

OCD-HOBBS

ATS-08-660

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

HOBBS

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No. -----	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. 37473 McELVAIN # 44	
2. Name of Operator McELVAIN OIL & GAS PROPERTIES (REED FISCHER 303-893-0933) <22044>		9. API Well No. 30-025-39251	
3a. Address 1050 17th STREET SUITE 1800 DENVER, COLORADO 80265		3b. Phone No. (include area code) 303-893-0933 EXT. 330	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 822' FSL & 2057' FEL SECTION 25 T18S-R33E LEA CO. NM At proposed prod. zone SAME Unit 8		10. Field and Pool, or Exploratory EK-DELAWARE	
14. Distance in miles and direction from nearest town or post office* Approximately 40 miles West of Hobbs New Mexico		12. County or Parish LEA CO.	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 822'	16. No. of acres in lease 320	17. Spacing Unit dedicated to this well. 40	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 165'	19. Proposed Depth 6000'	20. BLM/BIA Bond No. on file NATION WIDE COB000009	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3858'	22. Approximate date work will start* WHEN APPROVED	23. Estimated duration 25 Days	

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- | | |
|---|--|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Joe T. Janica</i>	Name (Printed/Typed) Joe T. Janica	Date 08/12/08
Title Permit Eng.		
Approved by (Signature) <i>/s/ Don Peterson</i>	Name (Printed/Typed) /s/ Don Peterson	Date SEP 12 2008
Title FIELD MANAGER		
Office CARLSBAD FIELD OFFICE		

Application for approval does not warrant accuracy that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on page 2)

K2

Capitan Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations Attached

DISTRICT I
1635 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

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

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-39251	Pool Code 21655	Pool Name EK-DELAWARE
Property Code 37473	Property Name McELVAIN A	Well Number 4
OGRID No. 22044	Operator Name McELVAIN OIL AND GAS PROPERTIES	Elevation 3858'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	25	18 S	33 E		822	SOUTH	2057	EAST	LEA

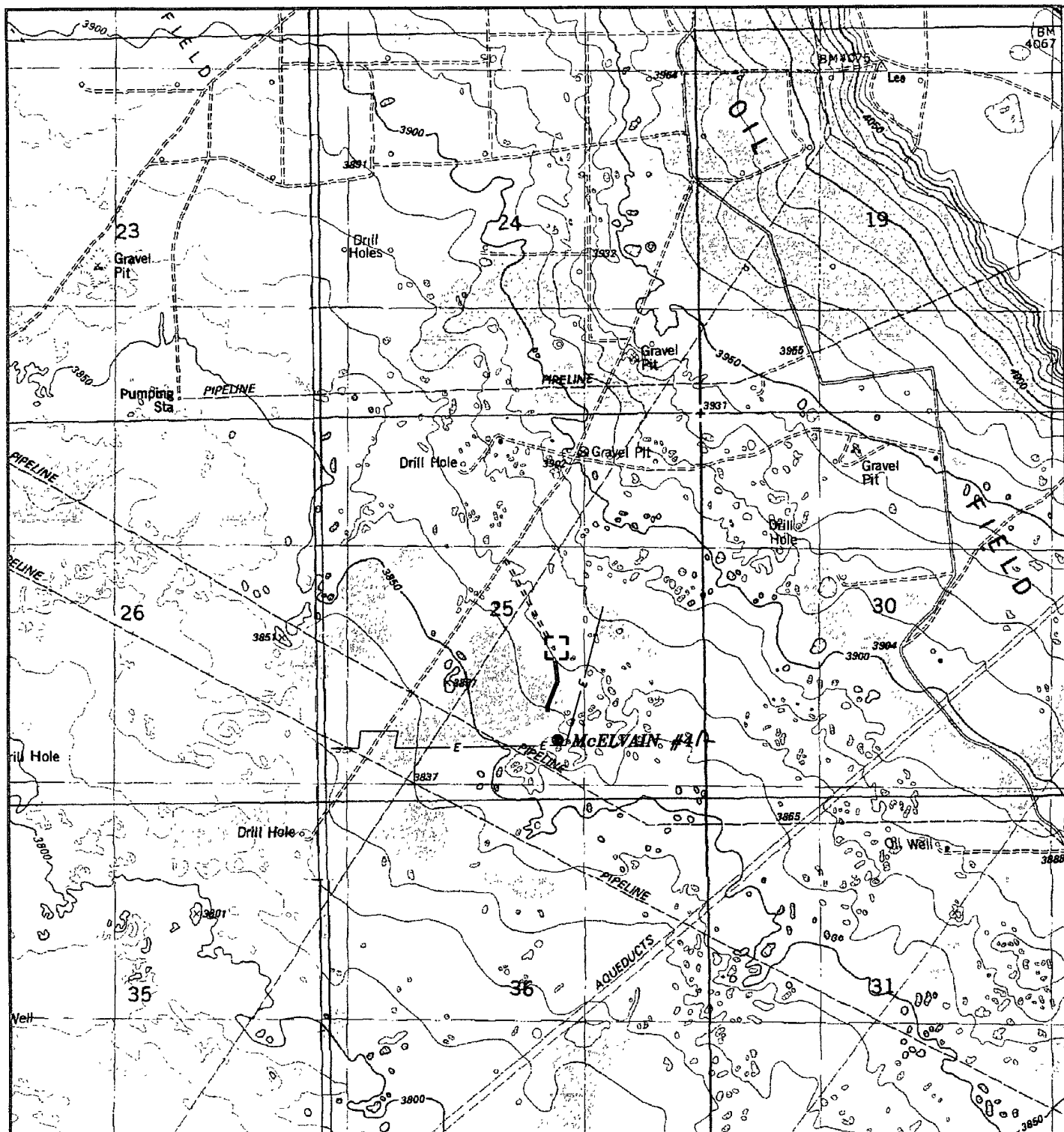
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40		Joint or Infill		Consolidation 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

