



June 25, 2004

State of Utah  
Division of Oil, Gas & Mining  
Attn: Diana Whitney  
1594 West North Temple - Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

RE: Applications for Permit to Drill: Entire State Section 16, T9S R18E.

Dear Diana:

Enclosed find APD's on the above referenced wells. When these APD's are received, please contact Brad Mecham to set up a State On-Site. If you have any questions, feel free to give either Brad or myself a call.

Sincerely,

Mandie Crozier  
Regulatory Specialist

mc  
enclosures

RECEIVED  
JUN 28 2004  
DIV. OF OIL, GAS & MINING

**001 DIVISION OF OIL, GAS AND MINING**

**APPLICATION FOR PERMIT TO DRILL, DEEPEN**

1a. TYPE OF WORK **DRILL**  **DEEPEN**

1b. TYPE OF WELL

OIL  GAS  OTHER  SINGLE ZONE  MULTIPLE ZONE

5. LEASE DESIGNATION AND SERIAL NO.  
**ML-48378**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
**N/A**

7. UNIT AGREEMENT NAME  
**N/A**

8. FARM OR LEASE NAME  
**N/A**

9. WELL NO.  
**State #3-16-9-18**

10. FIELD AND POOL OR WILDCAT  
**Eight Mile Flat**

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:  
**NE/NW Sec. 16, T9S, R18E**

12. County  
**Uintah**

13. STATE  
**UT**

2. NAME OF OPERATOR  
**Inland Production Company**

3. ADDRESS AND TELEPHONE NUMBER:  
**Route #3 Box 3630, Myton, UT 84052 Phone: (435) 646-3721**

4. LOCATION OF WELL (FOOTAGE)  
At Surface **NE/NW 660' FNL 1980' FWL 593832 X 40,03632**  
At proposed Producing Zone **4432158 Y -109,90020**

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
**Approximately 20.5 miles southeast of Myton, UT**

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) <b>Approx. 660' f/lse line</b>	16. NO. OF ACRES IN LEASE <b>640.00</b>	17. NO. OF ACRES ASSIGNED TO THIS WELL <b>40</b>
---	--	---

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT. <b>Approximately 1320'</b>	19. PROPOSED DEPTH <b>6500'</b>	20. ROTARY OR CABLE TOOLS <b>Rotary</b>
--	------------------------------------	--

21. ELEVATIONS (Show whether DF, RT, GR, etc.) <b>5031' GL</b>	22. APPROX. DATE WORK WILL START* <b>1st Quarter 2005</b>
---	--

**23. PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	SIZE OF CASING	WEIGHT/FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	8 5/8	24#	290'	155 sx +/- 10%
7 7/8	5 1/2	15.5#	TD	275 sx lead followed by 450 sx tail
				See Detail Below

DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give date on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

\*The actual cement volumes will be calculated off of the open hole logs, plus 15% excess:

**SURFACE PIPE** - 155 sx Class G Cement +/I 10%, w/ 2% CaCl2 & 1/4#/sk Cello-flake  
Weight: 15.8 PPG YIELD: 1.17 Cu Ft/sk H2O Req: 5 gal/sk

**LONG STRING** - Lead: Premium Lite II Cement + 3lbs/sk BA-90 + 3% KCl + .25 lbs/sk Cello Flake + 2 lbs/sk Kol Seal + 10% Bentonite + .5% Sodium Metasilicate  
Weight: 11.0 PPG YIELD: 3.43 Cu Ft/sk H2O Req: 21.04 gal/sk

Tail: 50-50 Poz-Class G Cement + 3% KCl + .25 lbs/sk Cello Flake + 2% Bentonite + .3% Sodium Metasilicate  
Weight: 14.2 PPG YIELD: 1.59 Cu Ft/sk H2O Req: 7.88 gal/sk

24. Name & Signature Mandie Crozier Title: Regulatory Specialist Date: 6/25/04

(This space for State use only)

API Number Assigned: 43-047-35813

APPROVAL:

**Approved by the Utah Division of Oil, Gas and Mining**

Date: 08-04-04

By: [Signature]

**RECEIVED**  
**JUN 28 2004**  
**DIV. OF OIL, GAS & MINING**



**From:** Diana Whitney

PER ED BONNER 8/4

Westport O&G Co	43-047-35788	State 920-360	<b>HOLD</b>
Westport O&G Co	43-047-35789	State 1022-20	<b>HOLD</b>
Westport O&G Co	43-007-30966	N Bench St 24-18	<b>OK TO GO</b>
EOG Resources	43-047-35806	STATE 1-16	<b>HOLD</b>
Westport O&G Co	43-047-35810	STATE 1022-36E	<b>OK TO GO</b>
Inland Production	43-047-35811	STATE 1-16-9-18	<b>OK TO GO</b>
Inland Production	43-047-35812	STATE 2-16-9-19	<b>OK TO GO</b>
Inland Production	43-047-35813	STATE 3-16-9-20	<b>OK TO GO</b>
Inland Production	43-047-35814	STATE 4-16-9-21	<b>OK TO GO</b>
Inland Production	43-047-35815	STATE 5-16-9-22	<b>OK TO GO</b>
Inland Production	43-047-35816	STATE 6-16-9-23	<b>OK TO GO</b>
Inland Production	43-047-35817	STATE 7-16-9-24	<b>HOLD</b>
Inland Production	43-047-35818	STATE 8-16-9-25	<b>OK TO GO</b>
Inland Production	43-047-35819	STATE 9-16-9-26	<b>OK TO GO</b>
Inland Production	43-047-35820	STATE 10-16-9-27	<b>OK TO GO</b>
Inland Production	43-047-35822	STATE 11-16-9-28	<b>OK TO GO</b>
Inland Production	43-047-35823	STATE 12-16-9-29	<b>OK TO GO</b>
Inland Production	43-047-35824	STATE 13-16-9-30	<b>OK TO GO</b>
Inland Production	43-047-35825	STATE 14-16-9-31	<b>HOLD</b>
Inland Production	43-047-35826	STATE 15-16-9-32	<b>OK TO GO</b>
Inland Production	43-047-35827	STATE 16-16-9-33	<b>OK TO GO</b>
CDX Rockies LLC	43-047-35828	St. Atchee 36-12-25 #1	<b>OK TO GO</b>
EOG Resources	43-013-32594	Pete's Wash 2-32	<b>HOLD</b>
MSC Exploration	43-019-31402	Cactus Rise MSC 2-1	<b>HOLD</b>
Merrion O&G Corp	43-015-30557	Fuzzball 1	<b>OK TO GO</b>
QEP Uinta Basin Inc	43-047-35684	CWU 4MU-32-8-24	<b>HOLD</b>
Westport O&G Co	43-047-35657	NBU 922-311	<b>OK TO GO</b>
Dominion Expl	43-047-35612	WHB 14-36E	<b>HOLD</b>
Dominion Expl	43-047-35613	LCU 12-36F	<b>HOLD</b>
EOG Resources	43-047-35203	CWU 853-32	<b>HOLD</b>
EOG Resources	43-047-35200	NBU 535-17E	<b>OK TO GO</b>
Chevron Usa Inc.	43-015-30609	State of Utah HH 23-166	<b>HOLD</b>

INLAND PRODUCTION COMPANY  
STATE #3-16-9-18  
NE/NW SECTION 16, T9S, R18E  
UINTAH COUNTY, UTAH

TEN POINT DRILLING PROGRAM

1. **GEOLOGIC SURFACE FORMATION:**

Uinta formation of Upper Eocene Age

2. **ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS:**

Uinta	0 – 1700'
Green River	1700'
Wasatch	6500'

3. **ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERALS:**

Green River Formation 1700' – 6500' – Oil

4. **PROPOSED CASING PROGRAM:**

Surface Casing: 8-5/8" J-55 24# w/ST&C collars; set at 290' (New)  
Production Casing: 5-1/2" J-55, 15.5# w/LT&C collars; set at TD (New or used, inspected).

5. **MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:**

The operator's minimum specifications for pressure control equipment are as follows:

An 8" Double Ram Hydraulic unit with a closing unit will be utilized. Function test of BOP's will be check daily.

Refer to **Exhibit C** for a diagram of BOP equipment that will be used on this well.

6. **TYPE AND CHARACTERISTICS OF THE PROPOSED CIRCULATION MUDS:**

The well will be drilled with air mist system to 3200', then from 3200' +/- to TD a fresh water/polymer system will be utilized. If necessary, to control formation fluids, the system will be weighted with the addition of bentonite gel, and if conditions warrant, barite. This fresh water system typically will contain Total Dissolved Solids (TDS) of less than 3000 PPM. Neither potassium chloride nor chromates will be utilized in the fluid system. The anticipated mud weight is 8.4 ppg and weighted as necessary for gas control.

**AIR DRILLING**

In the event that the proposed location is to be "Air Drilled", Inland requests a variance to regulations requiring a straight run blooie line. Inland proposes that the flowline will contain two (2) 90-degree turns. Inland also requests a variance to regulations requiring an automatic igniter or continuous pilot light on the blooie line. Inland requests authorization to ignite as needed, and the flowline at 80'.

Inland Production Company requests that the spark arrest, exhaust, or water cooled exhaust be waived under the Special Drilling Operations of Onshore Order #2.

**MUD PROGRAM**

Surface – 3200'  
3200' – TD'

**MUD TYPE**

fresh water or air/mist system  
fresh water system

From surface to ± 3200 feet will be drilled with either fresh water or an air/mist system, depending on the drilling contractor's preference. From about 3200 feet, or in the case of the air/mist system when hole conditions dictate, to TD, a fresh water system will be utilized. Clay inhibition and hole stability will be achieved with a KCL substitute additive. This fresh water system will typically contain Total Dissolved Solids (TDS) of less than 3000 PPM. Anticipated mud weight is 8.4 lbs/gal. If necessary to control formation fluids or pressure, the system will be weighted with the addition of bentonite gel, and if pressure conditions warrant, with barite. No chromate additives will be used in the mud system.

7. **AUXILIARY SAFETY EQUIPMENT TO BE USED:**

Auxiliary safety equipment will be a Kelly Cock, bit float, and a TIW valve with drill pipe threads.

8. **TESTING, LOGGING AND CORING PROGRAMS:**

The logging program will consist of a Dual Induction, Gamma Ray and Caliper log from TD to base of surface casing @ 290' +/-, and a Compensated Neutron-Formation Density Log from TD to 3500' +/- . A cement bond log will be run from PBTD to cement top. No drill stem testing or coring is planned for this well.

9. **ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURE:**

The anticipated maximum bottom hole pressure is 2000 psi. It is not anticipated that abnormal temperatures will be encountered; or that any other abnormal hazards such as H<sub>2</sub>S will be encountered in this area.

10. **ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS:**

It is anticipated that the drilling operations will commence the fourth quarter of 2004, and take approximately seven (7) days from spud to rig release.

INLAND PRODUCTION COMPANY  
STATE #3-16-9-18  
NE/NW SECTION 16, T9S, R18E  
UINTAH COUNTY, UTAH

THIRTEEN POINT SURFACE PROGRAM

1. EXISTING ROADS

See attached **Topographic Map "A"**

To reach Inland Production Company well location site State 3-16-9-18 located in the NE¼ NW¼ Section 16, T9S, R18E, S.L.B. & M., Uintah County, Utah:

Proceed southwesterly out of Myton, Utah along Highway 40 - 1.6 miles ± to the junction of this highway and UT State Hwy 53; proceed southeasterly along Hwy 53 - 11.7 miles ± to it's junction with an existing road to the southeast; proceed southeasterly - 3.6 miles ± to it's junction with an existing road to the east; proceed northeasterly and then easterly - 3.0 miles ± to it's junction with an existing road to the southeast; proceed southeasterly - 0.6 miles ± to it's junction with the beginning of the proposed access road to the west; proceed westerly 2,445' to the proposed well location.

The highways mentioned in the foregoing paragraph are bituminous surfaced roads to the point where Highway 216 exists to the South, thereafter the roads are constructed with existing materials and gravel. The highways are maintained by Utah State road crews. All other roads are maintained by County crews.

The aforementioned dirt oil field service roads and other roads in the vicinity are constructed out of existing native materials that are prevalent to the existing area they are located in and range from clays to a sandy-clay shale material.

The roads for access during the drilling, completion and production phase will be maintained at the standards required by the State of Utah, or other controlling agencies. This maintenance will consist of some minor grader work for smoothing road surfaces and for snow removal.

2. PLANNED ACCESS ROAD

Approximately 1,585' of access road is proposed. See attached **Topographic Map "B"**.

The proposed access road will be an 18' crown road (9' either side of the centerline) with drainage ditches along either side of the proposed road whether it is deemed necessary in order to handle any run-off from normal meteorological conditions that are prevalent to this area. The maximum grade will be less than 8%.

There will be no culverts required along this access road. There will be barrow ditches and turnouts as needed along this road.

There are no fences encountered along this proposed road. There will be no new gates or cattle guards required.

All construction material for this access road will be borrowed material accumulated during construction of the access road.

3. **LOCATION OF EXISTING WELLS**

Refer to **EXHIBIT B**.

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

It is anticipated that this well will be a producing oil well.

There will not be a tank battery at this location. A Central Battery will be located at the proposed State 1-16-9-18 location.

The flow lines from this well will run along access roads leading to the Central Battery located at the proposed State 1-16-9-18 location. **See attached Topographic Map "D"**.

Upon construction of a tank battery, the well pad will be surrounded by a dike of sufficient capacity to contain at minimum 110% of the largest tank volume within the facility battery.

Tank batteries will be built to State specifications.

All permanent (on site for six (6) months or longer) structures, constructed or installed (including pumping units), will be painted Desert Tan. All facilities will be painted within six months of installation.

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

Fresh water purchased from the Johnson Water District will be used for drilling. A temporary poly pipeline may be used for water transportation from our existing supply line from Johnson Water District, or trucked from Inland Production Company's injection facilities – **EXHIBIT A**.

There will be no water well drilled at this site.

6. **SOURCE OF CONSTRUCTION MATERIALS**

All construction material for this location shall be borrowed material accumulated during construction of the location site and access road.

A mineral material application is not required for this location.

7. **METHODS FOR HANDLING WASTE DISPOSAL**

A small reserve pit (90' x 40' x 8' deep, or less) will be constructed from native soil and clay materials. The reserve pit will receive the processed drill cutting (wet sand, shale & rock) removed from the wellbore. Any drilling fluids, which do accumulate in the pit as a result of shale-shaker carryover, cleaning of the sand trap, etc., will be promptly reclaimed. All drilling fluids will be fresh water based, typically containing Total Dissolved Solids of less than 3000 PPM. No potassium chloride, chromates, trash, debris, nor any other substance deemed hazardous will be placed in this pit. Therefore, it is proposed that no synthetic liner be required in the reserve pit. However, if upon constructing the pit there is insufficient fine clay and silt present, a liner will be used for the purpose of reducing water loss through percolation.

Inland requests approval that a flare pit not be constructed or utilized on this location.

A portable toilet will be provided for human waste.

A trash basket will be provided for garbage (trash) and hauled away to an approved disposal site at the completion of the drilling activities.

Immediately upon first production, all produced water will be confined to a steel storage tank. If the production water meets quality guidelines, it is transported to the Ashley, Monument Butte, Jonah, and Beluga water injection facilities by company or contract trucks. Subsequently, the produced water is injected into approved Class II wells to enhance Inland's secondary recovery project.

Water not meeting quality criteria, is disposed at Inland's Pariette #4 disposal well (Sec. 7, T9S R19E) or at State of Utah approved surface disposal facilities.

8. **ANCILLARY FACILITIES:**

There are no ancillary facilities planned for at the present time and none foreseen in the near future.

9. **WELL SITE LAYOUT:**

See attached Location Layout Sheet.

**Fencing Requirements**

All pits will be fenced according to the following minimum standards:

- a) A 39-inch net wire shall be used with at least one strand of barbed wire on top of the net.
- b) The net wire shall be no more than two (2) inches above the ground. The barbed wire shall be three (3) inches above the net wire. Total height of the fence shall be at least forty-two (42) inches.
- c) Corner posts shall be centered and/or braced in such a manner to keep tight at all times
- d) Standard steel, wood or pipe posts shall be used between the corner braces. Maximum distance between any two posts shall be no greater than sixteen (16) feet.
- e) All wire shall be stretched, by using a stretching device, before it is attached to the corner posts.

The reserve pit fencing will be on three (3) sides during drilling operations and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.

10. **PLANS FOR RESTORATION OF SURFACE:**

a) **Producing Location**

Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, equipment, debris, material, trash and junk not required for production.

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximated natural contours. Weather permitting, the reserve pit will be reclaimed within one hundred twenty (120) days from

the date of well completion. Before any dirt work takes place, the reserve pit must have all fluids and hydrocarbons removed.

b) **Dry Hole Abandoned Location**

At such time as the well is plugged and abandoned, the operator shall submit a subsequent report of abandonment and the State of Utah will attach the appropriate surface rehabilitation conditions of approval.

11. **SURFACE OWNERSHIP:** State of Utah

12. **OTHER ADDITIONAL INFORMATION:**

- a) Inland Production Company is responsible for informing all persons in the area 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, Inland is to immediately stop work that might further disturb such materials and contact the Authorized Officer.
- b) Inland Production will control noxious weeds along rights-of-way for roads, pipelines, well sites or other applicable facilities. On State administered land it is required that a Pesticide Use Proposal shall be submitted and given approval prior to the application of herbicides or other possible hazardous chemicals.
- c) Drilling rigs and/or equipment used during drilling operations on this well site will not be stacked or stored on State Lands after the conclusion of drilling operations or at any other time without State authorization. However, if State authorization is obtained, it is only a temporary measure to allow time to make arrangements for permanent storage on commercial facilities.

**The Archaeological Cultural Resource Survey for this area is attached.**

**Additional Surface Stipulations**

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws and regulations, Onshore Oil and Gas Orders, the approved plan of operations and any applicable Notice to Lessees. A copy of these conditions will be furnished to the field representative to ensure compliance.

**Hazardous Material Declaration**

Inland Production Company guarantees that during the drilling and completion of the State 3-16-9-18. Inland will not use, produce, store, transport or dispose 10,000# annually of any of the hazardous chemicals contained in the Environmental Protection Agency's consolidated list of chemicals subject to reporting under Title III Superfund Amendments and Reauthorization Act (SARA) of 1986. Inland also guarantees that during the drilling and completion of the State 3-16-9-18 Inland will use, produce, store, transport or dispose less than the threshold planning quantity (T.P.Q.) of any extremely hazardous substances as defined in 40 CFR 355.

A complete copy of the approved APD, if applicable, shall be on location during the construction of the location and drilling activities.

Inland Production Company or a contractor employed by Inland Production shall contact the State office at (801) 722-3417, 48 hours prior to construction activities.

The State office shall be notified upon site completion prior to moving on the drilling rig.

13. **LESSEE'S OR OPERATOR'S REPRESENTATIVE AND CERTIFICATION:**

Representative

Name: Brad Mecham  
Address: Inland Production Company  
Route 3, Box 3630  
Myton, UT 84052  
Telephone: (435) 646-3721

Certification

Please be advised that INLAND RESOURCES, INC. is considered to be the operator of well #3-16-9-18, NE/NW Section 16, T9S, R18E, LEASE #ML-48378, Uintah County, Utah and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond coverage is provided by Hartford Accident #4471291.

I hereby certify that the proposed drill site and access route have been inspected, and I am familiar with the conditions which currently exist; that the statements made in this plan are true and correct to the best of my knowledge; and that the work associated with the operations proposed here will be performed by Inland Resources, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of the 18 U.S.C. 1001 for the filing of a false statement.

Date

6/25/04

Mandie Crozier  
Mandie Crozier  
Regulatory Specialist  
Inland Production Company

CULTURAL RESOURCE INVENTORY FOR INLAND  
RESOURCES OF SECTIONS 2 AND 16, T 9S, R 18E  
ON EIGHT MILE FLAT, UINTAH COUNTY, UTAH

BY:

Angela Whitfield  
and  
Amanda Wilson

Prepared For:

State and Institutional  
Trust Land Administration

Prepared Under Contract With:

Inland Resources  
Route 3 Box 3630  
Myton, UT 84052

Prepared By:

Montgomery Archaeological Consultants  
P.O. Box 147  
Moab, Utah 84532

MOAC Report No. 04-37

April 16, 2004

United States Department of Interior (FLPMA)  
Permit No. 04-UT-60122

State of Utah Antiquities Project (Survey)  
Permit No. U-04-MQ-0109s

## ABSTRACT

A cultural resource inventory was conducted by Montgomery Archaeological Consultants (MOAC) of T 9S, R 18E, Sections 2 and 16 for Inland Resources. The project area is located on Eightmile Flat, Uintah County, Utah. Inland Resources, Inc. proposes to develop oil/gas well locations, access roads, and pipelines within these blocks. The inventory was implemented at the request of Ms. Mandie Crozier of Inland Resources. The project occurs entirely on land administered by the School and Institutional Trust Land Administration (SITLA).

The project area lies approximately 20 miles south of Roosevelt, Utah. The inventory resulted in the identification of thirteen new archaeological sites (42Un3669 through 42Un3681) and one isolated find of artifact. Five of the sites (42Un3674, 42Un3678, 42Un3679, 42Un3680, and 42Un3681) are recommended as eligible to the NRHP (see Table 1). These consist of three prehistoric temporary camps (42Un3674, 42Un3678, and 42Un3680), a lithic scatter (42Un3679), and a rock art site (42Un3681). The prehistoric camps and lithic scatter are deemed eligible to the NRHP under Criterion D due to their potential to yield additional information on the prehistory of the area. One of the sites (42Un3674) contains three single-hand manos and a core, all located near overhangs that are potential rock shelters. Colluvial deposits cover the site area, and could obscure the presence of additional cultural materials. Another prehistoric temporary camp (42Un3680) contains a core, several flakes, and a fire-cracked rock concentration. Aeolian soils covering the site area could obscure the presence of additional cultural materials. Site 42Un3678 contains lithic debitage and nine tools, including one diagnostic tool - the base of an Elko corner-notched projectile point. The lithic scatter (42Un3679) contains 15 pieces of lithic debitage of a variety of material types, a core, and a utilized flake. It is located near an ephemeral wash, and alluvial soils in the area suggest the potential for buried cultural materials. The rock art site (42Un3681) is evaluated as eligible to the NRHP under Criteria C and D. It possesses high artistic values as it is one of the few rock art sites that have been identified in the immediate area, and has potential to yield information important to the prehistory of the area.

Eight of the sites are evaluated as not eligible to the NRHP (Table 1). The prehistoric site types include two lithic scatters (42Un3675 and 42Un3677). These sites lack temporal indicators and spatial patterning and occur on sediments that are unlikely to yield buried cultural materials. The remainder of the sites evaluated as not eligible to the NRHP include five historic temporary camps (42Un3669 through 42Un3673) and a site containing two cairns (42Un3676). These sites all possess a limited class of artifacts and little depth potential. They are common site types to the area, and are unlikely to contribute to the historic research domains of the area.

It is recommended that the eligible sites be avoided by any future undertakings. Based on adherence to this recommendation, a determination of "no historic properties affected" pursuant to Section 106, CFR 800 is proposed for this project.

TABLE OF CONTENTS

ABSTRACT ..... i  
TABLE OF CONTENTS ..... ii  
LIST OF FIGURES ..... ii  
LIST OF TABLE ..... ii  
INTRODUCTION ..... 1  
DESCRIPTION OF PROJECT AREA ..... 2  
    Environmental Setting ..... 2  
    Cultural Overview ..... 2  
SURVEY METHODOLOGY ..... 6  
INVENTORY RESULTS ..... 7  
    Archaeological Sites ..... 7  
    Isolated Find of Artifacts ..... 11  
NATIONAL REGISTER OF HISTORIC PLACES EVALUATION ..... 12  
MANAGEMENT RECOMMENDATIONS ..... 13  
REFERENCES CITED ..... 14  
APPENDIX A: INTERMOUNTAIN ANTIQUITIES COMPUTER  
SYSTEM (IMACS) SITE FORMS ..... 16

LIST OF FIGURES

1. Inventory Area of Section 16, Township 9S, Range 18E on Eight Mile Flat for Inland Resources, Uintah County, Utah showing cultural resources ..... 3
2. Inventory Area of Section 2, Township 9S, Range 18E on Eight Mile Flat for Inland Resources, Uintah County, Utah showing cultural resources ..... 4

LIST OF TABLE

1. Cultural Resources and NRHP Assessment ..... 13

## INTRODUCTION

A cultural resource inventory was conducted by Montgomery Archaeological Consultants (MOAC) of T 9S, R 18E, Sections 2 and 16. The project area is located on Eightmile Flat, Uintah County, Utah. Inland Resources, Inc. proposes to develop oil/gas well locations, access roads, and pipelines within these blocks. The inventory was implemented at the request of Ms. Mandie Crozier of Inland Resources. The project occurs entirely on land administered by the School and Institutional Trust Land Administration (SITLA).

The objective of the inventory was to locate, document and evaluate any cultural resources within the project area. This project was carried out in compliance with Federal and State legislation including the Antiquities Act of 1906, the National Historic Preservation Act (NHPA) of 1966 (as amended), the National Environmental and Historic Preservation Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, and the American Indian Religious Freedom Act of 1978.

The fieldwork was conducted on March 8-13, 2004 under the direction of Keith R. Montgomery (Principal Investigator) and assisted by Mark Beeson, Mike Carlisle, and Greg Woodall. The inventory was conducted under the auspices of U.S.D.I. (FLPMA) Permit No. 04-UT-60122 and State of Utah Antiquities Project (Survey) No. U-04-MQ-0109s.

A file search for previous inventories was conducted by Marty Thomas on March 4, 2004 at the Utah State Historic Preservation Office in Salt Lake City. According to this consultation, a number of inventories have been conducted within the immediate project area. In 1979, Archeological-Environmental Research Corporation (AERC) conducted a cultural resource survey of three proposed drill locations for Mapco Corporation (Norman and Hauck 1979). The survey area included a portion of Section 16. No cultural resources were identified during the project. In 1981, Nickens and Associates performed a cultural resource inventory for the proposed Bonanza-Castle Peak-Upalco Transmission Line corridor and access roads for Deseret Generation and Transmission Co-operative (Christensen 1981). The transmission line was approximately 57 miles long, and a portion of it passed through Section 16, Township 9 South, Range 18 East. Thirty three archaeological sites and 56 isolated finds were identified during the project. One of the sites, 42Un1174, was deemed a possible NRHP eligible site. In 1984, AERC performed cultural resource inventories of two proposed well locations and access routes for Diamond Shamrock Exploration (Hauck 1984). A portion of the access route to well location 23-1 was located in Section 2, Township 9 South, Range 18 East. No sites were identified during the project, however several isolated tools and primary flakes were observed. In February 2004, MOAC performed a cultural resource inventory adjacent to the current project area that resulted in the documentation of four new archaeological sites (Wilson and Montgomery 2004a). The sites were all historic short-term camps or trash scatters evaluated as not eligible to the NRHP. In April 2004, MOAC conducted another cultural resource inventory in the area that included Sections 9, 10, 11, 14, 15, and 23, Township 9 South, Range 18 East (Wilson and Montgomery 2004b). The inventory resulted in documentation of seventy-one new archaeological sites. Twenty-eight of the sites were evaluated as eligible to the NRHP. These include one historic site, two multi-component sites, and twenty five prehistoric sites. The prehistoric sites consist of nineteen lithic scatters and six temporary camps.

## DESCRIPTION OF PROJECT AREA

The project area lies approximately 20 miles south of Roosevelt, Utah on Eightmile Flat, Uintah County, Utah. The inventory area is located in Township 9 South, Range 18 East, Section 2 and Section 16 (Figures 1 and 2). A total of 1240 acres, including 640 acres in Section 16 and 600 acres in Section 2, was inventoried on lands administered by School and Institutional Trust Land Administration (SITLA).

### Environmental Setting

The project area lies within the Uinta Basin physiographic unit, a distinctly bowl-shaped geologic structure (Stokes 1986:231). The entire Uinta Basin ecosystem is within the Green River drainage, considered to be the northernmost extension of the Colorado Plateau. Topographically, this area consists of highly dissected sandstone and mudstone rock formations and broad sandy silt ridges. Recent alluvial deposits, older alluvial terrace deposits, and rock outcrops of the Upper Eocene Uinta Formation constitute the surface geology of the area. The Uinta Formation is seen as eroded outcrops formed by fluvial deposited stream laid interbedded sandstone and mudstone. This formation is known for its fossil vertebrates, including turtles, crocodilians, fish, and mammals. The elevation ranges from 5100 to 5140 feet a.s.l. Named water sources north of the project area include Pariette Draw and Castle Peak Draw. In addition, there are numerous unnamed washes in the immediate project vicinity. The project area lies within the Upper Sonoran life zone, dominated by a mixed desert shrub zone. Vegetation in the area includes shadscale, low sagebrush, mat saltbush, greasewood, rabbitbrush, snakeweed, prickly pear cactus, pincushion cactus, and bunch grasses. Modern disturbances to the landscape include oil and gas development, access roads, pipelines, and livestock grazing.

### Cultural Overview

The cultural-chronological sequence represented in the area includes the Paleoindian, Archaic, Fremont, Protohistoric, and Euro-American stages. The earliest inhabitants of the region are representative of the Paleoindian stage (ca. 12,000-8,000 B.P.), characterized by the adaptation to terminal Pleistocene environments and by the exploitation of big game fauna. The presence of Paleoindian hunters in the Uinta Basin region is implied by the discovery of Clovis and Folsom fluted points (ca. 12,000 B.P. - 10,000 B.P.), as well as the more recent Plano Complex lanceolate points (ca. 10,000 B.P. - 7,000 B.P.). Near the project area, a variety of Plano Complex Paleoindian projectile points have been documented, including Goshen, Alberta, and Midland styles (Hauck 1998). No sites with evidence of Folsom lithic technology have previously been documented near the project area. Spangler (1995:332) reports that there are no sealed cultural deposits in association with extinct fauna or with chronologically distinct Paleoindian artifacts in Utah. Specifically in the Uinta Basin, few Paleoindian sites have been adequately documented, and most evidence of Paleoindian exploitation of the area is restricted to isolated projectile points recovered in nonstratigraphic contexts. Copeland and Fike (1998:21) argue that many areas in Utah are conducive to the herding behavior of megafauna, and that there is a high probability that many of the sites in Utah of unknown age are Paleoindian.

