checked="" type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				

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

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12.250"	8.625"	24	200	140	Surface
7.875"	5.500"	15.5	2333'	310	surface

<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.

Drill 12 1/4" hole to 200' using fresh water mud system. Run and cement surface casing in a single stage with cement returns to surface. WOC 12 hours. Nipple up 11" 2000 # BOPE. Pressure test surface casing and BOPE to minimum of 600 psig for 15 minutes. Drill 7 7/8" hole to TD using fresh water mud system. Log well. Run and cement production casing in a single stage with cement returns to surface. Move out drilling rig. Move in completion equipment. Run cased hole correlation logs. Pressure test casing to 3500 psig for 30 minutes. Perforate select Fruitland Coal intervals and stimulate using a 2% KCl based system. See attached drilling program for specific details.

This well is co-located with the XTO - Aztec No. 8 well on So. Oliver and Western Drive. There will be no pits or impoundments for storage of drilling or production fluids. All fluids will be retained in steel above ground tanks. Drill cuttings and mud solids will be hauled to a commercial disposal facility upon completion of the drilling operation. Drilling fluid liquid phase and produced water will be hauled to a commercial disposal facility during the life of the well.

The well location will be permitted according to City of Aztec Oil & Gas Regulations upon receipt of the permit from the State.

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☒ a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Printed name: Robert E. Fielder

Title: Agent

E-mail Address: pmci@acs-online.net

Date: July 28, 2005

Phone: 505.632.3869

OIL CONSERVATION DIVISION

Approved by:

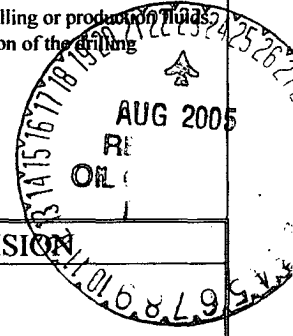
Title: DEPUTY OIL & GAS INSPECTOR, DIST. #1

Approval Date:

AUG 23 2005

Expiration Date:

Conditions of Approval Attached ☐



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

District II  
PO Drawer 00, Artesia, NM 88211-0719

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

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number	*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code	*Property Name SADIE	*Well Number 2
*GRID No. 22044	*Operator Name McELVAIN OIL & GAS PROPERTIES	*Elevation 5597

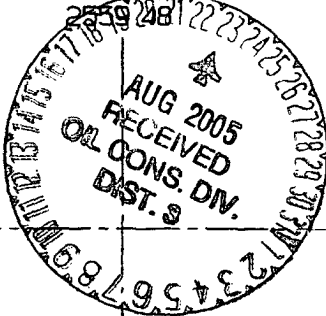
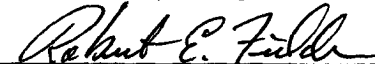

<sup>10</sup> Surface Location

UL or lot no. M	Section 8	Township 30N	Range 11W	Lot Idn	Feet from the 1095	North/South line SOUTH	Feet from the 800	East/West line WEST	County SAN JUAN
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres 320.0 Acres - S/2					<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.		

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

<sup>16</sup> 2641.98'			<sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature Robert E. Fielder Printed Name Agent Title July 27, 2005 Date
5306.40'	8		<sup>18</sup> SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey: JULY 1, 2005 Signature and Seal of Professional Surveyor  JASON C. EDWARDS Certificate Number 15269
5309.04'	LEASE FEE		
800'	LAT: 36°49.3533' N LONG: 108°01.1782' W DATUM: NAD27		
1095'	5235.12'		

McElvain Oil & Gas Properties, Inc.