<p>SURFACE LOCATION Lat - N32°42'49.30" Long - W103°36'52.77" NMSPCE- N 624122.942 E 762377.788 (NAD-83)</p> <p>3856.5' 3861.5' NM-0245247 3860.2' 3866.0' 2057'</p>	<p>OPERATOR CERTIFICATION</p> <p>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 pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division.</p> <p><i>Joe T. Janica</i> Signature Date Joe T. Janica 08/12/08 Printed Name</p>	
	<p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>JULY 24, 2008 Date Surveyed Signature of Registered Professional Surveyor W.C. Jones Certificate No. Gary L. Jones 7977 BASIN SURVEYS</p>	

EXHIBIT "A"



McELVAIN #4A

Located 822' FSL and 2057' FEL
 Section 25, Township 18 South, Range 33 East,
 N.M.P.M., Lea County, New Mexico.

basin
surveys
 focused on excellence
 in the oilfield

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basinsurveys.com

W.O. Number: JMS 19649

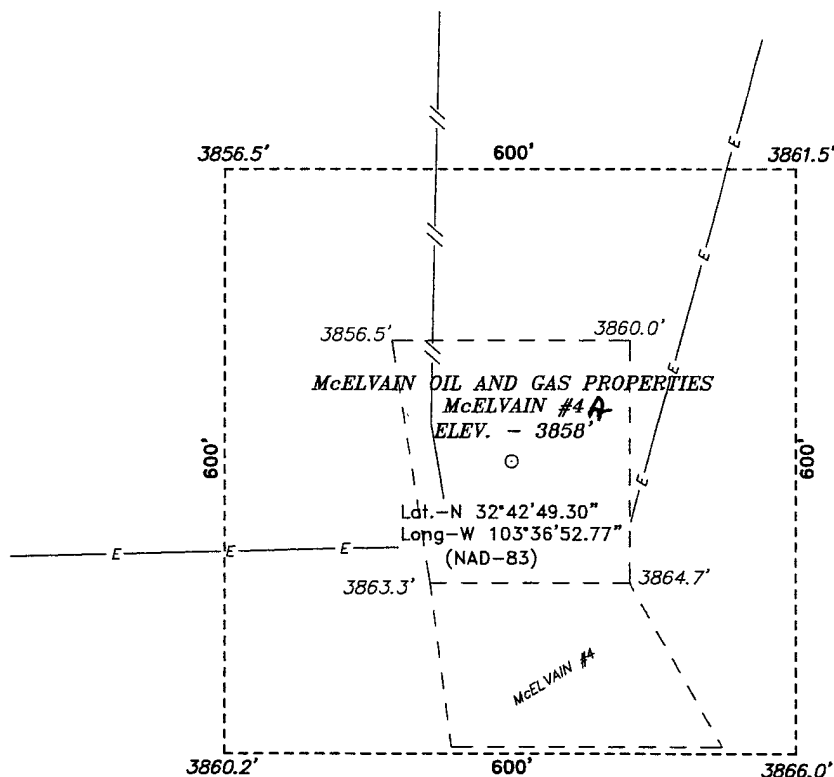
Survey Date: 07-30-2008

Scale: 1" = 2000'

Date: 07-29-2008

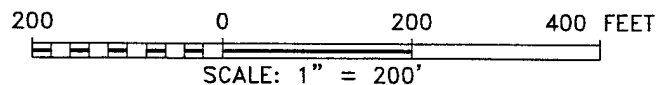
McELVAIN OIL
AND GAS
PROPERTIES

SECTION 25, TOWNSHIP 18 SOUTH, RANGE 33 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



Directions to Location:

FROM MILE MARKER 17 OF STATE HWY 529; GO WEST 0.1 MILES TO LEASE ROAD, ON LEASE ROAD GO SOUTHERLY 0.2 MILES TO A FORK, GO LEFT AND FOLLOW MAIN ROAD FOR 0.3 MILES TO A "Y", GO SOUTH 1.1 MILES TO A LEASE ROAD, GO EAST 0.1 MILES TO LEASE ROAD GO SOUTH 0.2 MILES TO THE #7 LOCATION AND PROPOSED LEASE ROAD.



