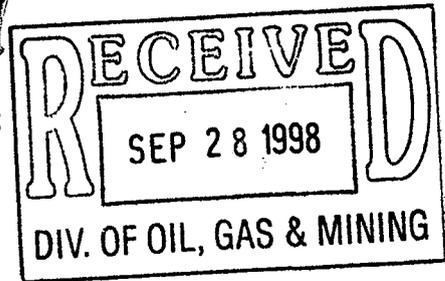




RESOURCES INC.  
September 25, 1998



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

**ATTENTION: Lisha Cordova**

**RE: Odekirk Spring #1-36-8-17  
Odekirk Spring #9-36-8-17  
Odekirk Spring #15-36-8-17**

**Odekirk Spring #8-36-8-17  
Odekirk Spring #10-36-8-17  
Odekirk Spring #16-36-8-17**

Dear Lisha,

Enclosed is the original and two copies of the Application For Permit To Drill, for the above referenced locations, and a copy of the Archaeological Survey Report.

Please do not hesitate to contact me if you have any questions in the Vernal Branch Office, (435) 789-1866.

Sincerely,

Cheryl Cameron  
Regulatory Specialist

/cc  
Enclosures

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

RECEIVED  
SEP 28 1998  
DIV. OF OIL, GAS & MINING

5. LEASE DESIGNATION AND SERIAL NO.  
**ML-44305**

6. INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

**APPLICATION FOR PERMIT TO DRILL, DEEPEN**

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

1b. TYPE OF WELL

OIL        GAS        OTHER        SINGLE ZONE        MULTIPLE ZONE   

8. FARM OR LEASE NAME  
**Odekirk Spring**

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

9. WELL NO.  
**#10-36-8-17**

3. ADDRESS AND TELEPHONE NUMBER:  
**P.O. Box 790233 Vernal, UT 84079      Phone: (801) 789-1866**

10. FIELD AND POOL OR WILDCAT  
**Monument Butte**

4. LOCATION OF WELL (FOOTAGE)  
At Surface      **NW/SE**      *686*      *612*  
At proposed Producing Zone      **1919.1' FSL & 2006.7' FEL**

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:  
**NW/SE  
Sec. 36, T8S, R17E**

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
**15.9 Miles southeast of Myton, Utah**

12. County      13. STATE  
**Uintah      UT**

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest dtlg. unit line, if any)  
**1919.1'**

16. NO. OF ACRES IN LEASE  
**640**

17. NO. OF ACRES ASSIGNED TO THIS WELL  
**40**

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT.

19. PROPOSED DEPTH  
**6500'**

20. ROTARY OR CABLE TOOLS  
**Rotary**

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**4965.3' GR**

22. APPROX. DATE WORK WILL START\*  
**4th Quarter 1998**

**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#	300'	120 sx
7 7/8	5 1/2	15.5#	TD	400 sx followed by 330 sx
				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** - Premium Plus Cement, w/ 2% Gel, 2% CaCl<sub>2</sub>, 1/4# Flocele/sk