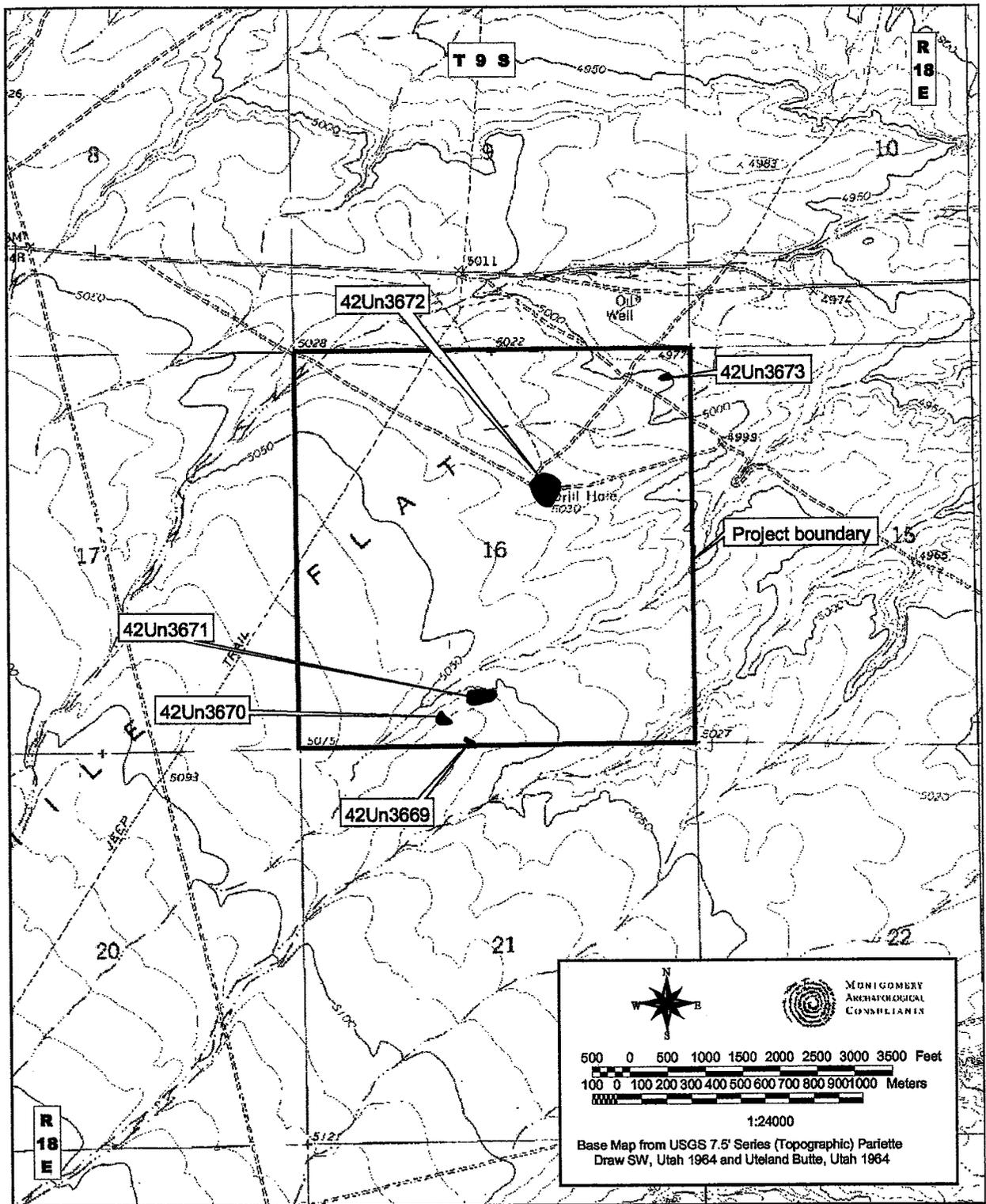


Figure 1. Inventory Area of Section 16, Township 9S, Range 18E on Eight Mile Flat for Inland Resources, Uintah County, Utah showing cultural resources.

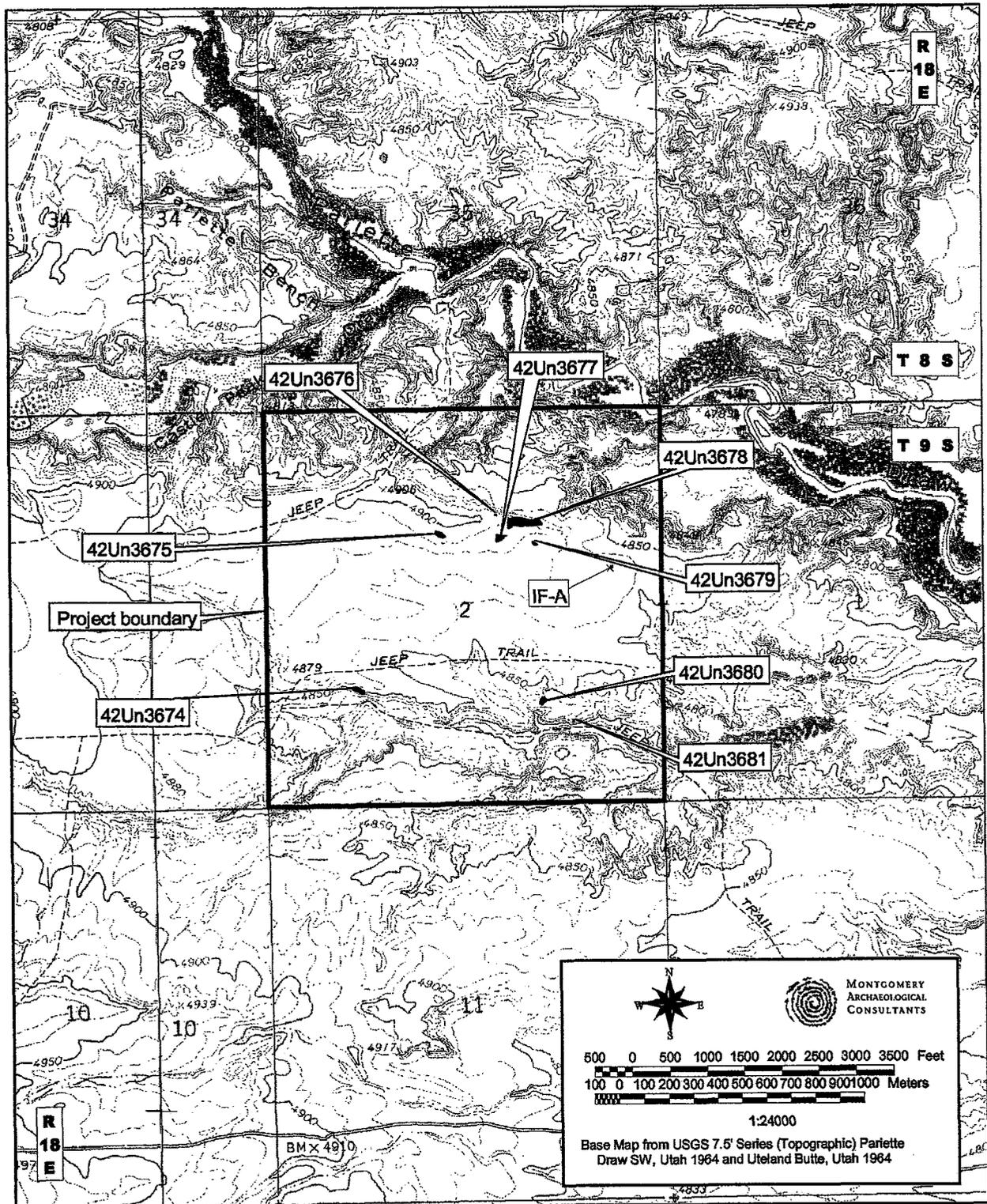


Figure 2. Inventory Area of Section 2, Township 9S, Range 18E on Eight Mile Flat for Inland Resources, Uintah County, Utah showing cultural resources.

The Archaic stage (ca. 8,000 B.P.-1,500 B.P.) is characterized by the dependence on a foraging subsistence, with peoples seasonally exploiting a wide spectrum of plant and animal species in different ecozones. The shift to an Archaic lifeway was marked by the appearance of new projectile point types, and the development of the atlatl, perhaps in response to a need to pursue smaller and faster game (Holmer 1986). In the Uinta Basin, evidence of Early Archaic presence is relatively sparse compared to the subsequent Middle and Late Archaic periods. Early Archaic (ca. 6000-3000 B.C.) sites in the Basin include sand dune sites and rockshelters primarily clustered in the lower White River drainage (Spangler 1995:373). Early Archaic projectile points recovered from Uinta Basin contexts include Pinto Series, Humboldt, Elko Series, Northern Side-notched, Hawken Side-notched, Sudden Side-notched and Rocker Base Side-notched points. Excavated sites in the area with Early Archaic components include Deluge Shelter in Dinosaur National Monument, and open campsites along the Green River and on the Diamond Mountain Plateau (Spangler 1995:374). The Middle Archaic (ca. 3000-500 B.C.) is characterized by improved climatic conditions and an increase in human population on the northern Colorado Plateau. Several stratified Middle Archaic sites have been excavated and dozens of sites have been documented in the Uinta Basin. Middle Archaic sites in the area reflect cultural influences from the Plains, although a Great Basin and/or northern Colorado Plateau influence is represented in the continuation of the Elko Series projectile points. Subsistence data from Middle Archaic components indicate gathering and processing of plants as well as faunal exploitation (e.g., mule deer, antelope, bighorn sheep, cottontail rabbit, muskrat, prairie dog, beaver and birds). The Late Archaic period (ca. 500 B.C.-A.D. 550) in the Uinta Basin is distinguished by the continuation of Elko Series projectile points with the addition of semi-subterranean residential structures at base camps. By about A.D. 100, maize horticulture and Rose Springs arrow points had been added to the Archaic lifeway. In the Uinta Basin, the earliest evidence of Late Archaic architecture occurs at the Cockleburr Wash Site (42Un1476) where a temporary structure, probably a brush shelter, yielded a date of 316 B.C. (Tucker 1986). The structure was probably associated with seasonal procurement of wild floral resources gathered along Cliff Creek.

The Formative stage (A.D. 500-1300) is recognized in the area as the Uinta Fremont as first defined by Marwitt (1970). This stage is characterized by a reliance upon domesticated corn and squash, increasing sedentism, and in its later periods, substantial habitation structures, pottery, and bow and arrow weapon technology. Based on the evidence from Caldwell Village, Boundary Village, Deluge Shelter, Mantles Cave and others, the temporal range of the Uinta Fremont appears to be from A.D. 650 to 950. This variant is characterized by shallow, saucer-shaped pithouse structures with randomly placed postholes and off-center firepits, some of which were adobe-rimmed. Traits considered unique or predominate to the Uinta Basin include calcite-tempered pottery, two-handled wide-mouth vessels, Utah type metates, the use of gilsonite for pottery repair, settlement on tops of buttes and large-shouldered bifaces (Shields 1970).

Archaeological evidence suggests that Numic peoples appeared in east-central Utah at approximately A.D. 1100 or shortly before the disappearance of Formative-stage peoples (Reed 1994). The archaeological remains of Numic-speaking Utes consist primarily of lithic scatters with low quantities of brown ware ceramics, rock art, and occasional wickiups. The brown ware ceramics appear to be the most reliable indicator of cultural affiliation, as Desert Side-notched and Cottonwood Triangular points were manufactured by other cultural groups beside the Ute (Horn,

Reed, and Chandler 1994:130). The Ute appear to have been hunters and gatherers who exploited various fauna and flora resources. According to macrobotanical and faunal data from dated components, deer, elk, pronghorn, bison, and small game were acquired (Reed 1994:191). Plant materials thought to have been exploited for food include goosefoot, grass seeds, pinyon nuts, juniper berries, squawbush berries and leaves, hackberry seeds and possibly saltbush seeds, knotweed, chokecherry, and chickweed (Reed 1994:191).

## SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. The two parcels were examined for cultural resources by the archaeologists walking parallel transects spaced no more than 10 m (30 ft) apart. Ground visibility was considered good. A total of 1240 acres, including 640 acres in Section 16 and 600 acres in Section 2, was inventoried on lands administered by School and Institutional Trust Land Administration (SITLA).

Cultural resources were recorded either as archaeological sites or isolated finds of artifacts. Archaeological sites are defined as spatially definable areas with ten or more artifacts and/or features. Sites were documented by the archaeologists walking transects across the site, spaced no more than 3 m (10 ft) apart and marking the locations of cultural materials with pinflags. This procedure allowed clear definition of site boundaries and artifact concentrations. At the completion of the surface inspection, a Brunton compass was employed to point-provenience diagnostic artifacts and other relevant features in reference to the site datum, a steel rebar stamped with a temporary site number. Archaeological sites were plotted on a 7.5' USGS quadrangle, photographed, and documented with site data entered on an Intermountain Antiquities Computer System (IMACS, 1990 version) inventory form (Appendix A). Isolated finds were defined as individual artifacts or light scatters of items lacking sufficient material culture to warrant IMACS forms or to derive interpretation of human behavior in a cultural and temporal context. All isolated artifacts were plotted on a 7.5' USGS map and are described in this report.

## INVENTORY RESULTS

The inventory of T 9S, R 18E, Sections 2 and 16 on Eight Mile Flat for Inland Resources resulted in the identification of thirteen new archaeological sites (42Un3669 through 42Un3681) and one isolated find of artifact.

### Archaeological Sites

Smithsonian Site No.: 42Un3669  
Temporary Site No.: 04-37-12  
Legal Description: T 9S, R 18E, Sec. 16 and 21  
Jurisdiction: SITLA  
NRHP Eligibility: Not Eligible

Description: This site is a historic temporary camp located at the top edge of a flat, broad ridge. The cultural materials at the site include glass, tin cans, a cartridge with the headstamp "30-30 WIN SuperSpeed, one battery bank with 30 'D' cells stuck together, one large battery core, one hay bail wire tie, one cast iron wood stove burner lid with a 7" diameter and the markings "GW 7R", and one metal frying pan handle. The glass consists of 69 fragments of selenium glass all representing different jars with 2" diameter screw on metal lids. Two of the jars contain trademarks: one jar has a Latchford Marble trademark on the base (1939-1957) and a diameter of 4" and the other jar had

a Glass Container's Corporation trademark (since 1945). The tin cans at the site include three sanitary cut around medium food cans; seven hole-in-top milk cans with ice pick or knife cut openings; two shirt pocket, hinged lid tobacco tins; and one removable lid with 12 nail holes punched in it. There is one Feature at the site consisting of 30 juniper wood chips and splinters in an area with a diameter of 10 meters. The site was most likely a camp used by sheep herders between 1939-1955.

Smithsonian Site No.: 42Un3670  
Temporary Site No.: 04-37-13  
Legal Description: T 9S, R 18E, Sec. 16  
Jurisdiction: SITLA  
NRHP Eligibility: Not Eligible

Description: This site is a historic temporary camp located on top of a broad flat ridge. The cultural materials at the site include one selenium glass jar with a threaded neck and the Alexander Kerr trademark on the base (since 1944); one internal friction tobacco tin (1960s); four external friction wire hinge tobacco tins (1910-1960); ten medium cut around sanitary cans; one tall cut around sanitary can with "Canco" embossed on it (1912-1921); ten knife tip cut hole-in-top milk cans with "Punch Here" embossed on them (1935-1945); two, one pound round key strip coffee cans; one, one quart oil can; one screw cap fluid can with a spout and "Canco" on the bottom (1912-1921); one pry out can lid with "Walter Baker's Breakfast Cocoa" on it; two key strip coffee can lids with "Regular Grind" embossed on them; one metal screw cap; and one sanitary can lid with "RCCanco St. Louis" on it. There are two features at the site that consist of wood piles with over one hundred juniper chips and splinters in each. The site represents a camp used by sheep herders or other ranchers in the area on multiple occasions between 1920 and 1960.

Smithsonian Site No.: 42Un3671  
Temporary Site No.: 04-37-11  
Legal Description: T 9S, R 18E, Sec. 16  
Jurisdiction: SITLA  
NRHP Eligibility: Not Eligible

Description: This site is a historic temporary camp located at the top edge of a low, broad ridge. The cultural materials at the site were found in two distinct loci. Locus A contained Feature A which consists of three wood chips, one rifle cartridge with "REM-UMC 25-35" on the headstamp (1911-1960), 14 sanitary food cans, eight hole-in-top milk cans, one spice can lid, one coffee can lid, one grease can, and one selenium medicine bottle with "DR. NUNN's Black Oil Healing Compound" embossed on the side and a finish that required a stopper or cork. Locus B contained Feature B which consists of six wood chips, two hay bail wire ties, two sanitary food cans, and two "Punch Here" hole-in-top milk cans (1935-1945). The site was most likely used by sheep herders on multiple occasions from 1920-1950.

Smithsonian Site No.: 42Un3672  
Temporary Site No.: 04-37-10  
Legal Description: T 9S, R 18E, Sec. 16  
Jurisdiction: SITLA  
NRHP Eligibility: Not Eligible

Description: This site is a temporary camp mixed with modern trash located on the crest of a broad, slightly rounded ridge. The cultural materials at the site include five hole-in-top milk cans with "Punch Here" embossed on the lid (1935-1945), ten medium cut-around sanitary food cans, and

modern trash and debris. There are five features at the site: Feature A is a pen or corral, Feature B is a wood pile, Feature C is a drill hole, Feature D is a brick/slag pile, and Feature E is a trash pile. The site dates from 1935 to the present based on the hole-in-top cans and modern trash. The historic aspect of the site was most likely used by sheep herders or other ranchers in the 1940s.

Smithsonian Site No.: 42Un3673  
Temporary Site No.: 04-37-09  
Legal Description: T 9S, R 18E, Sec. 16  
Jurisdiction: SITLA  
NRHP Eligibility: Not Eligible

Description: This site is a historic temporary camp located on a low rounded ridgetop in the Uinta Basin. Cultural materials include three knife punched hole-in-top milk cans, one key strip meat can, one broken selenium glass jar with a Knox Glass Bottle Company of Parker trademark on the base (1930-1952) and a metal screw cap, and one wood pile remnant with coal chunks. The feature of wood and coal probably represents the remains of a wood pile while the coal is left over from a stove. The site dates around 1930-1950 based on the glass maker's mark and was most likely used on one occasion by sheep herders or other ranchers in the area.

Smithsonian Site No.: 42Un3674  
Temporary Site No.: 04-37-01  
Legal Description: T 9S, R 18E, Sec. 2  
Jurisdiction: SITLA  
NRHP Eligibility: Eligible, Criterion D

Description: This site is a prehistoric temporary camp located on a sandstone shelf ledge that rises 1-2 meters with three rock alcoves/overhangs that could be possible shelters. There are four tools at the site. Tool 1 is a possible single-handed mano manufactured from coarse-grained brown quartzite measuring 15 cm long, 8 cm wide, and 5 cm thick. This mano exhibits 2-5% polish on the convex face and has five margins. Tool 2 is a single-handed mano with eight margins manufactured from reddish brown coarse-grained quartzite measuring 13 cm long, 9 cm wide, and 6 cm thick. The mano has one ground and polished surface measuring 8 x 6 cm and one lateral, natural fracture. The distal end of the cobble exhibits minimal to moderate wear on a 2 x 2 cm flat surface. Tool 3 is a single-handed mano with nine margins manufactured from brown, medium-grained quartzite. There is one grinding surface with minimal use wear that measures 6 x 6 cm on the convex side of the cobble. Tool 4 is a cobble core of light tan-brown opaque chert that measures 8 cm long, 5 cm wide, and 2 cm thick. Ten flakes have been removed from the core and use wear is exhibited on one small edge. The site was most likely used as a temporary camp that can not be dated since no diagnostic artifacts were present. A modern beer bottle was found on the site indicating the possibility of vandalism.

Smithsonian Site No.: 42Un3675  
Temporary Site No.: 04-37-02  
Legal Description: T 9S, R 18E, Sec. 2  
Jurisdiction: SITLA  
NRHP Eligibility: Not Eligible

Description: This site is a prehistoric lithic scatter located on a gentle south slope of a low knoll. The cultural materials present at the site include ten pieces of debitage and one lithic tool. The

debitage includes mainly tertiary flakes with a few broken flakes, one primary flake, and one secondary flake. Material types include grey-pink opaque chert, mottled grey-tan-pink opaque chert, mottled tan-brown opaque chert, brown opaque chert, yellow-brown quartzite, and white quartzite. The lithic tool is a uniface manufactured from semi-translucent brown chert with pressure flaking on the dorsal side. There were no features present at the site.

Smithsonian Site No.: 42Un3676  
Temporary Site No.: 04-37-03  
Legal Description: T 9S, R 18E, Sec. 2  
Jurisdiction: SITLA  
NRHP Eligibility: Not Eligible

Description: This site is composed of two cairns located on top of a low, long, flat ridge. A collapsed/tipped cairn is located on the east end and a standing cairn is visible at the west end of this same ridge approximately 1/8th of a mile away. The collapsed cairn appears to have been approximately 35 slabs high (4-5 feet) and constructed from local flat sandstone irregular slabs. The slabs measure between 1-2" thick, 6-18" wide, and 24-30" long. There is no discernible placement pattern and the cairn has collapsed to the west off the base location. The standing cairn is 4-5 feet tall and visible at the west end of the ridgeline. There are no associated artifacts at the site.

Smithsonian Site No.: 42Un3677  
Temporary Site No.: 04-37-04  
Legal Description: T 9S, R 18E, Sec. 2  
Jurisdiction: SITLA  
NRHP Eligibility: Not Eligible

Description: This site is a lithic scatter located along the base of a low ridge or knoll. The cultural materials at the site include 15 pieces ofdebitage and two lithic tools. The tools consist of a Stage 1 biface manufactured from grey-pink opaque chert and a bifacial core of grey-pink opaque chert. Thedebitage at the site consists mainly of primary and secondary flakes with one tertiary flake and no shatter. Material types include grey-pink opaque chert, tan opaque chert, tan-brown mottled opaque chert, grey quartzite, and cream quartzite. There were no diagnostic artifacts or features at the site which was mostly likely used as a brief lithic reduction locality.

Smithsonian Site No.: 42Un3678  
Temporary Site No.: 04-37-05  
Legal Description: T 9S, R 18E, Sec. 2  
Jurisdiction: SITLA  
NRHP Eligibility: Eligible, Criterion D

Description: This site is an Archaic temporary camp located on a slickrock and sand ridgetop. A bedrock natural water pocket in the slickrock is present, measuring 1.5 m long, 1 m wide, and 0.2 m deep. Cultural materials at the site include nine lithic tools, including two pieces of ground stone, and 20 pieces ofdebitage. Thedebitage includes mainly secondary and tertiary flakes with a few pieces of shatter and primary flakes. Material types include tan opaque chert, tan-brown mottled opaque chert, white-pink mottled opaque chert, cream opaque chert, yellow-orange quartzite, butterscotch quartzite, and cream quartzite. The tools at the site include three small cores of pink-grey opaque chert; one utilized flake with use wear on one bifacial edge; one slab grinding stone with a ground area on one side; one unknown hand stone with battering on one end and possible grinding on one face; one Elko Corner-notched projectile point base of salmon semi-translucent chert; one large side scraper with minimal use wear on one bifacial margin; and one early stage

biface of pink-grey opaque chert with a fracture on the distal end. There were no features present at the site. The Elko projectile point dates to the Archaic period and the site most likely represents a brief camp or lithic reduction locality. A modern beer can was found on the site indicating the possibility of vandalism.

Smithsonian Site No.: 42Un3679  
Temporary Site No.: 04-37-06  
Legal Description: T 9S, R 18E, Sec. 2  
Jurisdiction: SITLA  
NRHP Eligibility: Eligible, Criterion D

Description: This site is a prehistoric lithic scatter located in a slight depression and ephemeral wash in the Uinta Basin. The cultural materials at the site include 15 pieces of debitage and two lithic tools. The debitage consists of mainly secondary flakes with a few tertiary and primary flakes. Material types include tan-brown mottled opaque chert, tan opaque chert, orange semi-translucent chert, cream opaque chert, salmon quartzite, white-pink mottled opaque chert, grey opaque chert, grey quartzite, and brown opaque chert. The tools at the site include a core manufactured from a cream quartzite cobble with four flake scars and a utilized flake manufactured from a grey opaque chert secondary flake with use wear exhibited on one margin. There are no features present at the site. The site can not be dated since no diagnostic materials were found.

Smithsonian Site No.: 42Un3680  
Temporary Site No.: 04-37-07  
Legal Description: T 9S, R 18E, Sec. 2  
Jurisdiction: SITLA  
NRHP Eligibility: Eligible, Criterion D

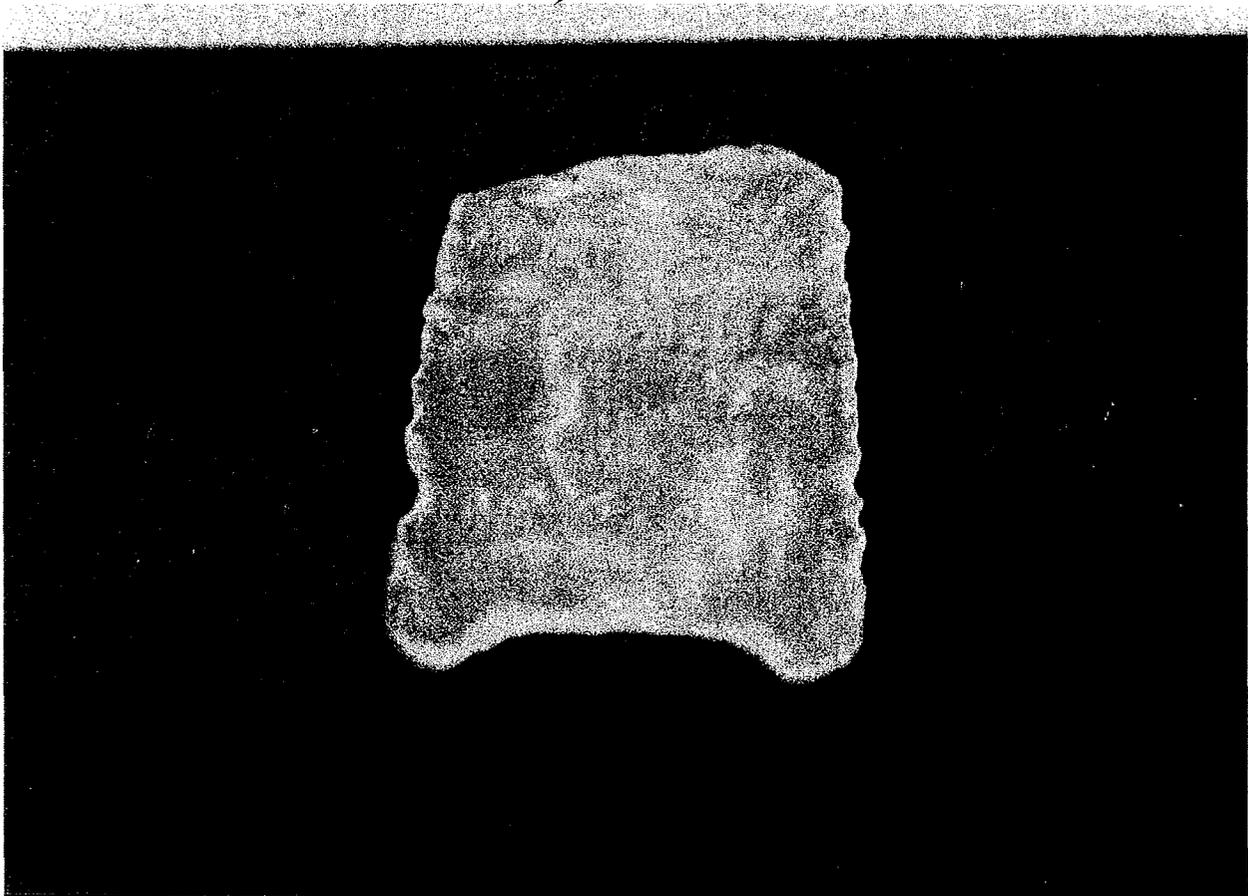
Description: This site is a prehistoric temporary camp located at the top edge of a ridge overlooking a large draw. Cultural materials at the site include one lithic tool, three pieces of debitage, and a fire-cracked rock concentration. The tool at the site is a butterscotch quartzite bifacial core with numerous flake scars and 5% cortex remaining. The debitage includes two secondary flakes and one tertiary flake. Material types are cream opaque chert and tan-brown mottled opaque chert. Feature A consists of 12 reddened quartzite cobbles in a circular area with a diameter of 2 meters. Another ten reddened and cracked quartzite cobbles and fragments are located within 5 meters down slope and across the slope of the concentration. No charcoal or soil staining was noted. The site was mostly likely used as a brief temporary camp and lithic reduction locality that can not be dated since no diagnostic artifacts were observed.

Smithsonian Site No.: 42Un3681  
Temporary Site No.: 04-37-08  
Legal Description: T 9S, R 18E, Sec. 2  
Jurisdiction: SITLA  
NRHP Eligibility: Eligible, Criterion C and D

Description: This site is a rock art site consisting of two petroglyph panels on large detached canyon wall bedrock boulders. Panel (Feature) A faces west on a sandstone boulder and consists of several anthropomorphic and zoomorphic figures as well as a few geometric designs. The panel is faded since it was subject to weathering. Panel (Feature) B consists of two of more figures on a boulder. One of the petroglyphs is a possible snake figure and the other an anthropomorph, but it is hard to distinguish the figures since the panel is faded due to weathering. There were no associated artifacts at the site.

### Isolated Find of Artifact

Isolated Find A (IF-A) is located in the SW/SE/NE of Section 2, T9S, R18E; UTM 597807E/4434899N. It is situated on a gentle ridge slope southeast of Pariette Draw, a major semi-permanent drainage. The deposition environment is a stable residual soil with a veneer of small rocks. This isolated find appears to be the base of a plano-type projectile point. It exhibits a broad concave base with rounded tangs and parallel sides. It is broken near the midsection and exhibits diagonal flake removal as well as margin retouch. The point is very similar to lanceolate points classified as Angostura Points dating ca. 9,000 to 7,000 B.P. The artifact is manufactured from a semitranslucent white chert. Measurements: L=2.5 cm (IC), W=2.0 cm, T=0.25cm.



Isolated Find A. Late Paleoindian Angostura Type Point.

## NATIONAL REGISTER OF HISTORIC PLACES EVALUATION

The National Register Criteria for Evaluation of Significance and procedures for nominating cultural resources to the National Register of Historic Places (NRHP) are outlined in 36 CFR 60.4 as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, material, workmanship, feeling, and association, and that they:

- a)...are associated with events that have made a significant contribution to the broad patterns of our history; or
- b)...are associated with the lives of persons significant to our past; or
- c)...embody the distinctive characteristics of a type, period, or method of construction; or that represents the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d)...have yielded or may be likely to yield information important in prehistory or history.

The inventory of T 9S, R 18E, Sections 2 and 16 on Eight Mile Flat for Inland Resources resulted in the documentation of thirteen new archaeological sites (42Un3669 through 42Un3681). Five of the sites (42Un3674, 42Un3678, 42Un3679, 42Un3680, and 42Un3681) are recommended as eligible to the NRHP (see Table 1). These consist of three prehistoric temporary camps (42Un3674, 42Un3678, and 42Un3680), a lithic scatter (42Un3679), and a rock art site (42Un3681). The prehistoric camps and lithic scatter are deemed eligible to the NRHP under Criterion D due to their potential to yield additional information on the prehistory of the area. One of the sites (42Un3674) contains three single-hand manos and a core, all located near overhangs that are potential rock shelters. Colluvial deposits cover the site area, and could obscure the presence of additional cultural materials. Another prehistoric temporary camp (42Un3680) contains a core, several flakes, and a fire-cracked rock concentration. Aeolian soils covering the site area could obscure the presence of additional cultural materials. Site 42Un3678 contains lithic debitage and nine tools, including an Elko Corner-notched projectile point base. The lithic scatter (42Un3679) contains 15 pieces of lithic debitage of a variety of material types, a core, and a utilized flake. It is located near an ephemeral wash, and alluvial soils in the area suggest the potential for buried cultural materials. The rock art site (42Un3681) is evaluated as eligible to the NRHP under Criteria C and D. It possesses high artistic values as it is one of the few rock art sites that have been identified in the immediate area, and has potential to yield information important to the prehistory of the area.

Eight of the sites are evaluated as not eligible to the NRHP (Table 1). The prehistoric site types include two lithic scatters (42Un3675 and 42Un3677). These sites lack temporal indicators and spatial patterning and occur on sediments that are unlikely to yield buried cultural materials. The remainder of the sites evaluated as not eligible to the NRHP include five historic temporary camps (42Un3669 through 42Un3673) and a site containing two cairns (42Un3676). These sites all possess a limited class of artifacts and little depth potential. They are common site types to the area, and are unlikely to contribute to the historic research domains of the area.

