



PO Box 99 • Eastlake, CO 80614 • (303) 857-9999 • FAX (303) 450-9200 • E-MAIL Permitco1@aol.com

September 29, 2008

Division of Oil, Gas & Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, UT 84114-5801  
Attn: Diana Mason

Re: McElvain Oil & Gas Properties, Inc.  
Slick Rock Federal #18-4  
672' FNL and 836' FWL  
NW NW Section 18, T12S - R24E  
Uintah County, Utah

Dear Diana,

Enclosed please find one copy of the Application for Permit to Drill, along with one copy of the Onshore Order No. 1 which was filed with the BLM in Vernal, Utah.

If you should need additional information, please don't hesitate to contact me. Approved copies of the A.P.D. should be sent to Permitco Inc. at the address shown above.

Sincerely,

PERMITCO INC.

*Venessa Langmacher*

Venessa Langmacher  
Consultant for  
McElvain Oil & Gas Properties, Inc.

Enc.

cc: McElvain Oil & Gas Properties, Inc. - Denver, CO

RECEIVED  
OCT 02 2008  
DIV. OF OIL, GAS & MINING

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT   
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>		5. MINERAL LEASE NO.: <b>UTU-73704</b>	6. SURFACE: <b>BLM</b>
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>		7. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>N/A</b>	
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>		8. UNIT or CA AGREEMENT NAME: <b>N/A</b>	
2. NAME OF OPERATOR: <b>McElvain Oil &amp; Gas Properties, Inc.</b>		9. WELL NAME and NUMBER: <b>Slick Rock Federal #18-4</b>	
3. ADDRESS OF OPERATOR: <b>1050 - 17th Street, Suite 1800, Denver, CO 80265</b>		10. FIELD AND POOL, OR WILDCAT: <del>Wildcat</del> <b>Jun Spring</b> 635	
PHONE NUMBER: <b>303/893-0933 x 330</b>		11. QTR/QTR, SECTION, TOWNSHIP, RANGE MERIDIAN: <b>Section 18, T12S - R24E</b>	
4. LOCATION OF WELL (FOOTAGES)  AT SURFACE: AT PROPOSED PRODUCING ZONE:		647415X 4404588Y 39.780364 <b>672' FNL and 836' FWL</b> <b>NW NW</b> -109.278608	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>Approximately 66.9 miles southwest of Vernal, UT</b>		12. COUNTY: <b>Uintah</b>	13. STATE: <b>UT</b>
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) <b>672'</b>	16. NUMBER OF ACRES IN LEASE: <b>623.52</b>	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>40 Acres</b>	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET): <b>226' (Shut in)</b>	19. PROPOSED DEPTH: <b>13,900'</b>	20. BOND DESCRIPTION: <b>Nationwide Bond No. COB-000010</b>	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>6073' GL</b>	22. APPROXIMATE DATE WORK WILL START: <b>Upon Approval</b>	23. ESTIMATED DURATION: <b>42 Days</b>	

**PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
12-1/4"	9-5/8", J-55, 36#	1,500'	200 sx Hi-Fill Lite, 3.82 ft3/sk, 11.0 ppg + 200 sx Premium, 1.15 ft3/sk, 15.6 ppg
8-3/4"	7", L-80, 26#	7,000'	1010 sx 50:50:2 (Poz:G:Gel) 1.24 ft3/sk, 14.4 ppg
7-7/8"	4-1/2", P-110, 13.5#	13,900'	570 sx 50:50:2 (Poz:G:Gel) 1.65 ft3/sk, 14.4 ppg
If intermediate casing is not run (if hole conditions allow), the following production casing will be run:			
7-7/8"	4-1/2", P-110, 13.5#	13,900'	500 sx 50:50:2 (Poz:G:Gel) 1.65 ft3/sk, 14.4 ppg + 2050 sx 50:50:2 (Poz:G:Gel) 1.24 ft3/sk, 14.4 ppg

**ATTACHMENTS**

25. VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER  
 EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER

- COMPLETE DRILLING PLAN  
 FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

**CONFIDENTIAL-TIGHT HOLE**

AGENT: PermitCo Inc., P.O. Box 99, Eastlake, CO 80614

AGENT'S PHONE NO.: 303/857-9999

NAME (PLEASE PRINT) Venessa Langmacher

TITLE Agent for McElvain Oil & Gas Properties, Inc.

SIGNATURE Venessa Langmacher

DATE September 29, 2008

(This space for State use only)

API NUMBER ASSIGNED: 43-047-40382

Approved by the  
Utah Division of  
Oil, Gas and Mining

RECEIVED  
OCT 02 2008

DIV. OF OIL, GAS & MINING

(11/2001)

Federal Approval of this  
Action is Necessary

Date: 10/15/08 (See Instructions on Reverse Side)

By: [Signature]

R  
23  
E

R  
24  
E

T12S, R24E, S.L.B.&M.

M<sup>c</sup>ELVAIN OIL & GAS PROP., INC.

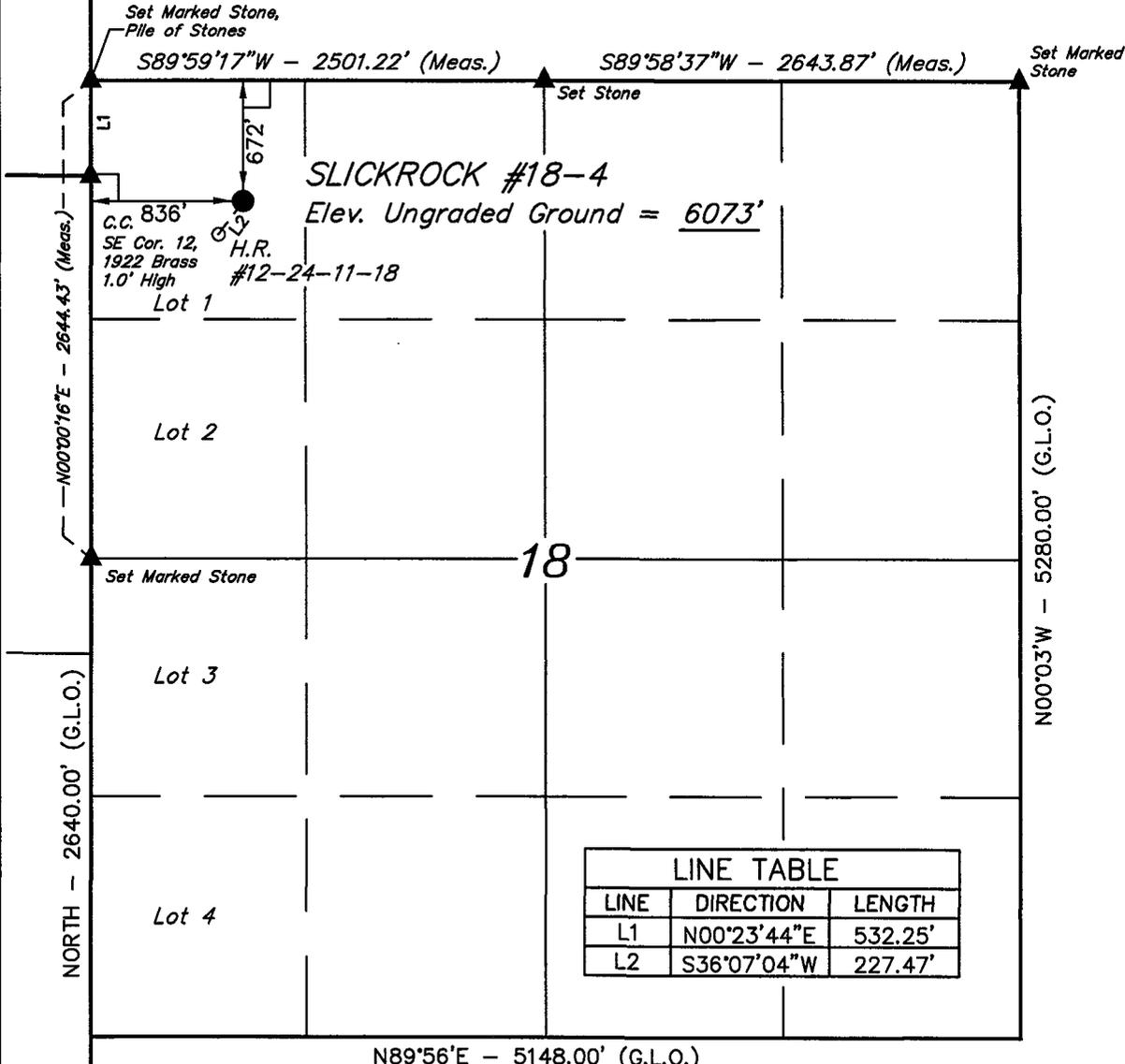
Well location, SLICKROCK #18-4, located as shown in Lot 1 of Section 18, T12S, R24E, S.L.B.&M., Uintah County Utah.

BASIS OF ELEVATION

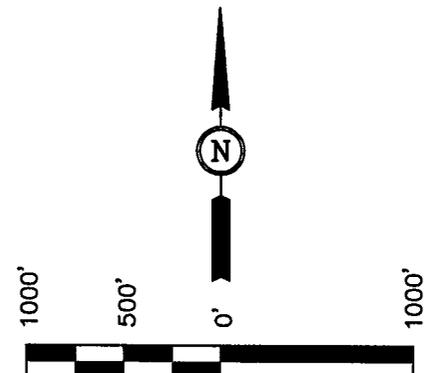
BENCH MARK 87 EAM LOCATED NEAR A ROAD INTERSECTION IN THE SW 1/4 OF SECTION 1, T12S, R23E, S.L.B.&M. TAKEN FROM THE ARCHY BENCH SE QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5887 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

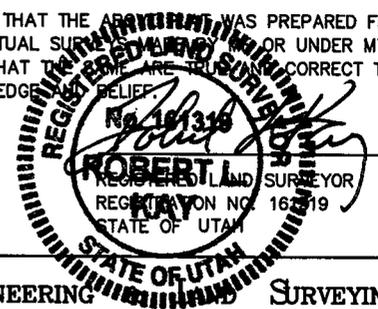


LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N00°23'44\"E	532.25'
L2	S36°07'04\"W	227.47'



SCALE  
CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYING OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



REVISED: 08-14-07  
REVISED: 07-18-07

<b>UNTAH ENGINEERING &amp; SURVEYING</b> 85 SOUTH 200 EAST - VERNAL, UTAH 84078 (435) 789-1017		
SCALE 1" = 1000'	DATE SURVEYED: 07-05-07	DATE DRAWN: 07-10-07
PARTY J.R. Z.G. C.H.	REFERENCES G.L.O. PLAT	
WEATHER HOT	FILE M <sup>c</sup> ELVAIN OIL & GAS PROP., INC.	

LEGEND:

- └─┘ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

(AUTONOMOUS NAD 83)  
 LATITUDE = 39°46'49.22" (39.780339)  
 LONGITUDE = 109°16'45.53" (109.279314)  
 (AUTONOMOUS NAD 27)  
 LATITUDE = 39°46'49.33" (39.780369)  
 LONGITUDE = 109°16'43.11" (109.278642)

*McELVAIN OIL & GAS PROPERTIES, INC.*

1050 17<sup>TH</sup> STREET  
SUITE 1800  
DENVER, COLORADO 80265

E. REED FISCHER  
SENIOR OPERATIONS ENGINEER  
E-MAIL: REEDF@MCELVAIN.COM

TELEPHONE 303/893-0933 EXT. 330  
FAX 303/893-0914

September 4, 2008

Bureau of Land Management  
Vernal Field Office  
170 S. 500 E.  
Vernal, Utah 84078

Attn: Minerals

Re: Slick Rock # 18 - 4  
Uintah County, Utah

Gentlemen:

This letter is to inform you that Permitco Inc. is authorized to act as Agent and to sign documents on behalf of McElvain Oil & Gas Properties, Inc. when necessary for filing county, state and federal permits including Onshore Order No.1 APDs, Right of Way applications, etc., for the above mentioned well.

It should be understood that Permitco is acting as Agent only in those matters stated above and is not responsible for drilling, completion, production or compliance with operational regulations.

McElvain Oil & Gas Properties, Inc. agrees to accept full responsibility for operations conducted in order to drill, complete and produce the above mentioned well.

Sincerely,



E. Reed Fischer

**CONFIDENTIAL - TIGHT HOLE**

**ONSHORE OIL & GAS ORDER NO. 1**

**Approval of Operations on Onshore  
Federal and Indian Oil & Gas Leases**

**Slick Rock Federal #18-4  
672' FNL and 836' FWL  
NW NW Section 18, T12S - R24E  
Uintah County, Utah**

**CONFIDENTIAL-TIGHT HOLE**

**Prepared For:**

**McElvain Oil & Gas Properties, Inc.**

**By:**

**PERMITCO INC.  
P.O. Box 99  
Eastlake, CO 80614  
303/857-9999**

**Copies Sent To:**

- 3 - Bureau of Land Management - Vernal, UT**
- 1 - Utah Division of Oil, Gas & Mining - SLC, UT**
- 2 - McElvain Oil & Gas Properties, Inc. - Denver, CO**



ONSHORE ORDER NO. 1  
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**Slick Rock Federal #18-4**  
672' FNL and 836' FWL  
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Uintah County, Utah

CONFIDENTIAL - TIGHT HOLE

Lease No. UTU-73704

DRILLING PROGRAM

Page 1

ONSHORE OIL & GAS ORDER NO. 1  
Approval of Operations on Onshore  
Federal and Indian Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Order No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to insure compliance.

1. ESTIMATED TOPS OF ALL GEOLOGIC GROUPS, FORMATIONS, MEMBERS OR ZONES

<i>Formation</i>	<i>Depth</i>	<i>Subsea</i>
Green River	272'	+5820'
Uteland Butte Limestone	2,272'	+3820'
Wasatch	2,372'	+3720'
Mesaverde	3,872'	+2220'
Castlegate	6,137'	-45'
Mancos	6,362'	-270'
Mancos "B"	7,162'	-1,070'
Dakota Silt	10,450'	-4,358'
Morrison	10,750'	-4,658'
Entrada	11,300'	-5,208'
Carmel	11,460'	-5,368'
Navajo-Nugget	11,535'	-5,443'
Wingate	11,765'	-5,673'
Moenkopi	12,300'	-6,208'
Weber	12,800'	-6,708'
Maroon	12,850'	-6,758'



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<i>Formation</i>	<i>Depth</i>	<i>Subsea</i>
Morgan	13,250'	-7,158'
Mississippian	13,500'	-7,408'
TD	13,750'	-7,658'

2. **ESTIMATED DEPTH AND THICKNESS OF WATER, OIL, GAS AND OTHER MINERAL ZONES**

<i>Substance</i>	<i>Formation</i>	<i>Depth</i>	<i>Thickness</i>
Gas, Brine, Water	Dakota Silt	10,450'	300'
Gas, Brine, Water	Entrada	11,300'	160'
Gas, Brine, Water	Navajo-Nugget	11,535'	235'
Gas, Brine, Water	Mississippian	13,500'	200'

- a. The lessee/operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled and analyzed (a copy of the analyses to be submitted to the BLM Field Office in Vernal, Utah).
- b. All oil and gas shows shall be adequately tested for commercial possibilities, reported, and protected.
- c. The lessee-operator must report encounters of all non oil and gas mineral resources (such as Gilsonite, tar sands, oil shale, etc.) to Peter Sokolosky or another geologist of the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- d. All shows of fresh water and minerals shall be reported and protected. A sample shall be taken of any water flows and a water analysis furnished the BLM, Vernal Field Office. All oil and gas shows shall be adequately tested for commercial possibilities, reported, and protected.



