

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**

¹ Operator Name and Address McElvain Oil & Gas Properties, Inc. 1050 17 th St., Suite 1800 Denver, CO 80265-1801		² OGRID Number 22044
		³ API Number 30 -
³ Property Code 28462	⁵ Property Name Badger 11	⁶ Well No. 1B
⁹ Proposed Pool 1 Blanco Mesa Verde		¹⁰ Proposed Pool 2

⁷ 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

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
E	11	25N	2W		1980	North	660	West	Rio Arriba

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 7355'
¹⁶ Multiple No	¹⁷ Proposed Depth 6014'TVD/6688' MD	¹⁸ Formation Mancos	¹⁹ Contractor D&J Drilling	²⁰ Spud Date September 15, 2008

²¹ 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		

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 and directional plan. Blowout prevention program described in attached drilling program. Schematic of BOPE attached.

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

Signature:

Robert E. Fielder

Printed name:
Robert E. Fielder

Title:
Agent

E-mail Address:
pmei@advantas.net

Date:
September 4, 2008

Phone:
505.320.1435

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

Expiration Date:

Conditions of Approval Attached

BEFORE THE OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 14238 Exhibit No. 2
Submitted by:
MCELVAIN OIL & GAS PROPERTIES, INC.
Hearing Date: November 6, 2008

District I
 1620 N. Fourth St., Hobbs, NM 88240
 District II
 1201 W. Grand Avenue, Artesia, NM 88210
 District III
 1600 Rio Grande Blvd., Santa Fe, NM 87510
 District IV
 1220 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		*Tract Code 72318	*Tract Name Blanco Mesa Verde
*Property Code 28482	*Property Name BADGER 11		*Well Number 1B
*OGBED No. 22044	*Owner Name McELVAIN OIL & GAS PROPERTIES		*Elevation 7355

Surface Location

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

Bottom Hole Location If Different From Surface

UL or lot no. E	Section 11	Township 25N	Range 2W	Lot No.	Feet from the 1980	North/South line North	Feet from the 660	East/West line West	County Rio Arriba
*Dedicated Acres 320	*Salt or brine	*Caterpillar 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.

		17 OPERATOR CERTIFICATION I hereby certify that the information supplied herein is correct and complete to the best of my knowledge and belief, and that the preparation either owner's working interest or undivided interest interest in the land including the proposed bottom hole location is for a right of oil discovery or the location purposes to a contract with an owner of land interest or working interest, or to an industry pooling agreement or a completion pooling order. Signature: <u>Robert E. Felder</u> Date: <u>9/4/08</u> Printed Name: <u>Robert E. Felder</u>
18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of aerial 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: <u>22 Nov 2006</u> Rev. <u>9-4-06</u> Signature and Seal of Professional Surveyor: <u>William E. Mahnke II</u> 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% 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 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 $\frac{1}{8}$ " X 12 $\frac{1}{4}$ " regular bowspring centralizers. Install first one on stop ring in middle of shoe joint.

Float Equipment: Cement nose guide shoe run on bottom of first joint. Self fill insert float valve run in top of first joint. Thread lock shoe and connection between first and second joint run.

5. **Intermediate Hole Program:**

Bit: Drill an 8 $\frac{3}{4}$ " 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.

Driscap will be used for control of fluid loss.

Hole will be drilled to top of Fruitland using polymer and driscap 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 $\frac{3}{4}$ " bowspring centralizers will be run across all prospective pays and 5 - 7" X 8 $\frac{3}{4}$ " turbolizers will be spaced such that one (1) is just below the Basal Fruitland Coal, two (2) across base of Ojo Alamo, and two (2) across base of Nacimiento. 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 1/4" 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

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:	Grid
Well:	Badger Com 11-1B	Survey Calculation Method:	Minimum Curvature
Wellbore:	11-1B		
Design:	Plan #2		

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

Site:	Badger Com 11		
Site Position:		Northing:	1,970,782.28 ft
From:	Lat/Long	Easting:	739,796.31 ft
Position Uncertainty:	0.00 ft	Slot Radius:	ft
		Latitude:	36° 24' 48.708 N
		Longitude:	107° 1' 6.188 W
		Grid Convergence:	0.48 °

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

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

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

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
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	
4,641.86	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	5,163.50	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:	Grid
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)	Bulk 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	988.77	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	1,280.18	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
Nacimiento									
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
EOC - hold 35.90°									
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	1,903.80	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	-1,298.72	1,306.28	0.00	0.00	0.00
Ojo Alamo									
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
Fruitland									
3,900.00	35.90	276.93	3,442.77	185.60	-1,528.11	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
Pictured Cliffs									
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
Lewis									
4,300.00	35.90	276.93	3,766.81	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:	Grid
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)	
Huerfano										
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	-1,954.97	1,969.37	0.00	0.00	0.00	
KOP - drop 3.00°/100'										
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	
Chacra										
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	
EOC - hold 36.90°										
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	
Mesa Verde-Cliff House										
6,028.36	0.00	0.00	5,353.50	281.90	-2,317.92	2,335.00	0.00	0.00	0.00	
Menefee										
6,358.36	0.00	0.00	5,683.50	281.90	-2,317.92	2,335.00	0.00	0.00	0.00	
Point Lookout										
6,533.36	0.00	0.00	5,858.50	281.90	-2,317.92	2,335.00	0.00	0.00	0.00	
Upper Mancos										
6,688.36	0.00	0.00	6,013.50	281.90	-2,317.92	2,335.00	0.00	0.00	0.00	
PBHL-11-1B										

Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N-S (ft)	+E-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
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	
- hit/miss target										
- Shape										
- 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



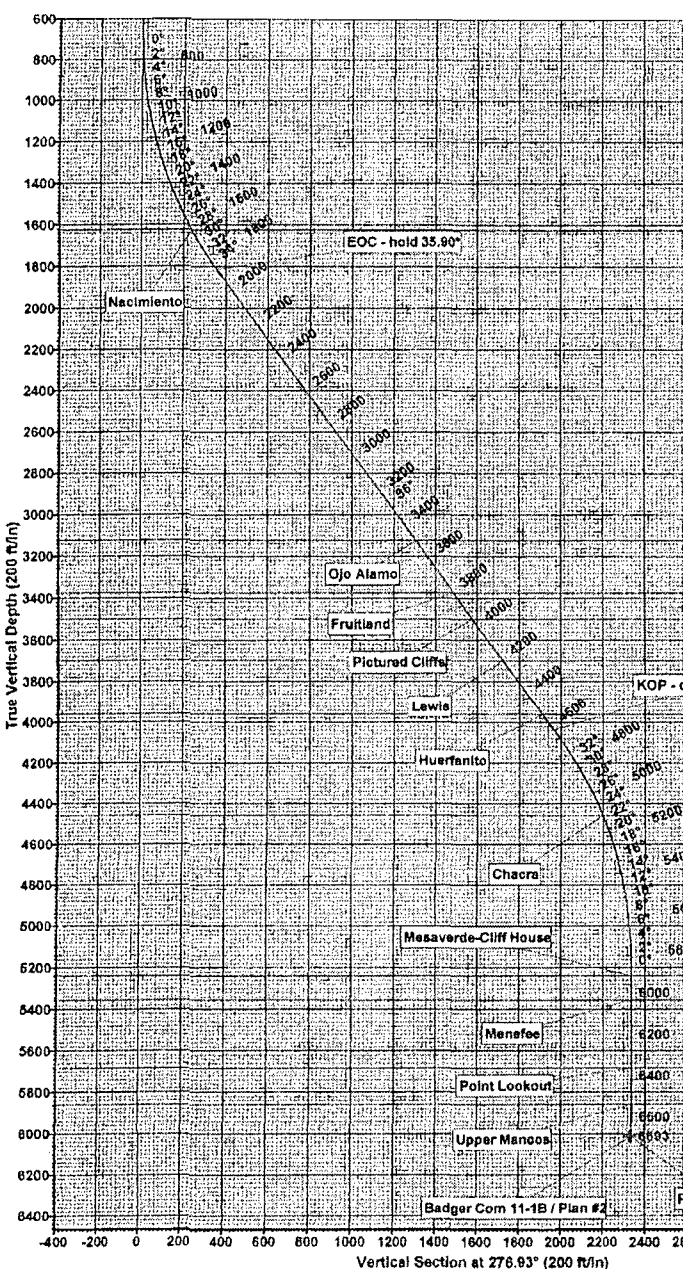
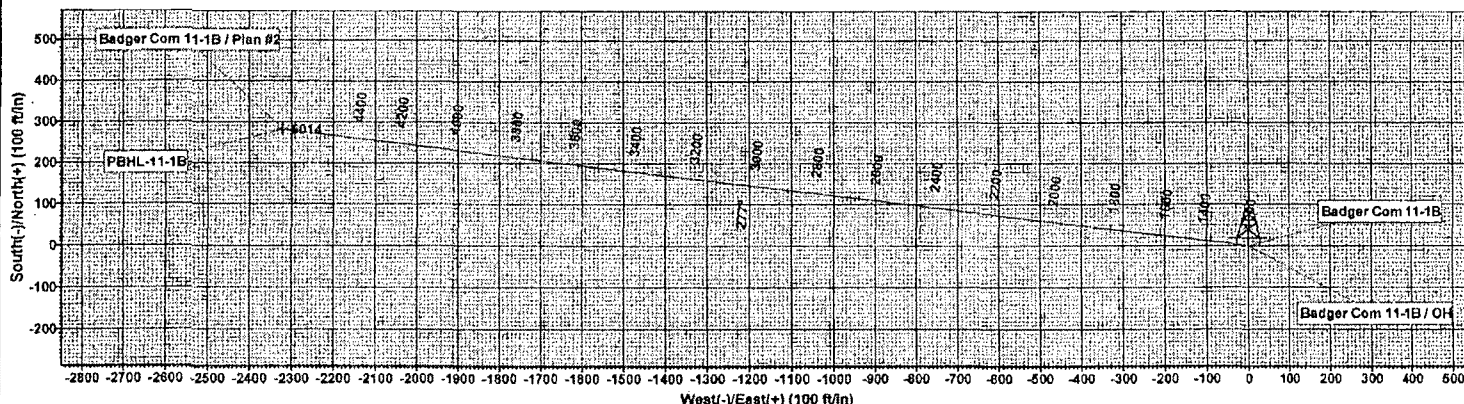
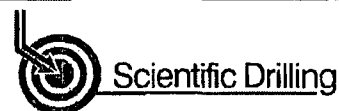
Database:	EDM 2003.14 Single User Db	Local Co-ordinate Reference:	Well Badger Com 11-1B
Company:	McElvain Oil & Gas	TVD Reference:	Well @ 7368.50ft (KB Elev 11-1B)
Project:	Rio Arriba County, NM (NAD 27)	MD Reference:	Well @ 7368.50ft (KB Elev 11-1B)
Site:	Badger Com 11	North Reference:	Grid
Well:	Badger Com 11-1B	Survey Calculation Method:	Minimum Curvature
Wellbore:	11-1B		
Design:	Plan #2		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,663.90	1,623.50	Nacimlento		0.00		
4,215.67	3,698.50	Lewis		0.00		
4,536.63	3,958.50	Huerfanito		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		
5,118.28	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	-357.16	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