McELVAIN OIL AND GAS PROPERTIES

REF: McELVAIN #4/V WELL PAD TOPO

THE McELVAIN #4/V LOCATED 822'

FROM THE SOUTH LINE AND 2057' FROM THE EAST LINE OF

SECTION 25, TOWNSHIP 18 SOUTH, RANGE 33 EAST,

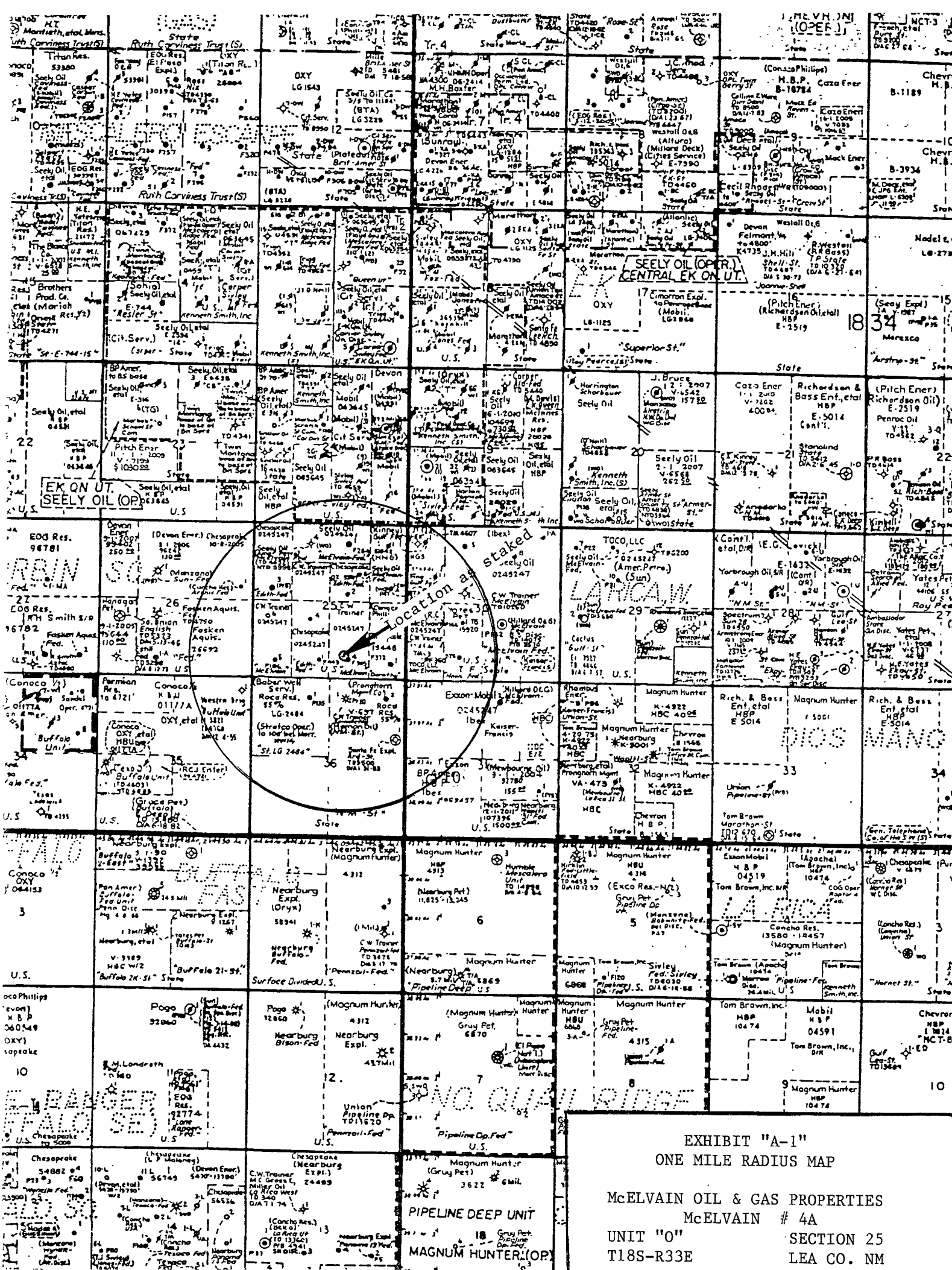
N.M.P.M., LEA COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 19649 Drawn By: J. SMALL