Table 1. Cultural Resources and NRHP Assessment

Site Number	Legal Description	Site Type	NRHP Assessment
42Un3669	T9S, R18E, S. 16 and 21	Historic Temporary Camp	Not Eligible
42Un3670	T9S, R18E, S. 16	Historic Temporary Camp	Not Eligible
42Un3671	T9S, R18E, S. 16	Historic Temporary Camp	Not Eligible
42Un3672	T 9S, R 18E, S. 16	Historic Temporary Camp	Not Eligible
42Un3673	T 9S, R 18E, S. 16	Historic Temporary Camp	Not Eligible
42Un3674	T 9S, R 18E, S. 2	Prehistoric Temporary Camp	Eligible, Criterion D
42Un3675	T 9S, R 18E, S. 2	Lithic Scatter	Not Eligible
42Un3676	T 9S, R 18E, S. 2	Cairns	Not Eligible
42Un3677	T 9S, R 18E, S. 2	Lithic Scatter	Not Eligible
42Un3678	T 9S, R 18E, S. 2	Prehistoric Temporary Camp	Eligible, Criterion D
42Un3679	T 9S, R 18E, S. 2	Lithic Scatter	Eligible, Criterion D
42Un3680	T 9S, R 18E, S. 2	Prehistoric Temporary Camp	Eligible, Criterion D
42Un3681	T 9S, R 18E, S. 2	Rock Art	Eligible, Criteria C & D

#### MANAGEMENT RECOMMENDATIONS

The inventory of T 9S, R 18E, Sections 2 and 16 on Eight Mile Flat for Inland Resources resulted in the identification of thirteen new archaeological sites (42Un3669 through 42Un3681). Five of the prehistoric sites (42Un3674, 42Un3678, 42Un3679, 42Un3680, and 42Un3681) are recommended as eligible to the NRHP under Criteria C and D. It is recommended that these sites be avoided by any future undertakings. Based on adherence to this recommendation, a determination of "no historic properties affected" pursuant to Section 106, CFR 800 is proposed for this project.

## REFERENCES CITED

- Christensen, D.  
1981 Archaeological Survey of the Bonanza-Castle Peak-Upalco Transmission Line, Bonanza Power Plant Project 1981, Nickens and Associates, Montrose, Colorado. Report No. U-81-NH-429.
- Copeland, J.M and R.E. Fike  
1998 Fluted Projectile Points in Utah. In *Utah Archaeology 1988*, Salt Lake City.
- Hauck, F.R.  
1984 Cultural Resource Evaluation of Two Proposed Well Locations in the Pariette Bench Locality of Uintah County, Utah, Archeological-Environmental Research Corporation, Bountiful, Utah. Report No. U-84-AF-0205b.
- Holmer, R.  
1986 Projectile Points of the Intermountain West. In *Anthropology of the Desert West: Essays in Honor of Jesse D. Jennings*, edited by Carol J. Condie and Don D. Fowler, pp. 89-116. *University of Utah Anthropological Papers* No. 110. Salt Lake City.
- Horn, J.C., A.D. Reed, and S.M. Chandler  
1994 Grand Resource Area Class I Cultural Resource Inventory. Alpine Archaeological Consultants, Inc. Montrose. Bureau of Land Management, Moab, Utah.
- Marwitt, J.P.  
1970 Median Village and Fremont Culture Regional Variation. *University of Utah Anthropological Papers* No. 95. Salt Lake City.
- Norman, V.G. and F.R. Hauck  
1979 Archaeological Survey of Three Proposed Drill Locations and Access Roads in the Eightmile Flat Locality, Uintah County, Utah. Archeological-Environmental Research Corporation, Bountiful, Utah. Report No. U-79-AF-0328b.
- Reed A.D.  
1994 The Numic Occupation of Western Colorado and Eastern Utah during the Prehistoric and Protohistoric Periods. In *Across the West: Human Population Movement and the Expansion of the Numa*, edited by D.B. Madsen and D. Rhode, pp. 188-199. University of Utah Press, Salt Lake City.
- Shields, W.F.  
1970 The Fremont Culture in the Uinta Basin. Paper presented at the Fremont Culture Symposium, 35<sup>th</sup> Annual Meeting of the Society for American Archaeology, Mexico City.
- Spangler, J.D.  
1995 Paradigms and Perspectives, A Class I Overview of Cultural Resources in the Uinta Basin and Tavaputs Plateau, Volume II. Uinta Research, Salt Lake City, Utah.

Stokes, W.L.

1986

*Geology of Utah*. Utah Museum of Natural History, University of Utah, Salt Lake City.

Tucker, G.C. Jr.

1986

Results of Archaeological Investigations Along the Chevron CO-2/PO-4 Pipelines in Northeastern Utah and Northwestern Colorado. Manuscript on file, Bureau of Land Management, Vernal, Utah.

Wilson, A. And K.R. Montgomery

2004a

Cultural Resource Inventory of Inland Resources Block Survey on Eightmile Flat, Township 9 South, Range 18 East, Sections 17, 20, 21, in Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-04-MQ-800b.

2004b

Cultural Resource Inventory of Inland Resources Block Survey on Eightmile Flat, Township 9 South, Range 18 East, Sections 9, 10, 11, 14, 15 and 23, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-04-MQ-801b.

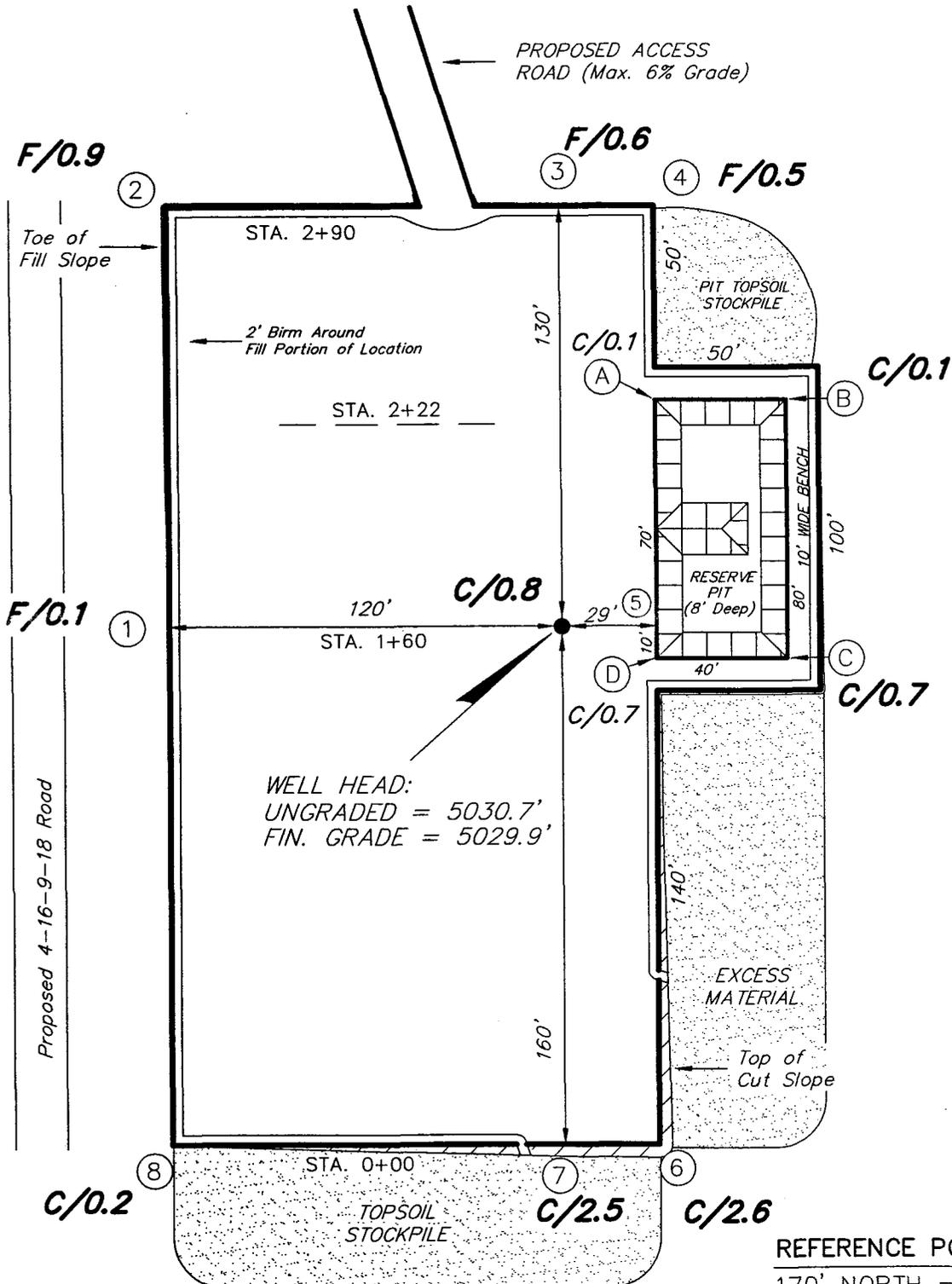
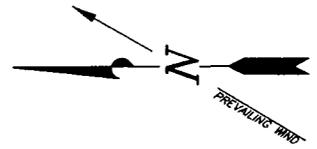
APPENDIX A:  
INTERMOUNTAIN ANTIQUITIES COMPUTER SYSTEM (IMACS)  
SITE INVENTORY FORMS  
42Un3669 through 42Un3681

On File At:

Utah Division of State History  
Salt Lake City, Utah

# INLAND PRODUCTION COMPANY

STATE 3-16-9-18  
SECTION 16, T9S, R18E, S.L.B.&M.



WELL HEAD:  
UNGRADED = 5030.7'  
FIN. GRADE = 5029.9'

### REFERENCE POINTS

- 170' NORTH = 5028.7'
- 220' NORTH = 5027.5'
- 210' WEST = 5031.8'
- 260' WEST = 5031.9'

SURVEYED BY: K.G.S.

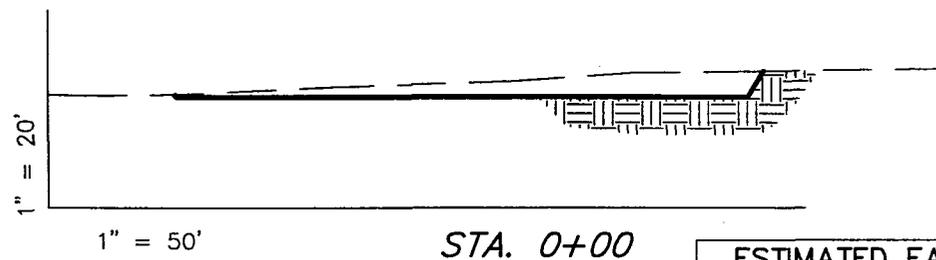
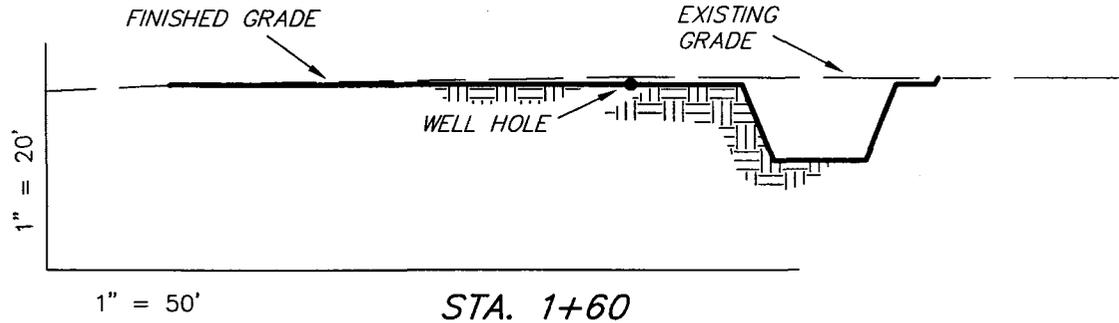
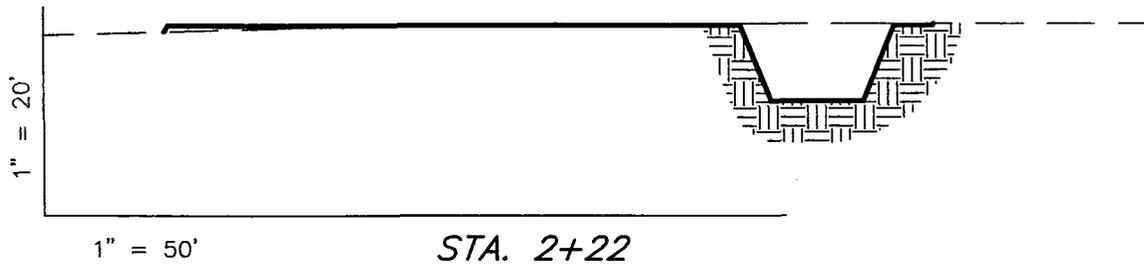
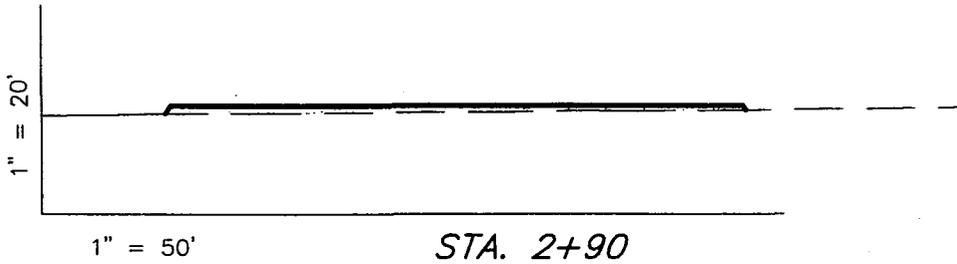
SCALE: 1" = 50'

DRAWN BY: R.V.C.

DATE: 4-20-04

(435) 781-2501  
**Tri State**  
Land Surveying, Inc.  
180 NORTH VERNAL AVE. VERNAL, UTAH 84078

**INLAND PRODUCTION COMPANY**  
**CROSS SECTIONS**  
**STATE 3-16-9-18**



NOTE:  
 UNLESS OTHERWISE NOTED  
 ALL CUT/FILL SLOPES ARE  
 AT 1.5:1

**ESTIMATED EARTHWORK QUANTITIES**  
 (No Shrink or swell adjustments have been used)  
 (Expressed in Cubic Yards)

ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	500	500	Topsoil is not included in Pad Cut	0
PIT	640	0		640
<b>TOTALS</b>	<b>1,140</b>	<b>500</b>	<b>890</b>	<b>640</b>

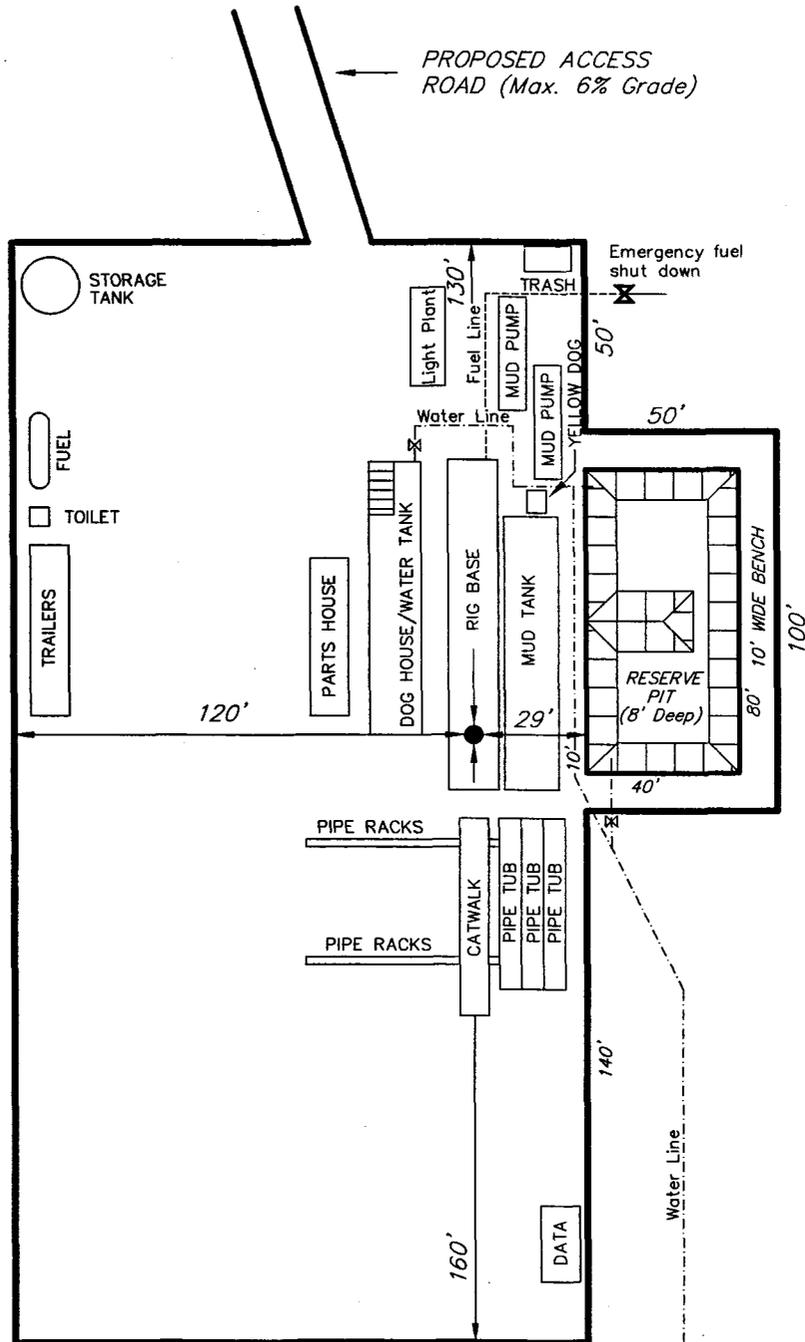
SURVEYED BY: K.G.S.	SCALE: 1" = 50'
DRAWN BY: R.V.C.	DATE: 4-20-04

**Tri State** (435) 781-2501  
**Land Surveying, Inc.**  
 180 NORTH VERNAL AVE. VERNAL, UTAH 84078

# INLAND PRODUCTION COMPANY

## TYPICAL RIG LAYOUT

STATE 3-16-9-18



SURVEYED BY: K.G.S.

SCALE: 1" = 50'

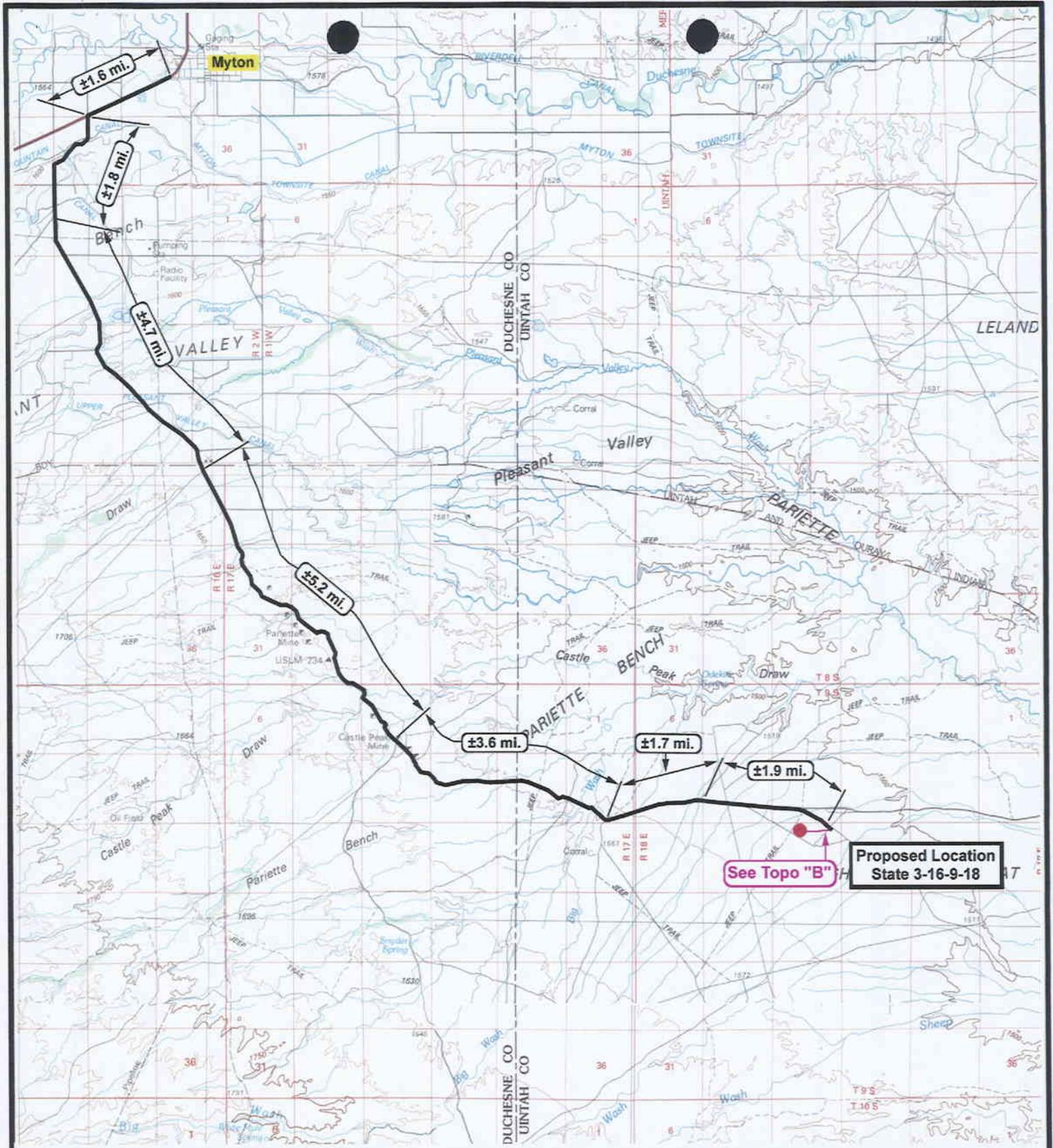
DRAWN BY: R.V.C.

DATE: 4-20-04

**Tri State**  
Land Surveying, Inc.

(435) 781-2501

180 NORTH VERNAL AVE. VERNAL, UTAH 84078



**State 3-16-9-18**  
**SEC. 16, T9S, R18E, S.L.B.&M.**



**Tri-State**  
*Land Surveying Inc.*  
 (435) 781-2501  
 180 North Vernal Ave. Vernal, Utah 84078

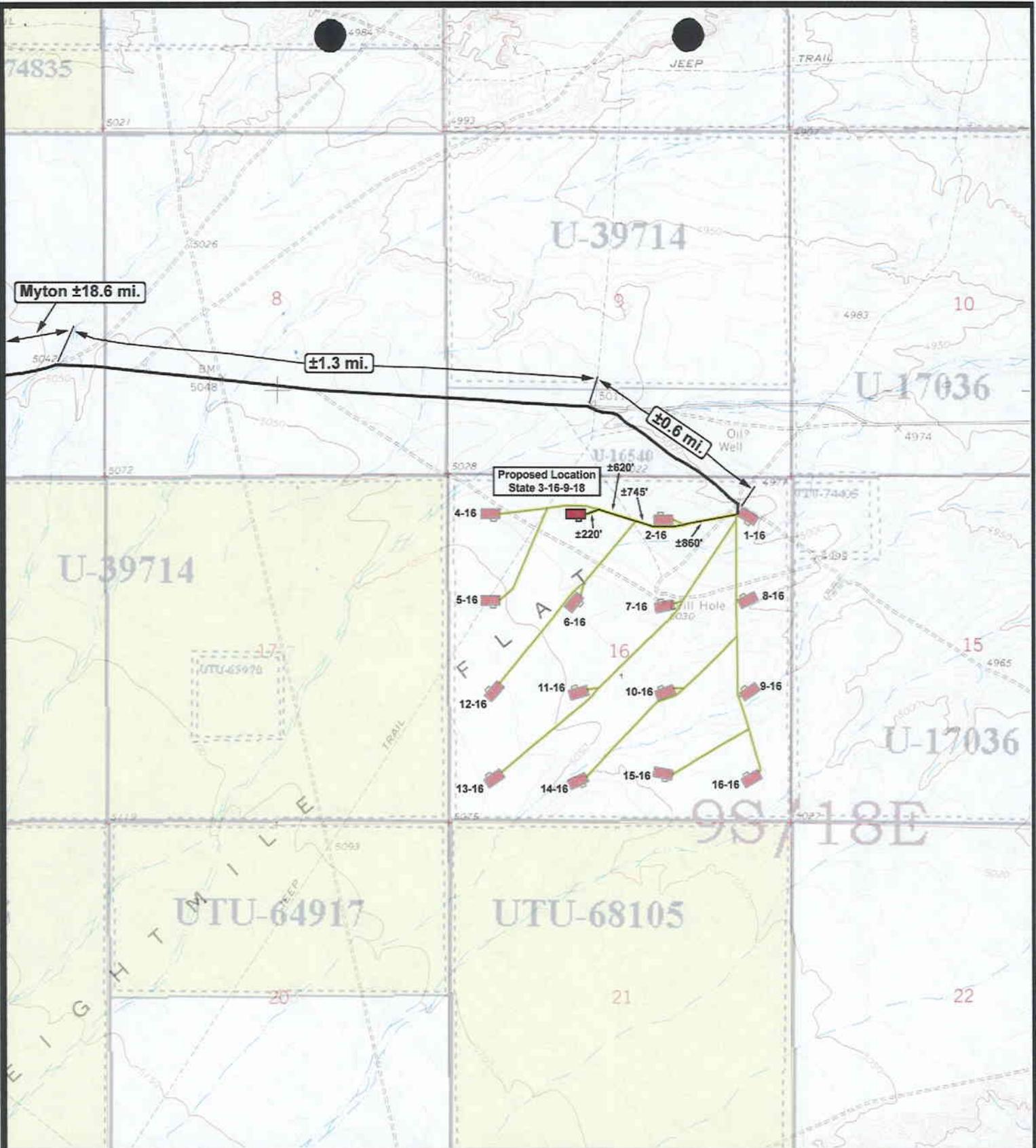
SCALE: 1 = 2,000  
 DRAWN BY: bgm  
 DATE: 06-18-2004

**Legend**

- Existing Road
- Proposed Access

TOPOGRAPHIC MAP

**"A"**



**State 3-16-9-18**  
**SEC. 16, T9S, R18E, S.L.B.&M.**

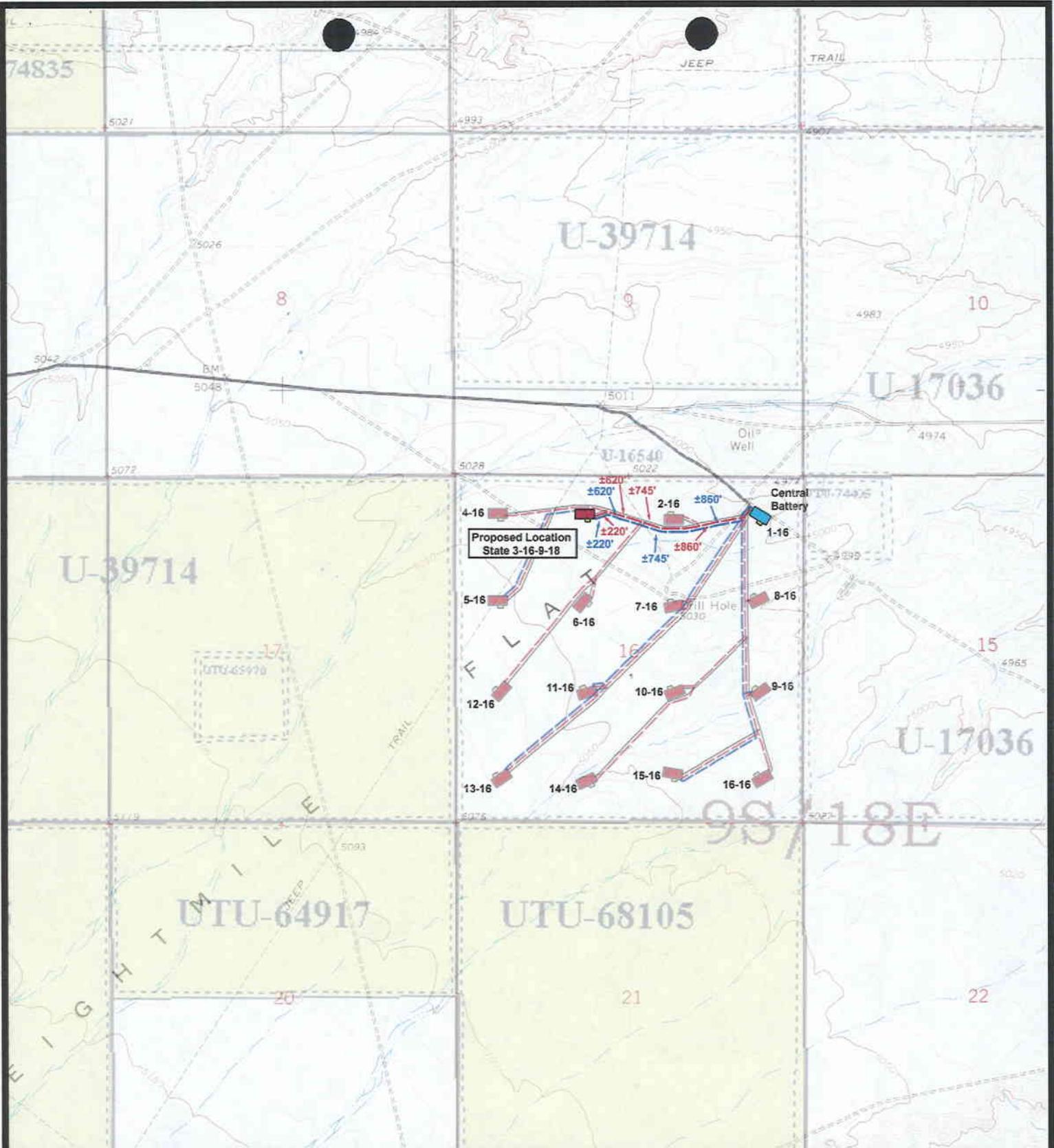


**Tri-State**  
*Land Surveying Inc.*  
 (435) 781-2501  
 180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 2,000'  
 DRAWN BY: bgm  
 DATE: 06-15-06

