

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, 2001

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**

¹ Operator Name and Address McElvain Oil & Gas Properties, Inc. 1050 17 th Street, Suite 1800 Denver, CO 80265-1801		² OGRID Number 22044
		³ API Number 30-045-35058
³ Property Code 36831	⁵ Property Name Argo	
⁹ Proposed Pool 1 Basin Fruitland Coal		¹⁰ Proposed Pool 2

⁷ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	South line	Feet from the	West line	County
M	21	30N	13W		782		1027		San Juan

⁸ 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

¹¹ Work Type Code N	¹² Well Type Code G	¹³ Cable/Rotary R	¹⁴ Lease Type Code P	¹⁵ Ground Level Elevation 5387'
¹⁶ Multiple N	¹⁷ Proposed Depth 1420'	¹⁸ Formation Pictured Cliffs	¹⁹ Contractor D & D Services	²⁰ Spud Date January 1, 2010

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12.250"	8.625"	24	500'	350	Surface
7.875"	5.500"	15.5	1420'	190	Surface

²² 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 for description of drilling and blowout prevention plan. BOPE schematic attached

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.

RCUD DEC 7 '09
OIL CONS. DIV.
DIST. 3
NOTIFY AZTEC OGD 24 HRS.
PRIOR TO CASING & CEMENT

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature:



Printed name:
Robert E. Fielder

Title:
Agent

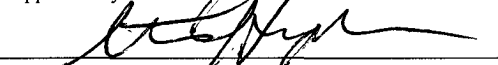
E-mail Address:
pmci@advantas.net

Date:
December 4, 2009

Phone:
505-320-1435

OIL CONSERVATION DIVISION

Approved by:


Title:
DEPUTY OIL & GAS INSPECTOR, DIST. 3

Approval Date:
DEC 08 2009

Expiration Date:
12/8/11

Conditions of Approval Attached ☐

DEC 08 2009 

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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

¹ API Number 30,045-35058	² Pool Code 71629	³ Pool Name Basin Fruitland Coal
⁴ Property Code 36831	⁵ Property Name ARGO	⁶ Well Number 2
⁷ OGRID No 22044	⁸ Operator Name McELVAIN OIL & GAS PROPERTIES, INC	⁹ Elevation 5387

¹⁰ Surface Location

UL or Lot No.	Section	Township	Range	Lot Idn.	Feet from the	North/South Line	Feet from the	East/West Line	County
M	21	30 N	13 W		782	South	1027	West	San Juan

¹¹ Bottom Hole Location If Different From Surface

UL or Lot No.	Section	Township	Range	Lot Idn.	Feet from the	North/South Line	Feet from the	East/West Line	County

¹² Dedicated Acres W/2-320	¹³ Joint or Infill Y	¹⁴ Consolidation Code	¹⁵ Order No
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Robert E. Fielder</i> 12/4/09 Signature Date Robert E. Fielder Printed Name
	¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey 26 Mar 2009 <i>William E. Mahnke II</i> Signature and Seal of Professional Surveyor William E. Mahnke II Certificate Number 8466

Bearings are from BLM Plat

McElvain Oil & Gas Properties, Inc.

Argo No. 2

782' FSL & 1027' FWL

Section 21, T30N, R13W, NMPM

San Juan County, New Mexico

TEN POINT DRILLING PROGRAM

1. Surface Formation: Ojo Alamo

2. Surface Elevation: 5387' GL.

3. Estimated Formation Tops:

<u>Formation</u>	<u>Top - feet</u>	<u>Expected Production</u>
Ojo Alamo	surface	
Kirtland	635	
Fruitland	1065	GAS
Pictured Cliffs	1270	GAS
TOTAL DEPTH	1420	

4. Surface Hole Program:

Bit: Drill an 12¼" hole to 500' 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 8½" 24 ppf J-55 or K-55 ST&C casing will be set and cemented to the surface in a single stage with 350 sacks (413.0 cf) of Class "B" cement (yield = 1.18 cf/sk) containing 3% CaCl₂ 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 BOPE to full working pressure using a test plug. Drill out cement to within five feet of surface casing shoe. Test surface casing and BOPE to a minimum of 600 psig for 15 minutes.