Date: 07-30-2008 Disk: JMS 19649

Survey Date: 07-30-2008 Sheet 1 of 1 Sheets



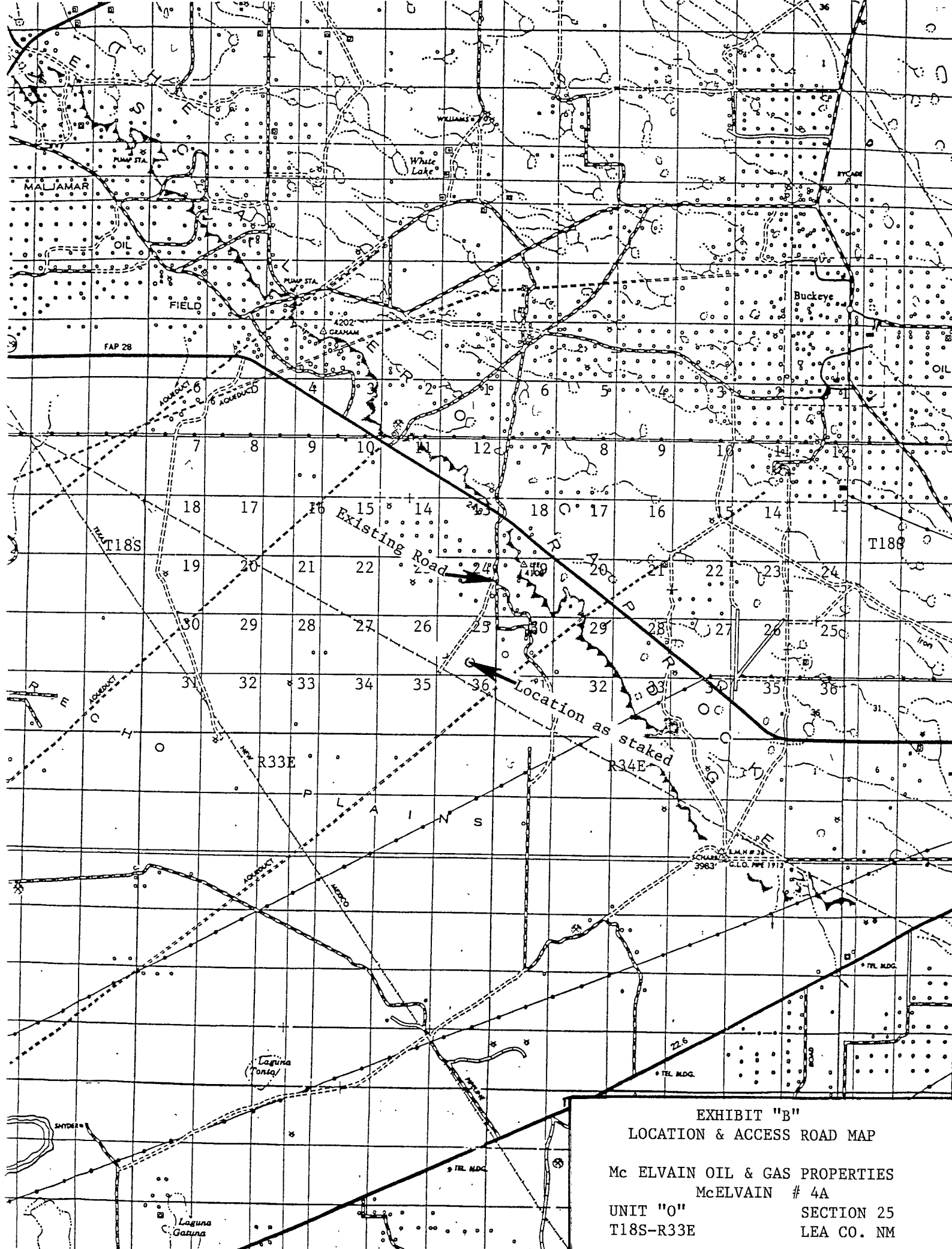


EXHIBIT "B"
LOCATION & ACCESS ROAD MAP

Mc ELVAIN OIL & GAS PROPERTIES
McELVAIN # 4A
UNIT "O"
T18S-R33E
SECTION 25
LEA CO. NM

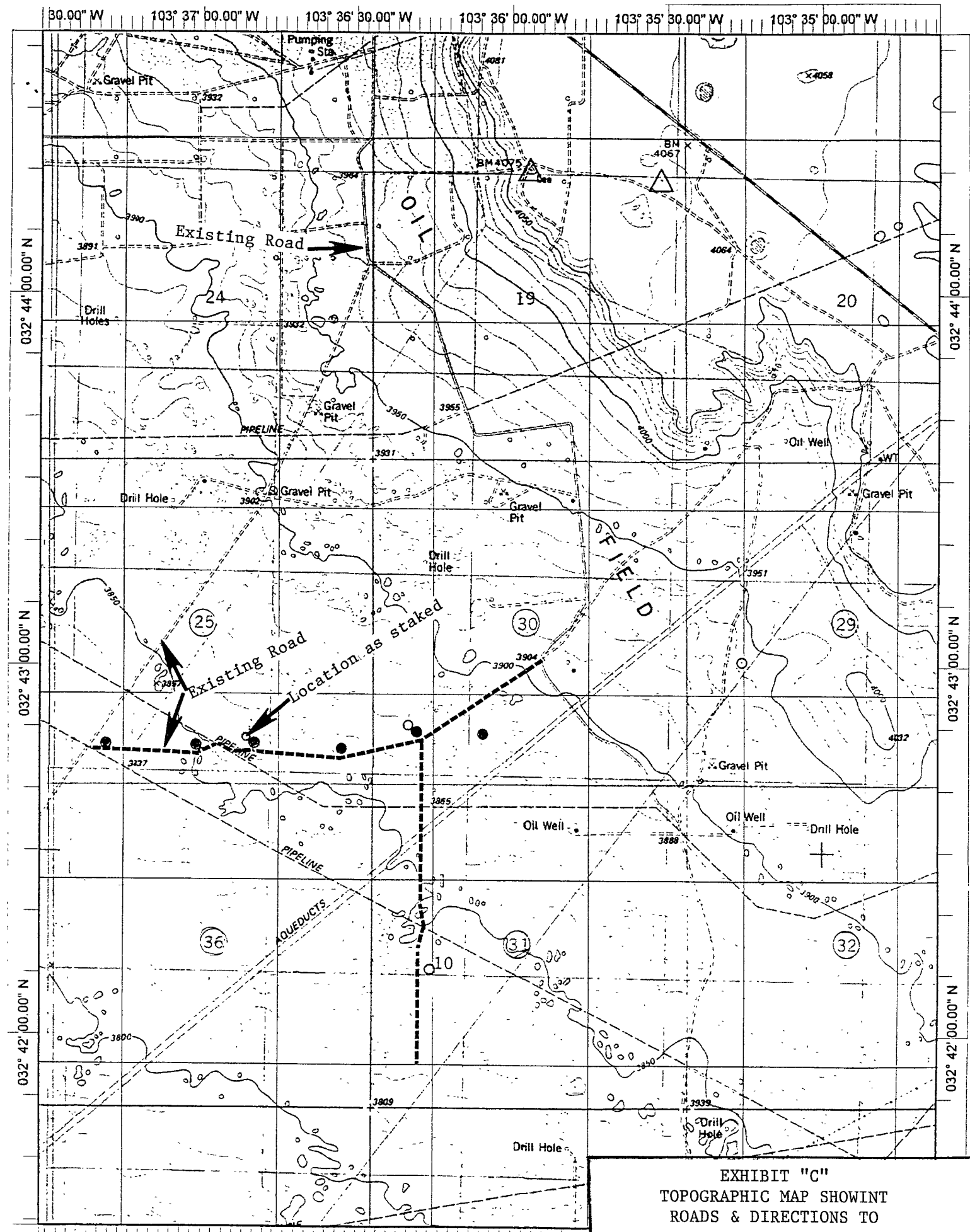


EXHIBIT "C"
TOPOGRAPHIC MAP SHOWING
ROADS & DIRECTIONS TO

McELVAIN OIL & GAS PROPERTIES
McELVAIN # 4A
UNIT "O" SECTION 25
T18S-R33E LEA CO. NM.

APPLICATION TO DRILL

McELVAIN OIL & GAS PROPERTIES

McELVAIN # 4A

UNIT "O" SECTION 25

T18S-R33E LEA CO. NM

In response to questions asked under Section II of Bulletin NTL-6 the following information on the above well is provided for your information.

1. LOCATION: 822' FSL & 2057' FEL SRCTION 25 T18S-R33E LEA CO. NM

2. ELEVATION ABOVE SEA LEVEL: 3858' GL

3. GEOLOGIC NAME OF SURFACE FORMATION: Quaternary Aeolian Deposits.

4.

4. DRILLING TOOLS AND ASSOCIATED EQUIPMENT: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.

5. PROPOSED DRILLING DEPTH: 6000'

6. ESTIMATED TOPS OF GEOLOGICAL MARKERS:

Rustler Anhydrite	1586'	San Andres	5031'
Yates	3486'	Delaware	5366
Seven Rivers	3686'	Top 1st Delaware Sd.	5506'
Queen	4386'	TD	6000'

7. POSSIBLE MINERAL BEARING FORMATION:

Queen	Oil	Delaware	Oil
San Andres	Oil		

8. CASING PROGRAM:

HOLE SIZE	INTERVAL	OD OF CASING	WEIGHT	THREAD	COLLAR	GRADE	CONDITION
26"	0-80	14"	CONDUCTOR	NA	NA	Conductor	New
11"	0-1700'	8 5/8"	24#	8-R	ST&C	K-55	New
7 7/8"	0-6000'	5.1/2"	17#	8-R	LT&C	J-55	New

