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

SEP 2005
RECEIVED
OIL CONS. DIV.
DIST. 3

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-101
May 27, 2004

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	[2] OGRID Number
McElvain Oil & Gas Properties, Inc.	22044
	[3] API Number: 30 - 039 - 29662

[5] Property Code	[5] Property Name	[6] Well No.
33338	Badger 14	1A

[9] Proposed Pool 1	[10] Proposed Pool 2
Blanco Mesa Verde	

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	14	25N	2W		2120	South	660	West	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

Additional Well Information

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
N	G	R	P	7273'
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
N	5832'	Mancos	D&J Drilling	October 1, 2005

Depth to Groundwater	Distance from nearest fresh water well	Distance from nearest surface water
~~>100 feet~~ 250'	800 feet	~~>1000 feet~~ 7200' & 1000'

Pit: Liner: Synthetic X 12 mils thick Clay ☐ Pit Volume: 4400 bbls

Drilling Method: Mud intermediate/ Air to TD

Closed-Loop System ☐

Fresh Water X Brine ☐ Diesel/Oil-based ☐ Gas/Air X

[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	500'	265	Surface
8.750"	7.000"	20	3757'	460	Surface
6.250"	4.500"	10.5	3637-5832	230	3637'

[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.

Spud in Nacimiento formation. Drill surface hole to 500 feet using fresh water base mud. Run and cement surface casing to surface. WOC 12 hours. Install BOPE. Test BOPE and surface casing to minimum of 600 psi/15 mins. Drill intermediate hole into Lewis formation using fresh water base mud system. Run and cement intermediate casing in two stages with adequate cement volume to circulate to surface. WOC 12 hours. Test intermediate casing and BOPE to 1500 psi/15 minutes. Drill production hole to TD in Mancos formation using air hammer. Log well. Run and cement liner with adequate cement volume to circulate to liner top. Move out drilling equipment. Move in completion equipment. Run cased hole correlation logs. Perforate and stimulate select Mesa Verde intervals using a 2% KCl based fluid. Clean up and test well. Install surface production equipment. Enterprise will install gas sales meter. Place well on production.

[23] 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 ☐, or an (attached) alternative OCD-approved plan ☐.**

Printed name: Robert E. Fielder

Title: Agent

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

Date: September 13, 2005 Phone: (505)632-3869

OIL CONSERVATION DIVISION

Approved by:

Title: DEPUTY OIL & GAS INSPECTOR, DIST. 3

Approval Date: SEP 15 2005 Expiration Date:

Conditions of Approval Attached ☐

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

District II
PO Drawer DD, 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

[1] API Number	[2] Pool Code	[3] Pool Name
	72319	BLANCO MESAVERDE

[4] Property Code	[5] Property Name	[6] Well Number
33338	BADGER 14	1A

[7] OGRID No.	[8] Operator Name	[9] Elevation
22044	McELVAIN OIL & GAS PROPERTIES	7273'