Sadie No. 2

1095' FSL & 800' FWL

Section 8, T30N, R11W, NMPM

San Juan County, New Mexico

TEN POINT DRILLING PROGRAM

1. Surface Formation: Nacimiento

2. Surface Elevation: 5597' GL.

3. Estimated Formation Tops:

<u>Formation</u>	<u>Top - feet</u>	<u>Expected Production</u>
Nacimiento	surface	
Ojo Alamo	463	
Kirtland	583	
Farmington	1483	
Fruitland	1723	
Pictured Cliffs	1983	GAS
Lewis	2183	
TOTAL DEPTH	2333	

4. Surface Hole Program:

**Bit:** Drill an 12¼" hole to 200' 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 - 200	8.6 or less	9.0-9.5	40 - 50	No Control

**Casing and Cementing:** A string of 8½" 24 ppf J-55 or K-55 ST&C casing will be set and cemented to the surface in a single stage with 140 sacks (165.2 cf) of Class "B" cement (yield = 1.18 cf/sk) containing 3% CaCl<sub>2</sub> and 1/4 lb/sack celloflake. Slurry volume assumes 100% excess over calculated hole volume. If cement does not circulate to surface, cement will be topped off using 1" pipe down the 12¼" by 8½" annulus. Minimum clearance between couplings and hole is 1.3125". Prior to drilling out the shoe, casing and BOPE will be tested to a minimum of 600 psig. Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8.

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

**Centralizers:** Run two (2) 8½" X 12¼" regular bowspring centralizers. Install first one on stop ring in middle of shoe joint.

**Float Equipment:** Cement nose guide shoe thread locked. Also thread lock connection between first and second joint run.

**Drilling Program**  
**McElvain Oil & Gas Properties, Inc.**  
**Sadie No. 2**  
Page Two

**5. Production Hole Program:**

**Bit:** Drill a 7 $\frac{1}{8}$ " hole to 2333' using a TCI, IADC Class 447 bit. WOB: 30-35K. RPM: 60 - 75. Reduce RPM to 55 - 65 through Ojo Alamo.

**Mud:** Use a fresh water base polymer and water system to drill this section. If hole conditions dictate, mud up with a fresh water base LSND mud with the following properties:

<u>Interval (ft)</u>	<u>Weight (ppg)</u>	<u>Ph</u>	<u>Vis(sec/qt)</u>	<u>Water Loss</u>
200 - 2333	8.6 - 8.8	9.0-9.5	28 - 35	10 - 12

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 surface pit will be visually monitored and recorded on a routine basis.

**Note:** If mud up is required, raise **viscosity** to 55 - 60 for logging. Thin to 40 - 45 viscosity to run casing.

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

Driscap will be used for control of fluid loss.

Lost Circulation 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.

**Pressure Control:** A 2M psi BOP well control system will be utilized. BOP's and choke manifold will be installed and pressure tested to a minimum of 600 psig before drilling out from under surface casing. Mechanical operation of pipe rams will be checked daily and blind rams will be checked on each trip out of hole. 4 $\frac{1}{2}$ " 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:** Dual Induction and Compensated Neutron/Formation Density logs will be run from TD to the surface casing shoe.

**Casing and Cementing Program:** Run 5 $\frac{1}{2}$ " 15.5 ppg J-55 production casing from surface to TD and cement in a single stage with 175 sacks (446.25 cf) of Class B containing 3% sodium metasilicate extender, 5 pps Gilsonite and 1/4 pps celloflake. Lead slurry mixed at 11.8 PPG to yield 2.55 cf/sk. Tail in with 135 sacks (160.65 cf) of Class B with 0.25 pps celloflake, 0.3% FLA and 5 pps gilsonite mixed at 15.6 PPG to yield 1.19 cf/sk.

*CMT Circ to Surface*

**Drilling Program**  
**McElvain Oil & Gas Properties, Inc.**  
**Sadie No. 2**  
Page Three

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

Slurry volumes assume a 50% excess over gauge hole volume to circulate to surface. Minimum clearance between couplings and hole is 0.9125". Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8.

**Centralizers:** 5 - 5½" X 7⅞" bowspring centralizers will be run across all prospective pays and 2 - 5½" X 7⅞" turbolizers will be spaced such that one (1) is just below the base of the Ojo Alamo and one (1) in the Ojo Alamo.