3. **PRESSURE CONTROL EQUIPMENT**

McElvain Oil & Gas Properties, Inc.'s minimum specifications for pressure control equipment are as follows:

Ram Type: A Class III 5000 psi WP BOP system as described in 43 CFR 3160 "Onshore Oil and Gas Order No. 2" will be utilized. The system will consist of a 5000 psi ram preventer with one blind and two pipe rams. The system may utilize a drilling spool, an annular preventer and a rotating head. The BOP system, including the surface casing, will be pressure tested following initial installation and prior to drill-out of the surface casing. Pressure tests will be conducted to the minimum standards set forth in "Onshore Oil and Gas Order No. 2". The BOP will be mechanically checked daily during the drilling operation.

Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 70 percent of internal yield pressure of casing. Pressure shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer. If a test plug is utilized, no bleed-off pressure is acceptable. For a test not utilizing a test plug, if a decline in pressure of more than 10 percent in 30 minutes occurs, the test shall be considered to have failed. Valve on casing head below test plug shall be open during test of BOP stack.

Annular type preventers (if used) shall be tested to 50 percent of rated working pressure. Pressure shall be maintained at least 10 minutes or until provisions of test are met, whichever is longer.

As a minimum, the above test shall be performed:

- a. when initially installed;
- b. whenever any seal subject to test pressure is broken
- c. following related repairs; and
- d. at 30-day intervals

Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.

Valves shall be tested from working pressure side during BOPE tests with all down stream valves open.

When testing the kill line valve(s) the check valve shall be held open or the ball removed.

Annular preventers shall be functionally operated at least weekly.



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CONFIDENTIAL - TIGHT HOLE

Lease No. UTU-73704

DRILLING PROGRAM

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Pipe and blind rams shall be activated each trip, however, this function need not be performed more than once a day.

Pressure tests shall apply to all related well control equipment.

All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and NOT by the rig pumps. Test shall be reported in the driller's log.

BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.

Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.

No aggressive/fresh hard-banded drill pipe shall be used within casing.

**Cement baskets shall not be run on surface casing.**

BOP systems shall be consistent with API RP53. Pressure tests will be conducted before drilling out from under casing strings which have been set and cemented in place. Blowout preventer controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection will be recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.

**Operator requests a variance to regulations requiring a straight run blooie line (when possible, a straight run blooie line will be used).**

**Operator requests a variance to regulations requiring an automatic ignitor or continuous pilot light on the blooie line.**

The District Office should be notified, with sufficient lead time, in order to have the BLM representative on location during pressure testing.

- a. The size and rating of the BOP stack is shown on the attached diagram. Although a rig has not been chosen to drill this well, most of the equipment for this depth of hole in the area use a 5000 psi working pressure blowout preventor.



- b. A choke line and a kill line are to be properly installed. The kill line is not to be used as a fill-up line.
- c. The accumulator system shall have a pressure capacity to provide for repeated operation of hydraulic preventers.
- d. Drill string safety valve(s), to fit all tools in the drill string, are to be maintained on the rig floor while drilling operations are in progress.

**4. PROPOSED CASING PROGRAM**

- a. **Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing and cementing operations and BOPE & casing pressure tests.**
- b. The proposed casing and cementing program shall be conducted as approved to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain the maximum pressure to which it will be exposed during normal drilling operations. Determination of casing setting depth shall be based on all relevant factors, including; presence/absence of hydrocarbons; fracture gradients; usable water zones; formation pressures; lost circulation zones; other minerals; or other unusual characteristics. All indications of usable water shall be reported.
- c. Casing design shall assume formation pressure gradients of 0.44 to 0.50 psi per foot for exploratory wells (lacking better data).
- d. Casing design shall assume fracture gradients from 0.70 to 1.00 psi per foot for exploratory wells (lacking better data)
- e. Casing collars shall have a minimum clearance of 0.422 inches of all sides in the hole/casing annulus, with recognition that variances can be granted for justified exceptions.
- f. All waiting on cement times shall be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.



- g. All casing except the conductor casing, shall be new or reconditioned and tested used casing that meets or exceeds API standards for new casing.
- h. The surface casing shall be cemented back to surface either during the primary cement job or by remedial cementing.
- i. All indications of usable water shall be reported to the authorized officer prior to running the next string of casing or before plugging orders are requested, whichever occurs first.
- j. Three centralizers will be run on the bottom three joints of surface casing with a minimum of one centralizer per joint starting with the shoe joint.
- k. Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a suitable preflush fluid, inner string cement method, etc. shall be utilized to help isolate the cement from contamination by the mud fluid being displaced ahead of the cement slurry.
- l. All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string length or 1500 psi, whichever is greater, but not to exceed 70 percent of the minimum internal yield. If pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.
- m. On all exploratory wells, and on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- n. The proposed casing program will be as follows:

<i>Purpose</i>	<i>Depth</i>	<i>Hole Size</i>	<i>O.D.</i>	<i>Weight</i>	<i>Grade</i>	<i>Type</i>	<i>New/Used</i>
Surface	0 - 1,500'	12-1/4"	9-5/8"	36#	J-55	STC	New
*Intermediate	0 - 7,000'	8-3/4"	7"	26#	L-80	LTC	New
Production	0 - 13,900'	7-7/8"	4-1/2"	13.5#	P-110	LTC	New



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**DRILLING PROGRAM**

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<i>Purpose</i>	<i>Collapse</i>	<i>Burst</i>	<i>Tensile</i>
Surface	2,020	3,520	453,000
*Intermediate	5,410	7,240	519,000
Production	10,680	12,410	338,000

\* Intermediate casing may be omitted if hole conditions allow.

- o. Casing design subject to revision based on geologic conditions encountered.

**5. PROPOSED CEMENTING PROGRAM**

<i>Surface</i>	<i>Type and Amount</i>
TOC @ Surface	Lead: 200 sx Hi-Fill Lite, 11.0 ppg, 3.82 ft3/sk. Tail: 200 sx Premium Type G with 2% CaCl, 1/4 pps Flocele, 15.6 ppg, 1.15 ft3/sk.
<i>Intermediate</i>	<i>Type and Amount</i>
TOC @ Surface	1010 sx 50:50:2 (Poz:G:Gel), 2% bwoc Bentonite, 3% bwow KCl, 1/4 pps celloflake, 0.1% bwoc Retarder, 0.9% bwoc Fluid Loss Control, 1 gal/100 sk Anti-foamer, 0.2% bwoc Gas Block, 14.4 ppg, 1.24 ft3/sk.
<i>Production</i>	<i>Type and Amount</i>
TOC @ 5,500'	570 sx 50:50:2 (Poz:G:Gel), 2% bwoc Bentonite, 35% Silica Flour, 3% bwow KCl, 1/4 pps Cello-Flake, 0.2% bwoc Retarder, 0.9% bwoc Fluid Loss Control, 1 gal/sk Anti-Foamer, 0.2% bwow Gas Block, 70.7% Fresh Water, 14.4 ppg, 1.65 ft3/sk.



\*If no intermediate casing is run, the following production casing cement will be run:

<i>Production</i>	<i>Type and Amount</i>
TOC @ Surface	<p><b>Stage 1:</b> 500 sx 50:50:2 (Poz:G:Gel), 2% bwoc Bentonite, 35% Silica Flour, 3% bwow KCl, 1/4 pps Cello-Flake, 0.2% bwoc Retarder, 0.9% bwoc Fluid Loss Control, 1 gal/sk Anti-Foamer, 0.2% bwow Gas Block, 70.7% Fresh Water, 14.4 ppg, 1.65 ft<sup>3</sup>/sk.</p> <p><b>Stage 2:</b> 2050 sx 50:50:2 (Poz:G:Gel), 2% bwoc Bentonite, 3% bwow KCl, 1/4 pps celloflake, 0.1% bwoc Retarder, 0.9% bwoc Fluid Loss Control, 1 gal/100 sk Anti-foamer, 0.2% bwoc Gas Block, 14.4 ppg, 1.24 ft<sup>3</sup>/sk.</p>

- a. Anticipated cement tops will be reported as to depth; not the expected number of sacks of cement to be used. The District Office should be notified, with sufficient lead time, in order to have a BLM representative on location while running all casing strings and cementing.
- b. After cementing but before commencing any test, the casing string shall stand cemented until the cement has reached a compressive strength of at least 500 psi at the shoe. WOC time shall be recorded in the driller's log.
- c. Production casing cement shall be brought up and into the surface casing. The minimum cement top will be a minimum of 200' above the surface casing shoe.
- d. A Cement Bond Log (CBL) shall be run from the production casing shoe to the surface casing shoe. A field copy of the CBL shall be submitted to the BLM Vernal Field Office.
- e. The following reports shall be filed with the District Manager within 30 days after the work is completed.
  1. Progress reports, Form 3160-5 (formerly 9-331) "Sundry Notices and Reports on Wells", must include complete information concerning:
    - a. Setting of each string of casing, showing the size, grade, weight of casing set, hole size, setting depth, amounts and type of cement used, whether cement circulated or the top of the cement behind the casing, depth of cementing tools used, casing test method and results, and the date work was done. Show the spud date on the first reports submitted.



- b. Temperature or bond logs must be submitted for each well where the casing cement was not circulated to the surface.
  
- f. Auxiliary equipment to be used is as follows:
  - 1. Kelly cock
  - 2. No bit float is deemed necessary.
  - 3. A sub with a full opening valve.

6. **PROPOSED CIRCULATING MEDIUM OR MEDIUMS**

<i>Interval</i>	<i>Mud Type</i>	<i>Mud Wt.</i>	<i>Visc.</i>	<i>F/L</i>	<i>pH</i>
0' - 1,500'	Water	8.3-8.6	27-32	N/C	9.0-9.5
1,500' - 7,000'	LSND	8.8-9.8	32-48	<20	9.0-9.5
7,000' - 13,900'	LSND	9.0-10.5	38-48	8-10	9.0-9.5

There will be sufficient mud on location to control a blowout should one occur.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, static filtration loss, and Ph.

- a. Mud monitoring equipment to be used is as follows:
  - 1. Periodic checks will be made each tour of the mud system. The mud level will be checked visually.
- b. No chromate additives will be used in the mud system on Federal and/or Indian lands without prior BLM approval to ensure adequate protection of fresh water aquifers.
- c. No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.



- d. The use of materials under BLM jurisdiction will conform to 43 CFR 3610.2-3.

**7. PROPOSED TESTING, LOGGING AND CORING**

The anticipated type and amount of testing, logging and coring are as follows:

- a. No drill stem tests are anticipated, however, if DST's are run, the following requirements will be adhered to:

Initial opening of drill stem test tools shall be restricted to daylight hours unless specific approval to start during other hours is obtained from the authorized officer. However, DST's may be allowed to continue at night if the test was initiated during daylight hours and the rate of flow is stabilized and if adequate lighting is available (i.e. lighting which is adequate for visibility and vapor-proof for safe operations). Packers can be released, but tripping shall not begin before daylight, unless prior approval is obtained from the authorized officer. Closed chamber DSTs may be accomplished day or night.

A DST that flows to the surface with evidence of hydrocarbons shall be either reversed out of the testing string under controlled surface conditions. This would involve provided some means for reverse circulation.

Separation equipment required for the anticipated recovery shall be properly installed before a test starts.

All engines within 100 feet of the wellbore that are required to "run" during the test shall have spark arresters or water cooled exhausts.

- b. The logging program will consist of the following:

- Mudlogging: Mud logging unit in service at approximately 2,000'.

- Electric Logging: Dual Induction and Sonic to be run from TD to Surface, Density Neutron to be run from TD to 2,000', and a Cement Bond Log to be run from TD to Top of Cement.

- c. A Cement Bond Log will be run from the production casing shoe to the surface casing shoe and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to the Vernal Field Office.



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DRILLING PROGRAM

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- d. **Please submit an electronic copy of all other logs run on this well in LAS format to UT VN Welllogs@blm.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- e. All off-lease storage, off-lease measurement, or commingling on-lease or off-lease shall have prior written approval from the BLM, Vernal Field Office.
- f. All measurement points shall be identified as point of sales or allocation for royalty determination prior to the installation of facilities.
- g. No cores are anticipated.
- h. Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with form 3160-4. Samples (cutting, fluids, and/or gases will be submitted when requested by the authorized officer (AO).
- i. The anticipated completion program will be as follows: After presetting surface casing, move in a drilling rig (contractor yet to be determined) capable of drilling to 13,900' TD, approximately 400' below the top of the Mississippian formation, log well and run new 4.5" production casing to TD. Cement the production casing 1,500' into the intermediate casing (if intermediate casing is run) or to ground level if no intermediate casing is run. Land and cut the production casing. Install a protection plate. RDMO drilling rig. Evacuate and pull cellar ring before backfilling around wellhead, grading service rig pad and fencing any remaining unfenced sides of the reserve pit. Install anchors. Install and test tubing head with 2 wing valves. (Use 10M wellhead configuration if any zones below Dakota are to be tested and 5M wellhead configuration if no zones below Dakota will be tested). MIRU the service rig. Drill out stage tool(s) if necessary and run a cement bond log. NU and test BOPE. Depending on the quality of drilling shows and the corresponding open hole log response it is anticipated that completion operations will begin by perforating the Mississippian formation via casing guns and swab testing through tubing prior to fracture stimulating. If the swab tests do not appear promising or is no commercial production is established following stimulation then plug back and continue testing additional up-hole zones. It is anticipated that each prospective pay zone including the Mississippian carbonates, Navajo-Nugget, Entrada, Dakota-Cedar



Mountain formation(s) will be selectively tested in this manner until commercial production is established and the service rig is released or the well is plugged and abandoned. Depending on the test results, a battery and surface pipe line will be constructed and a request to commingle various pay zones may follow before placing the well on production.

