

District I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone (575) 748-1283 Fax (575) 748-9720
District III
1000 Rin Brnzos Road, Aztec, NM 87410
Phone (505) 334-6178 Fax (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax (505) 476-3462

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised August 1, 2011

Permit

RCVD DEC 14 '11
OIL CONS. DIV.

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE ^{DIST 3}

Operator Name and Address McElvain Energy, Inc. 1050 17 th St., Suite 2500 Denver, CO 80265-2080		OGRID Number 22044
		API Number 30-045-35332
Property Code 38974	Property Name Bentley	Well No 2S

Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
1	15	31N	13W		1467	S	717	E	San Juan

Pool Information

Basin Fruitland Coal	71629
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Additional Well Information

Work Type N	Well Type G	Cable/Rotary R	Lease Type P	Ground Level Elevation 5681
Multiple N	Proposed Depth 2019'	Formation Pictured Cliffs	Contractor D & D Services	Spud Date January 3, 2012
Depth to Ground water 32 ft		Distance from nearest fresh water well 2300 ft west		Distance to nearest surface water 115 ft

Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	12.250"	9.625"	36 #	522'	250	Surface
Production	8.750"	7.000"	20 #	2019'	230	surface

Casing/Cement Program: Additional Comments

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Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram hydraulic	2000	2000	Cameron or Shaffer

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 X, a general permit <input type="checkbox"/> , or an (attached) alternative OCD-approved plan <input type="checkbox"/> .		OIL CONSERVATION DIVISION	
Printed name Robert E. Fielder		Approved By: <i>Charles R. 12-16-11</i>	
Title, Agent		Title, SUPERVISOR DISTRICT #3	
E-mail Address pmc@advantas.net		Approved Date DEC 20 2011, Expiration DEC 20 2013	
Date: 12/13/2011	Phone: (505) 320-1435	Conditions of Approval Attached	

A ea

DEC 20 2011

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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 August 1, 2011

Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number 30-045-35332		2. Pool Code 71629		3. Pool Name Basin Fruitland Coal	
4. Property Code 38974		5. Property Name BENTLEY			6. Well Number 2S
7. OGRID No 22044		8. Operator Name McELVAIN ENERGY, INC.			9. Elevation 5681

10. Surface Location

UL of Lot No.	Section	Township	Range	Lot Idn.	Feet from the	North/South Line	Feet from the	East/West Line	County
1	15	31 N	13 W		1467	South	717	East	San Juan

11. Bottom Hole Location If Different From Surface

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

12. Dedicated Acres 320 S/2	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.

16 N 88°50' W, 41.95 Ch. N 89°20' W, 40.79 Ch. N 0°49' W, 40.08 Ch. N 0°55' E, 39.49 Ch. N 89°06' W, 40.14 Ch. N 88°18' W, 40.16 Ch. N 4°01' E, 40.07 Ch. N 1°05' E, 40.05 Ch. 1467' Lat. 36.89679° N Long. 108.18464° W 717' FEE All S/2 Sec. 15	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. Robert E. Fielder 12/13/2011 Signature Date Robert E. Fielder Printed Name pmci@advantas.net E-mail Address
	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. 27 Aug 2011 Date of Survey Signature and Seal of Professional Surveyor William E. Mahanke II Certificate Number 00046001 LX

Bearings from GLO Plat

McElvain Oil & Gas Properties, Inc.

Bentley No. 2S

1467' FSL & 717' FEL

Section 15, T31N, R13W, NMPM

San Juan County, New Mexico

TEN POINT DRILLING PROGRAM

1. Surface Formation: Ojo Alamo

2. Surface Elevation: 5681' GL.

3. Estimated Formation Tops:

<u>Formation</u>	<u>Top - feet</u>	<u>Expected Production</u>
Ojo Alamo	surface	
Kirtland	869	
Fruitland	1269	GAS
Pictured Cliffs	1869	GAS
TOTAL DEPTH	2019	

4. Surface Hole Program:

Bit: Drill an 12 $\frac{1}{4}$ " hole to 522' 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 - 522	8.6 or less	9.0-9.5	40 - 50	No Control

Casing and Cementing: A string of 9 $\frac{5}{8}$ " 36 ppf J-55 or K-55 ST&C casing will be set and cemented to the surface in a single stage with 250 sacks (350.0 cf) of Type III cement (yield = 1.40 cf/sk) containing 3% CaCl₂ 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 $\frac{1}{4}$ " by 9 $\frac{5}{8}$ " 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 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) 9 $\frac{5}{8}$ " X 12 $\frac{1}{4}$ " regular bowspring centralizers. Install first one on stop ring in middle of shoe joint.