Weight: 14.8 PPG    YIELD: 1.37 Cu Ft/sk    H2O Req: 6.4 gal/sk

**LONG STRING** - Lead: Hibond 65 Modified

Weight: 11.0 PPG    YIELD: 3.00 Cu Ft/sk    H2O Req: 18.08 gal/sk

Tail: Premium Plus Thixotropic

Weight: 14.2 PPG    YIELD: 1.59 Cu Ft/sk    H2O Req: 7.88 gal/sk

*589368.57  
HH36115.23*

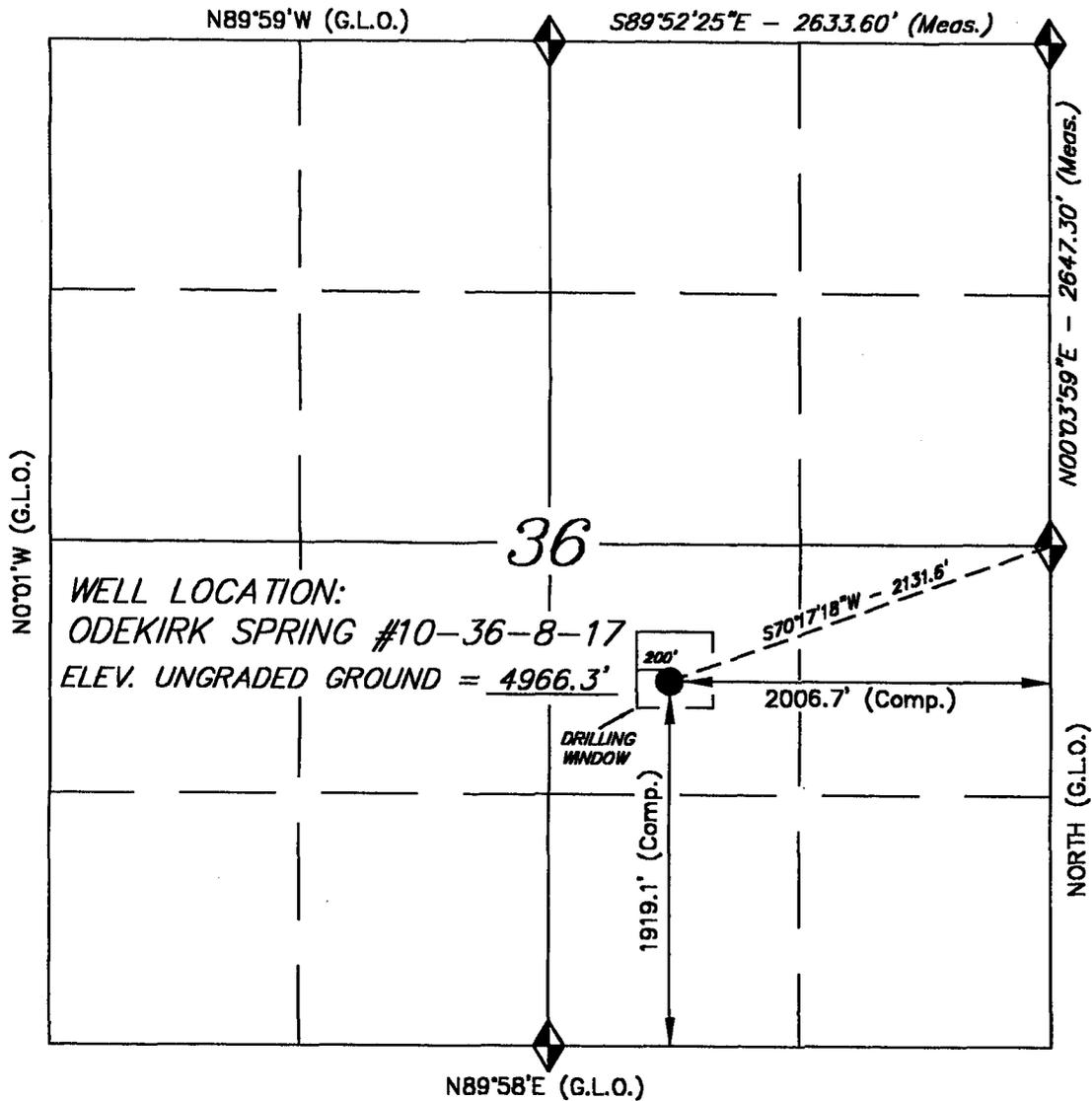
24. Name & Signature: *Cheryl Cameron*    Title: Regulatory Specialist    Date: 9/23/98  
**Cheryl Cameron**

(This space for State use only)

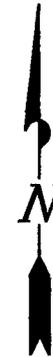
API Number Assigned: 43-047-33198    APPROVAL: *[Signature]*    12/1/98

T8S, R17E, S.L.B.&M.

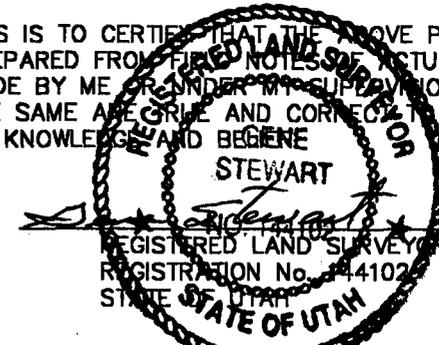
INLAND PRODUCTION COMPANY



WELL LOCATION, ODEKIRK SPRING #10-36-8-17, LOCATED AS SHOWN IN THE NW 1/4 SE 1/4 OF SECTION 36, T8S, R17E, S.L.B.&M. UTAH COUNTY, UTAH.