- j. Daily drilling and completion progress reports shall be submitted to the BLM in Vernal on a weekly basis.

**8. EXPECTED BOTTOM HOLE PRESSURE**

- a. The expected bottom hole pressure is 6464 psi. The maximum bottom hole temperature anticipated is 230° F.
- b. No hydrogen sulfide gas is anticipated.

**9. OTHER INFORMATION AND NOTIFICATION REQUIREMENTS**

- a. Drilling is planned to commence upon approval of this application.
- b. It is anticipated that the drilling of this well will take approximately 42 days.
- c. The BLM in Vernal, Utah shall be notified of the anticipated date of location construction commencement and of anticipated spud date.
- d. No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the AO. If operations are to be suspended for more than 30 days, prior approval of the BLM, Vernal Field Office shall be obtained and notification given before resumption of operations.
- e. The spud date will be reported orally to the Vernal Field Office within 24 hours of spudding. The oral report will be followed up with a Sundry Notice.
- f. Chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.



- g. Any change in the program shall be approved by the BLM, Vernal Field Office. "Sundry Notices and Reports on Wells" (Form BLM 3160-5) shall be filed for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.
- h. Emergency approval may be obtained orally, but such approval does not waive the written report requirement. Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan pursuant to Onshore Oil & Gas Order No. 1 of 43 CFR 3164.1 and prior approval by the BLM, Vernal Field Office.
- i. In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, CO 80217-0110, or call 1-800-525-7922 (303)231-3650 for reporting information.
- j. Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported in accordance with the requirements of NTL-3A or its revision.
- k. If a replacement rig is contemplated for completion operations, a "Sundry Notice" Form 3160-5 to that effect will be filed, for prior approval of the AO, and all conditions of this approved plan are applicable during all operations conducted with the replacement rig.
- l. Should the well be successfully completed for production, the AO will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communications, not later than 5 days following the date on which the well is placed on production.
- m. Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90 day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by the Vernal Field Office.



- n. Pursuant to NTL-4A, lessees or operators are authorized to vent/flare gas during initial well evaluation tests, not exceeding a period of 30 days or the production of 50 MMCF of gas, whichever occurs first. An application must be filed with the District Engineer and approval received, for any venting/flaring of gas beyond the initial 30 day or authorized test period. Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from Field Office Petroleum Engineers.
- o. A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM, Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- p. A first production conference will be scheduled within 15 days after receipt of the first production notice.
- q. Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment: (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.
- r. Pursuant to Onshore Oil and Gas Order No. 1, lessees and operators have the responsibility to see that their exploration, development, production, and construction operations are conducted in a manner which conforms with applicable Federal laws and regulations and with State and local laws and regulations to the extent that such State and local laws are applicable to operations on Federal or Indian lands.
- s. There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. All wells, whether drilling, production, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well. Any changes in operation must have prior approval from the BLM, Vernal Field Office Petroleum Engineers.



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672' FNL and 836' FWL  
NW NW Section 18, T12S-R24E  
Uintah County, Utah

CONFIDENTIAL - TIGHT HOLE

Lease No. UTU-73704

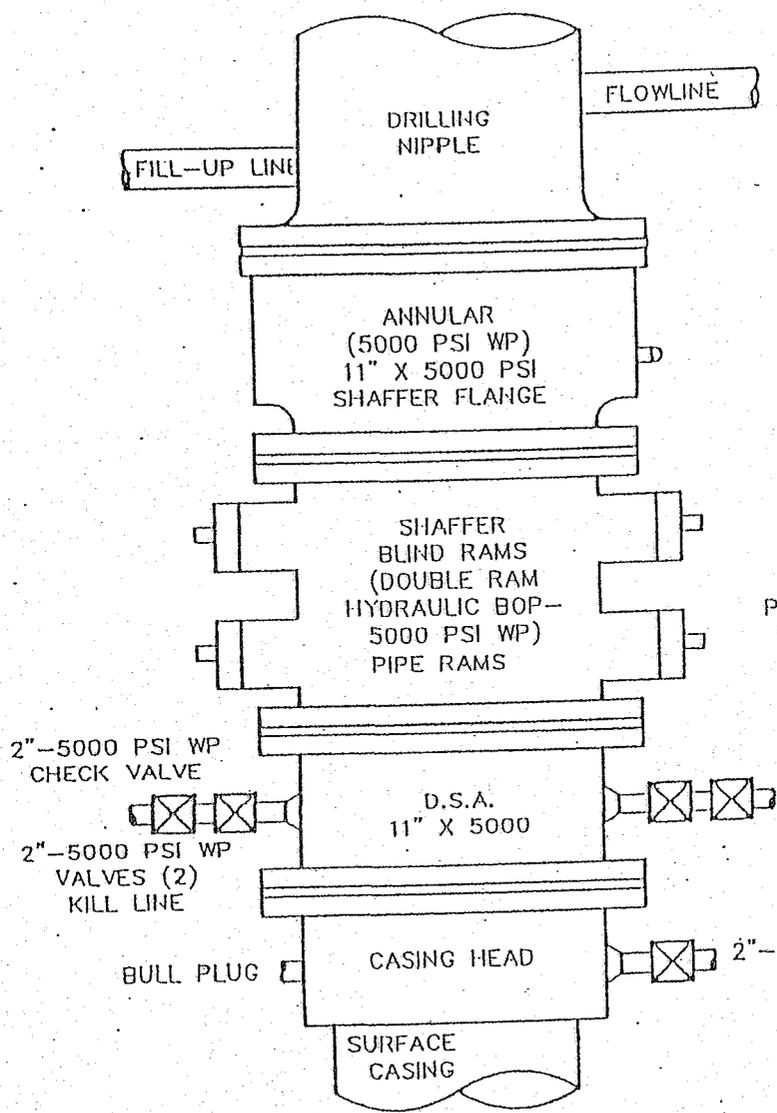
DRILLING PROGRAM

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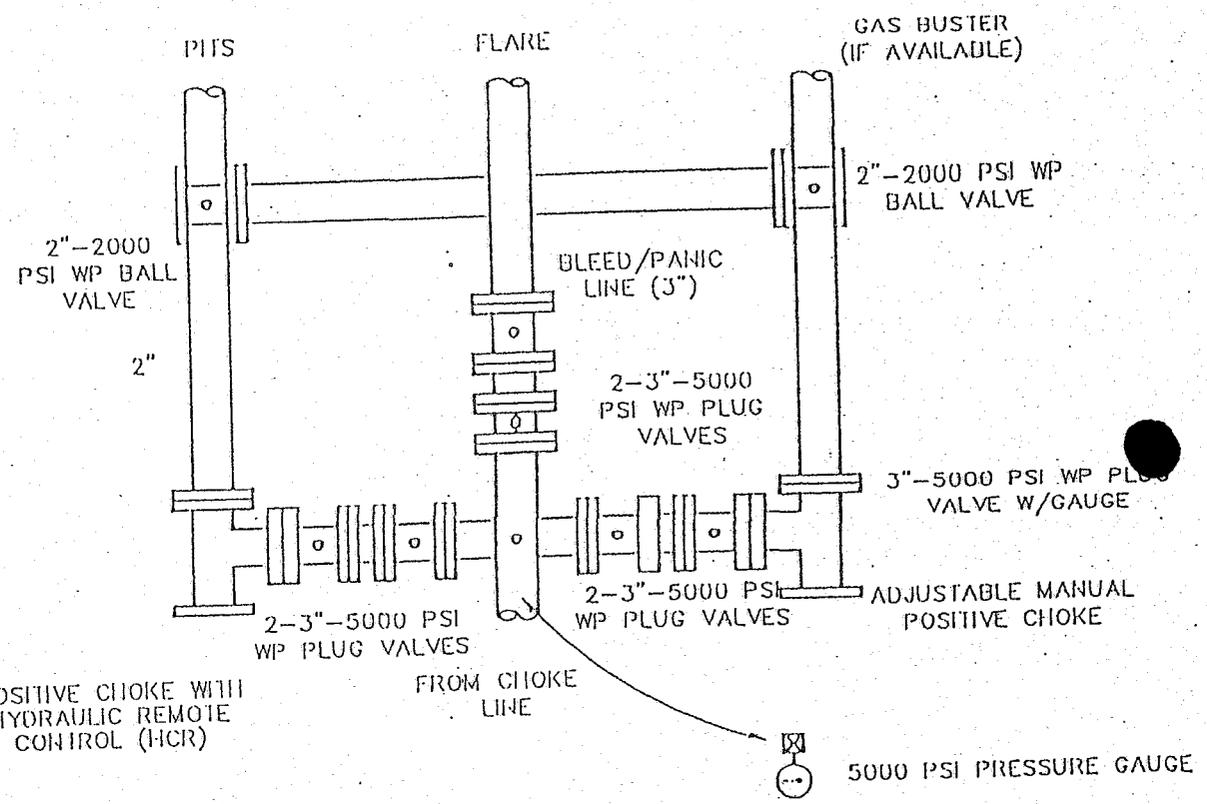
- t. This APD is subject to the requirement that, should the well be successfully completed for production, the BLM, Vernal Field Office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in the Vernal Field Office no later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
1. Operator name, address, and telephone number.
  2. Well name and number.
  3. Well location (1/4 1/4, Sec., Twn, Rng, and P.M.).
  4. Date well was placed in a producing status (date of first production for which royalty will be paid).
  5. The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  6. The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  7. Unit agreement and/or participating area name and number, if applicable.
  8. Communitization agreement number, if applicable.
- u. All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events as defined in NTL 3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.



BOP SCHEMATIC  
5000 PSI WORKING PRESSURE



PLAN VIEW CHOKE MANIFOLD



THE HYDRAULIC CLOSING UNIT WILL BE LOCATED MORE THAN 30' FROM THE WELLHEAD. CHOKE AND BLEED/PANIC LINES WILL GO TO THE PIT AND FLARE. ALL CONNECTIONS IN CHOKE LINES AND MANIFOLD WILL BE FLANGED OR WELDED. ALL FLANGES SHOULD BE RING JOINT GASKET TYPE. ALL TURNS IN LINES SHALL BE CONSTRUCTED USING TARGETING 90° TEES OR ELLS. ALL LINES SHALL BE ANCHORED.

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SURFACE USE PLAN

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**ONSHORE OIL & GAS ORDER NO. 1  
NOTIFICATION REQUIREMENTS**

<i>Title</i>	<i>Name</i>	<i>Office Phone</i>	<i>Cell Phone</i>
Petroleum Engineer	Matt Baker	435-781-4490	435-828-4470
Petroleum Engineer	Michael Lee	435-781-4432	435-828-7875
Petroleum Engineer	James Ashley	435-781-4470	435-828-7874
Petroleum Engineer	Ryan Angus	435-781-4430	435-828-7368
Supervisory Petroleum Technician	Jamie Sparger	435-781-4502	435-828-3913
NRS/Enviro Scientist	Paul Buhler	435-781-4475	435-828-4029
NRS/Enviro Scientist	Karl Wright	435-781-4484	
NRS/Enviro Scientist	Holly Villa	435-781-4404	
NRS/Enviro Scientist	Chuck MacDonald	435-781-4441	
NRS/Enviro Scientist	Jannice Cutler	435-781-3400	
NRS/Enviro Scientist	Michael Cutler	435-781-3401	
NRS/Enviro Scientist	Anna Figueroa	435-781-3407	
NRS/Enviro Scientist	Verlyn Pindell	435-781-3402	
NRS/Enviro Scientist	Darren Williams	435-781-4447	
NRS/Enviro Scientist	Nathan Packer	435-781-3405	
<b>After Hours Contact Number:</b>		<b>435-781-4513</b>	<b>435-781-4410 Fax</b>



<b>NOTIFICATION REQUIREMENTS</b>	
Location Construction (Notify NRS/Enviro Scientist)	- Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify NRS/Enviro Scientist)	- Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	- Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supervisory Petroleum Technician)	- Twenty-Four (24) hours prior to running casing and cementing all casing strings.
BOP & Related Equipment Tests (Notify Supervisory Petroleum Technician)	- Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	- Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

The onsite inspection for the subject well site was conducted on Thursday, April 24, 2008 at approximately 1:45 p.m. Weather conditions were cool, breezy and overcast. In attendance at the onsite inspection were the following individuals:

Holly Villa	Natural Resource Specialist	Bureau of Land Management
Amy Torres	Wildlife Biologist	Bureau of Land Management
Randy Smith	Field Assistant	Permitco Inc.
Reed Fischer	Senior Operations Engineer	McElvain Oil & Gas Properties, Inc.
Ivan Sadler	Field Foreman	McElvain Oil & Gas Properties, Inc.

**1. EXISTING ROADS**

- a. The proposed well site is located approximately 66.9 miles southwest of Vernal, Utah.



- b. Directions to the location from Vernal, Utah are as follows:

Proceed southeast on Highway 40 for 22.5 miles. Turn right onto Highway 40 and proceed south for 35.1 miles. Continue southwesterly 8.5 miles until reaching a fork in the road. Turn left and proceed southeast 1.3 miles. Turn right and proceed south 0.3 miles.

- c. For location of access roads within a 2-Mile radius, see Maps A & B.

- d. Improvement to existing main roads will not be required.

- e. All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.

- f. Existing roads and newly constructed roads on surface under the jurisdiction of any Surface Managing Agency shall be maintained in accordance with the standards of the SMA.

## 2. **NEW OR RECONSTRUCTED ACCESS ROADS**

- a. No new access will be constructed.
- b. The maximum grade of the new construction will not exceed 3%.
- c. No culverts or low water crossings will be necessary.
- d. The use of surfacing material is not anticipated, however it may be necessary depending on weather conditions.
- e. No cattle guards will be necessary.
- f. Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.
- g. No upgrading of the access roads will be necessary.



- h. The road has been constructed/upgraded to meet the standards of the anticipated traffic flow and all weather road requirements. Construction/upgrading shall include ditching, draining, graveling, crowing and capping the roadbed as necessary to provide a well constructed safe road. Prior to upgrading, the road shall be cleared of any snow cover and allowed to dry completely. Traveling off the 30 foot right-of-way will not be allowed. Road drainage crossings shall be of the typical dry creek drainage crossing type. Crossings shall be designed so they will not cause siltation or accumulation of debris in the drainage crossing nor shall the drainages be blocked by the roadbed. Erosion of drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts. Upgrading shall not be allowed during muddy conditions. Should mud holes develop, they shall be filled in and detours around them avoided.
- i. No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.
- j. No BLM road right of ways will be necessary since all access roads are located within the lease boundary or maintained by the County Road Department.
- k. McElvain has received approval from Alex Campbell, Vice President of Enduring Resources for the encroachment of the access road and pipeline. A written agreement will be submitted under separate cover.