APPLICATION TO DRILL

McELVAIN OIL & GAS PROPERTIES

McELVAIN # 4A

UNIT "O"

SECTION 25

T18S-R33E

LEA CO. NM

9. CEMENTING & CASING SETTING DEPTHS:

14"	Conductor	Set 80' of 14" conductor pipe and cement to surface with Redi-Mix.
8 5/8"	Surface	Run and set 1700' of 8 5/8" 24# K-55 ST&C casing. Cement with 350 Sx. of Class "C" cement + additives, Yield 1.7, tail in with 200 Sx. of Class "C" cement + additives, Yield 1.34 Circulate cement to surface.
5 1/2"	Production	Run and set 6000' of 5 1/2" 17# J-55 LT&C casing. Cement with 900 Sx. of 35/65 Class "C" POZ + additives, Yield 1.89, tail in with 6000 Sx. of Class "C" cement + additives, Yield 1.34. circulate cement to surface.

See COA →

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E" shows a 2000 PSI working pressure B.O.P. consisting of pipe rams, blind rams, and a packoff instead of an annular preventor. This B.O.P. will be nipped up on the 8 5/8" casing and tested to API specifications. The B.O.P. will be operated at least once each 24 hour day, and the blind rams will be operated when the drill pipe is out of the hole on trips. Full opening stabbing valve and upper kelly cock will be utilized. Exhibit "E-1" shows a manually operated choke manifold, Exhibit "F" shows a hydraulically operated closing unit. Bottom hole pressure is not expected to exceed 2600 PSI, this well is in an existing field, pressure and temperatures are not expected to be a problem.