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



BASIS OF BEARINGS IS A GLOBAL POSITIONING SATELITE OBSERVATION

◆ = SECTION CORNERS LOCATED

BASIS OF ELEV; U.S.G.S. 7-1/2 min QUAD (PARIETTE DRAW SW)

TRI STATE LAND SURVEYING & CONSULTING  
38 WEST 100 NORTH - VERNAL, UTAH 84078  
(801) 781-2501

SCALE: 1" = 1000'

SURVEYED BY: D.S.

DATE: 9-19-98

WEATHER: WARM

REVISIONS:

FILE #

**INLAND PRODUCTION COMPANY  
ODEKIRK SPRING #10-36-8-17  
NW/SE SECTION 36, T8S, R17E  
UINTAH COUNTY, UTAH**

**TEN POINT WELL PROGRAM**

**1. GEOLOGIC SURFACE FORMATION:**

Uinta formation of Upper Eocene Age

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

Uinta	0' - 1730'
Green River	1730'
Wasatch	6500'

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

Green River Formation 1730' - 6500' - Oil

**4. PROPOSED CASING PROGRAM**

8 5/8", J-55, 24# w/ ST&C collars; set at 300' (New)  
5 1/2", J-55, 15.5# w/ LT&C collars; set at TD (New)

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

The operators minimum specifications for pressure control equipment are as follows:

A 8" Series 900 Annular Bag type BOP and a 8" Double Ram Hydraulic unit with a closing unit will be utilized. Function test of BOPS's will be checked daily.

(See Exhibit F)

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

The well will be drilled with fresh water through the Uinta Formation. From the top of the Green River Formation @ 3050' ±, 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. Clay inhibition will be achieved with additions of 5 lb. - 8 lb. per barrel of DAP (Di-Ammonium Phosphate, commonly known as fertilizer). This fresh water system will contain Total Dissolved Solids (TDS) of less than 3000 PPM. Neither potassium chloride or chromate's 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 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 ignitor 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**

**MUD TYPE**

Surface - 320'	Air
320' - 4200'	Air/Mist & Foam
4200' - TD	The well will be drilled with fresh water through the Green River Formation @ 4200' ±, 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. Clay inhibition will be achieved with additions or by adding DAP (Di-Ammonium Phosphate, commonly known as fertilizer.) Typically, this fresh water/polymer system will contain Total Dissolved Solids (TDS) of less than 3000 PPM. Neither potassium chloride or chromates will be utilized in the fluid system. The anticipated mud weight is 8.4 ppg and weighted as necessary for gas control.

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:**

No drill stem testing has been scheduled for this well. It is anticipated at this time that the logging will consist of a Dual Induction Laterolog, Gamma Ray/Caliber from TD to base of surface casing @ 300' ±, and a Compensated Neutron-Formation Density Log. Logs will run from TD to 3500' ±. The cement bond log will be run from PBSD to cement top. An automated mud logging system will be utilized while drilling to monitor and record penetration rate, and relative gas concentration, in the fluid system.

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; nor that any other abnormal hazards such as H2S 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 forth quarter of 1998, and take approximately six days to drill.

**INLAND PRODUCTION COMPANY  
ODEKIRK SPRING 10-36-8-17  
NW/SE SECTION 36, T8S, R17E  
UINTAH COUNTY, UTAH**

**THIRTEEN POINT WELL PROGRAM**

**1. EXISTING ROADS**

See attached Topographic Map "A"

To reach Inland Production Company well location site Odekirk Spring #10-36-8-17 located in the NW ¼ SE ¼ Section 36, T8S, R17E, S.L.B. & M. Uintah County, Utah:

Proceed westerly out of Myton, Utah along Highway 40 - 1.6 miles ± to the junction of this highway and Utah State Highway 53; proceed southerly along Utah State Highway 53 – 12.9 miles to its junction with an existing dirt road to the northeast; proceed northeasterly along this road – 2.8 miles to its junction with a dirt road to the east; proceed southwesterly 0.3 miles to the beginning of the proposed access road. Refer to Item #2.

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 required 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 0.3 miles of access road is proposed.  
See 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 determined 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**

See Exhibit "D".