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	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	276.93	1819.75	43.79	-380.04	3.00	276.93	362.70	
3	4641.86	35.90	276.93	4043.75	238.11	-1957.89	0.00	0.00	1972.30	
4	6638.36	0.00	0.00	6163.60	281.90	-2317.92	3.00	186.00	2335.00	
5	6688.36	0.00	0.00	6013.60	281.90	-2317.92	0.00	0.00	2335.00	PBHL-11-1B

WELL DETAILS: Badger Com 11-1B

+N-S	+E-W	North	Ground Level:	7358.00	Latitude	Longitude	Slot
0.00	0.00	1970760.37	Easting	735787.67	36° 24' 48.492 N	107° 1' 8.276 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' 34.604 W	Point



Azimuths to Grid North
True North: -0.48°
Magnetic North: 9.87°

Magnetic Field
Strength: 51000.45nT
Dip Angle: 63.43°
Date: 2007-02-07
Model: IGRF200610

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

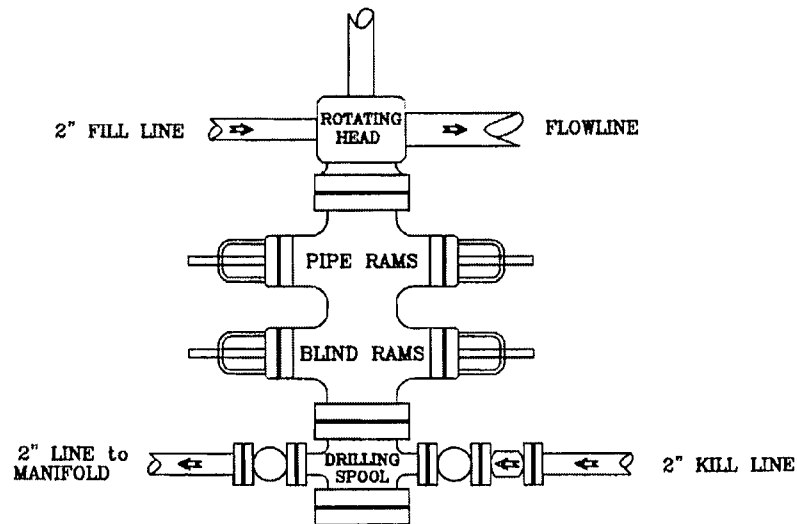
System Datum: Mean Sea Level

Plan: Plan #2 (Badger Com 11-1B/11-1B)

Created By: Julio Pina Date: 07-Feb-07
Checked: Date:
Reviewed: Date:
Approved: Date:

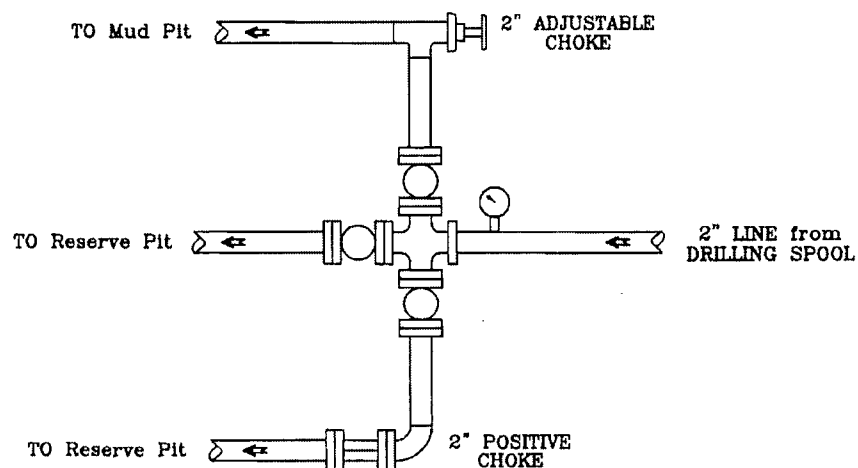
PRESSURE CONTROL

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