11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISCOSITY	FLUID LOSS	TYPE MUD
40-1700'	8.4-9.4	29-34	NC	Fresh water Spud mud add paper to control seepage.
1700-5000'	9.9-10.1	28-32	NC	Brine water use paper to control seepage, and high viscosity sweeps to clean hole.
5000-6000'	10.0-10.2	28-34	10-12 cc	Brine water, continue to use paper to control seepage, use caustic soda to control pH, use high viscosity sweeps to clean hole, use starch to control water loss.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks.

APPLICATION TO DRILL

McELVAIN OIL & GAS PROPERTIES

McELVAIN # 4A

UNIT "O"

SECTION 25

T18S-R33E

LEA CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

- A. Open hole logs: Dual Laterolog, LDT SNP Gamma Ray and Caliper from TD back to the 8 5/8" casing shoe.
- B. Run Gamma Ray, Neutron from TD back to surface.
- C. Rig up Mud logger on hole at 4000'± and keep on hole to TD.
- D. No cores or DST's are planned at this time.

13. POTENTIAL HAZARDS:

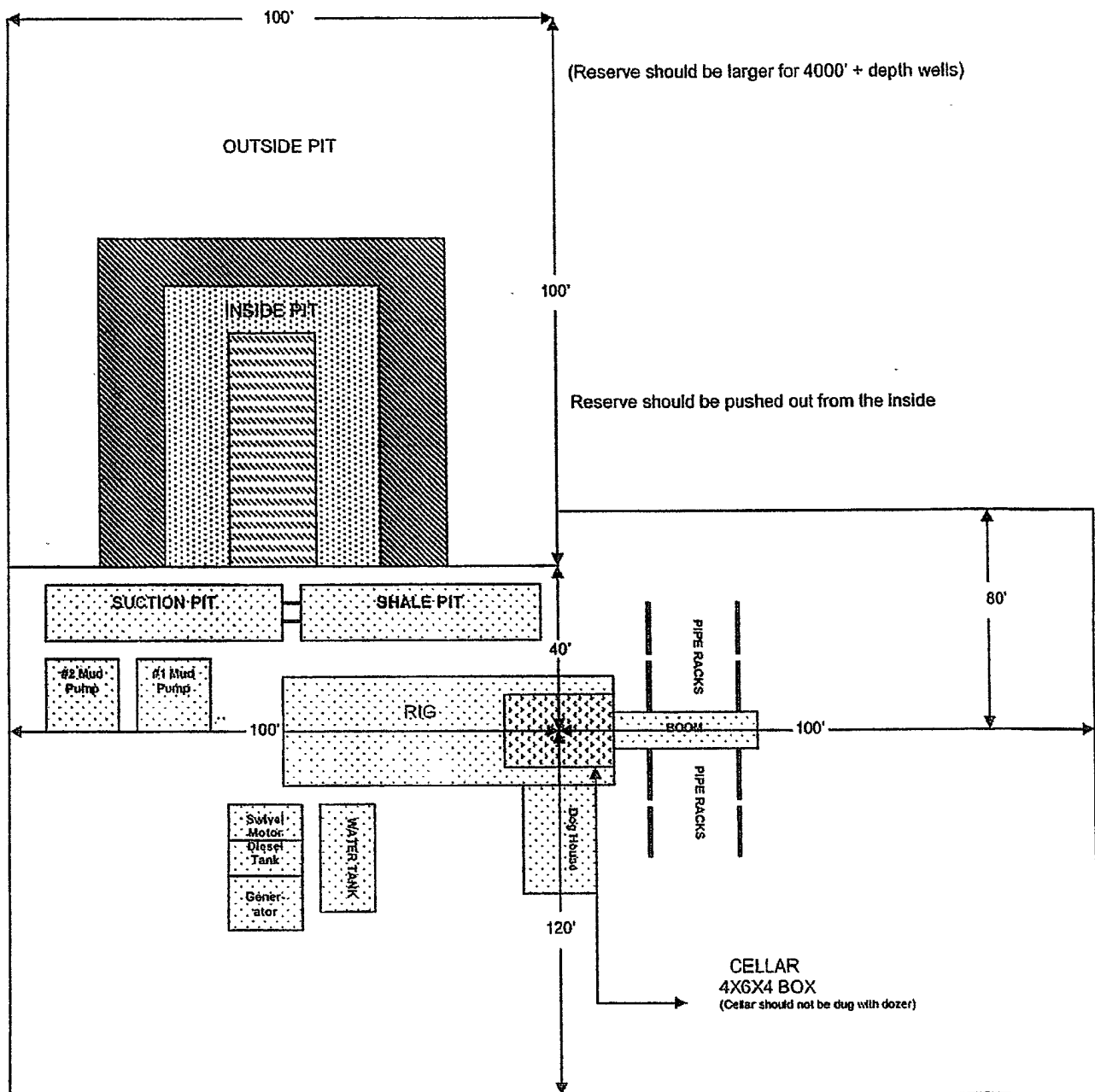
No abnormal pressures or temperatures are expected. There is no known presence of H²S in this area. If H²S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3050± PSI, and Estimated BHT 145°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take 25 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The Delaware formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialized as an oil well.