**3. LOCATION OF EXISTING WELLS WITHIN A 1-MILE RADIUS OF THE PROPOSED LOCATION**  
(See Map "C")

- a. Water wells - none
- b. Producing wells - two
- c. Shut-in wells - five
- d. Temporarily abandoned wells - none
- e. Disposal wells - none
- f. Abandoned wells - one
- g. Dry Holes - none



**4. LOCATION OF EXISTING AND/OR PROPOSED PRODUCTION FACILITIES**

- a. All permanent structures (onsite for six months or longer) constructed or installed (including oil well pump jacks) will be painted Olive Black. All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded.
- b. If storage facilities/tank batteries are constructed on this lease, the facility/battery or the well pad shall be surrounded by a containment dike of sufficient capacity to contain at a minimum, the entire contents of the largest tank within the facility/battery, unless more stringent protective requirements are deemed necessary by the authorized officer.
- c. If the well is productive, a production facility layout will be submitted via sundry.
- d. All loading lines will be placed inside the berm surrounding the tank battery.
- e. Gas meter runs for each well will be located within 500 feet of the wellhead. The gas flow line will be buried or anchored down from the wellhead to the separator. Meter runs will be housed and/or fenced.
- f. If at any time the facilities located on public land and authorized by the terms of the lease are no longer included in the lease (due to a contraction in the unit or other lease or unit boundary change), BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental or other financial obligation as determined by the authorized officer.
- g. Any necessary pits will be properly fenced to prevent any wildlife entry.
- h. All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to.
- i. All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the District Manager.
- j. All off-lease storage, off-lease measurement, or commingling on-lease or off-lease shall have prior written approval from the BLM, Vernal Field Office.
- k. All measurement points shall be identified as point of sales or allocation for royalty determination prior to the installation of facilities.



- i. Oil and gas meters shall be calibrated in place prior to any deliveries. The Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM, Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement.
- m. All access roads will be maintained as necessary to prevent erosion and accommodate year-round traffic.
- n. The road will be maintained in a safe useable condition.
- o. Produced water will be stored in a 300 bbl heated, insulated tank, then hauled to a commercial disposal site such as Disposal Inc., or Brennan Bottom.
- p. The gas will be transported by an existing 3" welded steel gas pipe line lying above ground. No new surface disturbance will be required to connect to this existing pipe line currently servicing the Enduring Resources offset well lying 226' to the southwest of the Slick Rock Federal #18-4 well bore. A minimum amount of pipe (150') may be necessary to connect this well to the existing pipe line but all of the new pipe will lie on lease.

**5. LOCATION AND TYPE OF WATER SUPPLY**

- a. The proposed water source will be from the Rose Wood Resources flowing water well, Well #5A, in Sec. 24, T11S - R24E, water permit number 49-1547, and/or Willow Creek, 30 miles southwest of Vernal in Sec. 29, T12S - R21E, water permit number T-75377, and/or the White River in Sec. 23, T10S - R23E, water permit number T-75517. Completion water will come from the same supply, or from the city of Vernal, Utah.
- b. Water will be hauled by Tu & Frum, Inc. (435/247-2377) to the location over the access roads shown on Maps A and B.
- c. No water well will be drilled on this lease.

**6. CONSTRUCTION MATERIALS**

- a. Surface and subsoil materials in the immediate area will be utilized.
- b. Any gravel used will be obtained from a commercial source.



- c. The use of materials under BLM jurisdiction will conform with 43 CFR 3610.2.3.
- d. No construction materials will be removed from Federal land.
- e. Operator shall notify any active Gilsonite mining operating within 2 miles of the location 48 hours prior to any blasting during construction for this well.

**7. METHODS OF HANDLING WASTE DISPOSAL**

- a. The reserve pit will be constructed so as not to leak, break, or allow discharge.
- b. At the request of the BLM, the reserve pit will be lined with a 12 mil liner. If fractured rock is encountered, the pit will be first lined with sufficient bedding (either straw or dirt) to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash, scrap pipe, etc., that could puncture the liner will be disposed of in the pit. More stringent protective requirements may be deemed necessary by the A.O.
- c. Burning will not be allowed. All trash will be contained in a trash cage and its contents removed at the end of drilling operations and hauled to an approved disposal sight.
- d. After first production, produced waste water will be confined to a unlined pit or storage tank for a period not to exceed ninety (90) days. During the 90-day period, in accordance with Onshore Order No. 7, an application for approval of a permanent disposal method and location, along with the required water analysis, will be submitted for the AO's approval. Failure to file an application within the time allowed will be considered an incident of noncompliance.
- e. Drill cuttings are to be contained and buried in the reserve pit.
- f. Any salts and/or chemicals which are an integral part of the drilling system will be disposed of in the same manner as the drilling fluid.
- g. A chemical porta-toilet will be furnished with the drilling rig.
- h. The produced fluids will be produced into a test tank until such time as construction of production facilities is completed. Any spills of oil, gas salt water or other produced fluids will be cleaned up and removed.



**8. ANCILLARY FACILITIES**

There are no airstrips, camps, or other facilities planned during the drilling of the proposed well.

**9. WELL SITE LAYOUT**

- a. The operator or his/her contractor shall contact the BLM Office at 435/781-4400 forty-eight (48) hours prior to construction activities.
- b. The reserve pit will be located on the northeast side of the location.
- c. The flare pit will be located on the south side of the reserve pit, a minimum of 100 feet from the well head and 20 feet from the reserve pit fence.
- d. Since the pad is existing, no additional topsoil can be salvaged, other than a small amount for the reverse pit area, located between corners 6 and C.
- e. Trees will be stockpiled near the well pad.
- f. Access to the well pad will be from the north as shown on the Pit & Pad Layout.
- g. See Location Layout for orientation of rig, cross section of drill pad and cuts and fills.
- h. The location of mud tanks; reserve pit, trash cage; pipe racks; living facilities and soil stockpiles will be shown on the Location Layout.
- i. All pits will be fenced according to the following minimum standards:
  1. 39 inch net wire shall be used with three strands of barbed wire on top of the net wire (barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence).
  2. The net wire shall be no more than 2-inches above the ground. The barbed wire shall be 3-inches above the net wire. Total height of the fence shall be at least 42-inches.



3. Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
  4. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any two posts shall be no greater than 16 feet.
  5. All wire shall be stretched, by using a stretching device, before it is attached to the corner posts.
- j. The reserve pit fencing will be on three sides during drilling operations and on the fourth side when the rig moves off the location. Pits will be fenced and maintained until cleanup.

10. **PLANS FOR SURFACE RECLAMATION**

Producing Location

- a. Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, equipment, debris, materials, trash and junk not required for production.
- b. Immediately upon well completion, any hydrocarbons on the pit shall be removed in accordance with 43 CFR 3162.7-1.
- c. If a plastic nylon reinforced liner is used it shall be torn and perforated before backfilling of the reserve pit.
- d. The reserve pit and that portion of the location not needed for production facilities or operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 120 days from the date of well completion. Before any dirt work takes place, the reserve pit must have all fluids and hydrocarbons removed and all cans, barrels, pipe, etc., will be removed.
- e. Reclamation of unused disturbed areas on the well pad/access road no longer needed for operations, such as cut slopes, and fill areas will be accomplished by grading, leveling and seeding as recommended by the Authorized Officer. A seed mixture will be specified by the Bureau of Land Management in their Conditions of Approval for the subject well.



Seeding will be performed immediately after the location has been reclaimed and the pit has been backfilled, regardless of the time of year. Seed will be broadcast and walked in with a dozer.

- f. The topsoil stockpile will be seeded as soon as the location has been constructed with the same recommended seed mix. The seed will be walked in with a cat.
- g. The seed mixture will be provided by the BLM as a Condition of Approval, or at the time of reclamation.

Plugged and Abandoned

- a. At such time as the well is plugged and abandoned, the operator shall submit a subsequent report of abandonment and BLM will attach the appropriate surface rehabilitation conditions of approval.
- b. Following well plugging and abandonment, the location, the access roads, pipelines, and other facilities shall be reclaimed. All disturbed surfaces shall be reshaped to approximate the original contour; the top soil respread over the surface; and, the surface revegetated per BLM requirements.
- c. Other reclamation methods including but not limited to mulching or soil treatments may be required on a site-specific basis.

Interim Surface Reclamation will be as follows:

- a. Immediately after final well completion, the location and surrounding area will be cleared of all unused tubing, materials, trash, and debris not required for production operations.
- b. Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in the reserve pit will be removed. Other waste and spoil materials will be disposed of immediately, weather permitting, upon final well completion.
- c. If a synthetic, nylon re-enforced, liner is used, the excess liner will be cut off and removed and the remaining liner will be torn and perforated while backfilling the reserve pit. Alternatively, the pit will be pumped dry, the liner folded into the pit, and the pit backfilled. The liner will be buried to a minimum of four (4) feet deep.



- d. The reserve pit will be reclaimed within 180 days from the date of final well completion, weather permitting.
- e. The reserve pit and that portion of the location not needed for production and storage facilities, and everyday production operations, will be reshaped to the approximate original contours to the extent possible. This will be completed by backfilling and crowning the pit to prevent water from standing. Topsoil will be re-spread up to the rig anchor points, excluding the area needed for production and storage facilities and everyday production operations. Re-seeding, using appropriate reclamation methods, will occur immediately following the re-spreading of topsoil, weather permitting. The Authorized Officer will provide a seed mixture to re-vegetate the reserve pit and other unused disturbed areas at the time of the onsite.

**11. SURFACE OWNERSHIP**

Access Roads - The majority of the access roads are maintained by the County Road Department or the Bureau of Land Management.

Well pad - The well pad is located on lands managed by the BLM.

**12. OTHER INFORMATION**

- a. A Class III archeological survey has been conducted by Montgomery Archaeological Consultants, Inc. and is attached. No cultural resources were found and clearance for the project has been recommended.
- b. A Paleontological Evaluation was done by Intermountain Paleo-Consulting and is attached.
- c. The operator is responsible for informing all persons in the areas who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the authorized officer (AO). Within five working days the AO will inform the operator as to:



- whether the materials appear eligible for the National Register of Historic Places;
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and
- a time frame for the AO to complete and expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that required mitigation has been completed, the operator will then be allowed to resume construction.
- d. The operator will control noxious weeds along rights-of-way for roads, pipelines, well sites, or other applicable facilities. A list of noxious weeds may be obtained from the BLM, or the appropriate County Extension Office. On BLM administered land it is required that a Pesticide Use Proposal shall be submitted, and given approval, prior to the application of herbicides or other pesticides or possible hazardous chemicals.
- e. Drilling rigs and/or equipment used during drilling operations on this wellsite will not be stacked or stored on Federal Lands after the conclusion of drilling operations or at any other time without BLM authorization. However, if BLM authorization is obtained, it is only a temporary measure.
- f. All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved plan of operations, and any applicable Notice to Lessees. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.
- g. A complete copy of the approved APD shall be on location during construction of the location and drilling activities.
- h. There will be no deviation from the proposed drilling and/or work over program without prior approval from the AO. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended or abandoned will be identified in accordance with 43 CFR 3162.



- i. "Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.
- j. This permit will be valid for a period of two years from the date of approval. An extension period may be granted, if requested, prior to the expiration of the original approval period. After permit termination, a new application will be filed for approval for any future operations.
- k. The operator or his contractor shall contact the BLM Offices at 435/781-4400 48 hours prior to construction activities.
- l. The BLM Office shall be notified upon site completion prior to moving on the drilling rig.

**AGENT AND OPERATOR'S CONTACT INFORMATION**

Permit Matters

**PERMITCO INC.**  
14421 County Road 10  
Ft. Lupton, CO 80621  
303/857-9999 (Office)  
303/857-0577 (Fax)  
Lisa Smith

Drilling & Completion Matters

**McElvain Oil & Gas Properties, Inc.**  
1050 - 17<sup>th</sup> Street, Suite 1800  
Denver, CO 80265  
Reed Fischer - Sr. Operations Engineer  
303/893-0933 ext. 330 (Office)  
303/893-0914 (Fax)  
303/694-4655 (Home)  
303/981-2921 (Cell)

Estes Jackson - Geologist  
303/893-0933 ext. 305 (Office)  
303/893-0914 (Fax)  
303/456-8932 (Home)  
303/882-4838 (Cell)



## PIPELINE INFORMATION

### Slick Rock Federal #18-4

1. The type of pipeline is a gathering system.
2. The outside diameters of all pipe sizes is 3 inches
3. The anticipated production through the line 1200 MCF/day.
4. The anticipated maximum test pressure is 360 psi.
5. The anticipated operating pressure is 250 psi.
6. The type of pipe is steel.
7. The method of coupling is welded.
8. There are no other pipelines to be associated in the same trench.
9. There are no other objects to be associated in the same trench.
10. The total length of pipeline is approximately 150 feet.
11. The pipeline will be laid on the surface across the existing well pad to the #12-24 shut-in-well.
12. No new surface disturbance will be required to connect to the existing pipeline currently servicing the Enduring Resources well lying 226' southwest of this location.
14. Reclamation procedures will include recontouring to original surface features, and reseeding as required by the BLM.



McElvain Oil & Gas Properties, Inc.

Slick Rock # 18-4

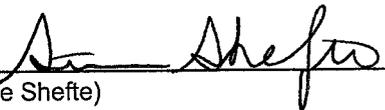
672' FNL & 836' FWL

NWNW Sec. 18, T12S-R24E

Uintah County, Utah

CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge, of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed this 4th day of September, 2008.

  
\_\_\_\_\_  
(Steve Shefte)

Vice President, Operations  
\_\_\_\_\_  
Title

1050 - 17th St., Ste. 1800 Denver, CO. 80265  
\_\_\_\_\_  
Address

(303) 893-0933 xtn 303  
\_\_\_\_\_  
Telephone

steves@mcelvain.com  
\_\_\_\_\_  
E-mail

# McELVAIN OIL & GAS PROP., INC.

## SLICKROCK #18-4

LOCATED IN UINTAH COUNTY, UTAH  
SECTION 18, T12S, R24E, S.L.B.&M.