Legend	
	Existing Road
	Proposed Access

TOPOGRAPHIC MAP  
**"B"**



**State 3-16-9-18**  
**SEC. 16, T9S, R18E, S.L.B.&M.**



**Tri-State**  
*Land Surveying Inc.*  
 (435) 781-2501  
 180 North Vernal Ave. Vernal, Utah 84078

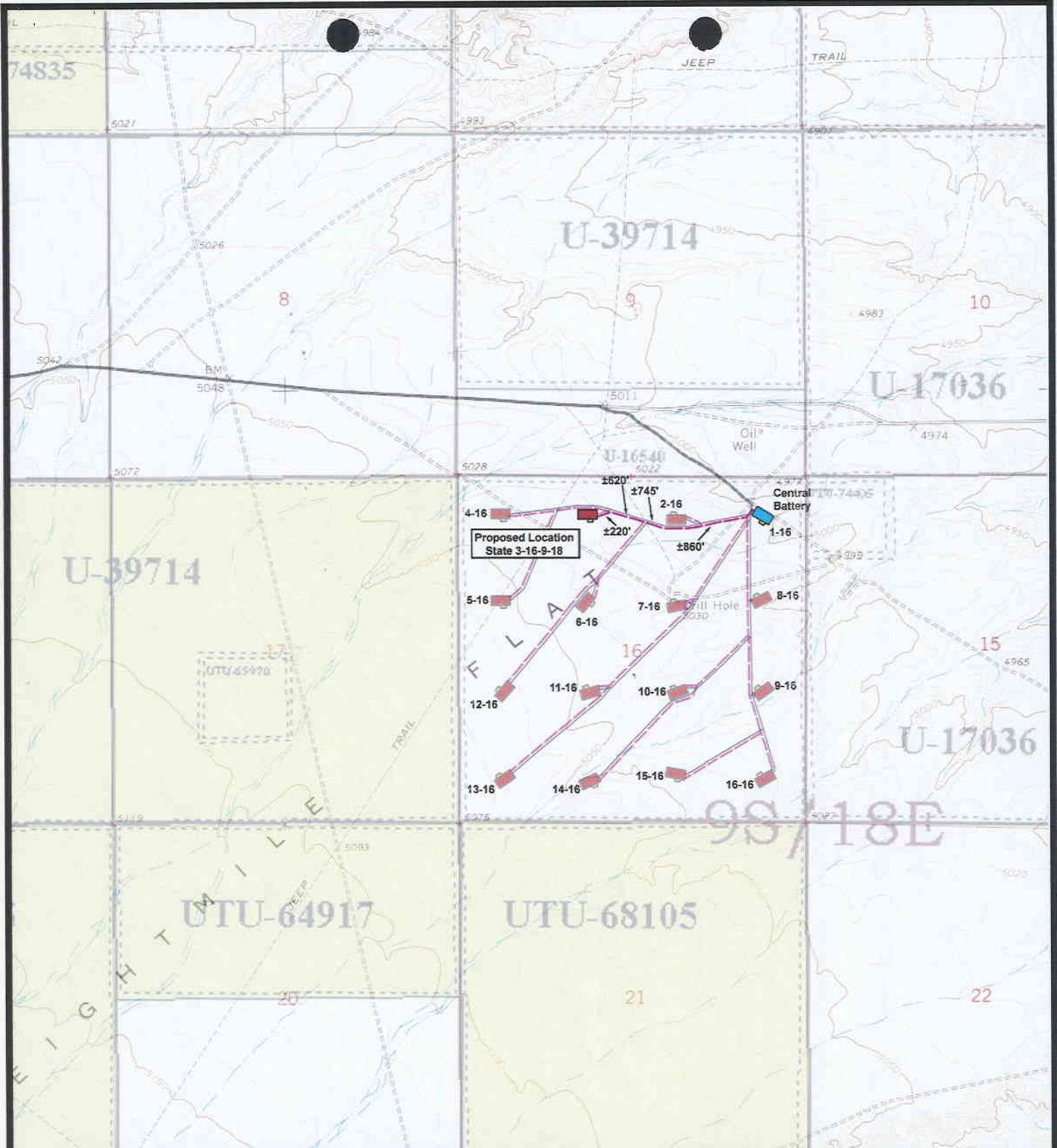
SCALE: 1" = 2,000'  
 DRAWN BY: bgm  
 DATE: 06-15-06

**Legend**

- Roads
- Proposed Gas Line
- Proposed Water Line

TOPOGRAPHIC MAP

**"C"**



**State 3-16-9-18**  
**SEC. 16, T9S, R18E, S.L.B.&M.**



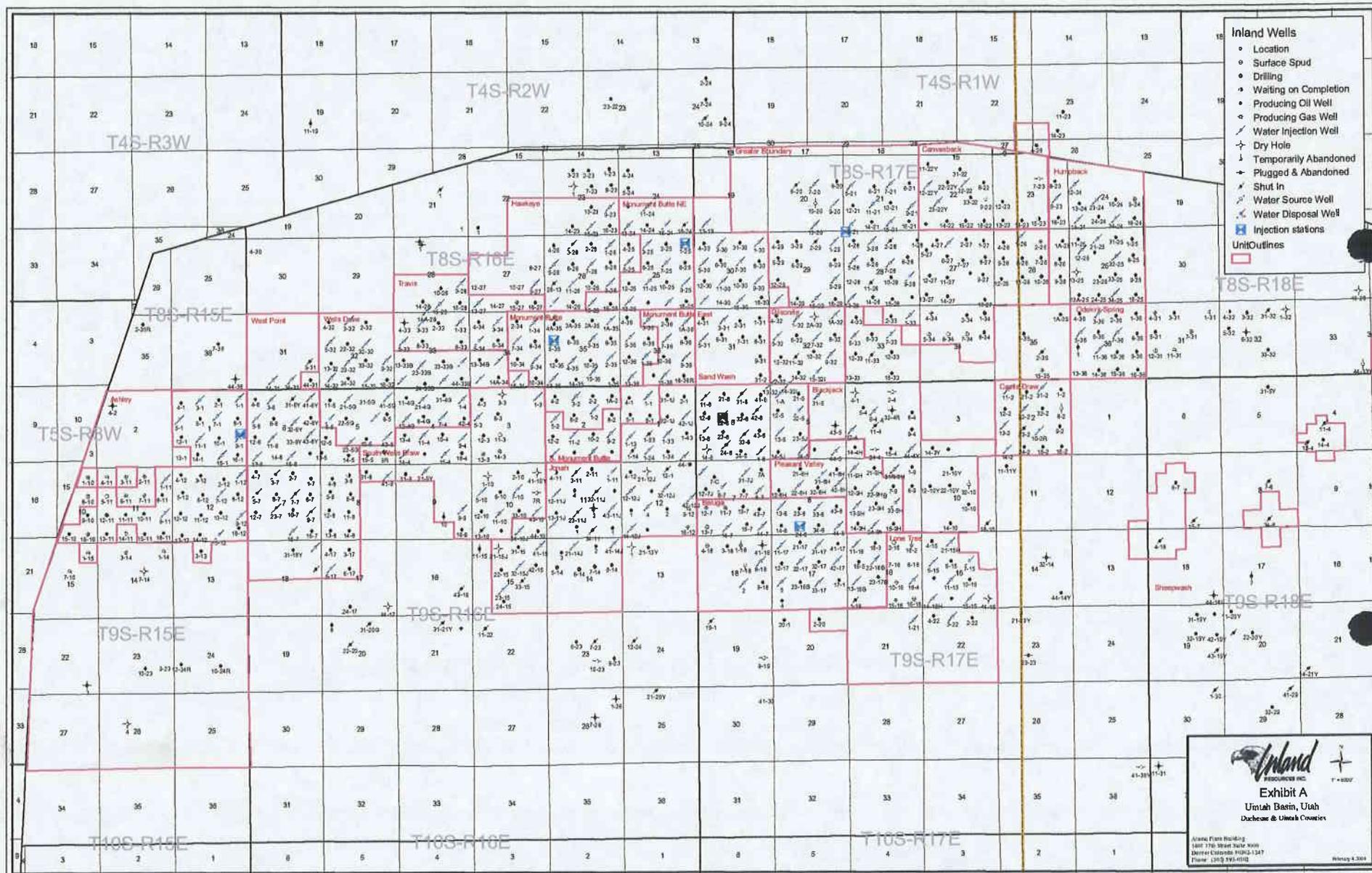
**Tri-State**  
*Land Surveying Inc.*  
 (435) 781-2501  
 180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 2,000'  
 DRAWN BY: bgm  
 DATE: 06-15-06

**Legend**

- Roads
- Proposed Flow Line

**TOPOGRAPHIC MAP**  
**"D"**

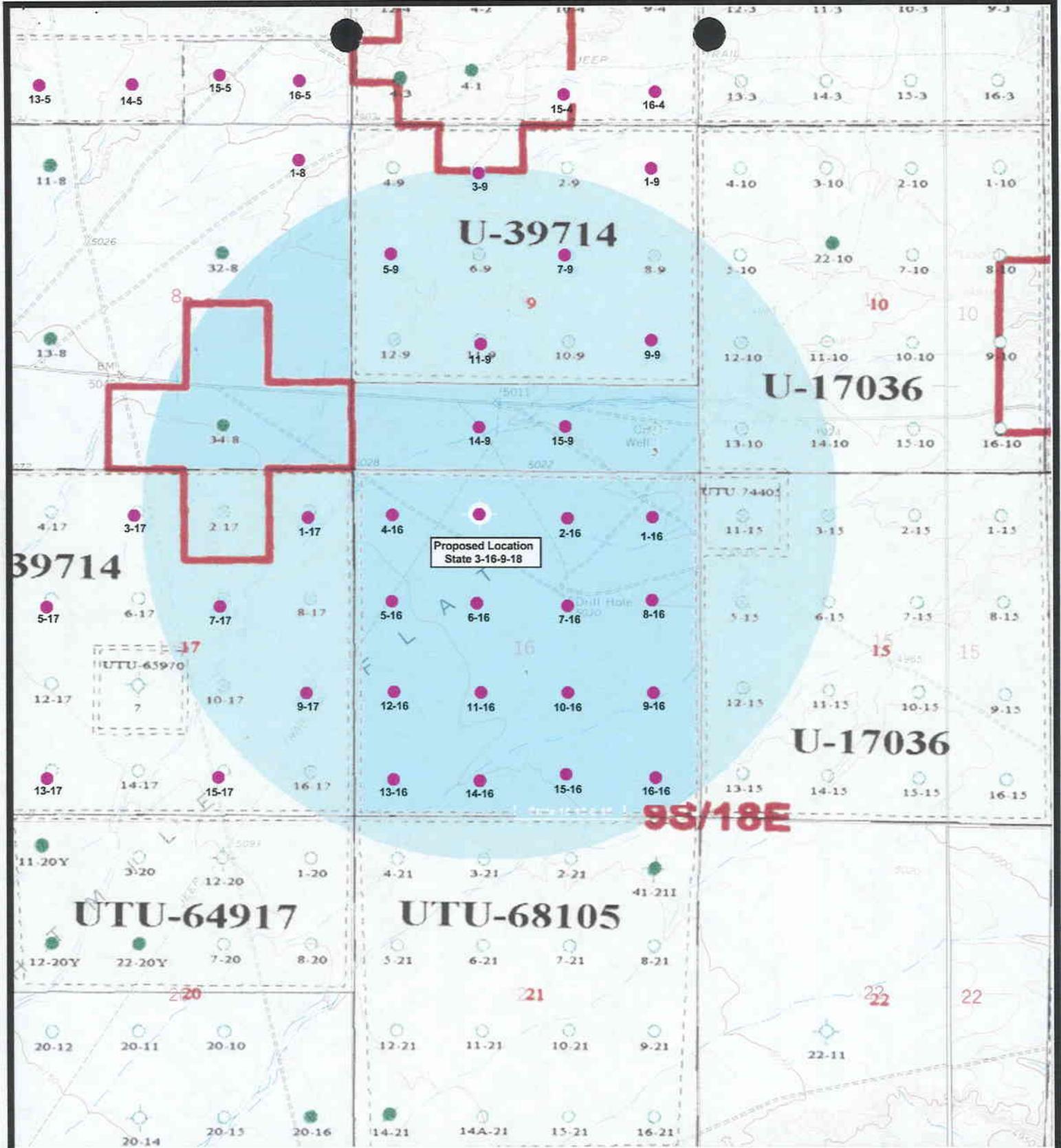


- Inland Wells**
- Location
  - Surface Spud
  - Drilling
  - Waiting on Completion
  - Producing Oil Well
  - Producing Gas Well
  - Water Injection Well
  - ↙ Dry Hole
  - ↘ Temporarily Abandoned
  - ↖ Plugged & Abandoned
  - ↗ Shut In
  - Water Source Well
  - Water Disposal Well
  - Injection stations
- Unit Outlines**
- 


  
**Exhibit A**  
 Umah Basin, Utah  
 Duchesne & Uintah Counties

Annual Plans Meeting  
 Salt Lake Convention Center  
 100 East Broadway, Suite 1000  
 Salt Lake City, Utah 84111-1447  
 Phone: (801) 462-1010

Worksheet 4.2009



**State 3-16-9-18**  
**SEC. 16, T9S, R18E, S.L.B.&M.**



**Tri-State**  
*Land Surveying Inc.*  
 (435) 781-2501  
 180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 2,000'  
 DRAWN BY: bgm  
 DATE: 06-14-2004

**Legend**

- Proposed Location
- One-Mile Radius

**Exhibit "B"**

# 2-M SYSTEM

Blowout Prevention Equipment Systems

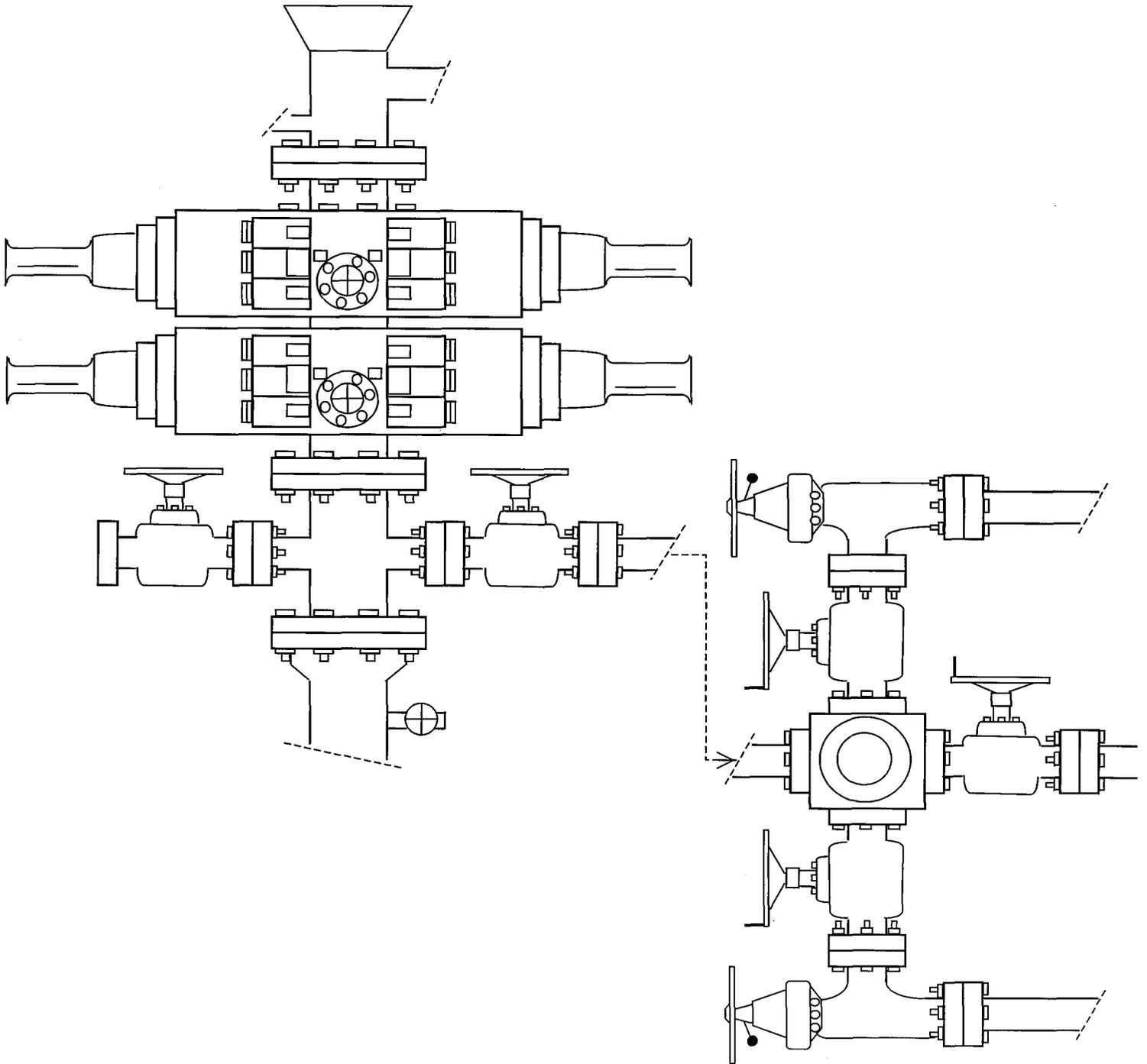


EXHIBIT C

WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 06/28/2004

API NO. ASSIGNED: 43-047-35813

WELL NAME: STATE 3-16-9-18

OPERATOR: INLAND PRODUCTION ( N5160 )

CONTACT: MANDIE CROZIER

PHONE NUMBER: 435-646-3721

PROPOSED LOCATION:

NENW 16 090S 180E  
SURFACE: 0660 FNL 1980 FWL  
BOTTOM: 0660 FNL 1980 FWL  
UINTAH  
8 MILE FLAT NORTH ( 590 )

LEASE TYPE: 3 - State

LEASE NUMBER: ML-48378

SURFACE OWNER: 3 - State

PROPOSED FORMATION: GRRV

COALBED METHANE WELL? NO

INSPECT LOCATN BY: / /		
Tech Review	Initials	Date
Engineering	DKD	8/3/04
Geology		
Surface		

LATITUDE: 40.03632

LONGITUDE: 109.90020

RECEIVED AND/OR REVIEWED:

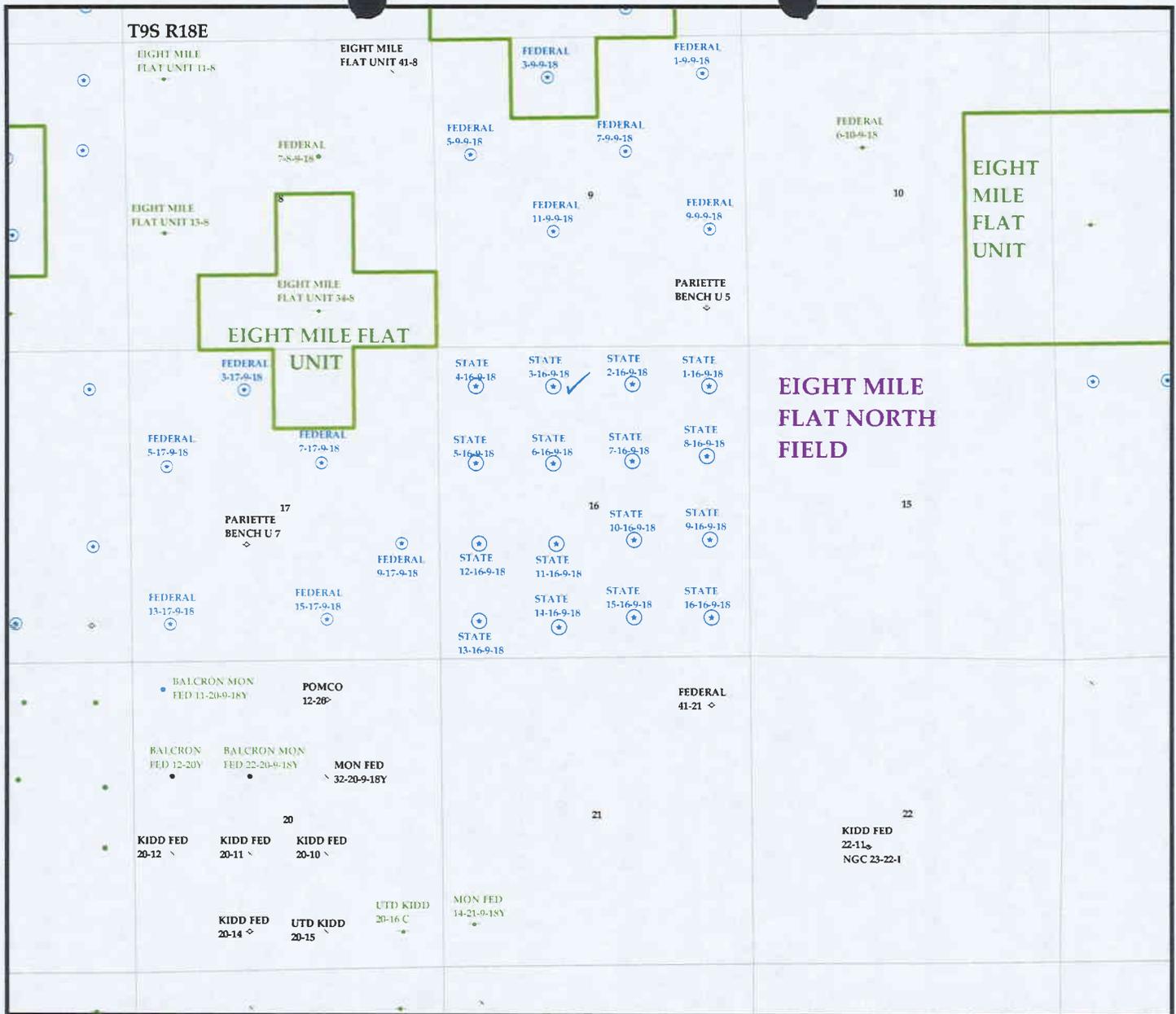
- Plat
- Bond: Fed[] Ind[] Sta[3] Fee[]  
(No. ~~4471291~~<sup>34</sup> BSBCO 4369 ER 8/23/04)
- Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit  
(No. JOHNSON )
- RDCC Review (Y/N)  
(Date: )
- Fee Surf Agreement (Y/N)

LOCATION AND SITING:

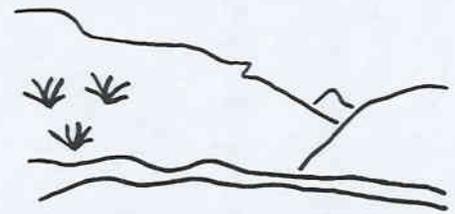
- R649-2-3.
- Unit \_\_\_\_\_
- R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells
- R649-3-3. Exception
- Drilling Unit  
Board Cause No: \_\_\_\_\_  
Eff Date: \_\_\_\_\_  
Siting: \_\_\_\_\_
- R649-3-11. Directional Drill

COMMENTS: Needs Permit (07-15-04)

STIPULATIONS: 1- Spacing Strip  
2- Surface Csg Curt Strip  
3- STATEMENT OF BASIS



**OPERATOR: INLAND PROD CO (N5160)**  
**SEC. 16 T.9S R.18E**  
**FIELD: EIGHT MILE FLAT NORTH (590)**  
**COUNTY: UINTAH**  
**SPACING: R649-3-2 / GENERAL SITING**



Utah Oil Gas and Mining

Wells	Units.shp	Fields.shp
⊕ GAS INJECTION	□ EXPLORATORY	⬛ ABANDONED
⊙ GAS STORAGE	□ GAS STORAGE	⬜ ACTIVE
× LOCATION ABANDONED	□ NF PP OIL	⬜ COMBINED
⊕ NEW LOCATION	□ NF SECONDARY	⬜ INACTIVE
⊙ PLUGGED & ABANDONED	□ PENDING	⬜ PROPOSED
⊕ PRODUCING GAS	□ PI OIL	⬜ STORAGE
● PRODUCING OIL	□ PP GAS	⬜ TERMINATED
⊙ SHUT-IN GAS	□ PP GEOTHERML	
⊙ SHUT-IN OIL	□ PP OIL	
⊙ TEMP. ABANDONED	□ SECONDARY	
⊙ TEST WELL	□ TERMINATED	
⊕ WATER INJECTION		
⊕ WATER SUPPLY		
⊕ WATER DISPOSAL		



PREPARED BY: DIANA WHITNEY  
 DATE: 28-JUNE-2004

**DIVISION OF OIL, GAS AND MINING  
APPLICATION FOR PERMIT TO DRILL  
STATEMENT OF BASIS**

**OPERATOR:** INLAND PRODUCTION COMPANY  
**WELL NAME & NUMBER:** STATE 3-16-9-18  
**API NUMBER:** 43-047-35813  
**LOCATION:** 1/4,1/4 NE/NW Sec:16 TWP: 9S RNG:18E 1980' FWL 660' FNL

**Geology/Ground Water:**

Inland proposes to set 290' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 1,000'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of section 16. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement program should adequately protect any useable ground water and nearby wells.

**Reviewer:** Brad Hill **Date:** 07/20/04

**Surface:**

The predrill investigation of the surface was performed on 7/15/04. This site is on State surface with State minerals. Floyd Bartlett with DWR and Ed Bonner with SITLA were invited to this investigation of 6/30/04. Neither was present, but Mr. Bartlett inspected this site on 7/9/04. He told me over the telephone, and later by E-mail, that his only concern was for prairie dogs living in this area, and that this concern was not significant. He suggested that Inland avoid construction of well pads or access roads between April 1 and June 15 if possible. He also recommended that Inland reseed reserve pits following closure as well as the shoulders of the access roads. He sent Brad Mecham a DWR approved seed mix.

**Reviewer:** David W. Hackford **Date:** 7/16/04

**Conditions of Approval/Application for Permit to Drill:**

None.

**ON-SITE PREDRILL EVALUATION**  
**Division of Oil, Gas and Mining**

OPERATOR: INLAND PRODUCTION COMPANY  
WELL NAME & NUMBER: STATE 3-16-9-18  
API NUMBER: 43-047-35813  
LEASE: ML-48378 FIELD/UNIT: EIGHT MILE FLAT  
LOCATION: 1/4, 1/4 NE/NW Sec: 16 TWP: 9S RNG: 18E 1980' FWL 660' FNL  
LEGAL WELL SITING: 460 F SEC. LINE; 460 F 1/4, 1/4 LINE; 460 F ANOTHER WELL.  
GPS COORD (UTM): 4432165N 12593830E SURFACE OWNER: STATE OF UTAH.

**PARTICIPANTS**

DAVID W. HACKFORD, BART KETTLE (DOGM). BRAD MECHAM, (INLAND).

**REGIONAL/LOCAL SETTING & TOPOGRAPHY**

SITE IS IN A RELATIVELY FLAT AREA ON EIGHT MILE FLAT, A HUGE BENCH STRETCHING OVER FOUR MILES IN ALL DIRECTIONS. MYTON, UTAH IS 20.5 MILES TO THE NORTHWEST. THE GREEN RIVER IS SIX MILES TO THE SOUTHEAST. DRAINAGE IS VERY SLIGHT AND TO THE SOUTHEAST.

**SURFACE USE PLAN**

CURRENT SURFACE USE: WILDLIFE AND LIVESTOCK GRAZING, HUNTING.

PROPOSED SURFACE DISTURBANCE: LOCATION WILL BE 290' BY 199'. ACCESS ROAD WILL BE 0.25 MILES.

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: SEE ATTACHED MAP FROM GIS DATABASE.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: THIS LOCATION WILL HAVE A PUMPJACK AND LINE HEATER. THE CENTRAL BATTERY WILL BE ON THE 1-16-9-18 LOCATION. PIPELINES WILL FOLLOW ACCESS ROAD.

SOURCE OF CONSTRUCTION MATERIAL: ALL CONSTRUCTION MATERIAL WILL BE BORROWED FROM SITE DURING CONSTRUCTION OF LOCATION.

ANCILLARY FACILITIES: NONE WILL BE REQUIRED.

**WASTE MANAGEMENT PLAN:**

DRILLED CUTTINGS WILL BE SETTLED INTO RESERVE PIT. LIQUIDS FROM PIT WILL BE ALLOWED TO EVAPORATE. FORMATION WATER WILL BE CONFINED TO STORAGE TANKS. SEWAGE FACILITIES, STORAGE AND DISPOSAL WILL BE HANDLED BY COMMERCIAL CONTRACTOR. TRASH WILL BE CONTAINED IN TRASH BASKETS AND HAULED TO AN APPROVED LAND FILL.

**ENVIRONMENTAL PARAMETERS**

AFFECTED FLOODPLAINS AND/OR WETLANDS: NONE

FLORA/FAUNA: GLOBE MALLOW, SHADSCALE, RUSSIAL THISTLE, RABBIT BRUSH, HORSEBRUSH, PRICKLY PEAR: DEER, SONGBIRDS, RODENTS, RABBITS, PRONGHORN, RAPTORS, PRAIRIE DOG.

SOIL TYPE AND CHARACTERISTICS: LIGHT BROWN SANDY CLAY.

EROSION/SEDIMENTATION/STABILITY: VERY LITTLE NATURAL EROSION. SEDIMENTATION AND STABILITY ARE NOT A PROBLEM AND LOCATION CONSTRUCTION SHOULDN'T CAUSE AN INCREASE IN STABILITY OR EROSION PROBLEMS.

PALEONTOLOGICAL POTENTIAL: NONE OBSERVED.

**RESERVE PIT**

CHARACTERISTICS: 40' BY 80' AND EIGHT FEET DEEP.

LINER REQUIREMENTS (Site Ranking Form attached): A LINER WILL NOT BE REQUIRED FOR RESERVE PIT.

**SURFACE RESTORATION/RECLAMATION PLAN**

AS PER SITLA.

SURFACE AGREEMENT: AS PER SITLA.

CULTURAL RESOURCES/ARCHAEOLOGY: SITE WAS INSPECTED BY MONTGOMERY ARCHAEOLOGICAL CONSULTANTS. A COPY OF THIS REPORT WILL BE SUBMITTED TO THE STATE OF UTAH.

**OTHER OBSERVATIONS/COMMENTS**

THIS PREDRILL INVESTIGATION WAS CONDUCTED ON A HOT, SUNNY DAY.

**ATTACHMENTS**

PHOTOS OF THIS SITE WERE TAKEN AND PLACED ON FILE.

DAVID W. HACKFORD  
DOGM REPRESENTATIVE

7/15/04. 10:15 AM  
DATE/TIME

**Evaluation Ranking Criteria and Ranking Score  
For Reserve and Onsite Pit Liner Requirements**

<u>Site-Specific Factors</u>	<u>Ranking</u>	<u>Site Ranking</u>
Distance to Groundwater (feet)		
>200	0	
100 to 200	5	
75 to 100	10	
25 to 75	15	
<25 or recharge area	20	<u>0</u>
Distance to Surf. Water (feet)		
>1000	0	
300 to 1000	2	
200 to 300	10	
100 to 200	15	
< 100	20	<u>0</u>
Distance to Nearest Municipal Well (feet)		
>5280	0	
1320 to 5280	5	
500 to 1320	10	
<500	20	<u>0</u>
Distance to Other Wells (feet)		
>1320	0	
300 to 1320	10	
<300	20	<u>0</u>
Native Soil Type		
Low permeability	0	
Mod. permeability	10	
High permeability	20	<u>10</u>
Fluid Type		
Air/mist	0	
Fresh Water	5	
TDS >5000 and <10000	10	
TDS >10000 or Oil Base Mud Fluid	15	
containing significant levels of hazardous constituents	20	<u>5</u>
Drill Cuttings		
Normal Rock	0	
Salt or detrimental	10	<u>0</u>
Annual Precipitation (inches)		
<10	0	
10 to 20	5	
>20	10	<u>0</u>
Affected Populations		
<10	0	
10 to 30	6	
30 to 50	8	
>50	10	<u>0</u>
Presence of Nearby Utility Conduits		
Not Present	0	
Unknown	10	
Present	15	<u>0</u>

**Final Score**      15      (Level III Sensitivity)

Sensitivity Level I = 20 or more; total containment is required.  
Sensitivity Level II = 15-19; lining is discretionary.  
Sensitivity Level III = below 15; no specific lining is required.





Casing Schematic

Uinta

Surface

Surface Strip

8-5/8"  
MW 8.2  
Frac 19.3

TOC @  
43.  
Surface  
290. MD

w/ 18% Washout  
Surface w/ 12% Washout

TOC @  
625.

1000  
BMSW

→ Strip

1700 Green River

BHP

$(.052)(8.4)(6500) = 2839$

Anticipate 2000 (nat)

Gas  $(.12)(6500) = 780$

fluid  $(.22)(6500) = 1430$

MASP

2059 (gas)  
1439 (fluid)

BOPE - 2000 ✓

Surf Csg - 2950

70% = 2065

Test to 2000 psi ✓

Adequate DKO 8/3/04

5-1/2"  
MW 8.4

Production  
6500. MD

Wasatch

Well name:	<b>07-04 Inland St 3-16-9-18</b>	
Operator:	<b>Inland Production Company</b>	
String type:	Surface	Project ID: 43-047-35813
Location:	Uintah County	

**Design parameters:**

**Collapse**  
Mud weight: 8.200 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**  
Design factor 1.125

**Burst:**  
Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 65 °F  
Bottom hole temperature: 69 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 290 ft  
Cement top: 43 ft

**Burst**

Max anticipated surface pressure: 0 psi  
Internal gradient: 0.436 psi/ft  
Calculated BHP 127 psi

No backup mud specified.

**Tension:**  
8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)

Tension is based on buoyed weight.  
Neutral point: 254 ft

Non-directional string.