[10] Surface Location

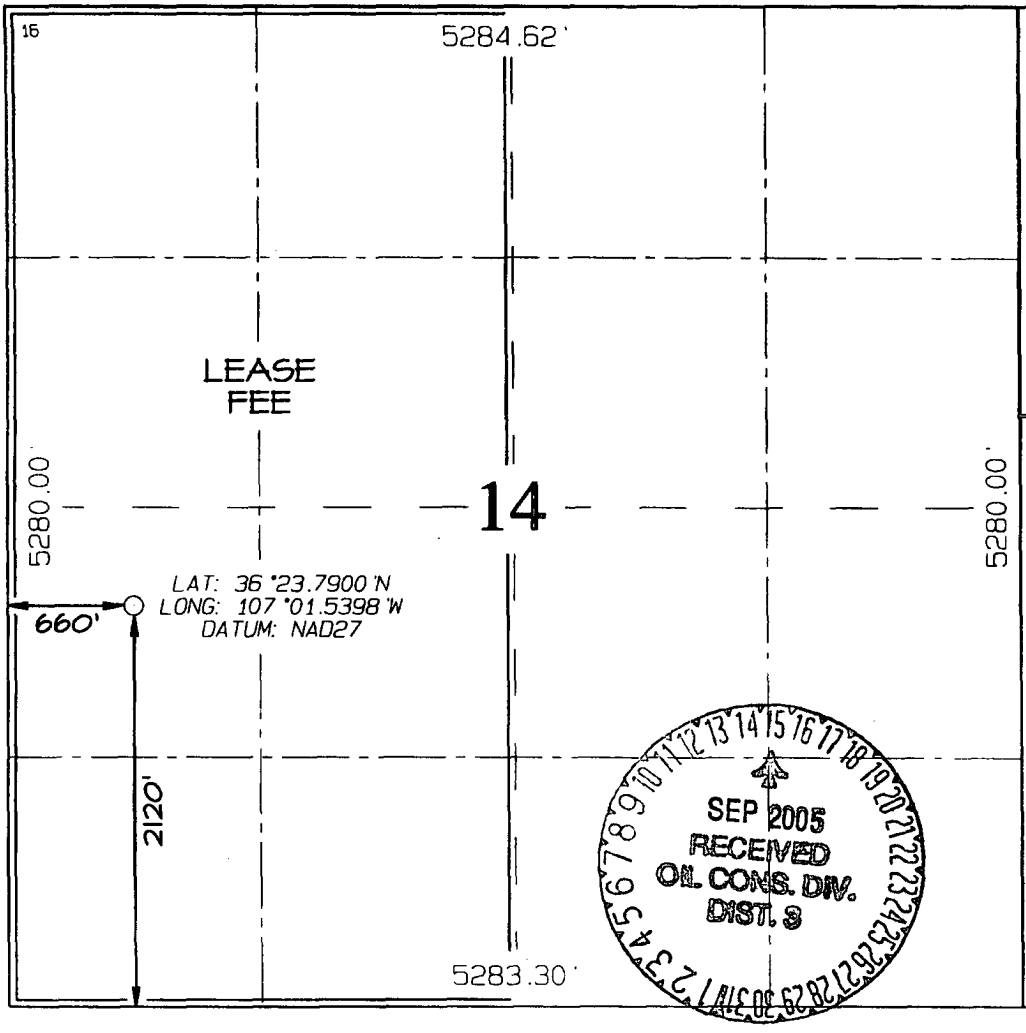
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	14	25N	2W		2120	SOUTH	660	WEST	RIO ARRIBA

[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	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320.0 Acres - W/2			

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

Robert E. Fielder

Signature

Robert E. Fielder

Printed Name

Agent

Title

September 12, 2005

Date

[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: MAY 25, 2005

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS

Certificate Number 15269

McElvain Oil & Gas Properties, Inc.
Badger 14 No. 1A
2120' FSL & 660' FWL
Section 14, T25N, R2W, NMPM
Rio Arriba County, New Mexico

TEN POINT DRILLING PROGRAM

1. **Surface Formation:** San Jose

2. **Surface Elevation:** 7273'GL.

3. **Estimated Formation Tops:**

Formation	Top - feet	Expected Production
Nacimiento	1527	
Ojo Alamo	3027	
Fruitland	3227	
Pictured Cliffs	3327	GAS
Lewis	3557	
Intermediate TD	3757	
Huerfanito	3817	
Chacra	4317	
Cliff House	5042	GAS
Menefee	5192	GAS
Pt. Lookout	5507	GAS
Upper Mancos	5682	
TOTAL DEPTH	5832	

4. **Surface Hole Program:**

Bit: Drill a 12 1/4" 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:

Interval (ft)	Weight (ppg)	Ph	Vis(sec/qt)	Water Loss
0 - 500	8.6 or less	9.0-9.5	40 - 50	No Control

Casing and Cementing: A string of 9⅝" 36# J-55 or K-55 ST&C casing will be set and cemented to the surface in a single stage with 265 sacks of Class "B" cement (yield = 1.18 cf/sk) containing 3% $CaCl_2$ 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 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 surface casing and BOPE to 600 psi for 15 minutes.