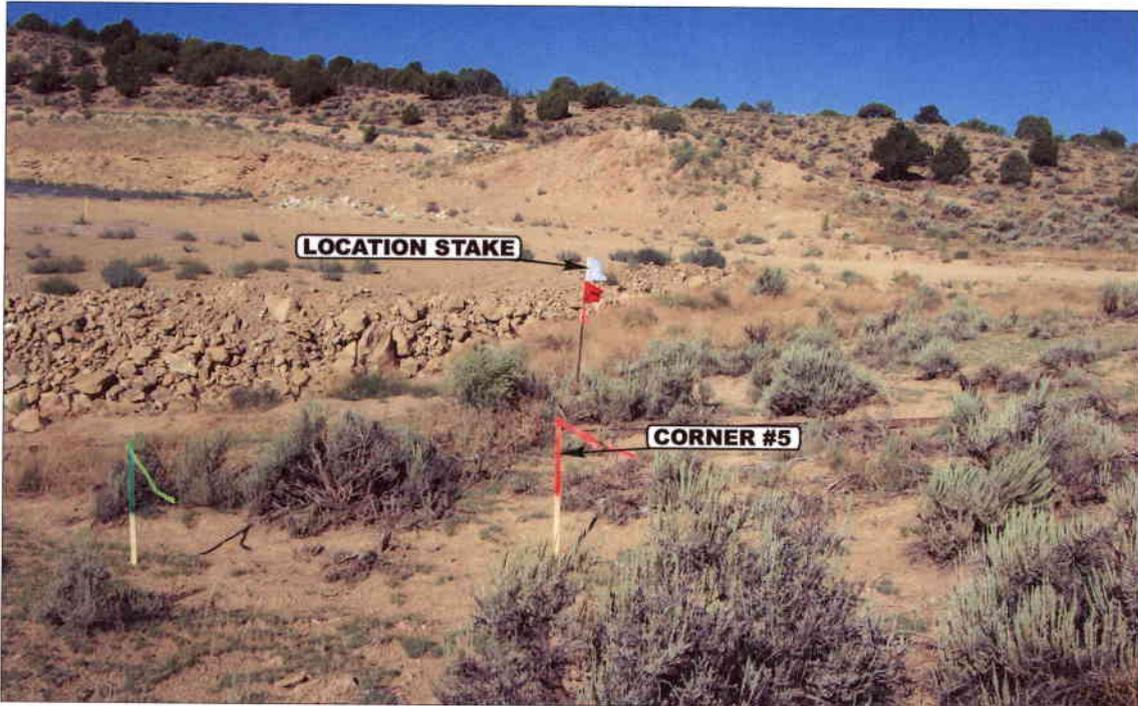


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: EASTERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: SOUTHERLY



- Since 1964 -

**UELS** Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS

07

09

07

MONTH

DAY

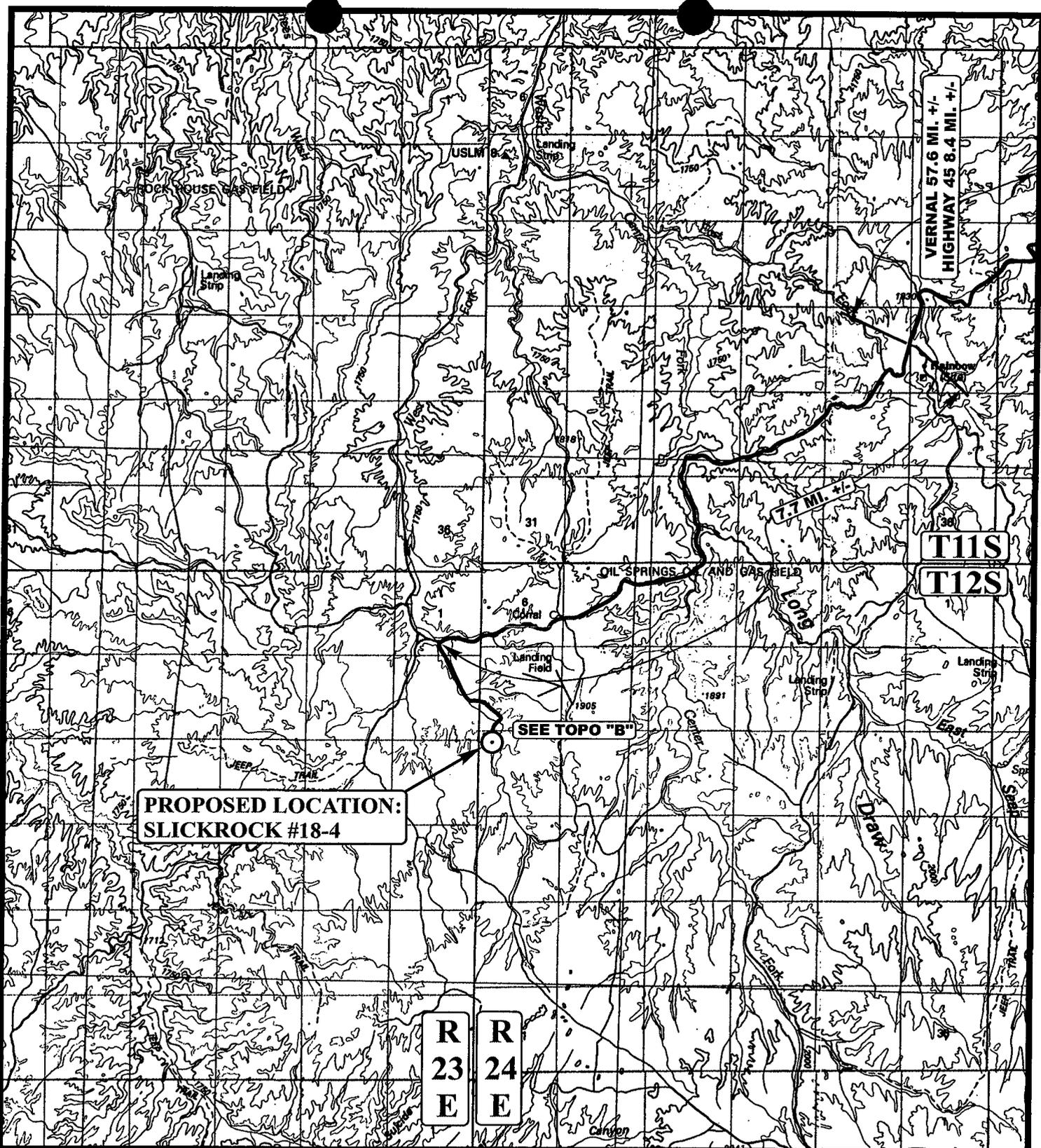
YEAR

PHOTO

TAKEN BY: J.R.

DRAWN BY: C.P.

REVISED: 08-13-07



**PROPOSED LOCATION:  
SLICKROCK #18-4**

**R 23 E**  
**R 24 E**

**T11S**  
**T12S**

**VERNAL 57.6 MI. +/-  
HIGHWAY 45 8.4 MI. +/-**

**7.7 MI. +/-**

**SEE TOPO "B"**

**LEGEND:**

○ PROPOSED LOCATION



**McELVAIN OIL & GAS PROP., INC.**

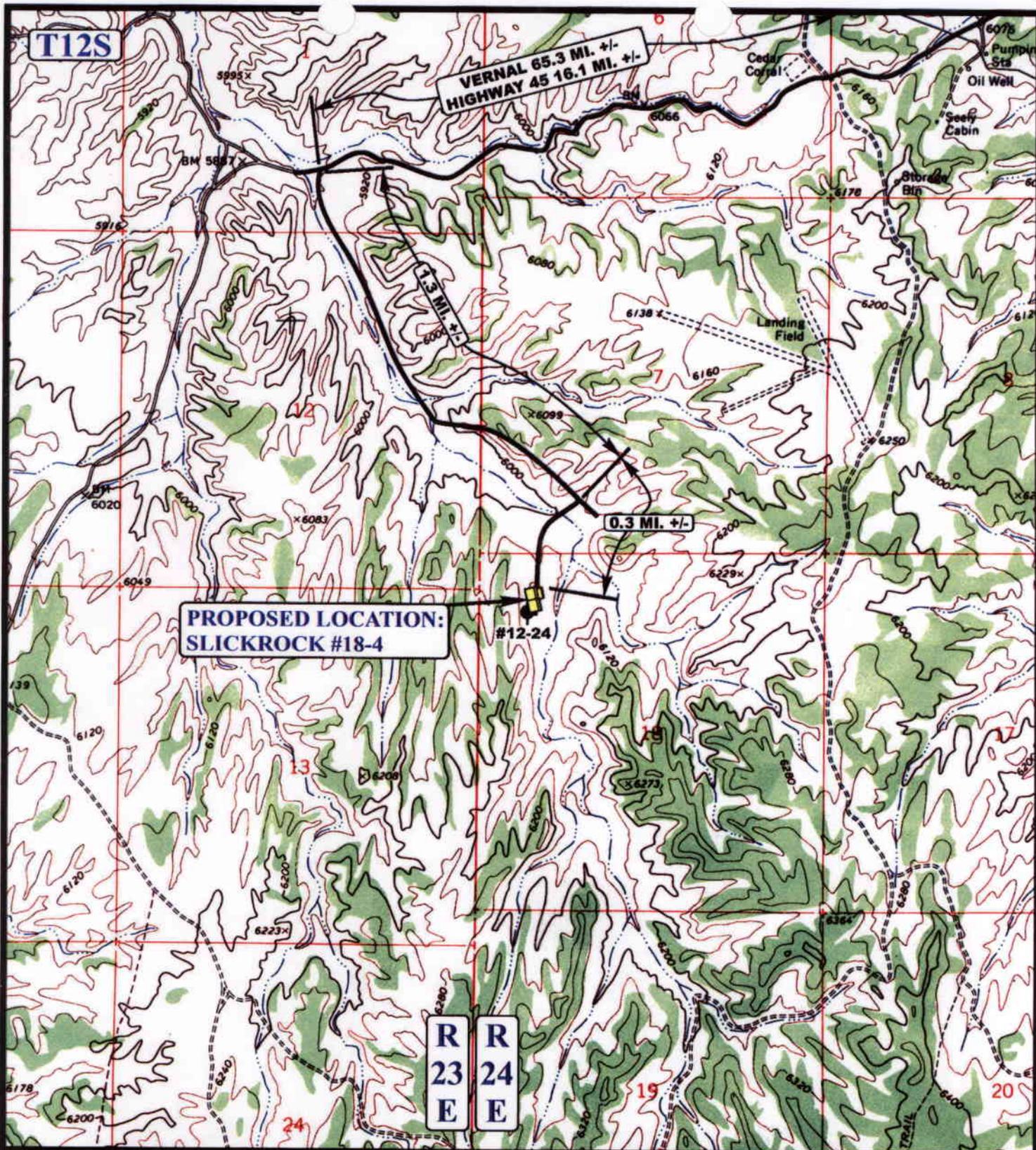
**SLICKROCK #18-4**  
**SECTION 18, T12S, R24E, S.L.B.&M.**  
**672' FNL 836' FWL**



**Utah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC** 07/09/07  
**MAP** MONTH DAY YEAR  
SCALE: 1:100,000 DRAWN BY: C.P. REVISED: 08-13-07





**PROPOSED LOCATION:  
SLICKROCK #18-4**

#12-24

0.3 MI. +/-

R  
23  
E

R  
24  
E

**LEGEND:**

— EXISTING ROAD



**McELVAIN OIL & GAS PROP., INC.**

**SLICKROCK #18-4**

**SECTION 18, T12S, R24E, S.L.B.&M.**

**672' FNL 836' FWL**



**Utah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC  
MAP**

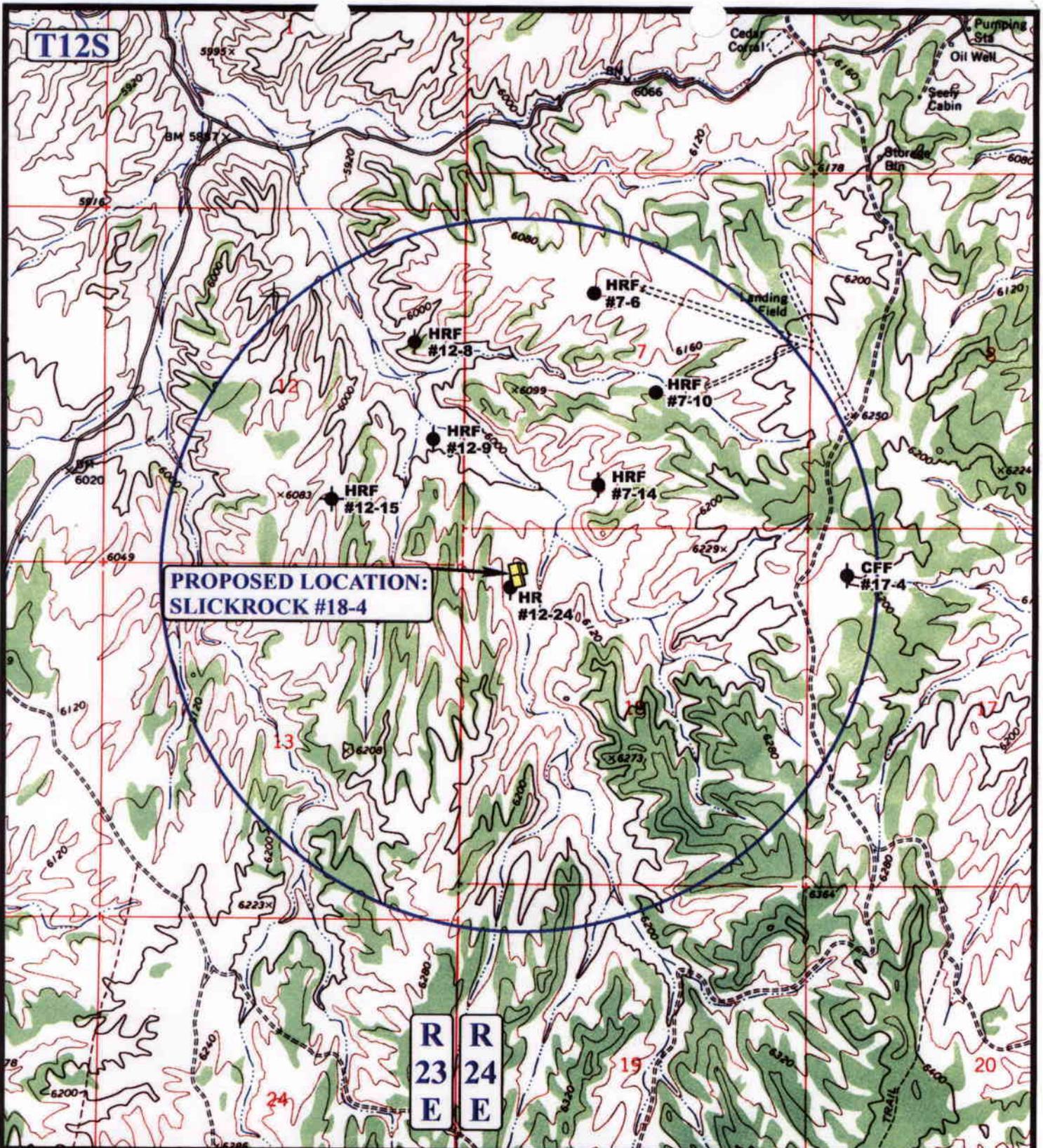
**07 09 07**  
MONTH DAY YEAR

SCALE: 1" = 2000'

DRAWN BY: C.P.