**Re subsequent strings:**

Next setting depth: 6,500 ft  
Next mud weight: 8.400 ppg  
Next setting BHP: 2,836 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 290 ft  
Injection pressure 290 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	290	8.625	24.00	J-55	ST&C	290	290	7.972	14

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	124	1370	11.090	127	2950	23.31	6	244	39.98 J

Prepared by: Clinton Dworshak  
Utah Div. of Oil & Mining

Phone: 801-538-5280  
FAX: 801-359-3940

Date: July 30,2004  
Salt Lake City, Utah

Remarks:  
Collapse is based on a vertical depth of 290 ft, a mud weight of 8.2 ppg The casing is considered to be evacuated for collapse purposes.  
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	<b>07-04 Inland St 3-16-9-18</b>	
Operator:	<b>Inland Production Company</b>	Project ID:
String type:	Production	43-047-35813
Location:	Uintah County	

**Design parameters:**

**Collapse**  
Mud weight: 8.400 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**  
Design factor 1.125

**Burst:**  
Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 65 °F  
Bottom hole temperature: 156 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 300 ft  
Cement top: 625 ft

**Burst**

Max anticipated surface pressure: 0 psi  
Internal gradient: 0.436 psi/ft  
Calculated BHP 2,836 psi

No backup mud specified.

**Tension:**  
8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)

Non-directional string.

Tension is based on air weight.  
Neutral point: 5,674 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	6500	5.5	15.50	J-55	ST&C	6500	6500	4.825	203.7

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	2836	4040	1.424	2836	4810	1.70	101	202	2.01 J

Prepared by: Clinton Dworshak  
Utah Div. of Oil & Mining

Phone: 801-538-5280  
FAX: 801-359-3940

Date: July 30, 2004  
Salt Lake City, Utah

Remarks:  
Collapse is based on a vertical depth of 6500 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.



State of Utah

Department of  
Natural Resources

ROBERT L. MORGAN  
*Executive Director*

Division of  
Oil, Gas & Mining

LOWELL P. BRAXTON  
*Division Director*

OLENE S. WALKER  
*Governor*

GAYLE F. McKEACHNIE  
*Lieutenant Governor*

August 4, 2004

Inland Production Company  
Rt. #3, Box 3630  
Myton, UT 84052

Re: State 3-16-9-18 Well, 660' FNL, 1980' FWL, NE NW, Sec. 16, T. 9 South,  
R. 18 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 43-047-35813.

Sincerely,

John R. Baza  
Associate Director

pab  
Enclosures

cc: Uintah County Assessor  
SITLA

Operator: Inland Production Company  
Well Name & Number State 3-16-9-18  
API Number: 43-047-35813  
Lease: ML-48378

Location: NE NW                      Sec. 16                      T. 9 South                      R. 18 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**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- 24 hours prior to cementing or testing casing
- 24 hours prior to testing blowout prevention equipment
- 24 hours prior to spudding the well
- within 24 hours of any emergency changes made to the approved drilling program
- prior to commencing operations to plug and abandon the well

The following are Division of Oil, Gas and Mining contacts and their work telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at (801) 538-5338
- Carol Daniels at (801) 538-5284 (spud)

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. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.

5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

Page 2

API #43-047-35813

August 4, 2004

6. 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.
7. Surface casing shall be cemented to the surface.

Corporations Section  
P.O.Box 13697  
Austin, Texas 78711-3697



Geoffrey S. Connor  
Secretary of State

## Office of the Secretary of State

The undersigned, as Secretary of State of Texas, does hereby certify that the attached is a true and correct copy of each document on file in this office as described below:

Newfield Production Company  
Filing Number: 41530400

Articles of Amendment

September 02, 2004

In testimony whereof, I have hereunto signed my name officially and caused to be impressed hereon the Seal of State at my office in Austin, Texas on September 10, 2004.



A handwritten signature in black ink, appearing to read "G. Connor".

Secretary of State

ARTICLES OF AMENDMENT  
TO THE  
ARTICLES OF INCORPORATION  
OF  
INLAND PRODUCTION COMPANY

FILED  
In the Office of the  
Secretary of State of Texas  
SEP 02 2004  
Corporations Section

Pursuant to the provisions of Article 4.04 of the Texas Business Corporation Act (the "TBCA"), the undersigned corporation adopts the following articles of amendment to the articles of incorporation:

ARTICLE 1 – Name

The name of the corporation is Inland Production Company.

ARTICLE 2 – Amended Name

The following amendment to the Articles of Incorporation was approved by the Board of Directors and adopted by the shareholders of the corporation on August 27, 2004.

The amendment alters or changes Article One of the Articles of Incorporation to change the name of the corporation so that, as amended, Article One shall read in its entirety as follows:

"ARTICLE ONE – The name of the corporation is Newfield Production Company."

ARTICLE 3 – Effective Date of Filing

This document will become effective upon filing.

The holder of all of the shares outstanding and entitled to vote on said amendment has signed a consent in writing pursuant to Article 9.10 of the TBCA, adopting said amendment, and any written notice required has been given.

IN WITNESS WHEREOF, the undersigned corporation has executed these Articles of Amendment as of the 1<sup>st</sup> day of September, 2004.

INLAND RESOURCES INC.

By: Susan G. Riggs  
Susan G. Riggs, Treasurer

**DIVISION OF OIL, GAS AND MINING****SPUDDING INFORMATION**Name of Company: INLAND PRODUCTION COMPANYWell Name: STATE 3-16-9-18Api No: 43-047-35813 Lease Type: STATESection 16 Township 09S Range 18E County UINTAHDrilling Contractor NDSI RIG # #1**SPUDDED:**Date 02/05/05Time 10:00 AMHow DRY**Drilling will commence:** \_\_\_\_\_Reported by RAY HERRERATelephone # 1-435-823-1890Date 02/07/2005 Signed CHD

007

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

5. LEASE DESIGNATION AND SERIAL NUMBER:  
ML48378

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL: OIL WELL  GAS WELL  OTHER

8. WELL NAME and NUMBER:  
STATE 3-16-9-18

2. NAME OF OPERATOR:  
Newfield Production Company

9. API NUMBER:  
4304735813

3. ADDRESS OF OPERATOR:  
Route 3 Box 3630 CITY Myton STATE UT ZIP 84052

PHONE NUMBER  
435.646.3721

10. FIELD AND POOL, OR WILDCAT:  
Monument Butte

4. LOCATION OF WELL:  
FOOTAGES AT SURFACE: 660 FNL 1980 FWL

COUNTY: Uintah

OTR/OTR. SECTION. TOWNSHIP. RANGE. MERIDIAN: NE/NW, 16, T9S, R18E

STATE: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF ACTION

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARITLY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of Work Completion: 02/08/2005	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/STOP)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER - Spud Notice
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

On 2/5/2005 MIRU NDSI NS # 1. Spud well @ 10:00 AM. Drill 310' of 12 1/4" hole with air mist. TIH W/ 7 Jt's 8 5/8" J-55 24 # csgn. Set @ 314.93'/ KB On 2/8/2005 cement with 160 sks of class "G" w/ 3% CaCL2 + 1/4# sk Cello- Flake Mixed @ 15.8 ppg > 1.17 cf/ sk yeild. Returned 3 bbls cement to pit. WOC.

NAME (PLEASE PRINT) Floyd Mitchell

TITLE Drilling Supervisor

SIGNATURE *Floyd Mitchell*

DATE February 08, 2005

(This space for State use only)

RECEIVED  
FEB 09 2005  
DIV. OF OIL, GAS & MINING

006

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING  
ENTITY ACTION FORM - FORM 6

OPERATOR: INLAND  
NEWFIELD PRODUCTION COMPANY  
ADDRESS: RT. 3 BOX 3830  
MYTON, UT 84052

OPERATOR ACCT. NO. N5160  
NZ695

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99999	14565	43-047-35813	State 3-16-9-18	NE/NW	16	9S	18E	Utah	February 5, 2005	2/15/05

WELL 1 COMMENTS:  
GRUV

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99999	14566	43-047-35819	State 9-16-9-18	NE/SE	16	9S	18E	Utah	February 9, 2005	2/15/05

WELL 2 COMMENTS:  
GRUV

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99999	14567	43-013-32425	Ashley Federal 16-23-9-15	SE/SE	23	9S	15E	Duchesne	February 10, 2005	2/15/05

WELL 3 COMMENTS:  
GRUV

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		

WELL 4 COMMENTS:

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		

WELL 5 COMMENTS:

- ACTION CODES (See Instructions on back of form)
- A - Establish new entity for new well (single well only)
  - B - Add new well to existing entity (group or unit well)
  - C - Re-assign well from one existing entity to another existing entity
  - D - Re-assign well from one existing entity to a new entity
  - E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

(3/99)

*Kebbie S. Jones*  
 Signature \_\_\_\_\_  
 Production Clerk  
 Title  
 February 11, 2005  
 Date

RECEIVED

FEB 11 2005

DIV. OF OIL, GAS & MINING

PAGE 02

INLAND

4356463031

08:17

02/11/2005

008

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

5. LEASE DESIGNATION AND SERIAL NUMBER:  
ML48378

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL: OIL WELL  GAS WELL  OTHER

8. WELL NAME and NUMBER:  
STATE 3-16-9-18

2. NAME OF OPERATOR:  
Newfield Production Company

9. API NUMBER:  
4304735813

3. ADDRESS OF OPERATOR:  
Route 3 Box 3630 CITY Myton STATE UT ZIP 84052

PHONE NUMBER  
435.646.3721

10. FIELD AND POOL, OR WILDCAT:  
Monument Butte

4. LOCATION OF WELL:  
FOOTAGES AT SURFACE: 660 FNL 1980 FWL

COUNTY: Uintah

QTR/OTR. SECTION. TOWNSHIP. RANGE. MERIDIAN: NE/NW, 16, T9S, R18E

STATE: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF ACTION

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARITLY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of Work Completion: 02/17/2005	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/STOP)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: - Weekly Status Report
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

On 02/11/05 MIRU Patterson Rig # 155. Set all equipment. Pressure test Kelly, TIW, Choke manifold, & Bop's to 2,000 psi. Test 8.625 csgn to 1,500 psi. Vernal BLM field, & Roosevelt DOGM office was notified of test. PU BHA and tag cement @ 264'. Drill out cement & shoe. Drill a 7.875 hole with fresh water to a depth of 5780'. Lay down drill string & BHA. Open hole log w/ Dig/SP/GR log's TD to surface. PU & TIH with Guide shoe, shoe jt, float collar, 136 jt's of 5.5 J-55, 15.5# csgn. Set @ 5764.08' / KB. Cement with 350 sks cement mixed @ 11.0 ppg & 3.43 yd. The 450 sks cement mixed @ 14.4 ppg & 1.24 yd. With 30 bbls good cement returned to pit. Nipple down Bop's. Drop slips @ 75,000 #'s tension. Release rig 12:00 pm on 02/16/05.

RECEIVED  
FEB 22 2005  
DIV. OF OIL, GAS & MINING

NAME (PLEASE PRINT) Floyd Mitchell TITLE Drilling Supervisor

SIGNATURE *Floyd Mitchell* DATE February 17, 2005



6a. (R649-9-2)Waste Management Plan has been received on: IN PLACE  
6b. Inspections of LA PA state/fee well sites complete on: waived

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM BIA

8. **Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: n/a

9. **Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: na/

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 2/23/2005

**DATA ENTRY:**

1. Changes entered in the **Oil and Gas Database** on: 2/28/2005  
2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 2/28/2005  
3. Bond information entered in RBDMS on: 2/28/2005  
4. Fee/State wells attached to bond in RBDMS on: 2/28/2005  
5. Injection Projects to new operator in RBDMS on: 2/28/2005  
6. Receipt of Acceptance of Drilling Procedures for APD/New on: waived

**FEDERAL WELL(S) BOND VERIFICATION:**

1. Federal well(s) covered by Bond Number: UT 0056

**INDIAN WELL(S) BOND VERIFICATION:**

1. Indian well(s) covered by Bond Number: 61BSBDH2912

**FEE & STATE WELL(S) BOND VERIFICATION:**

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number 61BSBDH2919

2. The **FORMER** operator has requested a release of liability from their bond on: n/a\*  
The Division sent response by letter on: n/a

**LEASE INTEREST OWNER NOTIFICATION:**

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

**COMMENTS:**

\*Bond rider changed operator name from Inland Production Company to Newfield Production Company - received 2/23/05

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**SUNDRY NOTICES AND REPORTS ON WELLS**  
Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use Form 3160-3 (APD) for such proposals.

010

5. Lease Serial No.  
ML48378

6. If Indian, Allottee or Tribe Name.

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.  
STATE 3-16-9-18

9. API Well No.  
4304735813

10. Field and Pool, or Exploratory Area  
Monument Butte

11. County or Parish, State  
Uintah, UT

**SUBMIT IN TRIPLICATE - Other Instructions on reverse side**

1. Type of Well  
 Oil Well  Gas Well  Other

2. Name of Operator  
Newfield Production Company

3a. Address Route 3 Box 3630  
Myton, UT 84052

3b. Phone No. (include are code)  
435.646.3721

4. Location of Well (Footage, Sec., T. R., M., or Survey Description)  
660 FNL 1980 FWL  
NE/NW Section 16 T9S R18E

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production(Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Weekly Status Report
	<input type="checkbox"/> Convert to Injector	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomplate in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Status report for time period 02/28/05-04/08/05

Subject well had completion procedures initiated in the Green River formation on 02/28/05 without the use of a service rig over the well. A cement bond log was run and a total of four Green River intervals were perforated and hydraulically fracture treated w/ 20/40 mesh sand. Perf intervals were #1 (5536-5541'), (5520-5524'), (5506-5511') (All 4 JSPF); #2 (4995-5003'), (4 JSPF); #3 (4807-4815') (4 JSPF); #4 (4551-4554'), (4534-4537'), (4524-4527') (All 4 JSPF). Composite flow-through frac plugs were used between stages. Fracs were flowed back through chokes. A service rig was moved on well on 03/07/05. Bridge plugs were drilled out. Well was cleaned out to PBD @ 5720'. Zones were swab tested for sand cleanup. A BHA & production tbg string were run in and anchored in well. End of tubing string @ 5594'. A 1 1/2" bore rod pump was run in well on sucker rods. Well was placed on production via rod pump on 04/08/05.

I hereby certify that the foregoing is true and correct	Title
Name (Printed/ Typed) Tara Kinney	Production Clerk
Signature <i>Tara Kinney</i>	Date 04/11/2005

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

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

(Instructions on reverse)

RECEIVED

APR 12 2005

DIV. OF OIL, GAS & MINING

011

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

5. LEASE DESIGNATION AND SERIAL NUMBER: ML48378
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT or CA AGREEMENT NAME:

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER [ ]
2. NAME OF OPERATOR: Newfield Production Company
3. ADDRESS OF OPERATOR: Route 3 Box 3630 CITY Myton STATE UT ZIP 84052 PHONE NUMBER 435.646.3721
4. LOCATION OF WELL: FOOTAGES AT SURFACE: 660 FNL 1980 FWL COUNTY: Uintah
OTR/OTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NE/NW, 16, T9S, R18E STATE: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

Table with columns: TYPE OF SUBMISSION, TYPE OF ACTION, and SubDate. Includes checkboxes for NOTICE OF INTENT, SUBSEQUENT REPORT, and various actions like ACIDIZE, DEEPEN, REPERFORATE, etc.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.
Newfield Production Company is requesting a variance from Onshore Order 43 CFR Part 3160 Section 4 requiring production tanks to be equipped with Enardo or equivalent vent line valves.
Newfield is requesting a variance for safety reasons. Crude oil production tanks equipped with back pressure devices will emit a surge of gas when the thief hatches are open.

RECEIVED
MAY 10 2005
DIV. OF OIL, GAS & MINING

COPIES SENT TO OPERATOR
DATE: 5-13-05
BY: C110

NAME (PLEASE PRINT) Mandie Crozier TITLE Regulatory Specialist
SIGNATURE [Handwritten Signature] DATE 05/09/2005

(This space for State use only)
APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE 5/10/05
BY: [Handwritten Signature]

012

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

5. LEASE DESIGNATION AND SERIAL NUMBER:
ML48378

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER

8. WELL NAME and NUMBER:
STATE 3-16-9-18

2. NAME OF OPERATOR:
Newfield Production Company

9. API NUMBER:
4304735813

3. ADDRESS OF OPERATOR:
Route 3 Box 3630 CITY Myton STATE UT ZIP 84052 PHONE NUMBER 435.646.3721

10. FIELD AND POOL, OR WILDCAT:
Monument Butte

4. LOCATION OF WELL:
FOOTAGES AT SURFACE: 660 FNL 1980 FWL

COUNTY: Uintah

OTR/OTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NE/NW, 16, T9S, R18E

STATE: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

Table with columns: TYPE OF SUBMISSION, TYPE OF ACTION, SubDate, TYPE OF ACTION. Includes checkboxes for NOTICE OF INTENT, SUBSEQUENT REPORT, and various actions like ACIDIZE, DEEPEN, REPERFORATE CURRENT FORMATION, etc.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Formation water is produced to a steel storage tank. If the production water meets quality guidelines, it is transported to the Ashley, Monument Butte, Jonah, and Beluga water injection facilities by company or contract trucks. Subsequently, the produced water is injected into approved Class II wells to enhance Newfield's secondary recovery project.

Water not meeting quality criteria, is disposed at Newfield's Pariette #4 disposal well (Sec. 7, T9S R19E) or at State of Utah approved surface disposal facilities.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY

RECEIVED
MAY 10 2005

DIV. OF OIL, GAS & MINING

NAME (PLEASE PRINT) Mandie Crozier

TITLE Regulatory Specialist

SIGNATURE [Handwritten Signature]

DATE 05/09/2005

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

5. LEASE DESIGNATION AND SERIAL NO.

**ML-48378**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

NA

7. UNIT AGREEMENT NAME

NA

8. FARM OR LEASE NAME, WELL NO.

State 3-16-9-18

9. WELL NO.

43-047-35813

10. FIELD AND POOL OR WILDCAT

Monument Butte

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec. 16, T9S, R18E

12. COUNTY OR PARISH

Uintah

13. STATE

UT

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG\***

1a. TYPE OF WORK

OIL WELL  GAS WELL  DRY  Other \_\_\_\_\_

1b. TYPE OF WELL

NEW WELL  WORK OVER  DEEPEN  PLUG BACK  DIFF RESVR.  Other \_\_\_\_\_

2. NAME OF OPERATOR

Newfield Exploration Company

3. ADDRESS AND TELEPHONE NO.

1401 17th St. Suite 1000 Denver, CO 80202

4. LOCATION OF WELL (Report locations clearly and in accordance with any State requirements.)\*

At Surface 660' FNL & 1980' FWL (NE/NW) Sec. 16, T9S, R18E

At top prod. Interval reported below

At total depth

14. API NO. 43-047-35813 DATE ISSUED 8/4/04

15. DATE SPUNDED

2/5/05

16. DATE T.D. REACHED

2/16/05

17. DATE COMPL. (Ready to prod.)

4/8/05

18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\*

5031' GL

19. ELEV. CASINGHEAD

KB

20. TOTAL DEPTH, MD & TVD

5780'

21. PLUG BACK T.D., MD & TVD

5720'

22. IF MULTIPLE COMPL., HOW MANY\*

----->

23. INTERVALS DRILLED BY

ROTARY TOOLS

X

CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION--TOP, BOTTOM, NAME (MD AND TVD)\*

Green River 4524'-5541'

25. WAS DIRECTIONAL SURVEY MADE

No

26. TYPE ELECTRIC AND OTHER LOGS RUN

Dual Induction Guard, SP, Compensated Density, Compensated Neutron, GR, Caliper, Cement Bond Log

27. WAS WELL CORED

No

**23. CASING RECORD (Report all strings set in well)**

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
8-5/8" - J-55	24#	315'	12-1/4"	To surface with 160 sx Class "G" cmt	
5-1/2" - J-55	15.5#	5764'	7-7/8"	350 sx Premlite II and 450 sx 50/50 Poz	

**29. LINER RECORD**

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2-7/8"	EOT @ 5594'	TA @ 5489'

**30. TUBING RECORD**

**31. PERFORATION RECORD (Interval, size and number)**

INTERVAL	SIZE	SPF/NUMBER	DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
P4) 5506'-5511', 5520'-5524', 5536'-5541'	.41"	4/56	5506'-5541'	Frac w/ 40,245# 20/40 sand in 384 bbls fluid
(A1) 4995'-5003'	.41"	4/32	4995'-5003'	Frac w/ 19,799# 20/40 sand in 258 bbls fluid
(B1) 4807'-4815'	.41"	4/32	4807'-4815'	Frac w/ 29,709# 20/40 sand in 309 bbls fluid
GCK&D1) 4524'-4527', 4534'-4537', 4551'-4554'	.41"	4/36	4524'-4554'	Frac w/ 35,598# 20/40 sand in 371 bbls fluid

**32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.**

**33.\* PRODUCTION**

DATE FIRST PRODUCTION 4/8/05	PRODUCTION METHOD (Flowing, gas lift, pumping--size and type of pump) 2-1/2" x 1-1/2" x 15' RHAC SM Plunger Pump	WELL STATUS (Producing or shut-in) PRODUCING					
DATE OF TEST 10 day ave	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD -->	OIL--BBL. 29	GAS--MCF. 17	WATER--BBL. 25	GAS-OIL RATIO 586
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE -->	OIL--BBL.	GAS--MCF.	WATER--BBL.	OIL GRAVITY-API (CORR.)	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Sold & Used for Fuel

TEST WITNESSED BY

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

*[Signature]*

TITLE

DIV. OF OIL, GAS & MINING  
Regulatory Specialist

DATE

6/3/2005

RECEIVED  
JUN 09 2005

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof, cored intervals, and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries);

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	GEOLOGIC MARKERS	
				MEAS. DEPTH	TOP TRUE VERT. DEPTH
			<b>Well Name</b> <b>State 3-16-9-18</b>	Garden Gulch Mkr	3586'
				Garden Gulch 1	3756'
				Garden Gulch 2	3866'
				Point 3 Mkr	4190'
				X Mkr	4348'
				Y-Mkr	4386'
				Douglas Creek Mkr	4514'
				BiCarbonate Mkr	4754'
				B Limestone Mkr	4886'
				Castle Peak	5288'
			Basal Carbonate	5702'	
			Total Depth (LOGGERS)	5773'	



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155



IN REPLY REFER TO  
3180  
UT-922

June 30, 2005

Newfield Production Company  
Attn: Kelly L. Donohoue  
1401 Seventeenth Street, Suite 1000  
Denver, Colorado 80202

Gentlemen:

The Sundance (Green River) Unit Agreement, Uintah County, Utah, was approved June 30, 2005. This agreement has been designated No. UTU82472X, and is effective July 1, 2005. The unit area embraces 11,143.86 acres, more or less.

Pursuant to regulations issued and effective June 17, 1988, all operations within the Sundance (Green River) Unit will be covered by your nationwide (Utah) oil and gas bond No. 0056.

The following leases embrace lands included within the unit area:

UTU0075174	UTU39713	UTU65970*	UTU79013*
UTU16539*	UTU39714	UTU74404	UTU79014*
UTU16540	UTU44429	UTU74835	UTU80915
UTU17424*	UTU64806*	UTU74872*	UTU82205
UTU18043	UTU65969	UTU75234	

\* Indicates lease to be considered for segregation by the Bureau of Land Management pursuant to Section 18 (g) of the unit agreement and Public Law 86-705.

All lands and interests by State of Utah, Cause No. 228-08 are fully committed.

Approval of this agreement does not warrant or certify that the operator thereof and other holders of operating rights hold legal or equitable title to those rights in the subject leases which are committed hereto.

RECEIVED

JUL 0 / 2005

DIV. OF OIL, GAS & MINING

*Docket No  
2005-009*

We are of the opinion that the agreement is necessary and advisable in the public interest and for the purpose of more properly conserving natural resources. Certification-Determination, signed by the School and Institutional Trust Land Administration for the State of Utah, is attached to the enclosed agreement. We request that you furnish the State of Utah and all other interested principals with appropriate evidence of this approval.

Sincerely,

/s/ Terry Catlin

Terry Catlin  
Acting Chief, Branch of Fluid Minerals

Enclosure

bcc: Mary Higgins w/enclosure  
MMS - Data Management Division (Attn: James Sykes)  
Trust Lands Administration  
Division of Oil, Gas and Mining  
Field Manager - Vernal w/enclosure  
File - Sundance (Green River) Unit w/enclosure  
Agr. Sec. Chron  
Fluid Chron  
Central Files

UT922:TAThompson:tt:06/30/2005

Entity Form 6  
 "C" Change from one existing entity to another existing entity

API	Well	Sec	Twsp	Rng	Entity	Entity Eff Date
4304734937	FEDERAL 14-6-9-18	06	090S	180E	14064 to 14844	9/20/2005
4304735183	FEDERAL 9-6-9-18	06	090S	180E	14153 to 14844	9/20/2005
4304735184	FEDERAL 11-6-9-18	06	090S	180E	14127 to 14844	9/20/2005
4304735185	FEDERAL 15-6-9-18	06	090S	180E	14120 to 14844	9/20/2005
4304735751	FEDERAL 16-6-9-18	06	090S	180E	14623 to 14844	9/20/2005
4304735752	FEDERAL 12-6-9-18	06	090S	180E	14649 to 14844	9/20/2005
4304735753	FEDERAL 10-6-9-18	06	090S	180E	14622 to 14844	9/20/2005
4304731126	FEDERAL 6-7-9-18	07	090S	180E	14599 to 14844	9/20/2005
4304731202	FEDERAL 15-7-9-18	07	090S	180E	564 to 14844	9/20/2005
4304735448	FEDERAL 3-7-9-18	07	090S	180E	14661 to 14844	9/20/2005
4304735449	FEDERAL 5-7-9-18	07	090S	180E	14662 to 14844	9/20/2005
4304735451	FEDERAL 11-7-9-18	07	090S	180E	14768 to 14844	9/20/2005
4304735452	FEDERAL 13-7-9-18	07	090S	180E	14755 to 14844	9/20/2005
4304735454	FEDERAL 14-7-9-18	07	090S	180E	14767 to 14844	9/20/2005
4304735503	FEDERAL 12-7-9-18	07	090S	180E	14663 to 14844	9/20/2005
4304731274	FEDERAL 7-8-9-18	08	090S	180E	554 to 14844	9/20/2005
4304731545	FEDERAL 4-8-9-18	08	090S	180E	10275 to 14844	9/20/2005
4304731546	FEDERAL 12-8-9-18	08	090S	180E	10975 to 14844	9/20/2005
4304731547	FEDERAL 15-8-9-18	08	090S	180E	10972 to 14844	9/20/2005
4304735811	STATE 1-16-9-18	16	090S	180E	14390 to 14844	9/20/2005
4304735813	STATE 3-16-9-18	16	090S	180E	14565 to 14844	9/20/2005
4304735819	STATE 9-16-9-18	16	090S	180E	14566 to 14844	9/20/2005
4304735822	STATE 11-16-9-18	16	090S	180E	14577 to 14844	9/20/2005
4304731142	FEDERAL 4-18-9-18	18	090S	180E	14600 to 14844	9/20/2005



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 8  
999 18th STREET - SUITE 300  
DENVER, CO 80202-2466  
<http://www.epa.gov/region08>

Ref: 8P-W-GW

SEP 25 2006

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

David Gerbig  
Newfield Production Company  
1401 Seventeenth Street  
Suite 1000  
Denver, CO 80202

Accepted by the  
Utah Division of  
Oil, Gas and Mining

**FOR RECORD ONLY**

43,047,35813  
95 18E 16

Re: Underground Injection Control Program  
Final Permit: State 3-16-9-18  
Uintah County, UT  
EPA Permit No. UT21037-07043

Dear Mr. Gerbig:

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Permit for the proposed State 3-16-9-18 injection well. A Statement of Basis, which discusses development of the conditions and requirements of the Permit, also is included.

The Public Comment period ended on SEP 21 2006. There were no comments on the Draft Permit received during the Public Notice period, and therefore the Final Permit becomes effective on the date of issuance. All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations (CFR) and are regulations that are in effect on the date that this Permit becomes effective.

Please note that under the terms of the Final Permit, you are authorized only to construct the proposed injection well, and must fulfill the "Prior to Commencing Injection" requirements of the Permit, Part II Section C Subpart 1 and obtain written Authorization to Inject prior to commencing injection. It is your responsibility to be familiar with and to comply with all provisions of the Final Permit.

The Permit and the authorization to inject are issued for the operating life of the well unless terminated (Part III, Section B). The EPA will review this Permit at least every five (5) years to determine whether action under 40 CFR § 144.36(a) is warranted.

**RECEIVED**

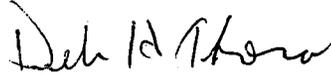
**OCT 02 2006**



DIV. OF OIL, GAS & MINING  
Printed on Recycled Paper

If you have any questions on the enclosed Final Permit or Statement of Basis, please call Emmett Schmitz of my staff at (303) 312-6174, or toll-free at (800) 227-8917, ext. 6174.

Sincerely,



*for* Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

enclosure: Final UIC Permit  
Statement of Basis  
Form 7520-7 Application to Transfer Permit  
Form 7520-11 Monitoring Report  
Form 7520-12 Well Rework Record  
Form 7520-14 Plugging Plan  
Groundwater Section Guidance 35  
Groundwater Section Guidance 39

cc: Letter only:  
  
Maxine Natchees  
Acting Chairperson  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Chester Mills  
Superintendent  
U.S. Bureau of Indian Affairs  
Uintah & Ouray Indian Agency

all enclosures:

S. Elaine Willie  
Environmental Coordinator  
Ute Indian Tribe



Lynn Becker  
Director  
Energy & Minerals Dept.  
Ute Indian Tribe

Michael Guinn  
Vice President - Operations  
Newfield Production Company  
Myton, Utah

Gilbert Hunt  
Acting Director  
State of Utah - Natural Resources

Fluid Minerals Engineering Office  
U.S. Bureau of Land Management  
Vernal, Utah





**UNDERGROUND INJECTION CONTROL PROGRAM  
PERMIT**

PREPARED: September 2006

**Permit No. UT21037-07043**

**Class II Enhanced Oil Recovery Injection Well**

**State 3-16-9-18  
Uintah County, UT**

Issued To

**Newfield Production Company**

1401 Seventeenth Street

Suite 1000

Denver, CO 80202

**RECEIVED  
OCT. 02 2006  
DIV. OF OIL, GAS & MINING**

## Part I. AUTHORIZATION TO CONSTRUCT AND OPERATE

Under the authority of the Safe Drinking Water Act and Underground Injection Control (UIC) Program regulations of the U. S. Environmental Protection Agency (EPA) codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 2, 124, 144, 146, and 147, and according to the terms of this Permit,

Newfield Production Company  
1401 Seventeenth Street  
Suite 1000  
Denver, CO 80202

is authorized to construct and to operate the following Class II injection well or wells:

State 3-16-9-18  
660' FNL & 1980' FWL, NENW S16, T9S, R18E  
Uintah County, UT

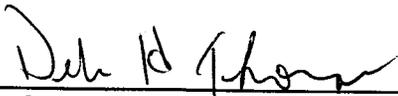
Permit requirements herein are based on regulations found in 40 CFR Parts 124, 144, 146, and 147 which are in effect on the Effective Date of this Permit. Issuance of this Permit does not convey any property rights of any sort, nor does it authorize any injury to persons or property or invasion of other private rights, or any infringement of other federal, State or local law or regulation.

This Permit is based on representations made by the applicant and on other information contained in the Administrative Record. Misrepresentation of information or failure to fully disclose all relevant information may be cause for termination, revocation and reissuance, or modification of this Permit and/or formal enforcement action. This Permit will be reviewed periodically to determine whether action under 40 CFR 144.36(a) is required.

This Permit is issued for the life of the well or wells unless modified, revoked and reissued, or terminated under 40 CFR 144.39 or 144.40. This Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for this program is delegated to an Indian Tribe or a State. Upon the effective date of delegation, all reports, notifications, questions and other compliance actions shall be directed to the Indian tribe or State Program Director or designee.