Float Equipment: Cement nose guide shoe on bottom and self fill insert float valve run one joint above shoe. Thread lock shoe and connection between first and second joint run.

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

5. Production Hole Program:

Bit: Drill an 8 $\frac{3}{4}$ " hole to 2019' 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>
522 - 2019	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 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. 7" 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 with GR, caliper and Epithermal Neutron/Formation Density logs (triple combo configuration) will be run from TD to the surface casing shoe. GR and Neutron will be pulled to surface.

Casing and Cementing Program: Run 7" 20 ppg J-55 production casing from surface to TD and cement in a single stage with 110 sacks (280.50 cf) of Type III 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 120 sacks (174.0 cf) of Type III with 0.25 pps celloflake, 0.3% FLA, 0.2% dispersant and 5 pps gilsonite mixed at 14.3 PPG to yield 1.45 cf/sk.

Drilling Program
McElvain Oil & Gas Properties, Inc.
Bentley No. 2S
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 0.5470". Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8.

Centralizers: 5 - 7" X 8 $\frac{3}{4}$ " bowspring centralizers will be run across all prospective pays and 3 - 7" X 8 $\frac{3}{4}$ " 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 7" 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 with GR and caliper and Epithermal Neutron / Formation Density (triple combo configuration) will be run from TD to surface casing shoe. GR and neutron will be pulled to surface. 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.

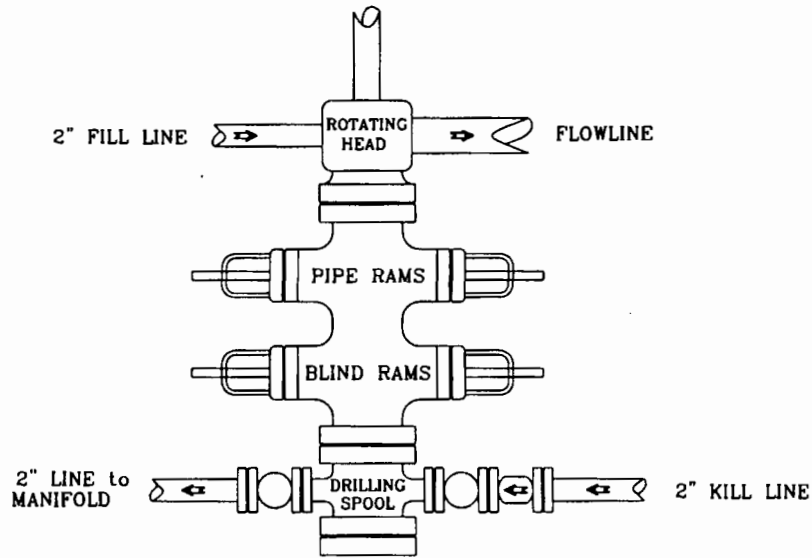
9. Anticipated Starting Date:

December 15, 2011

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

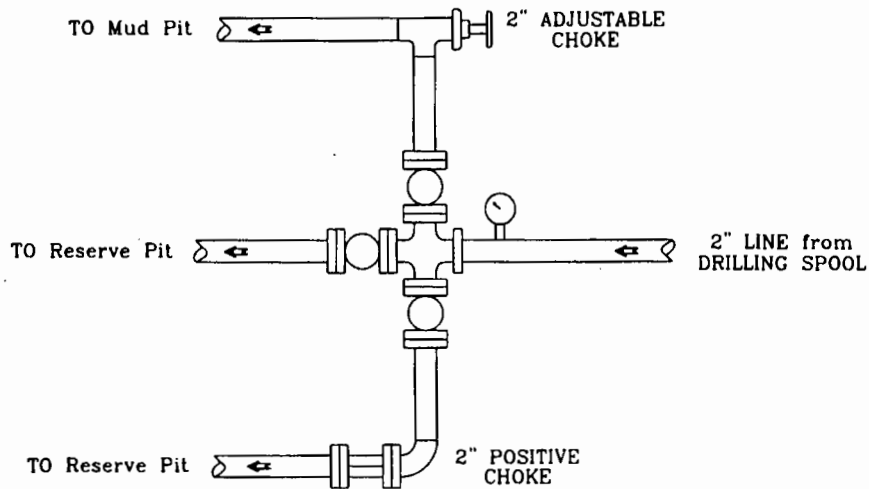
PRESSURE CONTROL

Wellhead Assembly



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

Choke Manifold



McElvain Energy, Inc.

Bentley No. 2S

1467' FSL - 717' FEL

Section 15, T31N, R13W, NMPM

San Juan County, New Mexico