Cellar can be 4X4X4 if using a screw-on wellhead

EXHIBIT "D"
RIG LAY OUT PLAT

McELVAIN OIL & GAS PROPERTIES
McELVAIN # 4A
UNIT "O" SECTION 25
T18S-R33E LEA CO. NM

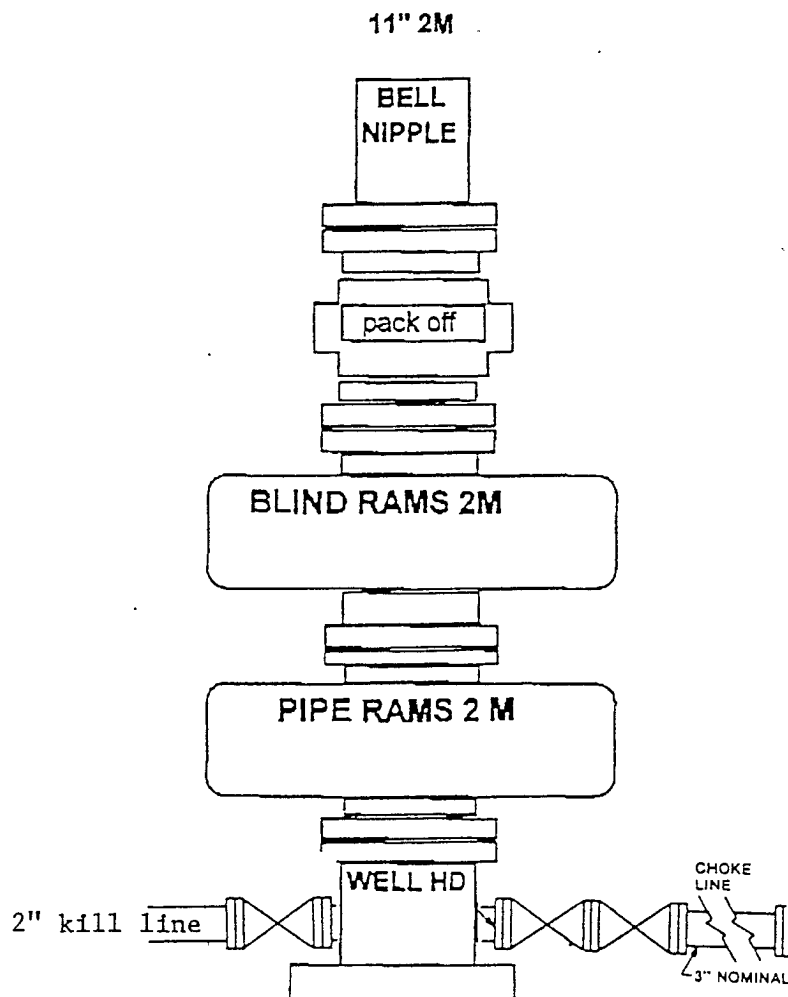


EXHIBIT "E"
 SKETCH OF B.O.P. TO BE USED ON

McELVAIN OIL & GAS PROPERTIES

McELVAIN # 4A

UNIT "O"

T18S-R33E

SECTION 25

LEA CO. NM

BLOWOUT PREVENTION
EQUIPMENT
Choke Manifolds

DRILLING MANUAL

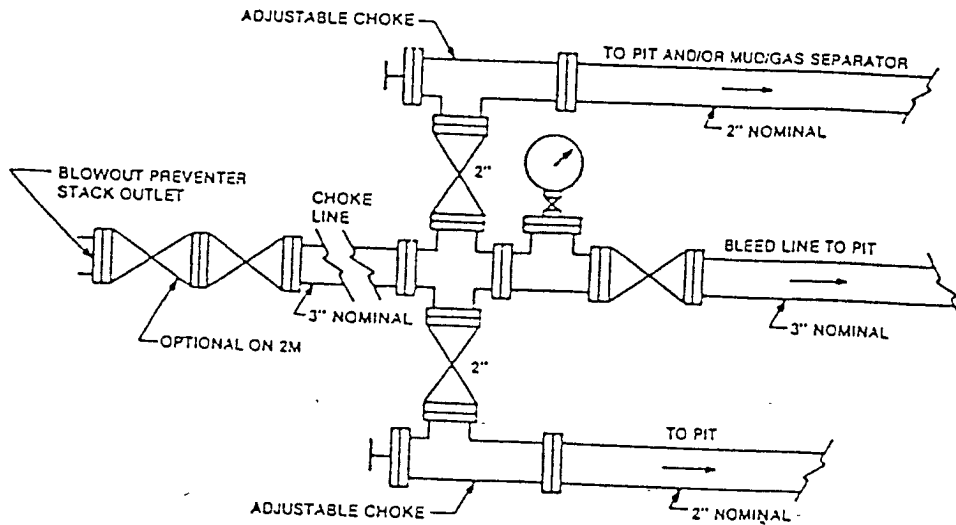


FIGURE K4-1. Typical choke manifold assembly for 2M and 3M rated working pressure service — surface installation.