Centralizers: Run four (4) 9⅝" X 12 ¼" regular bowspring centralizers. Install first one on stop ring in middle of shoe joint.

4. **Surface Hole Program** - continued

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

5. **Intermediate Hole Program:**

Bit: Drill an 8 ¾" hole to 3757' using TCI, IADC Class 447 bit. WOB: 35-45K. RPM: 60 - 75. Reduce RPM to 55 - 65 through Ojo Alamo.

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

Interval (ft)	Weight (ppg)	Ph	Vis(sec/qt)	Water Loss
500 - 3227	8.6 - 8.8	9.0-9.5	28 - 35	10 - 12
3227 - 3757	8.9 - 9.2	9.0-9.5	35 - 50	8 - 10

Fresh water will be used for initial mud up. Produced water will be used for subsequent additions 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.

Note: 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.

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.

Pressure Control: A 3M 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. 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: No logs will be run in intermediate hole.

5. Intermediate Hole Program: - continued

Casing and Cementing Program: Run 7" 20# J-55 production casing from surface to Intermediate TD and cement in two stages with a mechanical DV tool installed @ 1878'±. **Stage 1**: (3757-1878') Cement with 140 sacks (296.8 cf) of Class 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. Tail in with 100 sacks (126.0 cf) of Class B with 2% $CaCl_2$, 0.25 pps celloflake and 5 pps gilsonite mixed at 15.2 PPG to yield 1.26 cf/sk. **Stage 2**: (1878 - surface); Cement with 170 sacks (360.4 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. Tail in with 50 sacks (63.0 cf) of Class B with 2% $CaCl_2$, 0.25 pps celloflake and 5 pps gilsonite mixed at 15.2 PPG to yield 1.26 cf/sk.

Circulate and WOC between stages for four hours.

Slurry volumes assume a 50% 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. Pressure test intermediate casing and BOPE to 1500 psi for 15 minutes.

Centralizers: 10 - 7" X 8¾" bowspring centralizers will be run across all prospective pays and 5 - 7" X 8¾" 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.

Float Equipment: Cement nose float shoe, 1 joint 7" casing, float collar and one mechanical DV tool. Run two cement baskets below DV tool.

6. Production Hole Program:

Bits: Drill a 6¼" hole to 5831' feet using air hammer. WOB: 5 - 25K. RPM: to be determined by drilling conditions. If hole gets wet use TCI, IADC class 637 to finish hole.

Mud: Air from Intermediate casing shoe to TD. If hole gets wet use a fresh water based low solids non dispersed system with the following properties: **Note**: Pull into intermediate casing to mud up.

Interval (ft)	Weight (ppg)	pH	Vis(sec/qt)	Water Loss
? - TD	8.6 - 9.0	9.0-9.5	28 - 40	8 - 10 cc

6. Production Hole Program: - continued

Pressure Control: A 3M psi BOP well control system will be utilized. BOP's and choke manifold will be installed and pressure 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: Induction and Compensated density/Epithermal neutron logs from TD to intermediate casing shoe. Pull gamma ray to surface for correlation purposes. A temperature log may be run if natural flows are encountered

Casing and Cementing Program: Run 4 ½" 10.5# J-55 production liner on sufficient amount of drill pipe to place liner hanger a minimum of 120' into intermediate casing. Cement in a single stage with 120 sacks (241.2 cf) of 65/35 Class H Poz with 5 pps gilsonite and 0.25 pps celloflake mixed at 12.3 ppg to yield 2.01 cf/sk. Tail in with 110 sacks (146.3 cf) of 50/50 Class H Poz with 2% gel, 5 pps gilsonite, 0.25 pps celloflake, 0.4% FLA and 0.2% friction reducer mixed at 13.7 PPG to yield 1.33 cf/sk.

Slurry volumes assume a 70% 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: 9 - 4½" X 6⅛" rigid centralizers will be spaced across all prospective pay zones in the Mesa Verde.