Centralizers: Run four (4) 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. Self fill insert float valve run one joint above shoe. Also thread lock connection between first and second joint run.

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

5. Production Hole Program:

Bit: Drill a 7½" hole to 1420' using a TCI, IADC Class 447 bit. WOB: 30-35K. RPM: 60 - 75. Hold RPM at 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>
500 - 1420	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.

Drispac 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 full working pressure. Surface casing and BOPE 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. 5½" 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 Epithermal Neutron/Formation Density logs will be run from TD to the surface casing shoe.

Casing and Cementing Program: Run 5½" 15.5 ppg J-55 production casing from surface to TD and cement in a single stage with 110 sacks (280.5 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 80 sacks (95.2 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.

Drilling Program
McElvain Oil & Gas Properties, Inc.
Argo 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 3 - 5½" X 7⅞" turbolizers will be spaced such that one (1) is just below the base of the Fruitland coal, one just below the base of the Ojo Alamo and one (1) in the Ojo Alamo.

Float Equipment: Cement nose guide shoe, 1 joint 4½" 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 Epithermal 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:

250 - 300 psig.

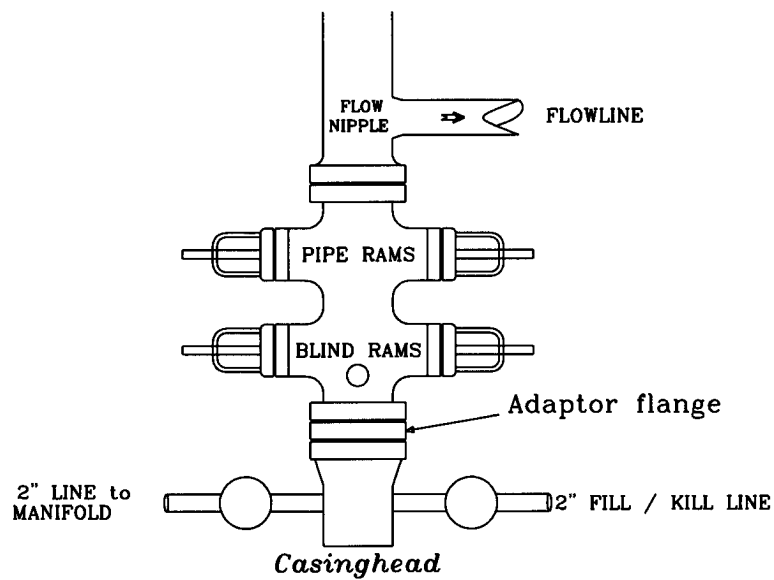
9. Anticipated Starting Date:

January 1, 2010

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

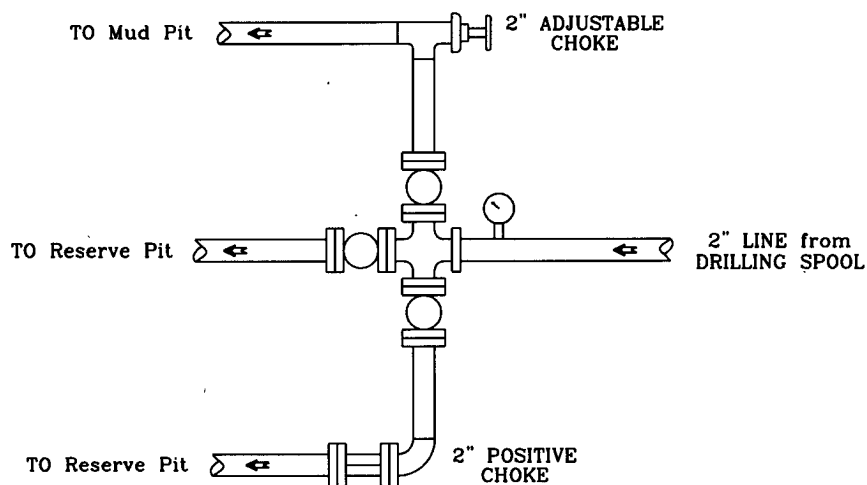
PRESSURE CONTROL

Wellhead Assembly



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

Choke Manifold



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Argo No. 2

782' FSL - 1027' FWL

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