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

There are no existing facilities that will be used by this well.

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

Upon construction of a tank battery the well pad will be surrounded by a dike of sufficient capacity to contain at minimum the entire contents of the largest tank 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**

*\* Public Water Source*

Inland Production Company has purchased a 3" water connection with Johnson Water District to supply the Monument Butte, Travis, and Gilsonite oil fields. Johnson Water District has given permission to Inland Production Company to use water from this system, for the purpose of drilling and completing the Odekirk Spring #10-36-8-17. A temporary line may be used for water transportation from our existing supply line, from Johnson Water District, or trucked from Inland Production Company's water supply line located at the Gilsonite State #7-32 (SW/NE Sec. 32, T8S, R17E), or the Monument Butte Federal #5-35 (SW/NW Sec. 35, T8S, R16E), or the Travis Federal #15-28 (SW/SE Sec. 28, T8S, R16E). See Exhibit "C".

There will be no water well drilled at this site.

6. **SOURCE OF CONSTRUCTION MATERIALS**

See Location Layout Sheet - Exhibit "E".

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**

See Location Layout Sheet - Exhibit "E".

A small reserve pit (90' X 40' X 8' deep, or less) will be constructed from native soil and clay materials. A water processing unit will be employed to continuously recycle the drilling fluid as it is used, returning the fluid component to the drilling rig's steel tanks. The reserve pit will primarily receive the processed drill cuttings (wet sand, shale & rock) removed from the well bore. Any drilling fluids which do accumulate in the pit as a result of sale-shaker carryover, cleaning of the sand trap, etc., will be promptly reclaimed by the water recycling unit and then returned to the steel rig tanks. All drilling fluids will be fresh water based containing DAP (Di-Ammonium Phosphate, commonly known as fertilizer), typically containing Total Dissolved Solids of less than 3000 PPM. No potassium chloride chromate's, trash, debris, nor any other substance deemed hazardous will be placed in this pit. Therefore, it is proposed that no synthetic liner be utilized in the reserve pit.

All completion fluids, frac gels, etc., will be contained in steel tanks and hauled away to approved commercial disposal, as necessary.

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 in storage tanks. Inland requests temporary approval to transfer the produced water to Inland's nearby waterflood, for re-injection into the waterflood reservoirs via existing approved injection wells. Within 90 days of first production, a water analysis will be submitted to the Authorized Officer, along with an application for approval of this, as a permanent disposal method.

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 - Exhibit "E".

The reserve pit will be located on the northeast between stakes 4 & 5.

The stockpiled topsoil (first six (6) inches) will be stored on the southwest between stakes 2 & 8.

Access to the well pad will be from the east between stakes 7 & 8.

Corners #2 & #4 will be rounded to avoid drainage.

**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 cemented 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 re contoured to the approximated natural contours. 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.

When the drilling and completion phase ends, reclamation of unused disturbed areas on the well pad/access road no longer needed for operations, such as cut slopes, and fill areas will be accomplished by grading, leveling and seeding as recommended by the Authorized Officer. The seed mixture will be per State of Utah, and stated in the conditions of approval.

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 Report 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. Inland Production is fully responsible for the actions of its subcontractors. 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 Odekirk Spring #10-36-8-17, we 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 Odekirk Spring #10-36-8-17 we 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 OPERATORS REPRESENTATIVE AND CERTIFICATION

Representative

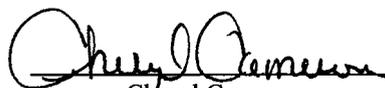
Name: Cheryl Cameron  
Address: P.O. Box 790233 Vernal, UT 84079  
Telephone: (801) 789-1866