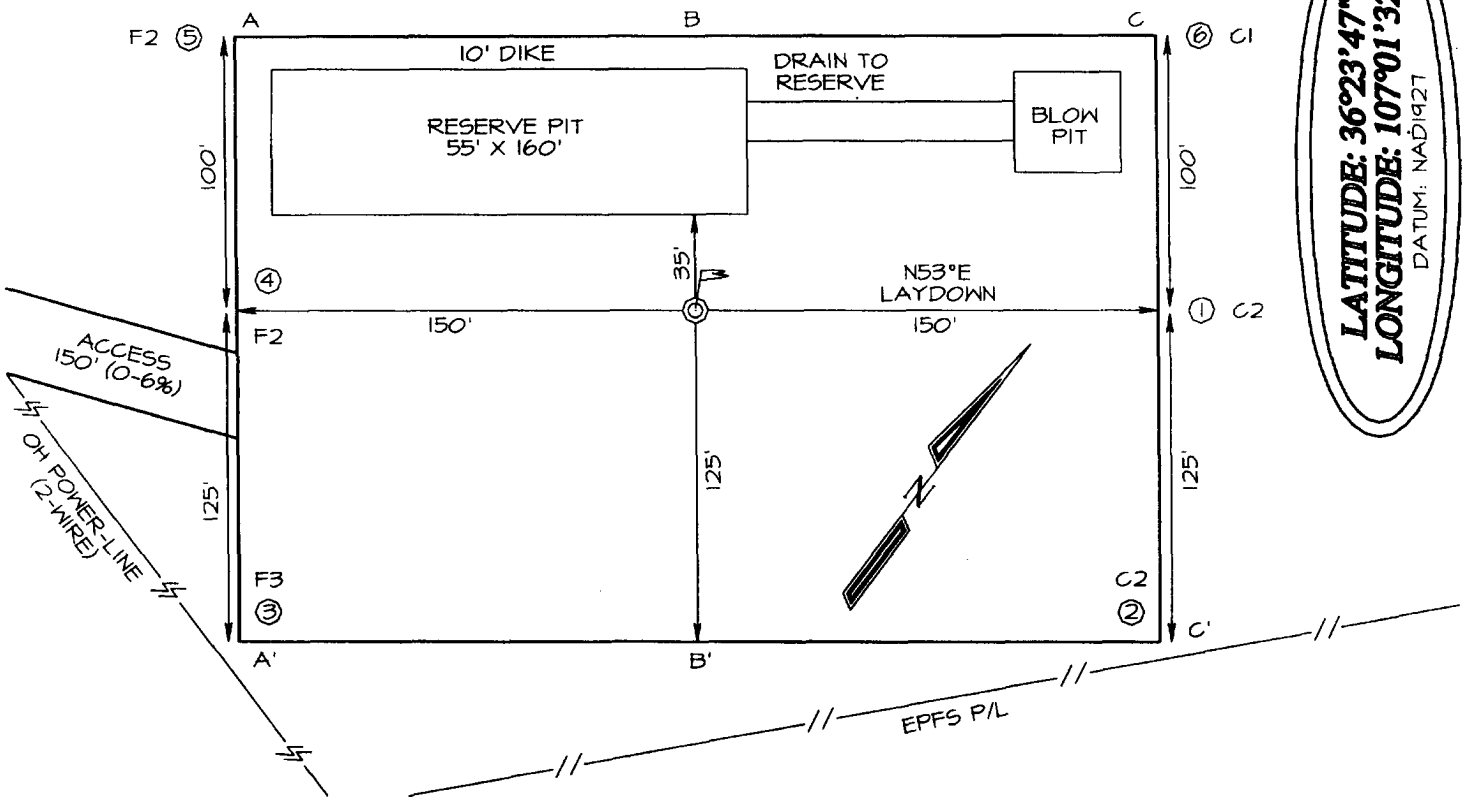
Float Equipment: Float shoe, 1 joint 4 1/2" 10.5 # casing, and latch collar. 4 ½" X 7" TIW liner hanger will be run between casing and drill pipe.