Issue Date: SEP 25 2006

Effective Date SEP 25 2006



for Stephen S. Tuber  
Assistant Regional Administrator\*  
Office of Partnerships and Regulatory Assistance

\*NOTE: The person holding this title is referred to as the "Director" throughout this Permit.

## PART II. SPECIFIC PERMIT CONDITIONS

### Section A. WELL CONSTRUCTION REQUIREMENTS

These requirements represent the approved minimum construction standards for well casing and cement, injection tubing, and packer.

Details of the approved well construction plan are incorporated into this Permit as APPENDIX A. Changes to the approved plan that may occur during construction must be approved by the Director prior to being physically incorporated.

#### **1. Casing and Cement.**

The well or wells shall be cased and cemented to prevent the movement of fluids into or between underground sources of drinking water. The well casing and cement shall be designed for the life expectancy of the well and of the grade and size shown in APPENDIX A. Remedial cementing may be required if shown to be inadequate by cement bond log or other attempted demonstration of Part II (External) mechanical integrity.

#### **2. Injection Tubing and Packer.**

Injection tubing is required, and shall be run and set with a packer at or below the depth indicated in APPENDIX A. The packer setting depth may be changed provided it remains below the depth indicated in APPENDIX A and the Permittee provides notice and obtains the Director's approval for the change.

#### **3. Sampling and Monitoring Devices.**

The Permittee shall install and maintain in good operating condition:

- (a) a "tap" at a conveniently accessible location on the injection flow line between the pump house or storage tanks and the injection well, isolated by shut-off valves, for collection of representative samples of the injected fluid; and
- (b) one-half (1/2) inch female iron pipe fitting, isolated by shut-off valves and located at the wellhead at a conveniently accessible location, for the attachment of a pressure gauge capable of monitoring pressures ranging from normal operating pressures up to the Maximum Allowable Injection Pressure specified in APPENDIX C:
  - (i) on the injection tubing; and
  - (ii) on the tubing-casing annulus (TCA); and
- (c) a pressure actuated shut-off device attached to the injection flow line set to shut-off the injection pump when or before the Maximum Allowable Injection Pressure specified in APPENDIX C is reached at the wellhead; and
- (d) a non-resettable cumulative volume recorder attached to the injection line.

#### **4. Well Logging and Testing**

Well logging and testing requirements are found in APPENDIX B. The Permittee shall ensure the log and test requirements are performed within the time frames specified in APPENDIX B. Well logs and tests shall be performed according to current EPA-approved procedures. Well log and test results shall be submitted to the Director within sixty (60) days of completion of the logging or testing activity, and shall include a report describing the methods used during logging or testing and an interpretation of the test or log results.

#### **5. Postponement of Construction or Conversion**

The Permittee shall complete well construction within one year of the Effective Date of the Permit, or in the case of an Area Permit within one year of authorization of the additional well. Authorization to construct and operate shall expire if the well has not been constructed within one year of the Effective Date of the Permit or authorization and the Permit may be terminated under 40 CFR 144.40, unless the Permittee has notified the Director and requested an extension prior to expiration. Notification shall be in writing, and shall state the reasons for the delay and provide an estimated completion date. Once Authorization has expired under this part, the complete permit process including opportunity for public comment may be required before Authorization to construct and operate may be reissued.

#### **6. Workovers and Alterations**

Workovers and alterations shall meet all conditions of the Permit. Prior to beginning any addition or physical alteration to an injection well that may significantly affect the tubing, packer or casing, the Permittee shall give advance notice to the Director and obtain the Director's approval. The Permittee shall record all changes to well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workover, logging, or test data to EPA within sixty (60) days of completion of the activity.

A successful demonstration of Part I MI is required following the completion of any well workover or alteration which affects the casing, tubing, or packer. Injection operations shall not be resumed until the well has successfully demonstrated mechanical integrity and the Director has provided written approval to resume injection.

### **Section B. MECHANICAL INTEGRITY**

The Permittee is required to ensure each injection well maintains mechanical integrity at all times. The Director, by written notice, may require the Permittee to comply with a schedule describing when mechanical integrity demonstrations shall be made.

An injection well has mechanical integrity if:

- (a) There is no significant leak in the casing, tubing, or packer (Part I); and
- (b) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore (Part II).

### **1. Demonstration of Mechanical Integrity (MI).**

The operator shall demonstrate MI prior to commencing injection and periodically thereafter. Well-specific conditions dictate the methods and the frequency for demonstrating MI and are discussed in the Statement of Basis. The logs and tests are designed to demonstrate both internal (Part I) and external (Part II) MI as described above. The conditions present at this well site warrant the methods and frequency required in Appendix B of this Permit.

In addition to these regularly scheduled demonstrations of MI, the operator shall demonstrate internal (Part I) MI after any workover which affects the tubing, packer or casing.

The Director may require additional or alternative tests if the results presented by the operator are not satisfactory to the Director to demonstrate there is no movement of fluid into or between USDWs resulting from injection activity. Results of MI tests shall be submitted to the Director as soon as possible but no later than sixty (60) days after the test is complete.

### **2. Mechanical Integrity Test Methods and Criteria**

EPA-approved methods shall be used to demonstrate mechanical integrity. Ground Water Section Guidance No. 34 "Cement Bond Logging Techniques and Interpretation", Ground Water Section Guidance No. 37, "Demonstrating Part II (External) Mechanical Integrity for a Class II injection well permit", and Ground Water Section Guidance No. 39, "Pressure Testing Injection Wells for Part I (Internal) Mechanical Integrity" are available from EPA and will be provided upon request.

The Director may stipulate specific test methods and criteria best suited for a specific well construction and injection operation.

### **3. Notification Prior to Testing.**

The Permittee shall notify the Director at least 30 days prior to any scheduled mechanical integrity test. The Director may allow a shorter notification period if it would be sufficient to enable EPA to witness the mechanical integrity test. Notification may be in the form of a yearly or quarterly schedule of planned mechanical integrity tests, or it may be on an individual basis.

### **4. Loss of Mechanical Integrity.**

If the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity becomes evident during operation (such as presence of pressure in the TCA, water flowing at the surface, etc.), the Permittee shall notify the Director within 24 hours (see Part III Section E Paragraph 11(e) of this Permit) and the well shall be shut-in within 48 hours unless the Director requires immediate shut-in.

Within five days, the Permittee shall submit a follow-up written report that documents test results, repairs undertaken or a proposed remedial action plan.

Injection operations shall not be resumed until after the well has successfully been repaired and demonstrated mechanical integrity, and the Director has provided approval to resume injection.

## **Section C. WELL OPERATION**

### **INJECTION BETWEEN THE OUTERMOST CASING PROTECTING UNDERGROUND SOURCES OF DRINKING WATER AND THE WELL BORE IS PROHIBITED.**

Injection is approved under the following conditions:

#### **1. Requirements Prior to Commencing Injection.**

Well injection, including for new wells authorized by an Area Permit under 40 CFR 144.33 (c), may commence only after all well construction and pre-injection requirements herein have been met and approved. The Permittee may not commence injection until construction is complete, and

- (a) The Permittee has submitted to the Director a notice of completion of construction and a completed EPA Form 7520-10 or 7520-12; all applicable logging and testing requirements of this Permit (see APPENDIX B) have been fulfilled and the records submitted to the Director; mechanical integrity pursuant to 40 CFR 146.8 and Part II Section B of this Permit has been demonstrated; and
  - (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit; or
  - (ii) The Permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in Paragraph 1a, in which case prior inspection or review is waived and the Permittee may commence injection.

#### **2. Injection Interval.**

Injection is permitted only within the approved injection interval, listed in APPENDIX C. Additional individual injection perforations may be added provided that they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6.

#### **3. Injection Pressure Limitation**

- (a) The permitted Maximum Allowable Injection Pressure (MAIP), measured at the wellhead, is found in APPENDIX C. Injection pressure shall not exceed the amount the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs. In no case shall injection pressure cause the movement of injection or formation fluids into a USDW.
- (b) The Permittee may request a change of the MAIP, or the MAIP may be increased or decreased by the Director in order to ensure that the requirements in Paragraph (a) above are fulfilled. The Permittee may be required to conduct a step rate injection test or other suitable test to provide information for determining the fracture pressure of the injection zone. Change of the permitted MAIP by the Director shall be by modification of this Permit and APPENDIX C.

#### **4. Injection Volume Limitation.**

Injection volume is limited to the total volume specified in APPENDIX C.

#### **5. Injection Fluid Limitation.**

Injected fluids are limited to those identified in 40 CFR 144.6(b)(2) as fluids used for enhanced recovery of oil or natural gas, including those which are brought to the surface in connection with conventional oil or natural gas production that may be commingled with waste waters from gas plants which are an integral part of production operations unless those waters are classified as a hazardous waste at the time of injection, pursuant to 40 CFR 144.6(b). Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved for injection. This well is NOT approved for commercial brine injection, industrial waste fluid disposal or injection of hazardous waste as defined by CFR 40 Part 261. The Permittee shall provide a listing of the sources of injected fluids in accordance with the reporting requirements in Part II Section D Paragraph 4 and APPENDIX D of this Permit.

#### **6. Tubing-Casing Annulus (TCA)**

The tubing-casing annulus (TCA) shall be filled with water treated with a corrosion inhibitor, or other fluid approved by the Director. The TCA valve shall remain closed during normal operating conditions and the TCA pressure shall be maintained at zero (0) psi.

If TCA pressure cannot be maintained at zero (0) psi, the Permittee shall follow the procedures in Ground Water Section Guidance No. 35 "Procedures to follow when excessive annular pressure is observed on a well."

### **Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS**

#### **1. Monitoring Parameters, Frequency, Records and Reports.**

Monitoring parameters are specified in APPENDIX D. Pressure monitoring recordings shall be taken at the wellhead. The listed parameters are to be monitored, recorded and reported at the frequency indicated in APPENDIX D even during periods when the well is not operating.

Monitoring records must include:

- (a) the date, time, exact place and the results of the observation, sampling, measurement, or analysis, and;
- (b) the name of the individual(s) who performed the observation, sampling, measurement, or analysis, and;
- (c) the analytical techniques or methods used for analysis.

#### **2. Monitoring Methods.**

- (a) Monitoring observations, measurements, samples, etc. taken for the purpose of complying with these requirements shall be representative of the activity or condition being monitored.

- (b) Methods used to monitor the nature of the injected fluids must comply with analytical methods cited and described in Table 1 of 40 CFR 136.3 or Appendix III of 40 CFR 261, or by other methods that have been approved in writing by the Director.
- (c) Injection pressure, annulus pressure, injection rate, and cumulative injected volumes shall be observed and recorded at the wellhead under normal operating conditions, and all parameters shall be observed simultaneously to provide a clear depiction of well operation.
- (d) Pressures are to be measured in pounds per square inch (psi).
- (e) Fluid volumes are to be measured in standard oil field barrels (bbl).
- (f) Fluid rates are to be measured in barrels per day (bbl/day).

### **3. Records Retention.**

- (a) Records of calibration and maintenance, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a period of AT LEAST THREE (3) YEARS from the date of the sample, measurement, report, or application. This period may be extended anytime prior to its expiration by request of the Director.
- (b) Records of the nature and composition of all injected fluids must be retained until three (3) years after the completion of any plugging and abandonment (P&A) procedures specified under 40 CFR 144.52(a)(6) or under Part 146 Subpart G, as appropriate. The Director may require the Permittee to deliver the records to the Director at the conclusion of the retention period. The Permittee shall continue to retain the records after the three (3) year retention period unless the Permittee delivers the records to the Director or obtains written approval from the Director to discard the records.
- (c) The Permittee shall retain records at the location designated in APPENDIX D.

### **4. Annual Reports.**

Whether the well is operating or not, the Permittee shall submit an Annual Report to the Director that summarizes the results of the monitoring required by Part II Section D and APPENDIX D.

The first Annual Report shall cover the period from the effective date of the Permit through December 31 of that year. Subsequent Annual Reports shall cover the period from January 1 through December 31 of the reporting year. Annual Reports shall be submitted by February 15 of the year following data collection. EPA Form 7520-11 may be copied and shall be used to submit the Annual Report, however, the monitoring requirements specified in this Permit are mandatory even if EPA Form 7520-11 indicates otherwise.

## **Section E. PLUGGING AND ABANDONMENT**

**1. Notification of Well Abandonment, Conversion or Closure.**

The Permittee shall notify the Director in writing at least forty-five (45) days prior to: 1) plugging and abandoning an injection well, 2) converting to a non-injection well, and 3) in the case of an Area Permit, before closure of the project.

**2. Well Plugging Requirements**

Prior to abandonment, the injection well shall be plugged with cement in a manner which prevents the movement of fluids into or between underground sources of drinking water. Prior to placement of the cement plug(s) the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director. The well shall be plugged in accordance with the approved plugging and abandonment plan and with 40 CFR 146.10.

**3. Approved Plugging and Abandonment Plan.**

The approved plugging and abandonment plan is incorporated into this Permit as APPENDIX E. Changes to the approved plugging and abandonment plan must be approved by the Director prior to beginning plugging operations. The Director also may require revision of the approved plugging and abandonment plan at any time prior to plugging the well.

**4. Forty Five (45) Day Notice of Plugging and Abandonment.**

The Permittee shall notify the Director at least forty-five (45) days prior to plugging and abandoning a well and provide notice of any anticipated change to the approved plugging and abandonment plan.

**5. Plugging and Abandonment Report.**

Within sixty (60) days after plugging a well, the Permittee shall submit a report (EPA Form 7520-13) to the Director. The plugging report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:

- (a) A statement that the well was plugged in accordance with the approved plugging and abandonment plan; or
- (b) Where actual plugging differed from the approved plugging and abandonment plan, an updated version of the plan, on the form supplied by the Director, specifying the differences.

**6. Inactive Wells.**

After any period of two years during which there is no injection the Permittee shall plug and abandon the well in accordance with Part II Section E Paragraph 2 of this Permit unless the Permittee:

- (a) Provides written notice to the Director;
- (b) Describes the actions or procedures the Permittee will take to ensure that the well will not endanger USDWs during the period of inactivity. These actions and procedures shall include compliance with mechanical integrity demonstration, Financial Responsibility and all other permit requirements designed to protect USDWs; and

- (c) Receives written notice by the Director temporarily waiving plugging and abandonment requirements.

## PART III. CONDITIONS APPLICABLE TO ALL PERMITS

### Section A. EFFECT OF PERMIT

The Permittee is allowed to engage in underground injection in accordance with the conditions of this Permit. The Permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR 142 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized by this Permit or by rule is prohibited. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment, for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the Permittee's independent obligation to comply with all UIC regulations. Nothing in this Permit relieves the Permittee of any duties under applicable regulations.

### Section B. CHANGES TO PERMIT CONDITIONS

#### **1. Modification, Reissuance, or Termination.**

The Director may, for cause or upon a request from the Permittee, modify, revoke and reissue, or terminate this Permit in accordance with 40 CFR 124.5, 144.12, 144.39, and 144.40. Also, this Permit is subject to minor modification for causes as specified in 40 CFR 144.41. The filing of a request for modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any condition of this Permit.

#### **2. Conversions.**

The Director may, for cause or upon a written request from the Permittee, allow conversion of the well from a Class II injection well to a non-Class II well. Conversion may not proceed until the Permittee receives written approval from the Director. Conditions of such conversion may include but are not limited to, approval of the proposed well rework, follow up demonstration of mechanical integrity, well-specific monitoring and reporting following the conversion, and demonstration of practical use of the converted configuration.

#### **3. Transfer of Permit.**

Under 40 CFR 144.38, this Permit is transferable provided the current Permittee notifies the Director at least thirty (30) days in advance of the proposed transfer date (EPA Form 7520-7) and provides a written agreement between the existing and new Permittees containing a specific date for transfer of Permit responsibility, coverage and liability between them. The notice shall adequately demonstrate that the financial responsibility requirements of 40 CFR 144.52(a)(7) will be met by the new Permittee. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act; in some cases, modification or revocation and reissuance is mandatory.

#### **4. Permittee Change of Address.**

Upon the Permittee's change of address, or whenever the operator changes the address where monitoring records are kept, the Permittee must provide written notice to the Director within 30 days.

#### **5. Construction Changes, Workovers, Logging and Testing Data**

The Permittee shall give advance notice to the Director, and shall obtain the Director's written approval prior to any physical alterations or additions to the permitted facility. Alterations or workovers shall meet all conditions as set forth in this permit. The Permittee shall record any changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workovers, logging, or test data to EPA within sixty (60) days of completion of the activity.

Following the completion of any well workovers or alterations which affect the casing, tubing, or packer, a successful demonstration of mechanical integrity (Part III, Section F of this permit) shall be made, and written authorization from the Director received, prior to resuming injection activities.

### **Section C. SEVERABILITY**

The Provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

### **Section D. CONFIDENTIALITY**

In accordance with 40 CFR Part 2 and 40 CFR 144.5, information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the Permittee, and
- information which deals with the existence, absence or level of contaminants in drinking water.

### **Section E. GENERAL PERMIT REQUIREMENTS**

#### **1. Duty to Comply.**

The Permittee must comply with all conditions of this Permit. Any noncompliance constitutes a violation of the Safe Drinking Water Act (SDWA) and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the Permittee need not comply with the provisions of this Permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 CFR 144.34. All violations of the SDWA may subject the Permittee to penalties and/or criminal prosecution as specified in Section 1423 of the SDWA.

**2. Duty to Reapply.**

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, under 40 CFR 144.37 the Permittee must apply for a new permit prior to the expiration date.

**3. Need to Halt or Reduce Activity Not a Defense.**

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

**4. Duty to Mitigate.**

The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.

**5. Proper Operation and Maintenance.**

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.

**6. Permit Actions.**

This Permit may be modified, revoked and reissued or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

**7. Property Rights.**

This Permit does not convey any property rights of any sort, or any exclusive privilege.

**8. Duty to Provide Information.**

The Permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. The Permittee is required to submit any information required by this Permit or by the Director to the mailing address designated in writing by the Director.

**9. Inspection and Entry.**

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

**10. Signatory Requirements.**

All applications, reports or other information submitted to the Director shall be signed and certified according to 40 CFR 144.32. This section explains the requirements for persons duly authorized to sign documents, and provides wording for required certification.

**11. Reporting Requirements.**

- (a) **Planned changes.** The Permittee shall give notice to the Director as soon as possible of any planned changes, physical alterations or additions to the permitted facility, and prior to commencing such changes.
- (b) **Anticipated noncompliance.** The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) **Monitoring Reports.** Monitoring results shall be reported at the intervals specified in this Permit.
- (d) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 30 days following each schedule date.
- (e) **Twenty-four hour reporting.** The Permittee shall report to the Director any noncompliance which may endanger human health or the environment, including:
  - (i) Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW; or
  - (ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Information shall be provided, either directly or by leaving a message, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning (800) 227-8917 and requesting EPA Region VIII UIC Program Compliance and Technical Enforcement Director, or by contacting the EPA Region VIII Emergency Operations Center at (303) 293-1788.

In addition, a follow up written report shall be provided to the Director within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- (f) Oil Spill and Chemical Release Reporting: The Permittee shall comply with all reporting requirements related to the occurrence of oil spills and chemical releases by contacting the National Response Center (NRC) at (800) 424-8802, (202) 267-2675, or through the NRC website <http://www.nrc.uscg.mil/index.htm>.
- (g) Other Noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs Part III, Section E Paragraph 11(b) or Section E, Paragraph 11(e) at the time the monitoring reports are submitted. The reports shall contain the information listed in Paragraph 11(e) of this Section.
- (h) Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

## **Section F. FINANCIAL RESPONSIBILITY**

### ***1. Method of Providing Financial Responsibility.***

The Permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug, and abandon the underground injection well(s). No substitution of a demonstration of financial responsibility shall become effective until the Permittee receives written notification from the Director that the alternative demonstration of financial responsibility is acceptable. The Director may, on a periodic basis, require the holder of a permit to revise the estimate of the resources needed to plug and abandon the well to reflect changes in such costs and may require the Permittee to provide a revised demonstration of financial responsibility.

### ***2. Insolvency.***

In the event of:

- (a) the bankruptcy of the trustee or issuing institution of the financial mechanism; or
- (b) suspension or revocation of the authority of the trustee institution to act as trustee; or

- (c) the institution issuing the financial mechanism losing its authority to issue such an instrument

the Permittee must notify the Director in writing, within ten (10) business days, and the Permittee must establish other financial assurance or liability coverage acceptable to the Director within sixty (60) days after any event specified in (a), (b), or (c) above.

The Permittee must also notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor, if named as debtor of a corporate guarantee, must make such a notification as required under the terms of the guarantee.

## APPENDIX A

### WELL CONSTRUCTION REQUIREMENTS

See Schematic Diagram:

The State No. 3-16-9-18 was drilled to a total depth of 5780 (KB) feet in the Basal Carbonate Member of the Green River Formation.

Surface casing (8-5/8 inch) was set at a depth of 315 feet in a 12-1/4 inch hole using 160 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 5764 feet (KB) in a 7-7/8 inch hole with 350 sacks of Premium Lite II and 450 sacks of 50/50 poz mix. This well construction is considered adequate to protect USDW's.

The EPA calculates the top of cement as 595 feet from the surface.

The schematic diagram shows the proposed current injection perforations in the Douglas Creek Member of the Green River Formation. Additional perforations may be added at a later time between the depths of 3592 feet and the top of the Wasatch Formation (Estimated to be 5827 feet) provided the operator first notifies the Director and later submits an updated well completion report (EPA Form 7520-12) and schematic diagram.

The packer will be required to be set no higher than 100 feet above the top perforation.

UT 21037-07043  
State 3-16-9-18

Spud Date: 02/05/05  
Put on Production: 04/08/2005  
GL: 5031' KB: 5043'

Initial Production: 29 BOPD,  
17 MCFD, 25 BWPD

Proposed Injection  
Wellbore Diagram

SURFACE CASING

CSG SIZE: 8 5/8"  
GRADE: J-55 *Base USRW*  
WEIGHT: 24#  
LENGTH: 7 jts. (304.93')  
DEPTH LANDED: 314.93' KB  
HOLE SIZE: 12 1/4"  
CEMENT DATA: 160 sks Class G Mix. 3 bbls cement to surface.

PRODUCTION CASING

CSG SIZE: 5 1/2"  
GRADE: J-55  
WEIGHT: 15.5# *Green River*  
LENGTH: 137 jts. (5766.08')  
DEPTH LANDED: 5764.08' KB  
HOLE SIZE: 7 7/8"  
CEMENT DATA: 350 sks Prem. Lite II mixed & 450 sks 50/50 POZ mix.  
CEMENT TOP AT: 120'

TUBING

SIZE/GRADE/WT.: 2 7/8" / J-55 / 6.5#  
NO. OF JOINTS: 164 jts (5476.92')  
TUBING ANCHOR: 5488.72' KB  
NO. OF JOINTS: 1 jts (33.46')  
SEATING NIPPLE: 2 7/8" (1.10')  
SN LANDED AT: 5525.18' KB  
NO. OF JOINTS: 2 jts (66.79')  
TOTAL STRING LENGTH: 5593.52' w/ 12' KB

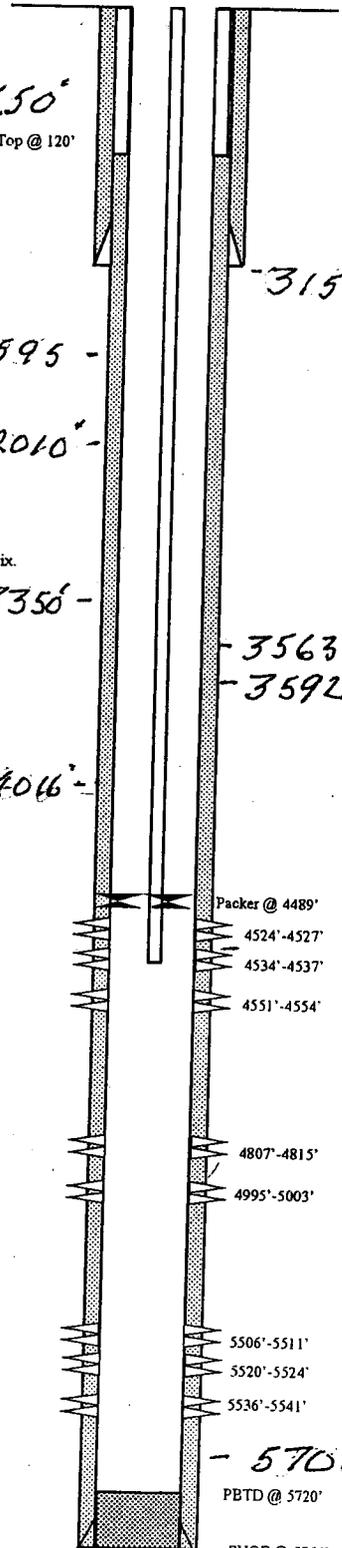
FRAC JOB

03/04/05 5506'-5541' **Frac CP4 sands as follows:**  
40,245#'s of 20/40 sand in 384 bbls lightning  
17 frac fluid. Treated @ avg press of 1070,  
w/avg rate of 24.8 bpm. ISIP 1360 psi. Calc  
flush: 5504 gal. Actual flush: 5502 gal.

03/04/05 4995'-5003' **Frac A1 sands as follows:**  
19,799#'s of 20/40 sand in 258 bbls lightning  
17 frac fluid. Treated @ avg press of 1478,  
w/avg rate of 24.8 bpm. ISIP 1780 psi. Calc  
flush: 4993 gal. Actual flush: 5040 gal.

03/04/05 4807'-4815' **Frac B1 sands as follows:**  
29,709#'s of 20/40 sand in 309 bbls  
lightning 17 frac fluid. Treated @ avg press  
of 1978, w/avg rate of 24.8 bpm. ISIP 1910  
psi. Calc flush: 4805 gal. Actual flush: 4788  
gal.

03/04/05 4524'-4554' **Frac D1 and DGCK sands as follows:**  
35,598#'s of 20/40 sand in 371 bbls lightning  
17 frac fluid. Treated @ avg press of 1658,  
w/avg rate of 24.8 bpm. ISIP 1780 psi. Calc  
flush: 4522 gal. Actual flush: 4410 gal.



PERFORATION RECORD

Date	Interval	Tool	Holes
02/28/05	5536'-5541'	4 JSPF	20 holes
02/28/05	5520'-5524'	4 JSPF	16 holes
02/28/05	5506'-5511'	4 JSPF	20 holes
03/04/05	4995'-5003'	4 JSPF	32 holes
03/04/05	4807'-4815'	4 JSPF	32 holes
03/04/05	4551'-4554'	4 JSPF	12 holes
03/04/05	4534'-4537'	4 JSPF	12 holes
03/04/05	4524'-4527'	4 JSPF	12 holes

**NEWFIELD**

---

State 3-16-9-18  
660' FNL & 1980' FWL  
NE/NW Section 16-T9S-R18E  
Uintah Co, Utah  
API #43-047-35813; Lease #AII-48378

## APPENDIX B

### LOGGING AND TESTING REQUIREMENTS

#### Logs.

Logs will be conducted according to current UIC guidance. It is the responsibility of the permittee to obtain and use guidance prior to conducting any well logging required as a condition of this permit.

### NO LOGGING REQUIREMENTS

#### Tests.

Tests will be conducted according to current UIC guidance. It is the responsibility of the permittee to obtain and use guidance prior to conducting any well test required as a condition of this permit.

**WELL NAME:** State 3-16-9-18

<b>TYPE OF TEST</b>	<b>DATE DUE</b>
Step Rate Test	Within 180 days after commencement of injection.
Pore Pressure	Prior to authorization to commence injection.
Standard Annulus Pressure	Prior to authorization to commence injection.

## APPENDIX C

### OPERATING REQUIREMENTS

#### MAXIMUM ALLOWABLE INJECTION PRESSURE:

Maximum Allowable Injection Pressure (MAIP) as measured at the surface shall not exceed the pressure(s) listed below.

WELL NAME	MAXIMUM ALLOWED INJECTION PRESSURE (psi)
	ZONE 1 (Upper)
State 3-16-9-18	1,105

#### INJECTION INTERVAL(S):

Injection is permitted only within the approved injection interval listed below. Injection perforations may be altered provided they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6. Specific injection perforations can be found in Appendix A.

WELL NAME: State 3-16-9-18	APPROVED INJECTION INTERVAL (KB, ft)		FRACTURE GRADIENT (psi/ft)
	TOP	BOTTOM	
	FORMATION NAME		
Green River	3,592.00 - 5,827.00		0.680

#### ANNULUS PRESSURE:

The annulus pressure shall be maintained at zero (0) psi as measured at the wellhead. If this pressure cannot be maintained, the Permittee shall follow the procedures listed under Part II, Section C. 6. of this permit.

#### MAXIMUM INJECTION VOLUME:

There is no limitation on the number of barrels per day (bbls/day) of water that shall be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Appendix C.

## APPENDIX D

### MONITORING AND REPORTING PARAMETERS

This is a listing of the parameters required to be observed, recorded, and reported. Refer to the permit Part II, Section D, for detailed requirements for observing, recording, and reporting these parameters.

OBSERVE MONTHLY AND RECORD AT LEAST ONCE EVERY THIRTY DAYS	
<b>OBSERVE AND RECORD</b>	Injection pressure (psig)
	Annulus pressure(s) (psig)
	Injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbls)

ANNUALLY	
<b>ANALYZE</b>	Injected fluid total dissolved solids (mg/l)
	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH

ANNUALLY	
<b>REPORT</b>	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and averaged annulus pressure(s) (psig)
	Each month's averaged injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

Records of all monitoring activities must be retained and made available for inspection at the following location:

**Newfield Production Company**  
**1401 Seventeenth Street - Suite 1000**  
**Denver, CO 80202**

## APPENDIX E

### PLUGGING AND ABANDONMENT REQUIREMENTS

See Schematic Diagram.

All cement plugs will be set with tubing.

9.2 ppg plugging gel, or fresh water weighted with bentonite or treated brine will be placed between all cement plugs.

The following Plugging and Abandonment Plan, as proposed by the permittee, is predicated on the permittee not revising the injection perforations cited on the schematic diagram of well construction/conversion. Should the uppermost perforations (4524 feet to 4527 feet) be modified in construction, the EPA will modify the P&A Plan accordingly.

**PLUG NO. 1:** A Cast Iron Bridge Plug (CIBP) at 4429 feet with 100 feet of Class "G" cement on CIBP.

**PLUG NO. 2:** A Class "G" cement plug from 1960 feet to 2200 feet. This plug will cover both a water zone and the top of the Green River Formation.

**PLUG NO. 3:** Circulate Class "G" cement down the 5-1/2 inch casing to 365 feet and up the 5-1/2 inch X 8-5/8 inch annulus to the surface.

State 3-16-9-18

Spud Date: 02/05/05

Put on Production: 04/08/2005

GL: 5031' KB: 5043'

Proposed P & A Wellbore Diagram

Initial Production: 29 BOPD, 17 MCFD, 25 BWPD

SURFACE CASING

CSG SIZE: 8 5/8"

GRADE: J-55

WEIGHT: 24#

LENGTH: 7 jts. (304.93')

DEPTH LANDED: 314.93' KB

HOLE SIZE: 12 1/4"

CEMENT DATA: 160 sks Class G Mix. 3 bbls cement to surface.