REVISED: 04-16-08

**B  
TOPO**



**PROPOSED LOCATION:  
SLICKROCK #18-4**

**LEGEND:**

- DISPOSAL WELLS
- PRODUCING WELLS
- SHUT IN WELLS
- WATER WELLS
- ABANDONED WELLS
- TEMPORARILY ABANDONED



**McELVAIN OIL & GAS PROP., INC.**

**SLICKROCK #18-4  
SECTION 18, T12S, R24E, S.L.B.&M.  
672' FNL 836' FWL**



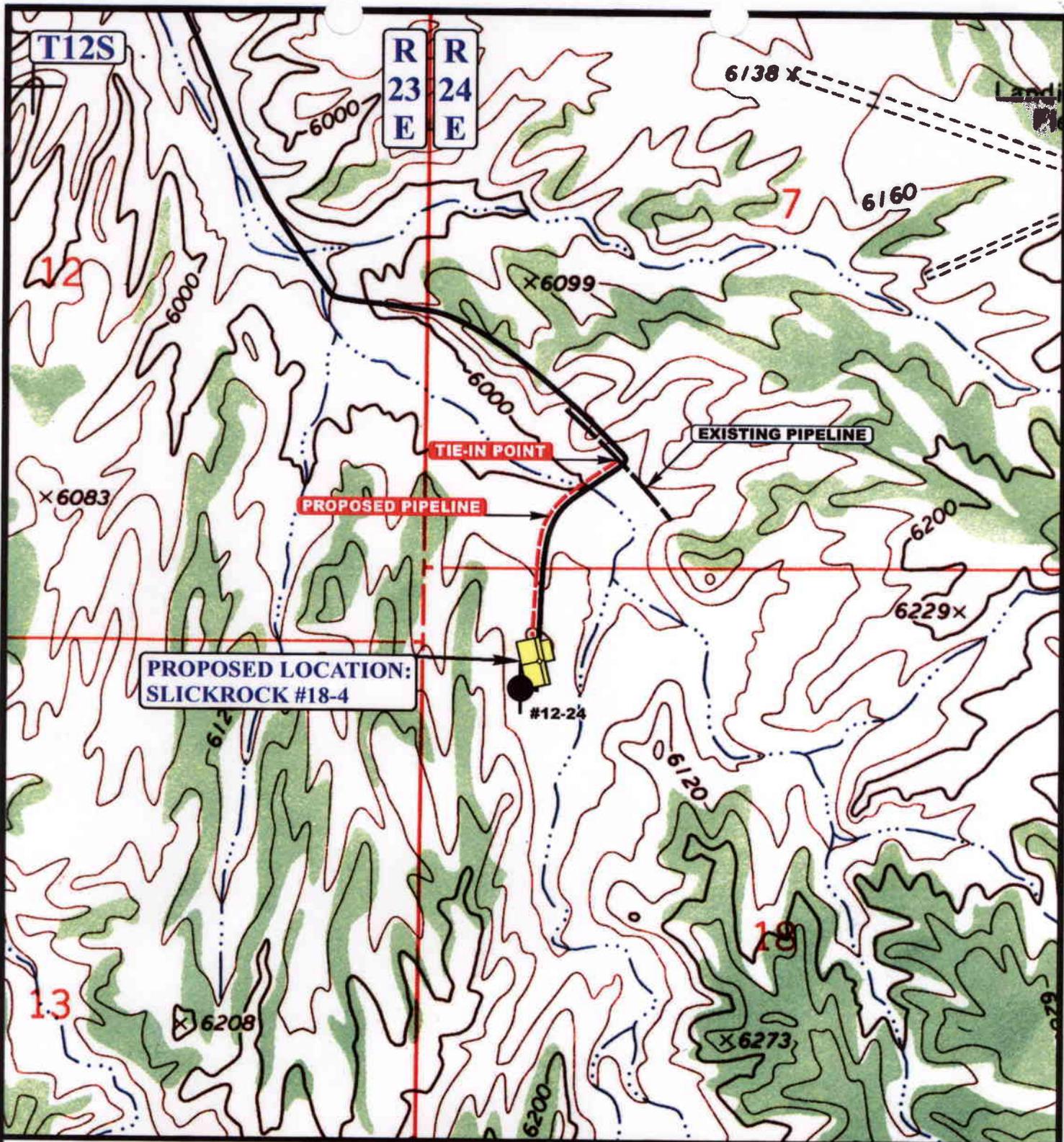
**Uintah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC MAP**

**07 09 07**  
MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: C.P. REVISED: 04-16-08





APPROXIMATE TOTAL PIPELINE DISTANCE = 1,500' +/-

**LEGEND:**

-  PROPOSED ACCESS ROAD
-  EXISTING PIPELINE
-  PROPOSED PIPELINE

**McELVAIN OIL & GAS PROP., INC.**

SLICKROCK #18-4  
SECTION 18, T12S, R24E, S.L.B.&M.  
672' FNL 836' FWL

**UELS** Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC MAP** 07 09 07  
MONTH DAY YEAR  
SCALE: 1" = 1000' DRAWN BY: C.P. REVISED: 04-16-08

**D**  
TOPO

**McELVAIN OIL & GAS PROP., INC.**

**TYPICAL CROSS SECTIONS FOR**

**SLICKROCK #18-4**

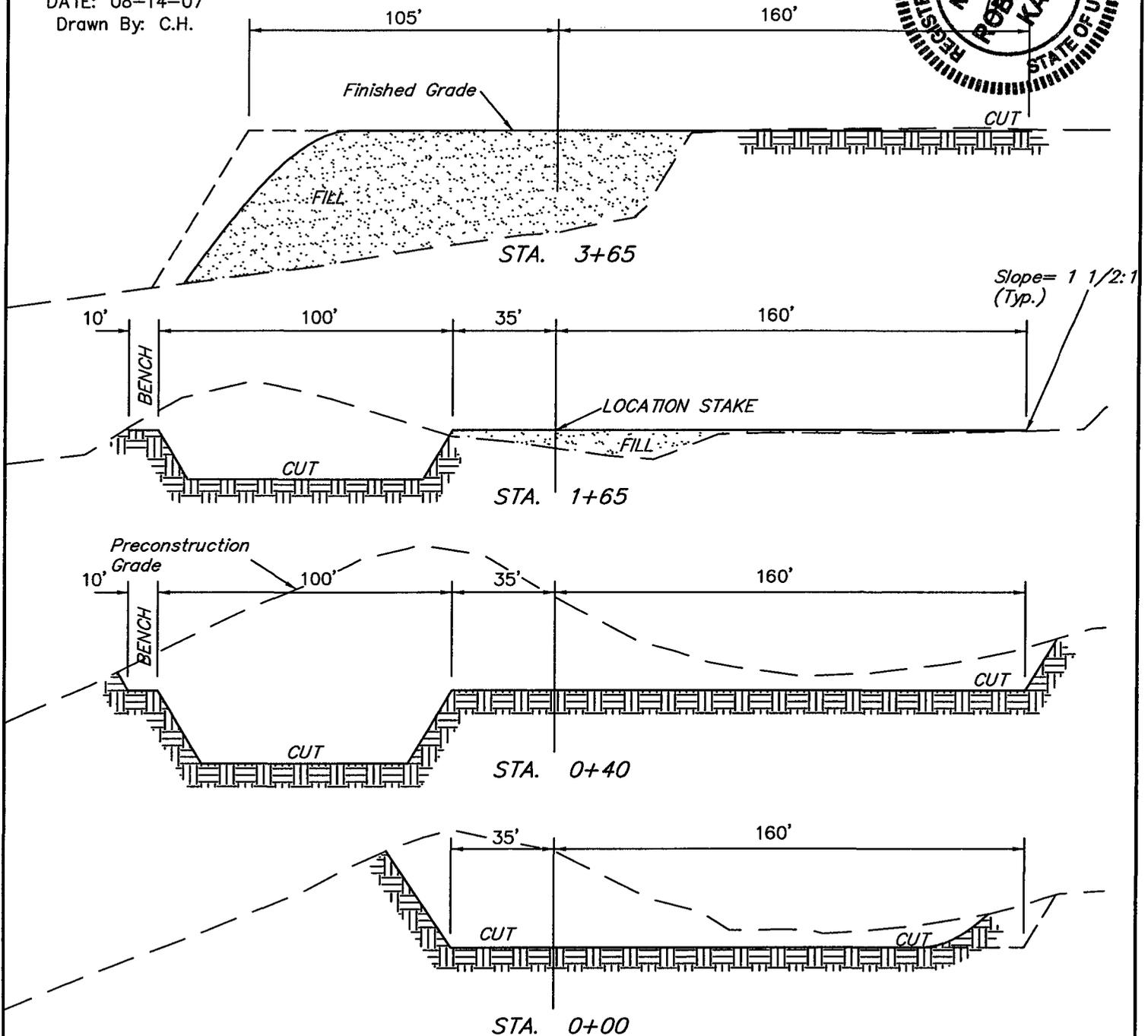
**SECTION 18, T12S, R24E, S.L.B.&M.**

**672' FNL 836' FWL**



1" = 20'  
X-Section Scale  
1" = 50'

DATE: 08-14-07  
Drawn By: C.H.



**APPROXIMATE YARDAGES**

<b>CUT</b>	
(6") Topsoil Stripping	= 1,350 Cu. Yds.
(New Construction Only)	
Remaining Location	= 15,950 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 17,300 CU.YDS.</b>
<b>FILL</b>	<b>= 13,970 CU.YDS.</b>

**\* NOTE:**

**FILL QUANTITY INCLUDES 5% FOR COMPACTION**

Excess Material	= 3,330 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 3,330 Cu. Yds.
<b>EXCESS UNBALANCE (After Rehabilitation)</b>	<b>= 0 Cu. Yds.</b>

**UINTAH ENGINEERING & LAND SURVEYING**  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

# MCELVAIN OIL & GAS PROP., INC.

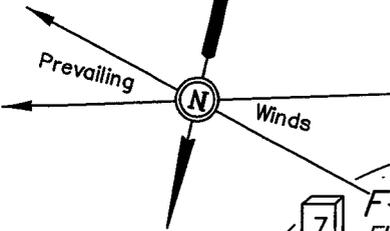
## LOCATION LAYOUT FOR

SLICKROCK #18-4  
SECTION 18, T12S, R24E, S.L.B.&M.

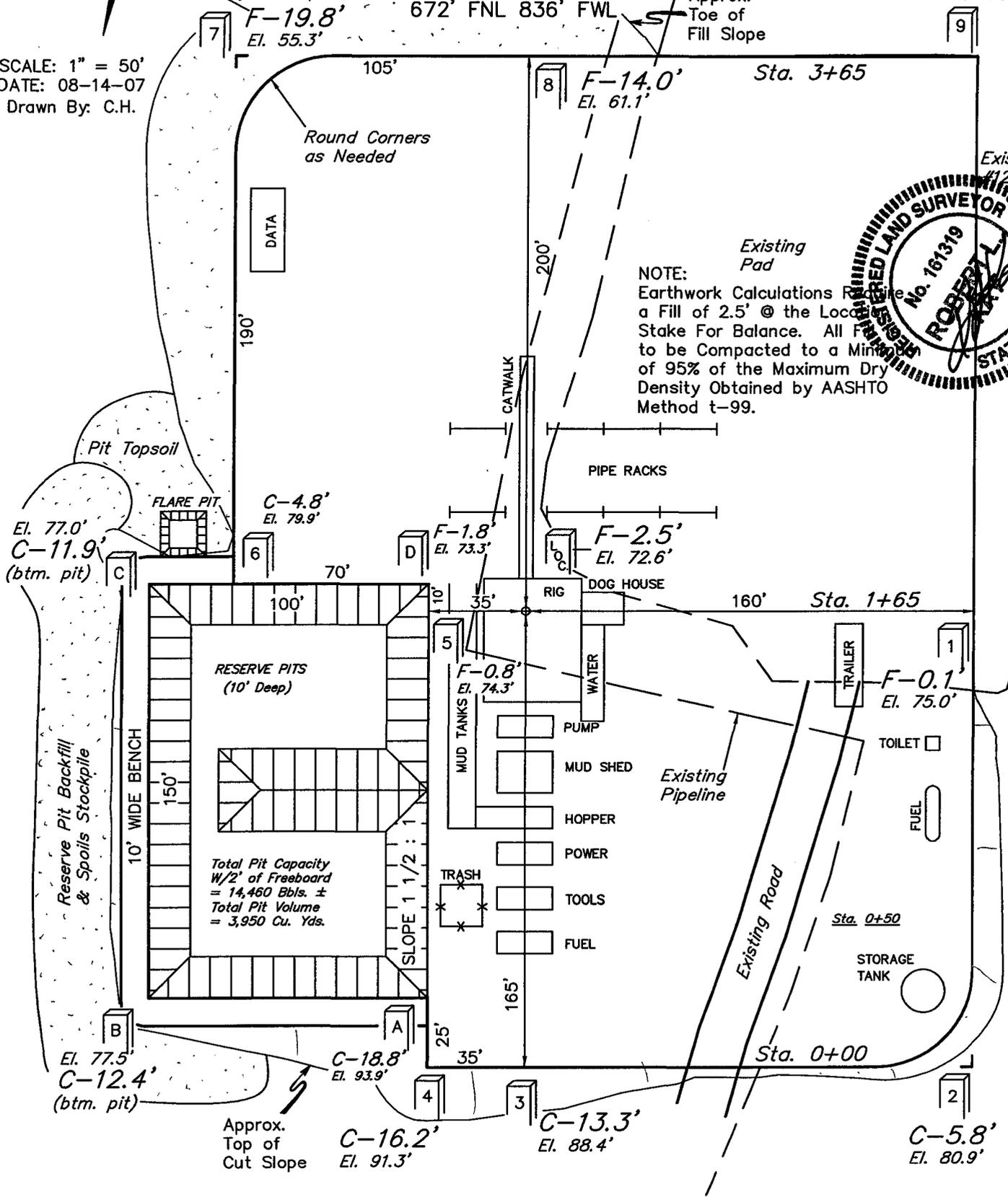
672' FNL 836' FWL

Approx. Toe of Fill Slope

C-0.3'  
El. 75.4'



SCALE: 1" = 50'  
DATE: 08-14-07  
Drawn By: C.H.



NOTE:  
Earthwork Calculations Require a Fill of 2.5' @ the Location Stake For Balance. All Fill to be Compacted to a Minimum of 95% of the Maximum Dry Density Obtained by AASHTO Method t-99.