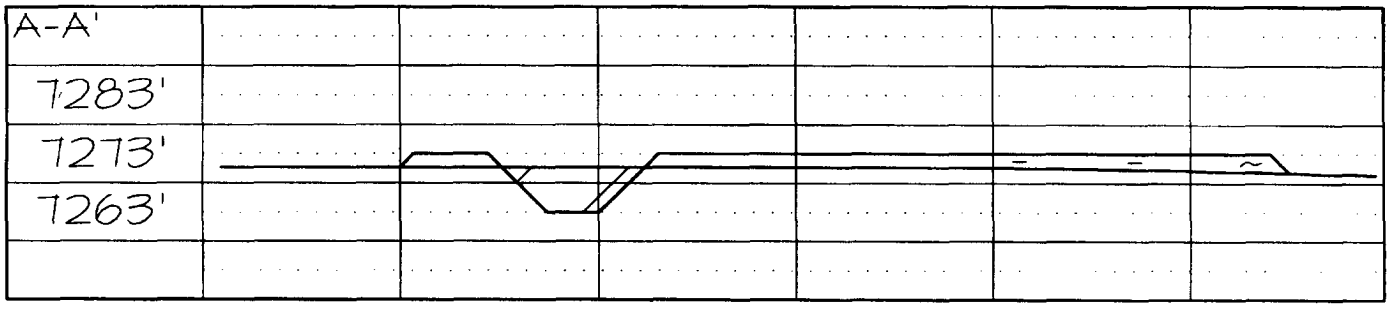
7. Auxiliary Equipment:

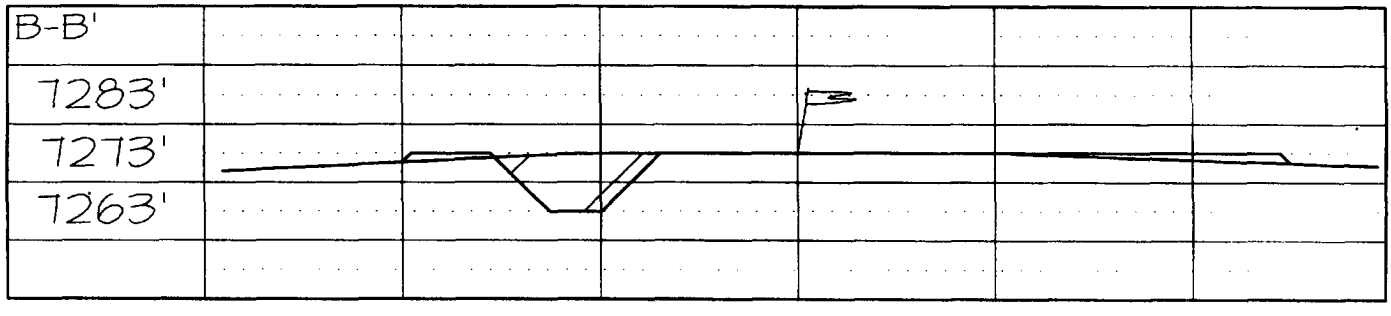
An upper kelly cock will be utilized. The handle will be available on rig floor at all times

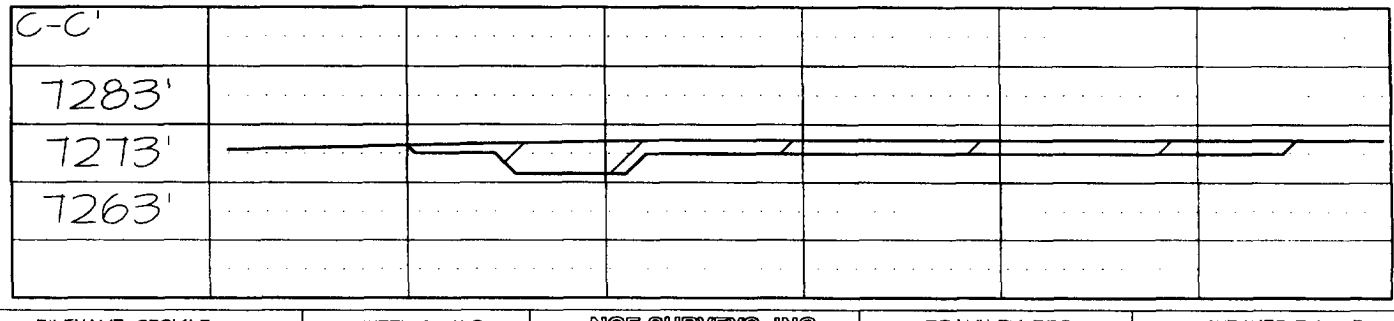
McELVAIN OIL & GAS PROPERTIES BADGER 14 #1A
2120' FSL, 660' FWL, SECTION 14, T25N, R2W, NMPM
RIO ARRIBA COUNTY, NM GROUND ELEVATION: 7273'