**Float Equipment:** Cement nose guide shoe, 1 joint 5½" casing, and float collar.

**6. Auxiliary Equipment:**

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

**7. Logging Program:**

Dual Induction and Compensated Neutron / Formation Density will be run from TD to surface casing shoe. Bulk density will be presented on a 5 " scale through the coals. Deep induction curve will be merged onto the porosity log.

**Coring and Testing Program:**

No cores or drill stem tests are planned.

**8. Abnormal Pressure:**

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

**Estimated Bottom Hole Pressure:**

750 - 1000 psig.

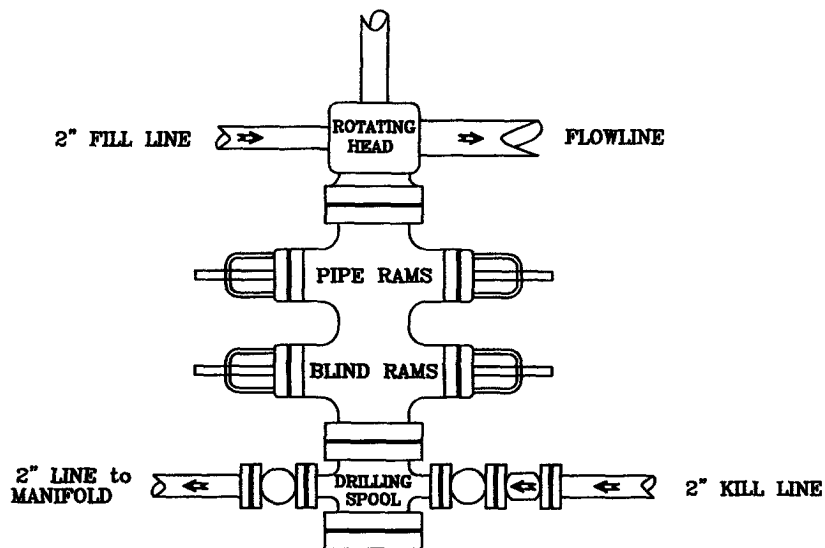
**9. Anticipated Starting Date:**

November 1, 2005

**Duration of Operations:** It is estimated a total of 6 days will be required for drilling operations and 5 days for the completion operation.

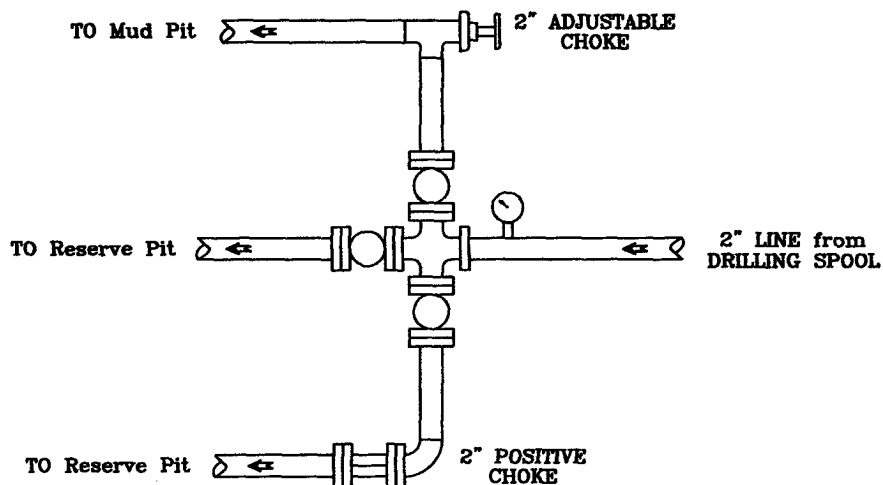
# PRESSURE CONTROL

## Wellhead Assembly



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

## Choke Manifold



*McElvain Oil & Gas Properties, Inc.*

Sadie No. 2

1095' FSL - 800' FWL

Section 8, T30N, R11W, NMPM  
San Juan County, New Mexico