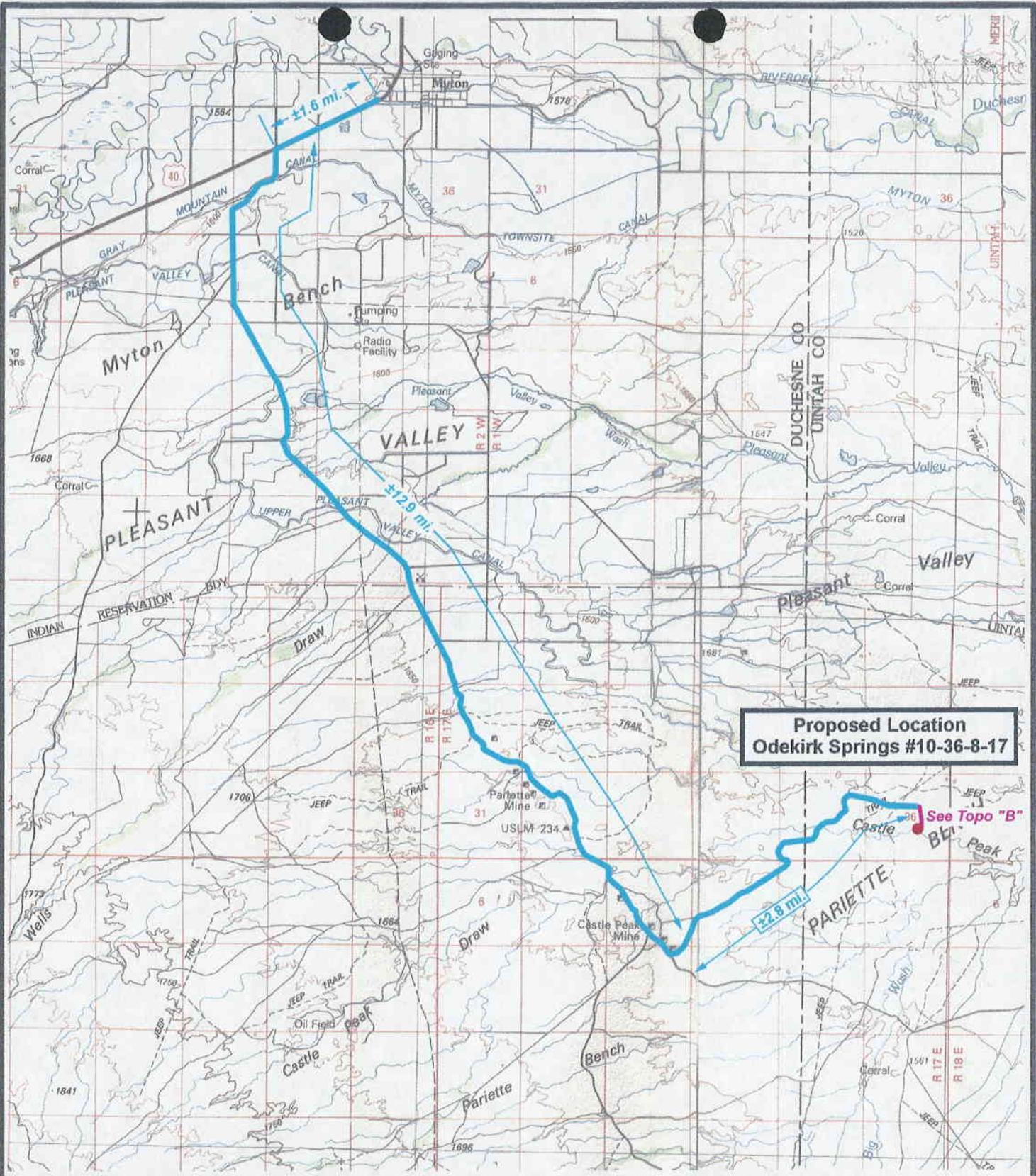
Certification

Please be advised that INLAND PRODUCTION COMPANY is considered to be the operator of Well #10-36-8-17 NW/SE Section 36, Township 8S, Range 17E: Lease #ML-44305 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 drillsite 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 Production Company 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 18 U.S.C. 1001 for the filing of a false statement.