PRODUCTION CASING

CSG SIZE: 5 1/2"

GRADE: J-55

WEIGHT: 15.5#

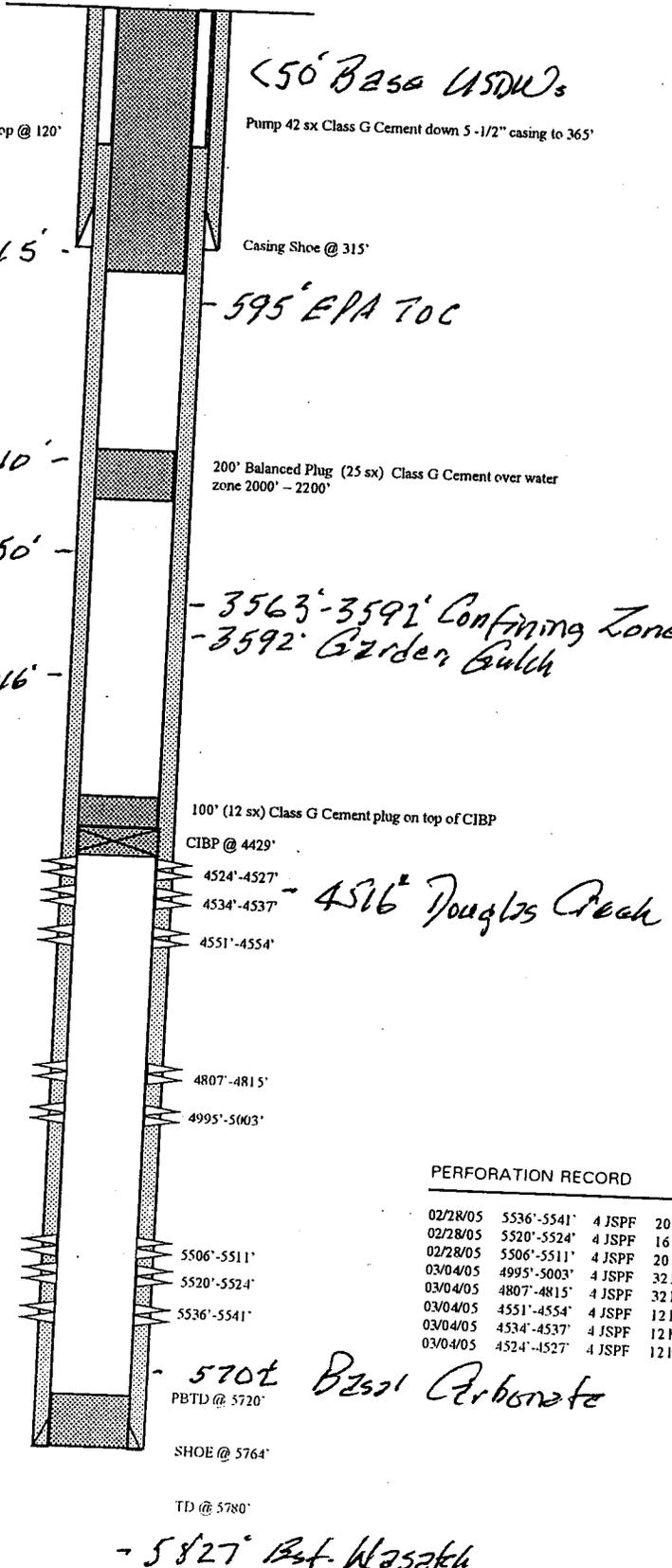
LENGTH: 137 jts. (5766.08')

DEPTH LANDED: 5764.08' KB

HOLE SIZE: 7 7/8"

CEMENT DATA: 350 sks Prem. Lite II mixed & 450 sks 50/50 POZ mix.

CEMENT TOP AT: 120'



PERFORATION RECORD

Date	Interval	Tool	Holes
02/28/05	5536'-5541'	4 JSPF	20 holes
02/28/05	5520'-5524'	4 JSPF	16 holes
02/28/05	5506'-5511'	4 JSPF	20 holes
03/04/05	4995'-5003'	4 JSPF	32 holes
03/04/05	4807'-4815'	4 JSPF	32 holes
03/04/05	4551'-4554'	4 JSPF	12 holes
03/04/05	4534'-4537'	4 JSPF	12 holes
03/04/05	4524'-4527'	4 JSPF	12 holes

**NEWFIELD**

State 3-16-9-18

660' FNL & 1980' FWL

NE/NW Section 16-T9S-R18E

Utah Co, Utah

API #43-047-35813; Lease #ML-48378

## APPENDIX F

### CORRECTIVE ACTION REQUIREMENTS

No Corrective Action required.

# STATEMENT OF BASIS

**NEWFIELD PRODUCTION COMPANY**

**STATE 3-16-9-18**

**UINTAH COUNTY, UT**

**EPA PERMIT NO. UT21037-07043**

**CONTACT:** Emmett Schmitz  
U. S. Environmental Protection Agency  
Ground Water Program, 8P-W-GW  
999 18th Street, Suite 300  
Denver, Colorado 80202-2466  
Telephone: 1-800-227-8917 ext. 6174

**RECEIVED**  
**OCT. 02 2006**  
**DIV. OF OIL, GAS & MINING**

This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

UIC Permits specify the conditions and requirements for construction, operation, monitoring and reporting, and plugging of injection wells to prevent the movement of fluids into underground sources of drinking water (USDWs). Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

Upon the Effective Date when issued, the Permit authorizes the conversion and operation of a "new" injection well or wells governed by the conditions specified in the Permit. The Permit is issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR 144.39, 144.40 and 144.41. The Permit is subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR 144.36(a).

## PART I. General Information and Description of Facility

Newfield Production Company  
1401 Seventeenth Street  
Suite 1000  
Denver, CO 80202

on

November 3, 2005

submitted an application for an Underground Injection Control (UIC) Program Permit or Permit Modification for the following injection well or wells:

State 3-16-9-18  
660' FNL & 1980' FWL, NENW S16, T9S, R18E  
Uintah County, UT

Regulations specific to Uintah-Ouray Indian Reservation injection wells are found at 40 CFR 147 Subpart TT.

The application, including the required information and data necessary to issue or modify a UIC Permit in accordance with 40 CFR Parts 144, 146 and 147, was reviewed and determined by EPA to be complete.

The Permit will expire upon delegation of primary enforcement responsibility (primacy) for applicable portions of the UIC Program to the Ute Indian Tribe or the State of Utah unless the delegated agency has the authority and chooses to adopt and enforce this Permit as a Tribal or State Permit.

TABLE 1.1 shows the status of the well or wells as "New", "Existing", or "Conversion" and for Existing shows the original date of injection operation. Well authorization "by rule" under 40 CFR Part 144 Subpart C expires automatically on the Effective Date of an issued UIC Permit.

The State No. 3-16-9-18 is currently an active Green River Formation - Douglas Creek Member - oil well. The applicant intends to convert the State No, 3-16-9-18 to an injection well to support existing Green River Formation enhanced oil recovery operations.

<b>TABLE 1.1</b>		
<b>WELL STATUS / DATE OF OPERATION</b>		
<b>CONVERSION WELLS</b>		
<b>Well Name</b>	<b>Well Status</b>	<b>Date of Operation</b>
State 3-16-9-18	Conversion	N/A

## Hydrogeologic Setting

The proposed injection well is located in the Newfield Production Company Greater Monument Butte area near the center of the broad, gently northward dipping south flank of the Uinta Basin. The beds dip at about 200'/mile, and there are no known surface folds or faults in the field. The lower 600' to 800' of the Uinta Formation, generally consisting of 5' to 20' thick brown lenticular fluvial sandstone and interbedded varicolored shales, outcrops at the surface in this area. The Uinta is underlain by the Green River Formation which consists of lake (lacustrine) margin sandstones, limestone and shale beds that were deposited along the edges and on the broad level floor of Lake Uinta as it expanded and contracted through time. Underlying the Green River Formation is the Wasatch Formation, which is approximately 2400' thick in this area and consists of red alluvial shales and siltstone with scattered lenticular sandstones usually 10' to 50' thick. Below the Wasatch Formation is the Mesaverde Formation; a series of interbedded continental deposits of shale, sandstone, and coal. Water samples from Mesaverde sands in the nearby Natural Buttes Unit yield highly saline water.

The Uinta Basin is a topographic and structural trough encompassing an area of more than 9300 square mi (14,900 km ) in northeast Utah. The basin is sharply asymmetrical, with a steep north flank bounded by the east-west-trending Uinta Mountains, and a gently dipping south flank. The Uinta Basin formed in Paleocene to Eocene time, creating a large area of internal drainage which was filled by ancestral Lake Uinta. Deposition in and around Lake Uinta consisted of open- to marginal-lacustrine sediments that make up the Green River Formation. Alluvial red-bed deposits that are laterally equivalent to and intertongue with the Green River make up the Colton Formation (Wasatch). More than 450 million barrels of oil (63 MT) have been produced from the Green River and Wasatch Formations in the Uinta Basin. The southern shore of Lake Uinta was very broad and flat, which allowed large transgressive and regressive shifts in the shoreline in response to climatic and tectonic-induced rise and fall of the lake. The cyclic nature of Green River deposition in the southern shore area resulted in numerous stacked deltaic deposits. Distributary-mouth bars, distributary channels, and near-shore bars are the primary producing sandstone reservoirs in the area (Ref: "Reservoir Characterization of the Lower Green River Formation, Southwest Uinta Basin, Utah Biannual Technical Progress Report 4/1/99 - 9/30/99", by C. D. Morgan, Program Manager, November 1999, Contract DE-AC26-98BC15103). The Tertiary Duchesne River Formation alluvium generally is present at the surface in this area.

Throughout the current Newfield Production Company area of enhanced recovery injection activity, i.e., T8-9S - R15-19E, Green River Formation water analyses generally exhibit total dissolved (TDS) content well in excess of 10,000 mg/l. A few recent applications for well conversion to enhanced recovery injection contain Green River water analyses with TDS approximating 10,000 mg/l. The State of Utah-Natural Resources ascribes low TDS values to several possibilities involving dilution of Green River water with high TDS values, e.g., recharge of the Green River Formation via Green River Formation outcrop on the Book Cliffs/Roan Cliffs; injection of very low TDS Johnson Water District Reservoir source water; and percolation of surface water via deep-seated Gilsonite veins penetrating lower Green River Members.

### Geologic Setting (TABLE 2.1)

**TABLE 2.1  
GEOLOGIC SETTING  
State 3-16-9-18**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Uinta	0.00	2,010.00	< 10,000.00	Predominantly fluvial sand and shale with interbedded lacustrine dolomite-shale-sand. Base of Underground Sources of Drinking Water (USDW) at less than 50 feet from the surface.

**Proposed Injection Zone(s) (TABLE 2.2)**

An injection zone is a geological formation, group of formations, or part of a formation that receives fluids through a well. The proposed injection zones are listed in TABLE 2.2.

Injection will occur into an injection zone that is separated from USDWs by a confining zone which is free of known open faults or fractures within the Area of Review.

The approved injection interval for enhanced recovery injection is identified as the gross interval between the top of the Garden Gulch Member (3592 feet) and the top of the Wasatch Formation, estimated to be 5827 feet.

**TABLE 2.2  
INJECTION ZONES  
State 3-16-9-18**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
Green River	3,592.00	5,827.00	38,911.00	0.680		N/A

- \* C - Currently Exempted
- E - Previously Exempted
- P - Proposed Exemption
- N/A - Not Applicable

**Confining Zone(s) (TABLE 2.3)**

A confining zone is a geological formation, part of a formation, or a group of formations that limits fluid movement above the injection zone. The confining zone or zones are listed in TABLE 2.3.

The Confining Zone is identified as a 29-foot (3563 feet - 3592 feet) Green River Formation shale interval. A CBL analysis identifies 80% cement bond across the Confining Zone.

**TABLE 2.3**  
**CONFINING ZONES**  
**State 3-16-9-18**

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Green River	Shale	3,563.00	3,592.00

**Underground Sources of Drinking Water (USDWs) (TABLE 2.4)**

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

The State of Utah "Water Wells and Springs", <http://NRWRT1.STATE.UT.US>, identifies no public water supply wells within the one-quarter (1/4) mile Area-of-Review (AOR) around the State No. 3-16-9-18.

Technical Publication No. 92: State of Utah, Department of Natural Resources, cites the base of Underground Sources of Drinking Water (USDW) in the Uinta Formation, approximately 50 feet from the surface.

**TABLE 2.4**  
**UNDERGROUND SOURCES OF DRINKING WATER (USDW)**  
**State 3-16-9-18**

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uinta	Predominantly fluvial sand and shale, with minor interbedded lacustrine carbonate and shale.	0.00	50.00	< 10,000.00

### PART III. Well Construction (40 CFR 146.22)

The State No. 3-16-9-18 was drilled to a total depth of 5780 (KB) feet in the Basal Carbonate Member of the Green River Formation.

Surface casing (8-5/8 inch) was set at a depth of 315 feet in a 12-1/4 inch hole using 160 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 5764 feet (KB) in a 7-7/8 inch hole with 350 sacks of Premium Lite II and 450 sacks of 50/50 poz mix. This well construction is considered adequate to protect USDW's.

The EPA calculates the top of cement as 595 feet from the surface.

The schematic diagram shows the proposed current injection perforations in the Douglas Creek Member of the Green River Formation. Additional perforations may be added at a later time between the depths of 3592 feet and the top of the Wasatch Formation (Estimated to be 5827 feet) provided the operator first notifies the Director and later submits an updated well completion report (EPA Form 7520-12) and schematic diagram.

The packer will be required to be set no higher than 100 feet above the top perforation.

**TABLE 3.1**  
**WELL CONSTRUCTION REQUIREMENTS**  
State 3-16-9-18

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Production	7.88	5.50	0.00 - 5,764.08	595.00 - 5,780.00
Surface	12.25	8.63	0.00 - 314.93	0.00 - 314.93

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

#### Casing and Cementing (TABLE 3.1)

The construction plan for the well or wells proposed for conversion to an injection well was evaluated and determined to be in conformance with standard practices and guidelines that ensure well injection does not result in the movement of fluids into USDWs. Well construction and conversion details for the well or wells are shown in TABLE 3.1.

#### Tubing and Packer

Injection tubing is required to be installed from a packer up to the surface inside the well casing. The packer will be set above the uppermost perforation. The tubing and packer are designed to prevent injection fluid from coming into contact with the outermost casing.

#### Tubing-Casing Annulus (TCA)

The TCA allows the casing, tubing and packer to be pressure-tested periodically for mechanical integrity, and will allow for detection of leaks. The TCA will be filled with fresh water treated with a corrosion inhibitor or other fluid approved by the Director.

The tubing/casing annulus must be kept closed at all times so that it can be monitored as required under the conditions of the Permit.

### **Monitoring Devices**

The permittee will be required to install and maintain wellhead equipment that allows for monitoring pressures and providing access for sampling the injected fluid. Required equipment may include but is not limited to: 1) shut-off valves located at the wellhead on the injection tubing and on the TCA; 2) a flow meter that measures the cumulative volume of injected fluid; 3) fittings or pressure gauges attached to the injection tubing and the TCA for monitoring the injection and TCA pressure; and 4) a tap on the injection line, isolated by shut-off valves, for sampling the injected fluid.

All sampling and measurement taken for monitoring must be representative of the monitored activity.

## **PART IV. Area of Review, Corrective Action Plan (40 CFR 144.55)**

TABLE 4.1 lists the wells in the Area of Review ("AOR") and shows the well type, operating status, depth, top of casing cement ("TOC") and whether a Corrective Action Plan ("CAP") is required for the well.

### **Area Of Review**

Applicants for Class I, II (other than "existing" wells) or III injection well Permits are required to identify the location of all known wells within the injection well's Area of Review (AOR) which penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the formation, all known wells within the area of review that penetrate formations which may be affected by increased pressure. Under 40 CFR 146.6 the AOR may be a fixed radius of not less than one quarter (1/4) mile or a calculated zone of endangering influence. For Area Permits, a fixed width of not less than one quarter (1/4) mile for the circumscribing area may be used.

### **Corrective Action Plan**

For wells in the AOR which are improperly sealed, completed, or abandoned, the applicant shall develop a Corrective Action Plan (CAP) consisting of the steps or modifications that are necessary to prevent movement of fluid into USDWs.

The CAP will be incorporated into the Permit as APPENDIX F and become binding on the permittee.

TABLE 4.1 lists the wells in the AOR, and shows the well type, operating status, depth, top of casing cement and whether a CAP is required for this well.

## **PART V. Well Operation Requirements (40 CFR 146.23)**

**TABLE 5.1**  
**INJECTION ZONE PRESSURES**  
State 3-16-9-18

Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
Green River	4,524.00	0.680	1,105

**Approved Injection Fluid**

The approved injection fluid is limited to Class II injection well fluids pursuant to 40 CFR § 144.6(b). For disposal wells injecting water brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production, the fluid may be commingled and the well used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Injection of non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, is prohibited.

The proposed injectate is a blend of source water from the Johnson Water District reservoir and produced water from adjacent Green River oil wells. The TDS of the injectate is 20,138 mg/l.

**Injection Pressure Limitation**

Injection pressure, measured at the wellhead, shall not exceed a maximum calculated to assure that the pressure used during injection does not initiate new fractures or propagate existing fractures in the confining zones adjacent to the USDWs.

The applicant submitted injection fluid density and injection zone data which was used to calculate a formation fracture pressure and to determine the maximum allowable injection pressure (MAIP), as measured at the surface, for this Permit,

TABLE 5.1 lists the fracture gradient for the injection zone and the approved MAIP, determined according to the following formula:

$$FP = [fg - (0.433 * sg)] * d$$

- FP = formation fracture pressure (measured at surface)
- fg = fracture gradient (from submitted data or tests)
- sg = specific gravity (of injected fluid)
- d = depth to top of injection zone (or top perforation)

**Injection Volume Limitation**

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs into an aquifer that has been exempted from protection as a USDW.

There will be no restrictions on the cumulative volume of the authorized injectate into the approved injection interval from 3592 feet to the top of the Wasatch Formation, estimated at 5827 feet.

## **Mechanical Integrity (40 CFR 146.8)**

An injection well has mechanical integrity if:

1. there is no significant leak in the casing, tubing, or packer (Part I); and
2. there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

The Permit prohibits injection into a well which lacks mechanical integrity.

The Permit requires that the well demonstrate mechanical integrity prior to injection and periodically thereafter. A demonstration of mechanical integrity includes both internal (Part I) and external (Part II). The methods and frequency for demonstrating Part I and Part II mechanical integrity are dependent upon well-specific conditions as explained below.

Well construction and site-specific conditions dictate the following requirements for Mechanical Integrity (MI) demonstrations:

PART I MI: Internal MI will be demonstrated prior to beginning injection. Since this well is constructed with a standard casing, tubing, and packer configuration, a successful mechanical integrity test (MIT) is required to take place at least once every five (5) years. A demonstration of Part I MI is also required prior to resuming injection following any workover operation that affects the casing, tubing or packer. Part I MI may be demonstrated by a standard tubing-casing annulus pressure test using the maximum permitted injection pressure or 1000 psi, which ever is less, with a ten (10) percent or less pressure loss over thirty (30) minutes.

## **PART VI. Monitoring, Recordkeeping and Reporting Requirements**

### **Injection Well Monitoring Program**

At least once a year the permittee must analyze a sample of the injected fluid for total dissolved solids (TDS), specific conductivity, pH, and specific gravity. This analysis shall be reported to EPA annually as part of the Annual Report to the Director. Any time a new source of injected fluid is added, a fluid analysis shall be made of the new source.

Instantaneous injection pressure, injection flow rate, cumulative fluid volume and TCA pressures must be observed on a weekly basis. A recording, at least once every thirty (30) days, must be made of the injection pressure, injection flow rate and cumulative fluid volume, and the maximum and average value for each must be determined for each month. This information is required to be reported annually as part of the Annual Report to the Director.

## **PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)**

### **Plugging and Abandonment Plan**

Prior to abandonment, the well or wells must be plugged with cement in a manner which will not allow the movement of fluids either into or between USDWs. The plugging and abandonment plan is described in Appendix E of the Permit.

## **PART VIII. Financial Responsibility (40 CFR 144.52)**

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

a Financial Statement approved by the EPA on June 28, 2006. The plug and abandonment of the State No. 3-16-9-18 is estimated to be \$32,500.

Financial Statement, received April 22, 2005

Evidence of continuing financial responsibility is required to be submitted to the Director annually.

SUBJECT: GROUND WATER SECTION GUIDANCE NO. 35  
Procedures to follow when excessive annular pressure is  
observed on a well.

FROM: Tom Pike, Chief  
UIC Direct Implementation Section

TO: All Section Staff  
Montana Operations Office

The following procedure is intended as an aid to UIC field inspectors when they encounter excessive annular pressure on a well. Excessive annular pressure is defined as 100 psi or 10% of the tubing pressure, whichever is less.

Usually, annular pressure is a direct indication of a loss of mechanical integrity. In some instances, recurring annular pressure may be caused by fluctuations in the temperature of the injected fluid. These temperature fluctuations may cause the annular pressure to increase when a hot fluid is being injected and decrease as the temperature of the injected fluid cools. The presence of temperature-induced pressure on the annulus does not indicate a malfunction in the casing/tubing/packer system and is not considered a loss of mechanical integrity. Wells exhibiting recurring temperature-induced annular pressure may be allowed to continue injecting if a temperature monitoring program is approved and followed.

This guidance was written to help determine the cause of annular pressure. When the procedures in this guidance are followed, any major mechanical integrity problems (a breach in the casing/tubing/packer system) will become apparent quickly. A quick determination will allow the operator to begin follow-up procedures immediately to prevent contamination to USDWs.

Use Section Guidance No. 35 to determine if the well has experienced a loss of mechanical integrity. If you find that there is a loss of mechanical integrity, use *Headquarters Guidance No. 76. - Follow-up to loss of Mechanical Integrity for Class II Wells* to bring the well back into compliance. The use of Section Guidance No. 35 is not to be confused with, nor does it supersede any provision of *Headquarters Guidance No. 76*. Instead, the two guidance documents are meant to work together to identify and to remedy any potential mechanical integrity failure.

A flowchart for Section Guidance No. 35 is included for quick reference in the field.

DIV. OF OIL, GAS & MINING

OCT 02 2006

RECEIVED

PROCEDURES TO FOLLOW WHEN EXCESSIVE ANNULAR PRESSURE IS OBSERVED

During field inspections, the following procedures should be followed when excessive annular pressure is observed. Excessive annular pressure is defined as 100 psi or 10% of the tubing pressure, whichever is less.

NOTE CONDITIONS AT THE WELL

Note tubing and annular pressure readings, and the operating status of the well (injecting, shut-in, etc.) on the UIC inspection form.

SEE IF ANNULUS PRESSURE WILL BLEED-OFF

Attempt to bleed the pressure from the annulus by having the operator open the annulus (for a maximum of sixty seconds).

It is the operator's responsibility to collect and dispose of any fluids bled from the annulus.

DID THE ANNULAR PRESSURE BLEED TO 0 PSI WITHIN SIXTY SECONDS?YESNO

Have the operator close the annulus.

Have the operator close the annulus.

On your inspection form note the volume of fluid (or gas) bled from the annulus during the sixty seconds, and the tubing and annulus pressures.

On your inspection form note the volume of fluid (or gas) bled from the annulus during the sixty seconds, and the tubing and annulus pressures.

Have the operator shut the well in for 2 hours, and if possible, bleed pressure from the injection tubing. Record the tubing and annulus pressure after two hours.

Bleed off the annulus for 60 seconds. Record the tubing and annulus pressures after bleed-off, and estimate the volume bled off.

INFORM THE OPERATOR THAT THE WELL HAS AN APPARENT MECHANICAL INTEGRITY FAILURE and provide the operator with the guidance that discusses OPERATOR RESPONSIBILITIES FOLLOWING MECHANICAL INTEGRITY FAILURES.

END PROCEDURE.

SEE IF PRESSURE RETURNS WITHIN 15 MINUTES

Continue to monitor the well for annulus pressure return for at least 15 minutes after the annulus valve is closed.

DOES PRESSURE  
RETURN TO THE  
ANNULUS AFTER 15  
MINUTES?

YES

NO

On your inspection form, note the annulus and tubing pressures recorded after 15 minutes.

Have the operator shut the well in for 2 hours, and if possible, bleed pressure from the injection tubing. Record the tubing and annulus pressure after two hours.

Bleed off the annulus for 60 seconds. Record the tubing and annulus pressures after bleed-off, and estimate the volume bled off.

INFORM THE OPERATOR THAT THE WELL HAS AN APPARENT MECHANICAL INTEGRITY FAILURE and provide the operator with the guidance that discusses OPERATOR RESPONSIBILITIES FOLLOWING MECHANICAL INTEGRITY FAILURES.

END PROCEDURE.

Require the operator to monitor and report to EPA with the annulus and tubing pressures for at least 14 days to see if pressure returns to the annulus.

Instruct the operator to contact EPA as soon as any pressure returns to the annulus.

DOES PRESSURE  
RETURN TO THE  
ANNULUS WITHIN  
14 DAYS?

YES

NO

EPA Technical Expert will design a proper Mechanical Integrity test.

Compliance officer will require the operator to conduct the test within 14 days.

The well is considered to have mechanical integrity.

END PROCEDURE.

DOES THE WELL  
PASS THE MIT?

YES

NO

Require the operator to monitor and report to EPA with the annulus and tubing pressures for at least 14 days to see if pressure returns to the annulus.

Instruct the operator to contact EPA as soon as any pressure returns to the

INFORM THE OPERATOR THAT THE WELL HAS AN APPARENT MECHANICAL INTEGRITY FAILURE and provide the operator with the guidance that discusses OPERATOR RESPONSIBILITIES FOLLOWING MECHANICAL INTEGRITY FAILURES.

END PROCEDURE

DOES PRESSURE  
RETURN TO THE  
ANNULUS WITHIN  
14 DAYS?

YES

NO

EPA Technical Expert will design a proper Monitoring Program to determine the cause of recurrent annular pressure.

The well is considered to have mechanical integrity.

**END PROCEDURE.**

Compliance officer will require the operator to begin the Monitoring program within 14 days.

Conduct unannounced inspections at the well during the Monitoring Program.

IS THE ANNULUS  
PRESSURE CAUSED  
BY TEMPERATURE?

YES

NO

EPA Technical Expert will design a proper Temperature Monitoring Program that allows injection to continue while tracking relationship between temperature and recurrent annulus pressure.

INFORM THE OPERATOR THAT THE WELL HAS AN APPARENT MECHANICAL INTEGRITY FAILURE and provide the operator with the guidance that discusses OPERATOR RESPONSIBILITIES FOLLOWING MECHANICAL INTEGRITY FAILURES.

Compliance officer will require the operator to cease injection immediately if the operator fails to follow the Temperature Monitoring Program.

**END PROCEDURE.**

Compliance officer will require the operator to cease injection immediately if recurrent annular pressures cannot be explained by the results of the Temperature Monitoring Program.

Compliance officer will require annual Mechanical Integrity Tests using the standard pressure method.

## 14-DAY PRESSURE MONITORING

Please use this form to report data for a 14-day period after pressure is bled from the tubing-casing annulus. Please telephone EPA in Denver as soon as possible when/if pressure returns to the annulus. This data will be used to determine the cause(s) of recurrent annular pressure.

**NOTE:** DO NOT BLEED PRESSURE FROM ANNULUS DURING THE 14-DAY MONITORING PERIOD.

	DATE	TIME	ANNULUS PRESSURE (psi)	TUBING PRESSURE (psi)	WELL INJECTING (YES/NO)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

WELL NAME: \_\_\_\_\_

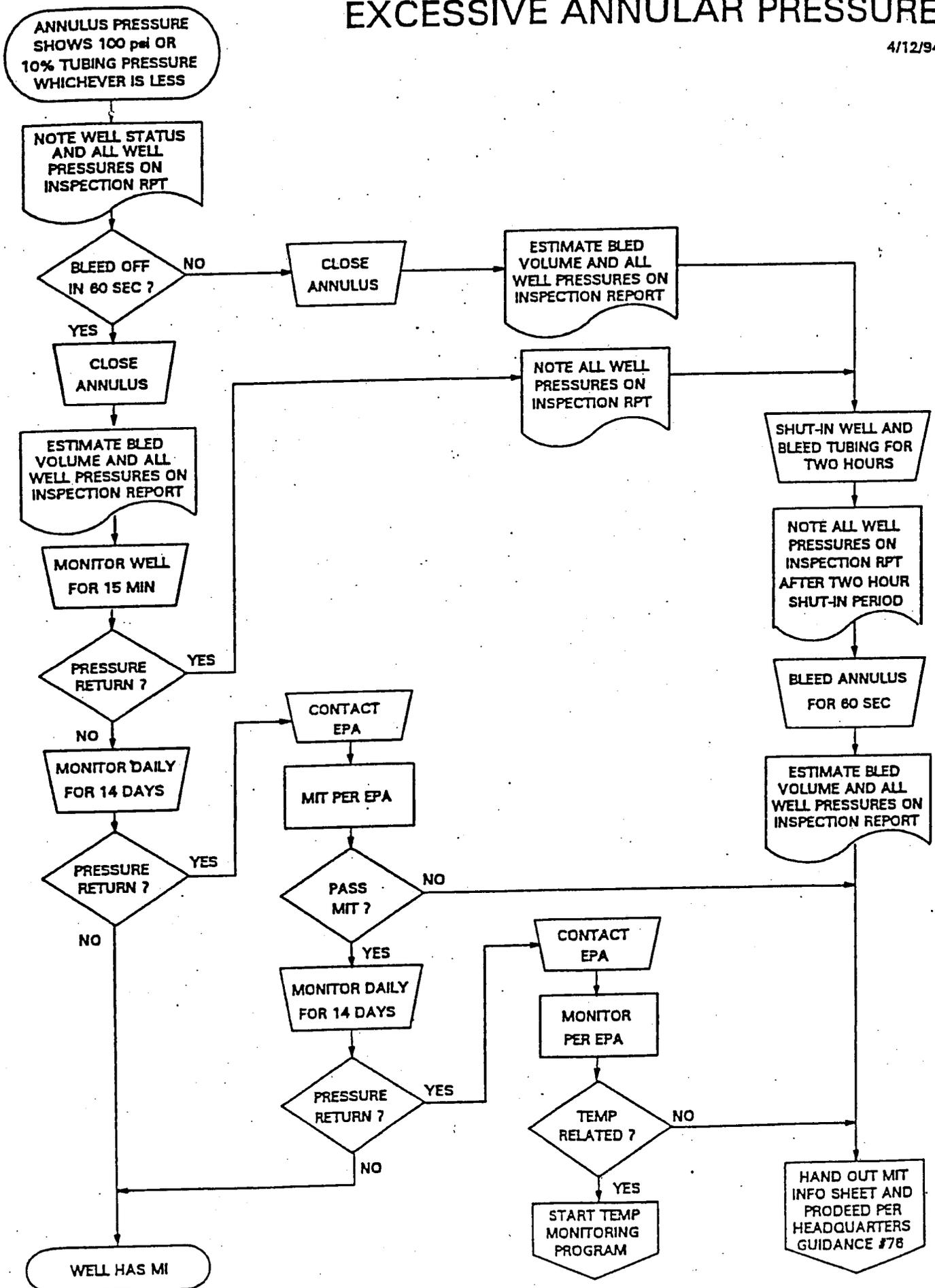
ATOR: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

# EXCESSIVE ANNULAR PRESSURE

4/12/94





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500  
DENVER, COLORADO 80202-2466

**OPERATOR RESPONSIBILITIES  
FOLLOWING  
MECHANICAL INTEGRITY FAILURES**

- 1) **IMMEDIATELY** - Cease injection and shut-in the well as rapidly as feasible. In no case shall the well remain in operation beyond 48 hours unless Tom Pike, Chief, Underground Injection Control Implementation (UIC-I) Section [(303) 293-1544] allows for temporary operation of the well.
- 2) **WITHIN 24 HOURS** - Verbally notify the UIC-I Section Chief of MIT failure even in cases where the failure is detected during a test which was witnessed by a UIC inspector.
- 3) **WITHIN 5 DAYS** - Submit a written follow-up report documenting test results, remediation taken or a proposed remediation plan and any limits established by the Director on appropriate volume or time for continued injection operation.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500

DENVER, COLORADO 80202-2466

SUBJECT: GROUND WATER SECTION GUIDANCE NO. 39  
Pressure testing injection wells for Part I (internal)  
Mechanical Integrity

FROM: Tom Pike, Chief  
UIC Direct Implementation Section

TO: All Section Staff  
Montana Operations Office

Introduction

The Underground Injection Control (UIC) regulations require that an injection well have mechanical integrity at all times (40 CFR 144.28 (f) (2) and 40 CFR 144.51 (q) (1)). A well has mechanical integrity (40 CFR 146.8) if:

- (1) There is no significant leak in the tubing, casing or packer; and
- (2) There is no significant fluid movement into an underground source of drinking water (USDW) through vertical channels adjacent to the injection wellbore.