Elev. Ungraded Ground at Location Stake = 6072.6'  
Elev. Graded Ground at Location Stake = 6075.1'

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

**FEDERAL STIPULATIONS AND TIMING RESTRICTIONS**

*Any Timing Limitation Stipulations will be attached as a Condition of Approval by the BLM.*



CULTURAL RESOURCE INVENTORY  
OF MCELVAIN OIL AND GAS PROPERTIES, INC.'S PROPOSED  
SLICKROCK 18-4 WELL LOCATION  
(T12S, R24E, SECTION 18)  
UINTAH COUNTY, UTAH

Nicole Lohman

CULTURAL RESOURCE INVENTORY  
OF MCELVAIN OIL AND GAS PROPERTIES, INC.'S PROPOSED  
SLICKROCK 18-4 WELL LOCATION  
(T12S, R24E, SECTION 18)  
UINTAH COUNTY, UTAH

By:

Nicole Lohman

Prepared For:

Bureau of Land Management  
Vernal Field Office

Prepared Under Contract With:

McElvain Oil & Gas Properties, Inc.  
1050 17<sup>th</sup> Street, Suite 1800  
Denver, Colorado 80265

Prepared By:

Montgomery Archaeological Consultants, Inc.  
P.O. Box 219  
Moab, Utah 84532

MOAC Report No. 07-277

August 6, 2007

United States Department of Interior (FLPMA)  
Permit No. 07-UT-60122

State of Utah Antiquities Project (Survey)  
Permit No. U-07-MQ-0956b

## INTRODUCTION

A cultural resource inventory was conducted by Montgomery Archaeological Consultants Inc. (MOAC) in July 2007 of McElvain Oil & Gas Properties, Inc.'s proposed Slickrock 18-4 well location with associated access and pipeline. The project area is located near the West Fork Asphalt Wash, Uintah County, Utah. The inventory was implemented at the request of Ms. Barbara Martin, McElvain Oil & Gas Properties, Inc., Denver, Colorado. A total of 16 acres was inventoried on public land administered by the Bureau of Land Management (BLM), Vernal Field Office.

The objective of the inventory was to locate, document, and evaluate any cultural resources within the project area in order to comply with Section 106 of 36 CFR 800, the National Historic Preservation Act of 1966 (as amended). Also, the inventory was implemented to attain compliance with a number of federal and state mandates, including the National Environmental Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and Utah State Antiquities Act of 1973 (amended 1990).

The fieldwork was performed on July 25, 2007 by Keith R. Montgomery (Principal Investigator) under the auspices of U.S.D.I. (FLPMA) Permit No. 07-UT-60122 and State of Utah Antiquities Permit (Survey) No. U-07-MQ-0956b issued to MOAC.

A file search was conducted by Keith R. Montgomery at the BLM Vernal Field Office on July 25, 2007. This consultation indicated that one inventory has been conducted in the area. In 2006, Montgomery Archaeological Consultants (MOAC) inventoried McElvain Oil & Gas Properties Hanging Rock 3D seismic prospect (Lower-Eskelson 2006). The inspection resulted in the documentation of 30 sites and the re-visitation of 11 sites, all situated outside of the current project area. In summary, no previously documented archaeological sites occur within the present project area.

## DESCRIPTION OF PROJECT AREA

McElvain Oil & Gas Properties, Inc.'s proposed Slickrock 18-4 well location with associated access/pipeline corridor is situated east of the West Fork Asphalt Wash, Uintah County, Utah. The legal description is Township 12 South, Range 24 East, Sections 7 and 18 (Table 1, Figure 1).

Table 1: Enduring Resources Hanging Rock Proposed Well Location.

Well Location	Legal Location	Pipeline/Access	Cultural Resources
Slickrock 18-4	NW/NW Sec. 18 T12S,R24E	Pipeline: 1447 ft Access: 280 ft	None

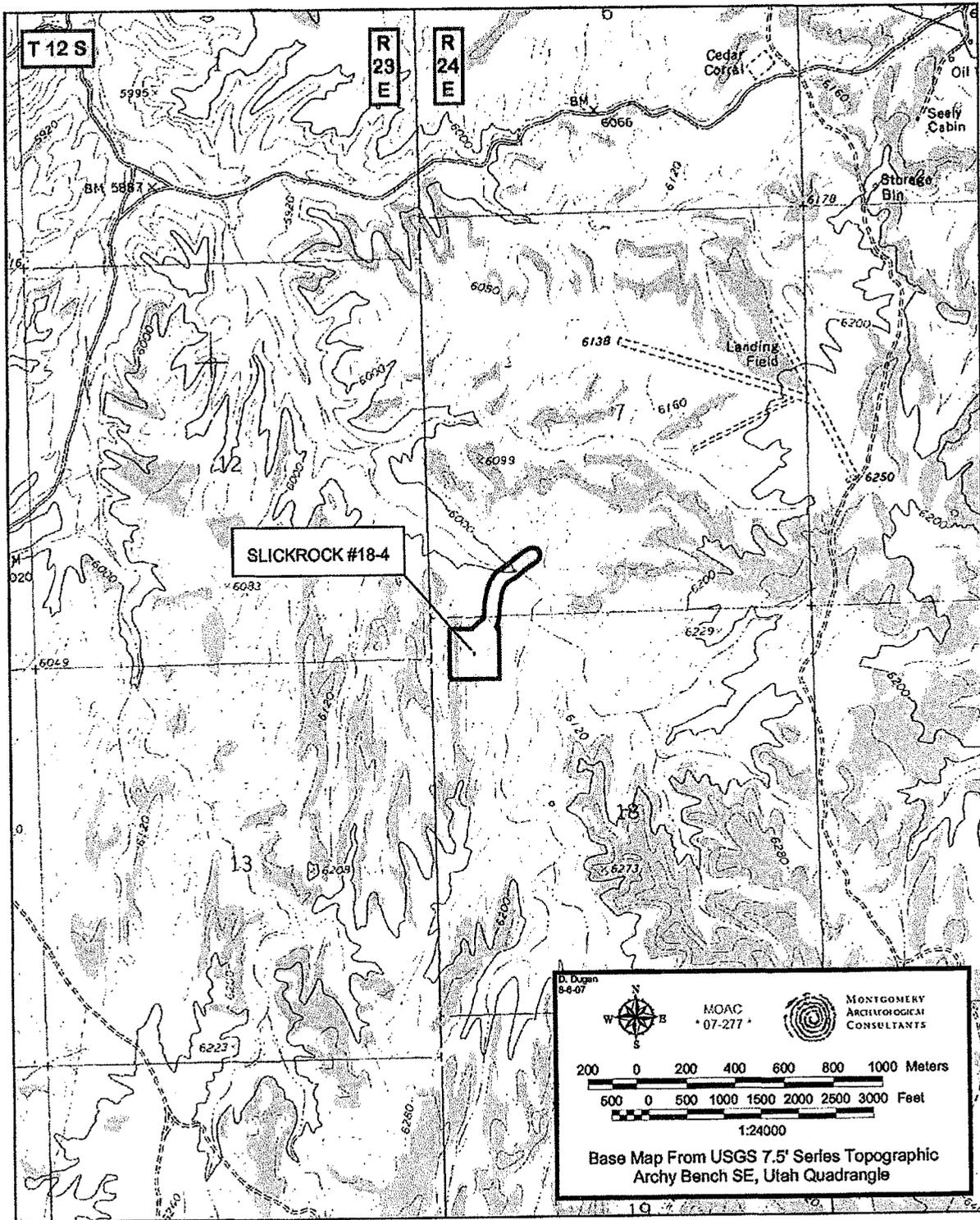


Figure 1. Inventory Area of McElvain Oil & Gas Properties, Inc. Proposed Slickrock 18-4 Well Location with Associated Access/Pipeline Corridor, Uintah County, Utah.

## Environment

The study area lies within the Uinta Basin physiographic unit, a distinctly bowl-shaped geologic structure (Stokes 1986:231). The Uinta Basin ecosystem is within the Green River drainage, considered to be the northernmost extension of the Colorado Plateau. The geology is comprised of Tertiary age deposits, which include Paleocene and Eocene age fluvial and lacustrine sedimentary deposits. The Uinta Formation, which is predominate in the project area, occurs as eroded outcrops (formed by stream laid interbedded sandstone and mudstone), and is known for its prolific paleontological localities.

Specifically, the project area is situated south of the Oil Springs Oil and Gas Field, several miles east of Bitter Creek. Surface geology consists of hard pan residual soil armored with shale and sandstone pebbles. The elevation ranges between 6000 ft and 6120 ft asl. The project occurs within the Upper Sonoran with vegetation cover of greasewood, snakeweed, rabbitbrush, prickly pear cactus, and Indian ricegrass. Modern disturbances include roads, livestock grazing and oil/gas development.

## SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. At the proposed well location, a ten acre area centered on the center stake of the well pad was surveyed by the archaeologist walking parallel transects spaced no more than 10 m (33 ft) apart. The pipeline and access corridors were surveyed to a width of 61 m (200 ft) by employing the same methods as described above. Ground visibility was considered to be good. A total of 16 acres was inventoried for cultural resources on public land administered by the Bureau of Land Management (BLM), Vernal Field Office.

## RESULTS AND RECOMMENDATIONS

The inventory of McElvain Oil and Gas Properties, Inc.'s proposed Slickrock 18-4 well location with associated access/pipeline corridor resulted in no cultural resources. Based on the findings, a recommendation of "no historic properties affected" is proposed for the undertaking pursuant to Section 106, CFR 800.

## REFERENCES CITED

Lower-Eskelson, K.

2006

Cultural Resource Inventory of McElvain Oil & Gas Properties Inc.'s Hanging Rock 3D Seismic Project, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-06-MQ-1153b,s.

Stokes, W.L.

1986

*Geology of Utah*. Utah Museum of Natural History and Utah Geological and Mineral Survey, Salt Lake City.

IPC #07-177

## **Paleontological Reconnaissance Report**

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**McElvain's Proposed Well Pad, Access Road and Pipeline for  
"Slickrock #18-4" (Sec. 7 & 18, T 12 S, R 24 E)**

Archy Bench SE  
Topographic Quadrangle  
Uintah County, Utah

August 7, 2007

Prepared by Stephen D. Sandau  
Paleontologist for  
Intermountain Paleo-Consulting  
P. O. Box 1125  
Vernal, Utah 84078

## INTRODUCTION

At the request of Barbara Martin of McElvain Oil & Gas Properties, Inc. and authorized by the BLM Vernal Field Office, a paleontological reconnaissance survey of McElvain's proposed well pad, access road and pipeline for "Slickrock #18-4" (Sec. 7 & 18, T 12 S, R 24 E) was conducted by Stephen Sandau, Ashley Scheetz and Aaron Scheetz on July 26, 2007. The reconnaissance survey was conducted under the Utah BLM Paleontological Resources Use Permit #UT-S-05-33. This survey to locate, identify and evaluate paleontological resources was done to meet requirements of the National Environmental Policy Act of 1969 and other State and Federal laws and regulations that protect paleontological resources.

## FEDERAL AND STATE REQUIREMENTS

As mandated by the US Department of the Interior Bureau of Land Management, paleontologically sensitive geologic formations in BLM lands that are considered for exchange or may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

- 1) The National Environmental Policy Act of 1969 (NEPA)
- 2) The Federal Land Policy and Management Act (FLPMA) of 1976 (90 Stat. 2743, 43 U.S.C. § 1701-1785, et. Seq., P.L. 94-579);

Under policy dictated by the BLM Manual and Handbook H-8270-1 (July, 1998) formations are ranked according to their paleontological potential:

- *Condition 1* is applied to those areas known to contain fossil localities and special consideration of the known resources is in need of evaluation.
- *Condition 2* is applied to areas that have exposures of geologic rock units known to have produced fossils elsewhere.
- *Condition 3* is applied to areas unlikely to produce fossils based on surficial geology.

Although these guidelines apply mostly to vertebrate fossils on lands under the direction of the BLM, they are equally designed to help protect rare plant and invertebrate fossils. It should be noted that many fossils, though common and unimpressive in and of themselves, can be important paleo-environmental, depositional and chronostratigraphic indicators.

## LOCATION

The proposed well pad, access road and pipeline for "Slickrock #18-4" (Sec. 7 & 18, T 12 S, R 24 E) are on land managed by the BLM approximately 28 miles southwest of Bonanza, Utah. The project area can be found on the Archy Bench SE 7.5 minute U. S. Geological Survey Quadrangle Map, Uintah County, Utah.

## PREVIOUS WORK

The basins of western North America have long produced some of the richest fossil collections in the world. Early Cenozoic sediments are especially well represented throughout the western interior. Paleontologists started field work in Utah's Uinta Basin as early as 1870 (Betts, 1871; Marsh, 1871, 1875a, 1875b). The Uinta Basin is located in the northeastern corner of Utah and covers approximately 31,000 sq. km (12,000 sq. miles) ranging in elevation from 1,465 to 2,130 m (4,800 to 7,000 ft) (Marsell, 1964; Hamblin et al., 1987). Middle to late Eocene time marked a period of dramatic change in the climate, flora, (Stucky, 1992) and fauna (Black and Dawson, 1966) of North America.

## GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW

Early in the geologic history of Utah, some 1,000 to 600 Ma, an east-west trending basin developed creating accommodation for 25,000 feet of siliclastics. Uplift of that filled-basin during the early Cenozoic formed the Uinta Mountains (Rasmussen et al., 1999). With the rise of the Uinta Mountains the asymmetrical synclinal Uinta Basin is thought to have formed through the effects of down warping in connection with the uplift. Throughout the Paleozoic and Mesozoic deposition fluctuated between marine and non-marine environments laying down a thick succession of sediments in the area now occupied by the Uinta Basin. Portions of these beds crop out on the margins of the basin due to tectonic events occurring during the late Mesozoic.

Early Tertiary Uinta Basin sediments were deposited in alternating lacustrine and fluvial environments. Large shallow lakes periodically covered most of the basin and surrounding areas during early to mid Eocene time (Abbott, 1957). These lacustrine sediments show up in the western part of the basin, dipping 2-3 degrees to the northeast and are lost in the subsurface on the east side. The increase of cross-

	<b>Starr Flat Memb.</b> Fluvial siltstone, sandstone, conglomerate		<b>Duchesne River Formation</b>
	<b>Lapoint Memb.</b> Fluvial mudstone, claystone, sandstone		
	<b>Dry Gulch Creek Memb.</b> Fluvial claystone, sandstone		
	<b>Brennan Basin Memb.</b> Fluvial claystone, sandstone, pebbly sandstone		
Beeded SS. -LS. Facies	<b>Myton Memb.</b> Fluvial claystones, sandstones	"C"	<b>Uinta Formation</b>
	<b>Wagonhound Memb.</b> Fluvial siltstones, sandstones	"B"	
	Saline Facies	"A"	
Carbonate-Sapropellic Shale Facies	<b>Evacuation Creek Memb.</b>		<b>Green River Formation</b>
	<b>Parachute Creek Memb.</b>		
Fluvial Facies	<b>Garden Gulch Memb.</b>		
Black Shale Facies	<b>Douglas Creek Memb.</b>		

Table 1. Uinta Basin stratigraphy

bedded, coarse-grained sandstone and conglomerates preserved in paleo-channels indicates a transition to a fluvial environment toward the end of the epoch.