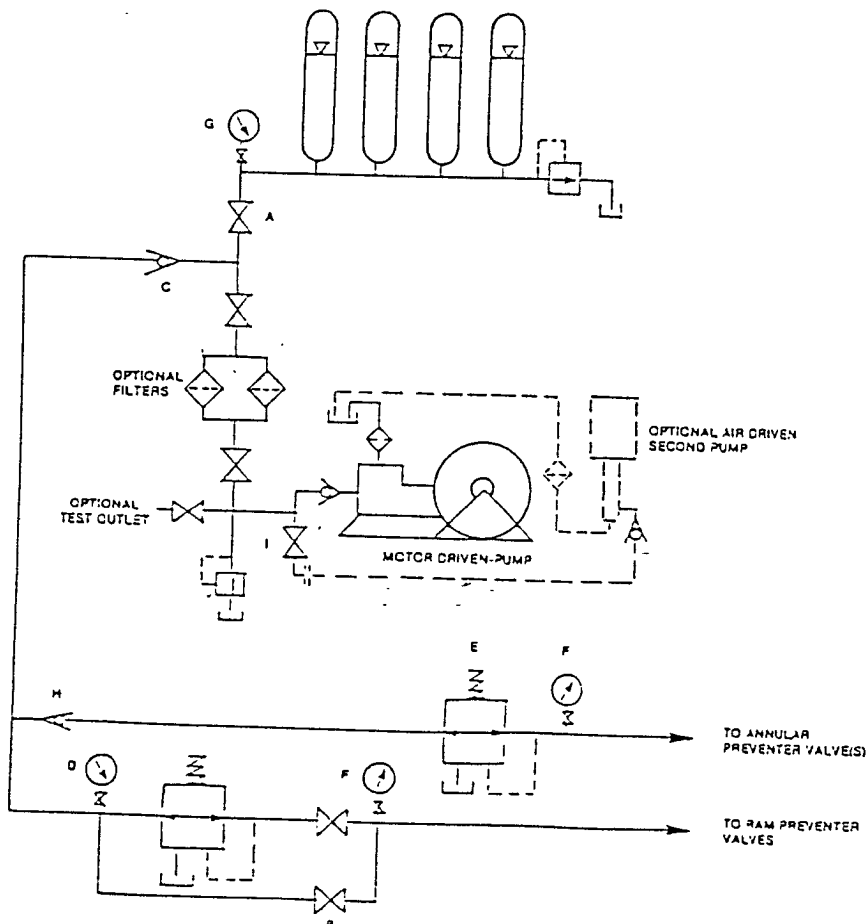


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

EXHIBIT "E-1"
CHOKE MANIFOLD & CLOSING UNIT

McELVAIN OIL & GAS PROPERTIES
McELVAIN # 4A
UNIT "O" SECTION 25
T18S-R33E LEA CO. NM

McELVAIN OIL & GAS PROPERTIES
Hydrogen Sulfide Contingency Plan
For Drilling/Workover/Facility

This well and it's anticipated facility are not expected to have Hydrogen Sulfide releases. However, there may be Hydrogen Sulfide production in the nearby area. There are no private residences in the area but a contingency plan has been orchestrated. McELVAIN OIL & GAS PROPERTIES will have a company representative available to the rig personnel through out the drilling of this well. If Hydrogen Sulfide is detected or suspected, monitoring equipment will be employed to assure the safety of all personnel.

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	McElvain Oil & Gas Properties
LEASE NO.:	NM0245247
WELL NAME & NO.:	McElvain # 4A
SURFACE HOLE FOOTAGE:	822' FSL & 2057' FEL
BOTTOM HOLE FOOTAGE:	Same
LOCATION:	Section 25, T. 18 S., R 33 E., NMPM
COUNTY:	Lea County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - Lesser Prairie Chicken
 - Sand Dune Lizard
- ☒ **Construction**
 - Notification
 - Topsoil
 - Reserve Pit
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
- ☐ **Production (Post Drilling)**
- ☐ **Reserve Pit Closure/Interim Reclamation**
- ☐ **Final Abandonment/Reclamation**

I. GENERAL PROVISIONS.

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1 through June 15 annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Hobbs Field Station at (505) 393-3612 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

There is no measurable soil on this well pad to stockpile. No topsoil stockpile is required.

C. RESERVE PITS

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 100' X 100 on the North side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (505) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

VII. DRILLING

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Lea County**

**Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612**

1. A Hydrogen Sulfide (H₂S) Drilling Plan should be activated 500 feet prior to drilling into the **Queen** formation. **Hydrogen sulfide has been reported throughout section 25. If Hydrogen Sulfide is encountered, please report measurements and formations to the BLM.**

NOTE – area code for Eddy county is 575 with effective date 10/05/2008 according to Windstream. H₂S plan still has 505 numbers.

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possible lost circulation in the Grayburg and San Andres formations.
Possible water/brine flows in the Salado & Artesia Group.

1. The 8-5/8 inch surface casing shall be set at approximately 1700 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
 - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 5-1/2 inch production casing is:
☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.
3. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. The tests shall be done by an independent service company.
 - b. The results of the test shall be reported to the appropriate BLM office.
 - c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
 - d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

LB/WWI 091008

II. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

III. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RESERVE PIT CLOSURE

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

(Insert Seed Mixture Here)

Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

**Four-winged Saltbush 5lbs/A

* This can be used around well pads and other areas where caliche cannot be removed.

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.