Definition: Mechanical Integrity Pressure Test for Part I. A pressure test used to determine the integrity of all the downhole components of an injection well, usually tubing, casing and packer. It is also used to test tubing cemented in the hole by using a tubing plug or retrievable packer. Pressure tests must be run at least once every five years. If for any reason the tubing/packer is pulled, the injection well is required to pass another mechanical integrity test of the tubing casing and packer prior to recommencing injection regardless of when the last test was conducted. Tests run by operators in the absence of an EPA inspector must be conducted according to these procedures and recorded on either the attached form or an equivalent form containing the necessary information. A pressure recording chart documenting the actual annulus test pressures must be attached to the form.

This guidance addresses making a determination of Part I of Mechanical Integrity (no leaks in the tubing, casing or packer). The Region's policy is: 1) to determine if there are significant leaks in the tubing, casing or packer; 2) to assure that the casing can withstand pressure similar to that which

DIV. OF OIL, GAS & MINING

OCT 02 2006

RECEIVED

would be applied if the tubing or packer fails; 3) to make the Region's test procedure consistent with the procedures utilized by other Region VIII Primacy programs; and 4) to provide a procedure which can be easily administered and is applicable to all class I and II wells. Although there are several methods allowed for determining mechanical integrity, the principal method involves running a pressure test of the tubing/casing annulus. Region VIII's procedure for running a pressure test is intended to aid UIC field inspectors who witness pressure tests for the purpose of demonstrating that a well has Part I of Mechanical Integrity. The guidance is also intended as a means of informing operators of the procedures required for conducting the test in the absence of an EPA inspector.

### Pressure Test Description

#### Test Frequency

The mechanical integrity of an injection well must be maintained at all times. Mechanical integrity pressure tests are required at least every five (5) years. If for any reason the tubing/packer is pulled, however, the injection well is required to pass another mechanical integrity test prior to recommencing injection regardless of when the last test was conducted. The Regional UIC program must be notified of the workover and the proposed date of the pressure test. The well's test cycle would then start from the date of the new test if the well passes the test and documentation is adequate. Tests may be required on a more frequent basis depending on the nature of the injectate and the construction of the well (see Section guidance on MITs for wells with cemented tubing and regulations for Class I wells).

Region VIII's criteria for well testing frequency is as follows:

1. Class I hazardous waste injection wells; initially [40 CFR 146.68(d)(1)] and annually thereafter;
2. Class I non-hazardous waste injection wells; initially and every two (2) years thereafter, except for old permits (such as the disposal wells at carbon dioxide extraction plants which require a test at least every five years);
3. Class II wells with tubing, casing and packer; initially and at least every five (5) years thereafter;
4. Class II wells with tubing cemented in the hole; initially and every one (1) or two (2) years thereafter

depending on well specific conditions (See Region VIII UIC Section Guidance #36);

5. Class II wells which have been temporarily abandoned (TAd) must be pressure tested after being shut-in for two years; and
6. Class III uranium extraction wells; initially.

#### Test Pressure

To assure that the test pressure will detect significant leaks and that the casing is subjected to pressure similar to that which would be applied if the tubing or packer fails, the tubing/casing annulus should be tested at a pressure equal to the maximum allowed injection pressure or 1000 psig whichever is less. The annular test pressure must, however, have a difference of at least 200 psig either greater or less than the injection tubing pressure. Wells which inject at pressures of less than 300 psig must test at a minimum pressure of 300 psig, and the pressure difference between the annulus and the injection tubing must be at least 200 psi.

#### Test Criteria

1. The duration of the pressure test is 30 minutes.
2. Both the annulus and tubing pressures should be monitored and recorded every five (5) minutes.
3. If there is a pressure change of 10 percent or more from the initial test pressure during the 30 minute duration, the well has failed to demonstrate mechanical integrity and should be shut-in until it is repaired or plugged.
4. A pressure change of 10 percent or more is considered significant. If there is no significant pressure change in 30 minutes from the time that the pressure source is disconnected from the annulus, the test may be completed as passed.

#### Recordkeeping and Reporting

The test results must be recorded on the attached form. The annulus pressure should be recorded at five (5) minute intervals. Tests run by operators in the absence of an EPA inspector must be conducted according to these procedures and recorded on the attached form or an equivalent form and a pressure recording

chart documenting the actual annulus test pressures must be attached to the submittal. The tubing pressure at the beginning and end of each test must be recorded. The volume of the annulus fluid bled back at the surface after the test should be measured and recorded on the form. This can be done by bleeding the annulus pressure off and discharging the associated fluid into a five gallon container. The volume information can be used to verify the approximate location of the packer.

#### Procedures for Pressure Test

1. Scheduling the test should be done at least two (2) weeks in advance.
2. Information on the well completion (location of the packer, location of perforations, previous cement work on the casing, size of casing and tubing, etc.) and the results of the previous MIT test should be reviewed by the field inspector in advance of the test. Regional UIC Guidance #35 should also be reviewed. Information relating to the previous MIT and any well workovers should be reviewed and taken into the field for verification purposes.
3. All Class I wells and Class II SWD wells should be shut-in prior to the test. A 12 to 24-hour shut-in is preferable to assure that the temperature of the fluid in the wellbore is stable.
4. Class II enhanced recovery wells may be operating during the test, but it is recommended that the well be shut-in if possible.
5. The operator should fill the casing/tubing annulus with inhibited fluid at least 24 hours in advance, if possible. Filling the annulus should be undertaken through one valve with the second valve open to allow air to escape. After the operator has filled the annulus, a check should be made to assure that the annulus will remain full. If the annulus can not maintain a full column of fluid, the operator should notify the Director and begin a rework. The operator should measure and report the volume of fluid added to the annulus. If not already the case, the casing/tubing valves should be closed, at least, 24 hours prior to the pressure test.

Following steps are at the well:

6. Read tubing pressure and record on the form. If the

---

well is shut-in, the reported information on the actual maximum operating pressure should be used to determine test pressures.

7. Read pressure on the casing/tubing annulus and record value on the form. If there is pressure on the annulus, it should be bled off prior to the test. If the pressure will not bleed-off, the guidance on well failures (Region VIII UIC Section Guidance #35) should be followed.
8. Ask the operator for the date of the last workover and the volume of fluid added to the annulus prior to this test and record information on the form.
9. Hook-up well to pressure source and apply pressure until test value is reached.
10. Immediately disconnect pressure source and start test time (If there has been a significant drop in pressure during the process of disconnection, the test may have to be restarted). The pressure gages used to monitor injection tubing pressure and annulus pressure should have a pressure range which will allow the test pressure to be near the mid-range of the gage. Additionally, the gage must be of sufficient accuracy and scale to allow an accurate reading of a 10 percent change to be read. For instance, a test pressure of 600 psi should be monitored with a 0 to 1000 psi gage. The scale should be incremented in 20 psi increments.
11. Record tubing and annulus pressure values every five (5) minutes.
12. At the end of the test, record the final tubing pressure.
13. If the test fails, check the valves, bull plugs and casing head close up for possible leaks. The well should be retested.
14. If the second test indicates a well failure, the Region should be informed of the failure within 24 hours by the operator, and the well should be shut-in within 48 hours per Headquarters guidance #76. A follow-up letter should be prepared by the operator which outlines the cause of the MIT failure and proposes a potential course of action. This report should be submitted to EPA within five days.

15. Bleed off well into a bucket, if possible, to obtain a volume estimate. This should be compared to the calculated value obtained using the casing/tubing annulus volume and fluid compressibility values.
16. Return to office and prepare follow-up.

#### Alternative Test Option

While it is expected that the test procedure outlined above will be applicable to most wells, the potential does exist that unique circumstances may exist for a given well that precludes or makes unsafe the application of this test procedure. In the event that these exceptional or extraordinary conditions are encountered, the operator has the option to propose an alternative test or monitoring procedures. The request must be submitted by the operator in writing and must be approved in writing by the UIC-Implementation Section Chief or equivalent level of management.

Attachment

# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
 Underground Injection Control Program, UIC Direct Implementation Program 8P-W-GW  
 999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

EPA Witness: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Test conducted by: \_\_\_\_\_  
 Others present: \_\_\_\_\_

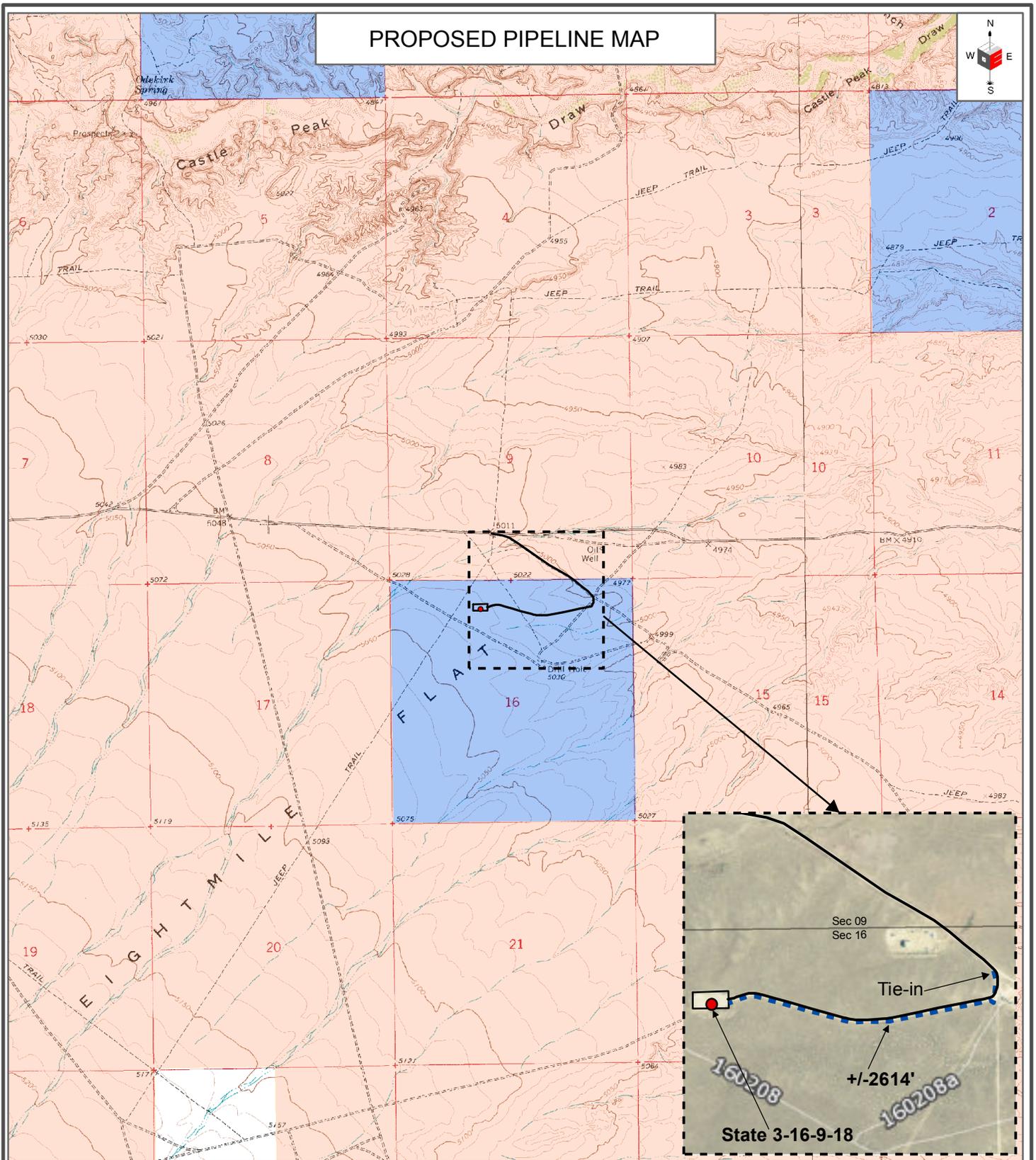
Well Name: _____	Type: ER SWD	Status: AC TA UC
Field: _____		
Location: _____	Sec: _____	T _____ N/S R _____ E/W County: _____ State: _____
Operator: _____		
Last MIT: ____/____/____	Maximum Allowable Pressure: _____	PSIG

Is this a regularly scheduled test?  Yes  No  
 Initial test for permit?  Yes  No  
 Test after well rework?  Yes  No  
 Well injecting during test?  Yes  No If Yes, rate: \_\_\_\_\_ bpd

Pre-test casing/tubing annulus pressure: \_\_\_\_\_ psig

MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	psig	psig	psig
End of test pressure	psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	psig	psig	psig
5 minutes	psig	psig	psig
10 minutes	psig	psig	psig
15 minutes	psig	psig	psig
20 minutes	psig	psig	psig
25 minutes	psig	psig	psig
30 minutes	psig	psig	psig
minutes	psig	psig	psig
minutes	psig	psig	psig
<b>RESULT</b>	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML-48378
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
		<b>7. UNIT or CA AGREEMENT NAME:</b> GMBU (GRRV)
<b>1. TYPE OF WELL</b> Oil Well	<b>8. WELL NAME and NUMBER:</b> STATE 3-16-9-18	
<b>2. NAME OF OPERATOR:</b> NEWFIELD PRODUCTION COMPANY	<b>9. API NUMBER:</b> 43047358130000	
<b>3. ADDRESS OF OPERATOR:</b> 1001 17th Street, Suite 2000 , Denver, CO, 80202	<b>PHONE NUMBER:</b> 303 382-4443 Ext	<b>9. FIELD and POOL or WILDCAT:</b> 8 MILE FLAT NORTH
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0660 FNL 1980 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 16 Township: 09.0S Range: 18.0E Meridian: S	<b>COUNTY:</b> UINTAH	
	<b>STATE:</b> UTAH	
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 10/15/2014  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input checked="" type="checkbox"/> OTHER	
	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: Pipeline Installation	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>Newfield would like to install a buried 3" Flex-steel Pipe for purposes of water injection to the 3-16-9-18 totaling 2614 feet in length. Reclamation activities would commence after construction activities were complete.</p>		
<p><b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY August 18, 2014</b></p>		
<b>NAME (PLEASE PRINT)</b> Jill L Loyle	<b>PHONE NUMBER</b> 303 383-4135	<b>TITLE</b> Regulatory Technician
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/6/2014	



LEGEND	
<span style="color: red;">●</span>	Well Head Location
<span style="color: blue;">- - -</span>	Proposed Approx. Waterline
<span style="color: black;">—</span>	Existing Access Road
<span style="border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	Existing Well Pad
Ownership	
<span style="background-color: #f4a460; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	Federal
<span style="background-color: #fff9c4; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	Private
<span style="background-color: #90caf9; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	State
<span style="background-color: #fff176; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	Tribal



**STATE 3-16-9-18  
ON STATE GROUND  
SEC. 16, T9S, R18E, S.L.B.&M.  
UINTAH COUNTY, UT.**

NO BOUNDARY SURVEY HAS BEEN PERFORMED BY OUTLAW ENGINEERING ON THE ABOVE PARCELS OF GROUND. OUTLAW DOES NOT WARRANT ANY PROPERTY PARCEL DATA OR ANY ASSOCIATED INFORMATION.

**OUTLAW ENGINEERING INC.**  
P.O. BOX 1800 ROOSEVELT,  
UTAH 84066  
(435) 232-4321

TOPOGRAPHIC MAP	DATE SURVEYED: OCT 30, 2013
	SURVEYED BY: CW
	SCALE: N.T.S.
	DRAWN: NOVEMBER 13, 2013
	DRAWN BY: BWH

SHEET  
**D**



GARY R. HERBERT  
Governor

SPENCER J. COX  
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

August 21, 2014

CERTIFIED MAIL NO.: 7011 2970 0001 8828 1559

43 047 35813  
State 3-16-9-18  
16 95 18E

Mr. Kirby Carroll  
Newfield Production Company  
1001 17<sup>th</sup> Street, STE 2000  
Denver, CO 80202

Subject: Extended Shut-in and Temporary Abandoned Well Requirements for Fee or State Leases

Dear Mr. Carroll:

As of April 2014, Newfield Production Company (Newfield) has eighteen (18) State Lease Wells and three (3) Fee Lease Wells (see attachment A) that are currently in non-compliance with the requirements for extended shut-in or temporarily abandoned (SI/TA) status. Fifteen (15) wells were added to Newfield's SI/TA list in 2014.

Six (6) of these wells (attachment A) have previously been issued notices of non-compliance and were later granted extensions which have since expired in August, 2013. Five (5) of these wells (attachment A) have been shut-in beyond five (5) years and are cause for concern due to possible surface issues. The Gulf State wells were inspected by the Division and the State of Utah School & Institutional Trust Lands Administration (SITLA) recently showing multiple issues on site. These wells need to be addressed immediately and comply with rule R649-3-36-1.3.3 concerning the length of time SI/TA.

The State 16-2 well has known surface issues. It has been shut-in for over 50 years. The Division had previously granted SI/TA extension for the State 16-2 based on well integrity and under the intention of waiting for water flood expansion. The area was drilled for 20 acre wells in early 2013; therefore the reason for the State 16-2 remaining shut-in is no longer valid.

Wells SI/TA beyond twelve (12) consecutive months requires filing a Sundry Notice (R649-3-36-1). Wells with five (5) years non-activity or non-productivity shall be plugged, unless the Division grants approval for extended shut-in time upon a showing of good cause by the operator (649-3-36-1.3.3). For extended SI/TA consideration the operator shall provide the Utah Division of Oil, Gas & Mining with the following:

1. Reasons for SI/TA of the well (R649-3-36-1.1)
2. The length of time the well is expected to be SI/TA (R649-3-36-1.2), and



Page 2

Newfield Production Company

August 21, 2014

3. An explanation and supporting data if necessary, for showing the well has integrity, meaning that the casing, cement, equipment condition, static fluid level, pressure, existence or absence of Underground Sources of Drinking Water and other factors do not make the well a risk to public health and safety or the environment (R649-3-36-1.3).

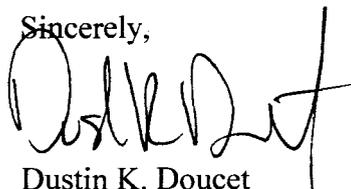
Please note that the Divisions preferred method for showing well integrity is by MIT

Submitting the information suggested below may help show well integrity and may help qualify your well for extended SI/TA. **Note: As of July 1, 2003, wells in violation of the SI/TA rule R649-3-36 may be subject to full cost bonding (R649-3-1-4.2, 4.3).**

1. Wellbore diagram, and
2. Copy of recent casing pressure test, and
3. Current pressures on the wellbore (tubing pressure, casing pressure, and casing/casing annuli pressure) showing wellbore has integrity, and
4. Fluid level in the wellbore, and
5. An explanation of how the submitted information proves integrity.

If the required information is not received within 30 days of the date of this notice, further actions may be initiated. If you have any questions concerning this matter, please contact me at (801) 538-5281.

Sincerely,



Dustin K. Doucet  
Petroleum Engineer

DKD/JP/js

cc: Compliance File  
Well File  
LaVonne Garrison, SITLA

N:\O&G Reviewed Docs\ChronFile\PetroleumEngineer\SITLA

# ATTACHMENT A

	Well Name	API	LEASE	Years Inactive	Prior Notice
1	STATE 16-2	43-013-30552	ML-3453B	50 years 3 months	2 <sup>nd</sup> NOTICE
2	SUNDANCE 16-32-8-18	43-047-34466	ML-22058	10 years 3 months	2 <sup>nd</sup> NOTICE
3	GULF STATE 36-22	43-047-31892	ML-22057	7 years 3 months	2 <sup>nd</sup> NOTICE
4	GULF STATE 36-13	43-047-31345	ML-22057	6 years 6 months	1 <sup>ST</sup> NOTICE
5	GULF STATE 36-12	43-047-31864	ML-22057	5 years 3 months	1 <sup>ST</sup> NOTICE
6	NGC ST 33-32	43-047-31116	ML-22058	2 years 5 month	1 <sup>ST</sup> NOTICE
7	ASHLEY ST 12-2-9-15	43-013-32576	ML-43538	1 year 5 months	
8	ODEKIRK SPRING 4-36-8-17	43-047-32764	ML-44305	1 year 6 months	
9	GMBU G-32-8-16	43-013-50835	ML-21836	2 years 8 months	
10	HANCOCK 11-23-4-1	43-047-33081	FEE	1 year 3 months	
11	MOON 3-20-4-2	43-013-50007	FEE	1 year 1 month	
12	S MON BUTTE ST P-2-9-16	43-013-50118	ML-21839	1 year 9 months	
13	STATE 2-2-9-18	43-047-35774	ML-48377	2 years 2 months	
14	STATE 3-16-9-18	43-047-35813	ML-48378	1 year 1 month	
15	STATE 5-2-9-18	43-047-35777	ML-48377	1 year 2 months	
16	STATE 5-36-8-15	43-013-34230	ML-21835	1 year 11 months	
17	STATE 6-36-8-15	43-013-34229	ML-21835	3 years 3 months	
18	STATE 7-2-9-18	43-047-35787	ML-48377	1 year 5 months	
19	TERRY-PREWITT 11-19-4-1	43-013-50074	FEE	2 years 2 months	
20	WELLS DRAW 4-32-8-16	43-013-32222	ML-21836	1 year 2 months	
21	WELLS DRAW ST 7-36	43-013-30934	ML-21835	1 year	



GARY R. HERBERT  
Governor

SPENCER J. COX  
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

November 28, 2016

CERTIFIED MAIL NO.: 7015 0640 0003 5276 0440

Mr. Kirby Carroll  
Newfield Production Company  
1001 17<sup>th</sup> Street, STE 2000  
Denver, CO 80202

43 047 35813  
State 3-16-9-18  
16 95 18E

Subject: Extended Shut-in and Temporary Abandoned Well Requirements for Fee or State Leases

Dear Mr. Carroll:

As of August 2016, Newfield has thirty-two (32) State and Fee Lease Wells (see attachment A) that are currently in non-compliance with the requirements for extended shut-in or temporarily abandoned (SI/TA) status.

Wells SI/TA beyond twelve (12) consecutive months requires filing a Sundry Notice (R649-3-36-1). Wells with five (5) years non-activity or non-productivity shall be plugged, unless the Division grants approval for extended shut-in time upon a showing of good cause by the operator (649-3-36-1.3.3). For extended SI/TA consideration the operator shall provide the Utah Division of Oil, Gas and Mining with the following:

1. Reasons for SI/TA of the well (R649-3-36-1.1).
2. The length of time the well is expected to be SI/TA (R649-3-36-1.2), and
3. An explanation and supporting data if necessary, for showing the well has integrity, meaning that the casing, cement, equipment condition, static fluid level, pressure, existence or absence of Underground Sources of Drinking Water and other factors do not make the well a risk to public health and safety or the environment (R649-3-36-1.3).

Please note that the Divisions preferred method for showing well integrity is by MIT.



Page 2  
Newfield Production Company  
November 28, 2016

Submitting the information suggested below may help show well integrity and may help qualify your well for extended SI/TA. **Note: As of July 1, 2003, wells in violation of the SI/TA rule R649-3-36 may be subject to full cost bonding (R649-3-1-4.2, 4.3).**

1. Wellbore diagram, and
2. Copy of recent casing pressure test, and
3. Current pressures on the wellbore (tubing pressure, casing pressure, and casing/casing annuli pressure) showing wellbore has integrity, and
4. Fluid level in the wellbore, and
5. An explanation of how the submitted information proves integrity.

**All Submittals should be sent via ePermit**

If the required information is not received within 30 days of the date of this notice, further actions may be initiated. If you have any questions concerning this matter, please contact me at (801) 538-5281.

Sincerely,



Dustin K. Doucet  
Petroleum Engineer

DKD/DD/js

cc: Compliance File  
Well File  
LaVonne Garrison, SITLA

N:\O&G Reviewed Docs\ChronFile\PetroleumEngineer\SITA

# ATTACHMENT A

	Well Name	API	LEASE	Years.Months Inactive
1	GMBU 2-16-9-18H	43-047-52013	ML-48378	4.4
2	Gulf State 36-13	43-047-31345	ML-22057	9.2
3	Moon 3-20-4-2	43-013-50007	Fee	3.5
4	S Mon Butte ST P-2-9-16	43-013-50118	ML-21839	3.6
→ 5	State 3-16-9-18	43-047-35813	ML-48378	3.5
6	Wells Draw ST 7-36	43-013-30934	ML-21835	3.4
7	Prewitt 10-24	43-013-31865	Fee	3.2
8	W Draw ST N-32-8-16	43-013-34146	ML-45555	2.4
9	Wells Draw 2-32-8-16	43-013-32220	ML-21836	2.3
10	GMBU N-2-9-15	43-013-50910	ML-43538	2.2
11	GMBU M-2-9-15	43-013-50909	ML-43538	2.1
12	Moon 1-29-4-2	43-013-50006	Fee	2.0
13	Moon 1-20-4-2	43-013-50008	Fee	2.0
14	State 1-36-8-15	43-013-34234	ML-21835	2.5
15	Ashley ST 6-2-9-15	43-013-32584	ML-43538	1.10
16	Allen Trust 2-24	43-013-31944	Fee	1.9
17	Lamb 4-34-4-1E	43-047-40272	Fee	1.5
18	Wells Draw 4-32-8-16	43-013-32222	ML-21836	1.8
19	Greater Mon Butte T-36-8-16	43-013-50211	ML-22061	1.8
20	Williams #14-8-4-2	43-013-50617	Fee	1.8
21	Hancock 11-21-4-1	43-013-33242	Fee	1.5
22	Malnar 9-19-4-1	43-013-33913	Fee	1.2
23	Hancock 16-20-4-1	43-013-33914	Fee	1.0
24	State 12-36-8-15	43-013-34224	ML-21835	2.1
25	State 4-36-8-15	43-013-34231	ML-21835	1.4
26	Roberts 4-19-4-1	43-013-50072	Fee	1.1
27	Mon Butte East K-36-8-16	43-013-50112	ML-22061	1.1
28	S Mon Butte ST N-2-9-16	43-013-50117	ML-21839	1.4
29	Wilcken 16-23-4-2	43-013-50304	Fee	1.0
30	Hancock 12-7-4-1W	43-013-50422	Fee	1.3
31	State 1-16-9-18	43-047-35811	ML-48378	1.6
32	Lamb 1-34-4-1E	43-047-40275	Fee	1.1



GARY R. HERBERT  
Governor

SPENCER J. COX  
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 14, 2016

CERTIFIED MAIL NO.: 7015 0640 0003 5276 0525

Ms. Assiya Bekniyazova  
Newfield Production Company  
4 Waterway Square PL, STE 100  
The Woodlands, TX 77380

43 047 35813  
State 3-16-9-18  
16 95 18E

**Subject: Extended Shut-in and Temporary Abandoned Well Requirements for Fee or State Leases**

Dear Ms. Bekniyazova:

As of August 2016, Newfield has thirty-two (32) State and Fee Lease Wells (see attachment A) that are currently in non-compliance with the requirements for extended shut-in or temporarily abandoned (SI/TA) status.

Wells SI/TA beyond twelve (12) consecutive months requires filing a Sundry Notice (R649-3-36-1). Wells with five (5) years non-activity or non-productivity shall be plugged, unless the Division grants approval for extended shut-in time upon a showing of good cause by the operator (649-3-36-1.3.3). For extended SI/TA consideration the operator shall provide the Utah Division of Oil, Gas and Mining with the following:

1. Reasons for SI/TA of the well (R649-3-36-1.1).
2. The length of time the well is expected to be SI/TA (R649-3-36-1.2), and
3. An explanation and supporting data if necessary, for showing the well has integrity, meaning that the casing, cement, equipment condition, static fluid level, pressure, existence or absence of Underground Sources of Drinking Water and other factors do not make the well a risk to public health and safety or the environment (R649-3-36-1.3).

**Please note that the Divisions preferred method for showing well integrity is by MIT.**



Page 2  
Newfield  
December 14, 2016

Submitting the information suggested below may help show well integrity and may help qualify your well for extended SI/TA. **Note: As of July 1, 2003, wells in violation of the SI/TA rule R649-3-36 may be subject to full cost bonding (R649-3-1-4.2, 4.3).**

1. Wellbore diagram, and
2. Copy of recent casing pressure test, and
3. Current pressures on the wellbore (tubing pressure, casing pressure, and casing/casing annuli pressure) showing wellbore has integrity, and
4. Fluid level in the wellbore, and
5. An explanation of how the submitted information proves integrity.

**All Submittals should be sent via ePermit**

If the required information is not received within 30 days of the date of this notice, further actions may be initiated. If you have any questions concerning this matter, please contact me at (801) 538-5281.

Sincerely,



Dustin K. Doucet  
Petroleum Engineer

DKD/DD/js

cc: Compliance File  
Well File  
LaVonne Garrison, SITLA

N:\O&G Reviewed Docs\ChronFile\PetroleumEngineer\SITA

# ATTACHMENT A

	Well Name	API	LEASE	Years.Months Inactive
1	GMBU 2-16-9-18H	43-047-52013	ML-48378	4.4
2	Gulf State 36-13	43-047-31345	ML-22057	9.2
3	Moon 3-20-4-2	43-013-50007	Fee	3.5
4	S Mon Butte ST P-2-9-16	43-013-50118	ML-21839	3.6
→ 5	State 3-16-9-18	43-047-35813	ML-48378	3.5
6	Wells Draw ST 7-36	43-013-30934	ML-21835	3.4
7	Prewitt 10-24	43-013-31865	Fee	3.2
8	W Draw ST N-32-8-16	43-013-34146	ML-45555	2.4
9	Wells Draw 2-32-8-16	43-013-32220	ML-21836	2.3
10	GMBU N-2-9-15	43-013-50910	ML-43538	2.2
11	GMBU M-2-9-15	43-013-50909	ML-43538	2.1
12	Moon 1-29-4-2	43-013-50006	Fee	2.0
13	Moon 1-20-4-2	43-013-50008	Fee	2.0
14	State 1-36-8-15	43-013-34234	ML-21835	2.5
15	Ashley ST 6-2-9-15	43-013-32584	ML-43538	1.10
16	Allen Trust 2-24	43-013-31944	Fee	1.9
17	Lamb 4-34-4-1E	43-047-40272	Fee	1.5
18	Wells Draw 4-32-8-16	43-013-32222	ML-21836	1.8
19	Greater Mon Butte T-36-8-16	43-013-50211	ML-22061	1.8
20	Williams #14-8-4-2	43-013-50617	Fee	1.8
21	Hancock 11-21-4-1	43-013-33242	Fee	1.5
22	Malnar 9-19-4-1	43-013-33913	Fee	1.2
23	Hancock 16-20-4-1	43-013-33914	Fee	1.0
24	State 12-36-8-15	43-013-34224	ML-21835	2.1
25	State 4-36-8-15	43-013-34231	ML-21835	1.4
26	Roberts 4-19-4-1	43-013-50072	Fee	1.1
27	Mon Butte East K-36-8-16	43-013-50112	ML-22061	1.1
28	S Mon Butte ST N-2-9-16	43-013-50117	ML-21839	1.4
29	Wilcken 16-23-4-2	43-013-50304	Fee	1.0
30	Hancock 12-7-4-1W	43-013-50422	Fee	1.3
31	State 1-16-9-18	43-047-35811	ML-48378	1.6
32	Lamb 1-34-4-1E	43-047-40275	Fee	1.1