Four Eocene formations are recognized in the Uinta Basin: the Wasatch, Green River, Uinta and Duchesne River, respectively (Wood, 1941). The Uinta Formation is subdivided into two lithostratigraphic units namely: the Wagonhound Member (Wood, 1934), formerly known as Uinta A and B (Osborn, 1895, 1929) and the Myton Member previously regarded as the Uinta C.

The Green River Formation was traditionally subdivided up into four stratigraphic units namely from oldest to youngest the Douglas Creek, Garden Gulch, Parachute, and Evacuation Creek Members (Bradley, 1931). Later, many authors introduced varying terminology to describe the Green River Formation (Dane, 1955; Cashion and Donnell, 1974; Ryder et al., 1976; Bryant et al., 1989 and Weiss et al., 1990). When describing Green River beds in the eastern portion of the basin the member names will be used and in the western portion of the basin description by facies will be employed (Table 1). For detailed description of the Green River Formation facies see the above mentioned references.

Within the Uinta Basin in northeast Utah, the Uinta Formation in the western part of the basin is composed primarily of lacustrine sediments inter-fingering with over-bank deposits of silt and mudstone and westward flowing channel sands and fluvial clays, muds and sands in the east (Bryant et al, 1990; Ryder et al, 1976). Stratigraphic work done by early geologists and paleontologists within the Uinta Formation focused on the definition of rock units and attempted to define a distinction between early and late Uintan faunas (Riggs, 1912; Peterson and Kay, 1931; Kay 1934). More recent work focused on magnetostratigraphy, radioscopic chronology and continental biostratigraphy (Flynn, 1986; Prothero, 1996). Well known for its fossiliferous nature and distinctive mammalian fauna of mid-Eocene Age, the Uinta Formation is the type formation for the Uintan Land Mammal Age (Wood et al, 1941).

The Duchesne River Formation of the Uinta Basin in northeastern Utah is composed of a succession of fluvial and flood plain deposits composed of mud, silt and sandstone. The source area for these late Eocene deposits is from the Uinta Mountains indicated by paleocurrent data (Anderson and Picard, 1972). In Peterson's (1931c) paper, the name "Duchesne Formation" was applied to the formation and it was later changed to the "Duchesne River Formation" by Kay (1934). The formation is divided up into four members: the Brennan Basin, Dry Gulch Creek, LaPoint and Starr Flat (Anderson and Picard, 1972). Debates concerning the Duchesne River Formation, as to whether its age was late Eocene or early Oligocene, have surfaced throughout the literature of the last century (Wood et al., 1941; Scott 1945). Recent paleo-magnetostratigraphic work (Prothero, 1996) shows that the Duchesne River Formation is late Eocene in time.

## FIELD METHODS

In order to determine if the proposed project area contained any paleontological resources a reconnaissance survey was performed. An on-site observation of the proposed areas undergoing surficial disturbance is necessary because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

When found within the proposed construction areas, outcrops and erosional surfaces were checked to determine if fossils were present and to assess needs. Careful effort is made during surveys to identify and evaluate significant fossil materials or fossil horizons when they are found. Microvertebrates, although rare, are occasionally found in anthills or upon erosional surfaces and are of particular importance.

## PROJECT AREA

The project area is situated within the Evacuation and Parachute Creek Members of the Green River Formation. The proposed well pad is situated in the NW/NW quarter-quarter of section 18, T 12 S, R 24 E just north of the existing well pad "#12-24". The associated pipeline follows the existing road for about 1000 feet and meets up with the proposed access road to tie into the staked well pad area (Figure 1). The proposed project area is located in a lacustrine depositional environment. Fragments of shale and sandstone are scattered throughout the gray to green sediment in the area with exposed beds of sandstone and shale along the southern edge of the proposed well pad. The project area is mostly covered in typical desert foliage with very little fossiliferous exposures. No fossils were found.

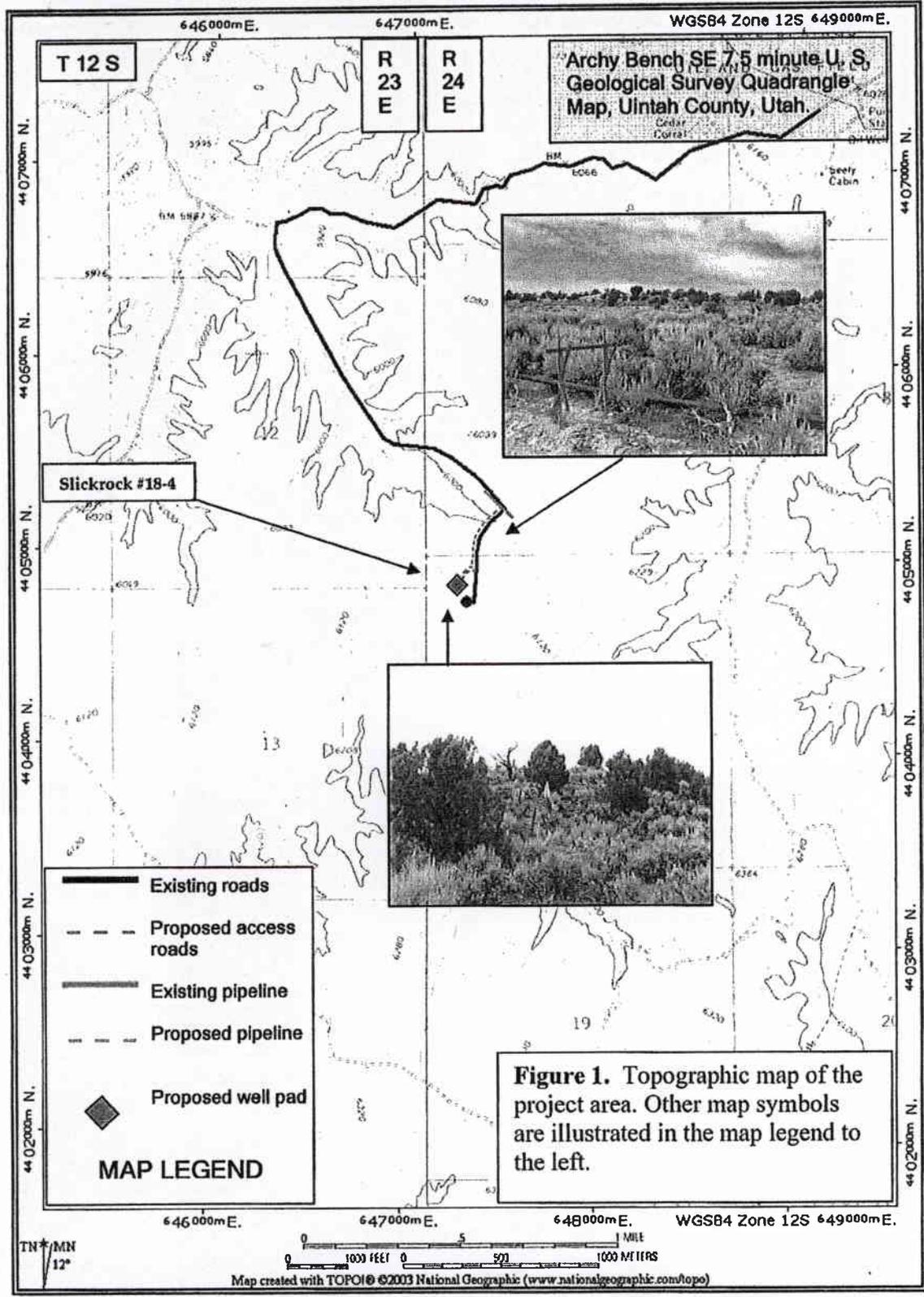
## SURVEY RESULTS

PROJECT	GEOLOGY	PALEONTOLOGY
"Slickrock #18-4" (Sec 7 & 18, T 12 S, R 24 E)	The proposed project area is located in a lacustrine depositional environment. Fragments of shale and sandstone are scattered throughout the gray to green sediment in the area with exposed beds of sandstone and shale along the southern edge of the proposed well pad. The project area is mostly covered in typical desert foliage with very little fossiliferous exposures.	No fossils were found. <b>Condition 3.</b>

## RECOMMENDATIONS

A reconnaissance survey was conducted for "Slickrock #18-4" (Sec. 7 & 18, T 12 S, R 24 E). The well pad, together with its associated access road and pipeline covered in this report showed no signs of vertebrate fossils. Therefore, we recommend that no paleontological restrictions should be placed on the development of the projects included in this report.

**Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, Operator (Lease Holder) will report all occurrences of paleontological resources discovered to a geologist with the Vernal Field Office of the BLM. The operator is responsible for informing all persons in the areas who are associated with this project of the requirements for protecting paleontological resources. Paleontological resources found on the public lands are recognized by the BLM as constituting a fragile and nonrenewable scientific record of the history of life on earth, and so represent an important and critical component of America's natural heritage. These resources are afforded protection under 43 CFR 3802 and 3809, and penalties possible for the collection of vertebrate fossils are under 43 CFR 8365.1-5.**



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- \_\_\_\_\_ and others, 1941, Nomenclature and correlation of the North America Continental Tertiary: *Geological Society of America Bulletin*, v. 52, no. 1, Jan. 1, p. 1-48.

**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 10/02/2008

API NO. ASSIGNED: 43-047-40382

WELL NAME: SLICK ROCK FED 18-4

OPERATOR: MCELVAIN OIL & GAS ( N2100 )

PHONE NUMBER: 303-857-9999

CONTACT: VENESSA LANGMACHER

PROPOSED LOCATION:

NWNW 18 120S 240E  
 SURFACE: 0672 FNL 0836 FWL  
 BOTTOM: 0672 FNL 0836 FWL  
 COUNTY: UINTAH  
 LATITUDE: 39.78036 LONGITUDE: -109.2786  
 UTM SURF EASTINGS: 647415 NORTHINGS: 4404588  
 FIELD NAME: OIL SPRINGS ( 635 )

INSPECT LOCATN BY: / /		
Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 1 - Federal  
 LEASE NUMBER: UTU-73704  
 SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: MSSP  
 COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Fed[1] Ind[] Sta[] Fee[]  
(No. COB-000010 )
- Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit  
(No. 49-1547 )
- RDCC Review (Y/N)  
(Date: )
- Fee Surf Agreement (Y/N)
- Intent to Commingle (Y/N)

LOCATION AND SITING:

- \_\_\_ R649-2-3.
- Unit: \_\_\_\_\_
- R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells
- \_\_\_ R649-3-3. Exception
- \_\_\_ Drilling Unit
- Board Cause No: \_\_\_\_\_
- Eff Date: \_\_\_\_\_
- Siting: \_\_\_\_\_
- \_\_\_ R649-3-11. Directional Drill

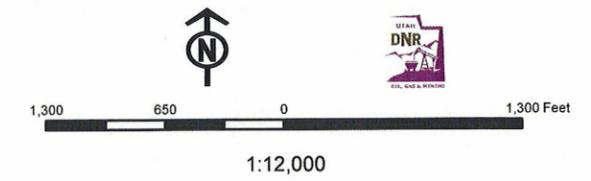
COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

STIPULATIONS: \_\_\_\_\_  
 1- Federal Approval  
 2- Special Strip  
 3- THIS WELL SHALL NOT BE PRODUCED FROM THE WAGATCH-MESAVERDE INTERVAL AS PERFORATED IN THE HANGING ROCK 12-24-11-18 WELL.

**API Number: 4304740382**  
**Well Name: SLICK ROCK FED 18-4**  
**Township 12.0 S Range 24.0 E Section 18**  
**Meridian: SLBM**  
**Operator: MCELVAIN OIL & GAS PROPERTIES, INC**

Map Prepared:  
 Map Produced by Diana Mason

- |               |                           |
|---------------|---------------------------|
| <b>Units</b>  | <b>Wells Query Events</b> |
| <b>STATUS</b> | X <all other values>      |
| ACTIVE        | GIS_STAT_TYPE             |
| EXPLORATORY   | <Null>                    |
| GAS STORAGE   | APD                       |
| NF PP OIL     | DRL                       |
| NF SECONDARY  | GI                        |
| PI OIL        | GS                        |
| PP GAS        | LA                        |
| PP GEOTHERML  | NEW                       |
| PP OIL        | OPS                       |
| SECONDARY     | PA                        |
| TERMINATED    | PGW                       |
| <b>Fields</b> | POW                       |
| <b>STATUS</b> | RET                       |
| ACTIVE        | SGW                       |
| COMBINED      | SOW                       |
| Sections      | TA                        |
| Township      | TW                        |
|               | WD                        |
|               | WI                        |
|               | WS                        |
|               | Bottom Hole Location      |





JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil Gas and Mining

JOHN R. BAZA  
Division Director

October 15, 2008

McElvain Oil & Gas Properties, Inc.  
1050 17th St., Ste. 1800  
Denver, CO 80265

Re: Slick Rock Federal 18-4 Well, 672' FNL, 836' FWL, NW NW, Sec. 18, T. 12 South,  
R. 24 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-40382.

Sincerely,

Gil Hunt  
Associate Director

pab  
Enclosures

cc: Uintah County Assessor  
Bureau of Land Management, Vernal Office

**Operator:** McElvain Oil & Gas Properties, Inc.  
**Well Name & Number** Slick Rock Federal 18-4  
**API Number:** 43-047-40382  
**Lease:** UTU-73704

**Location:** NW NW                      **Sec.** 18                      **T.** 12 South                      **R.** 24 East

### Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dustin Doucet at (801) 538-5281    (801) 733-0983 home

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

6. This well shall not be produced from the Wasatch-Mesaverde interval as perforated in the Hanging Rock 12-24-11-18 well.



GARY R. HERBERT  
*Governor*

GREGORY S. BELL  
*Lieutenant Governor*

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

### Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

December 30, 2009

McElvain Oil & Gas Properties, Inc.  
1050 17<sup>th</sup> Street, Suite 1800  
Denver, CO 80265

Re: APD Rescinded – Slick Rock Fed 18-4, Sec. 18, T. 12S, R. 24E  
Uintah County, Utah API No. 43-047-40382

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on October 15, 2008. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective December 30, 2009.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason  
Environmental Scientist

cc: Well File  
Bureau of Land Management, Vernal