LATITUDE: 36°23'47"
LONGITUDE: 107°01'32"
DATUM: NAD1927





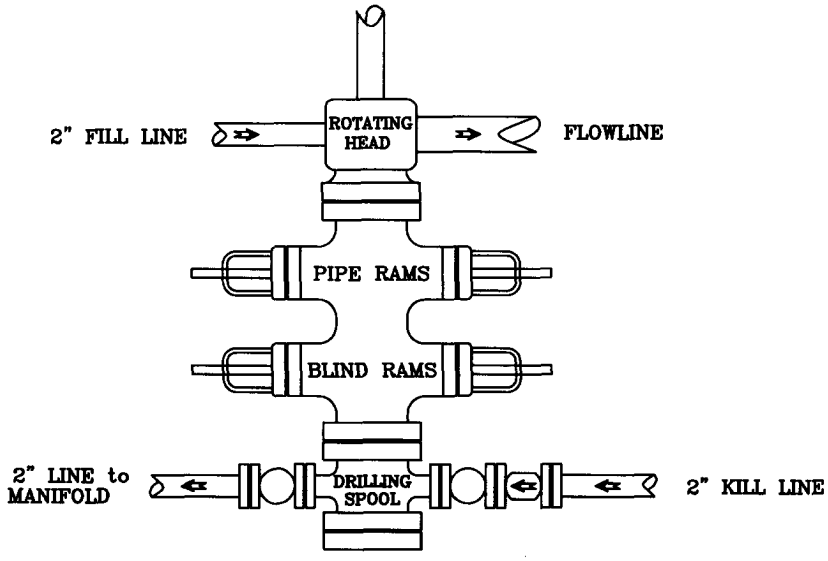




FILENAME: 25214LT	SHEET 2 OF 3	NCE SURVEYS, INC.	DRAWN BY: EDO	CHECKED BY: JCE

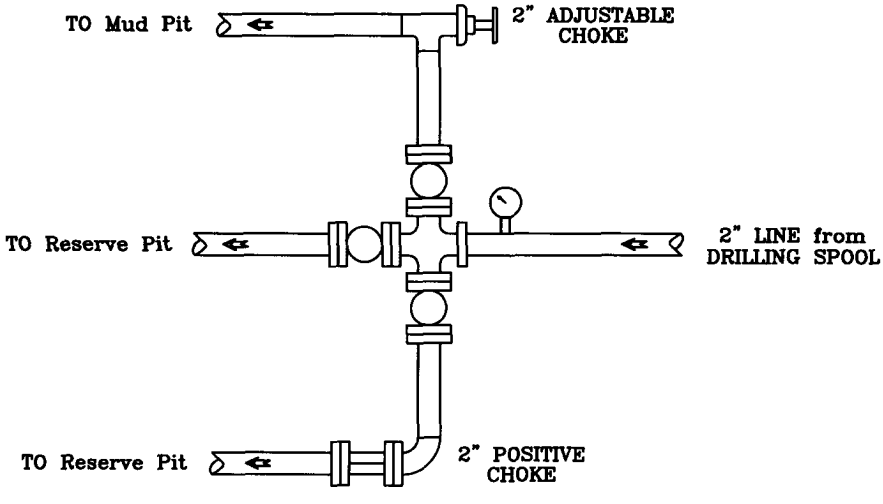
PRESSURE CONTROL

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 14 No. 1A

2120' FSL – 660' FWL

Section 14, T25N, R2W, NMPM

Rio Arriba County, New Mexico