\_\_\_\_\_  
9/23/98  
Date

  
\_\_\_\_\_  
Cheryl Cameron  
Regulatory Specialist

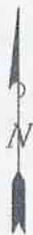


**Proposed Location  
Odekirk Springs #10-36-8-17**

See Topo "B"



**ODEKIRK SPRINGS #10-36-8-17  
SEC. 36, T8S, R17E, S.L.B.&M.  
TOPOGRAPHIC MAP "A"**



Drawn By: SS

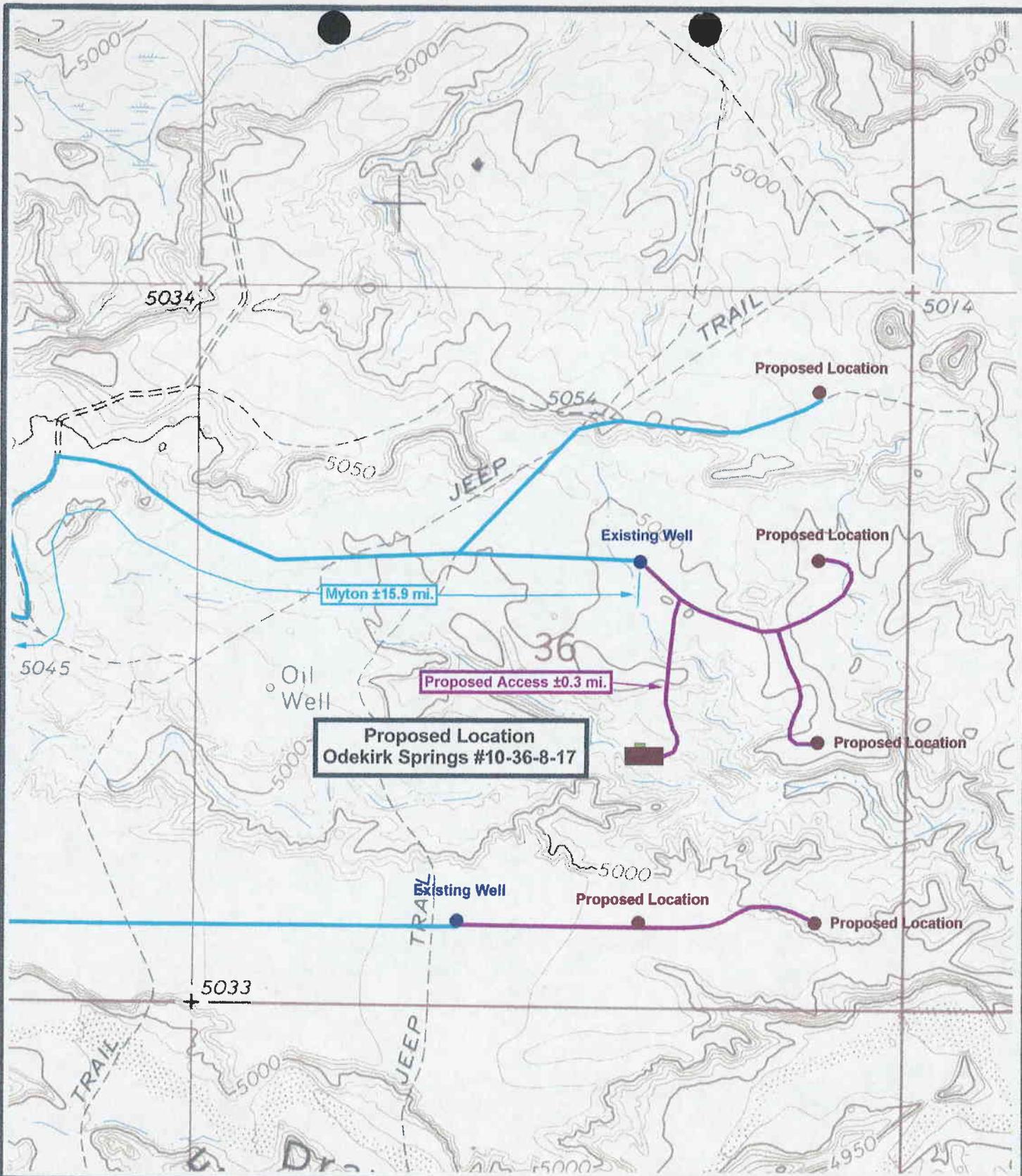
Revision:

Scale: 1 : 100,000

File:

Date: 9/14/98

**Tri-State Land Surveying Inc.  
P.O. Box 533, Vernal, UT 84078  
435-781-2501 Fax 434-781-2518**



RESOURCES INC.

**ODEKIRK SPRINGS #10-36-8-17**  
**SEC. 36, T8S, R17E, S.L.B.&M.**  
**TOPOGRAPHIC MAP "B"**



Drawn By: SS

Revision:

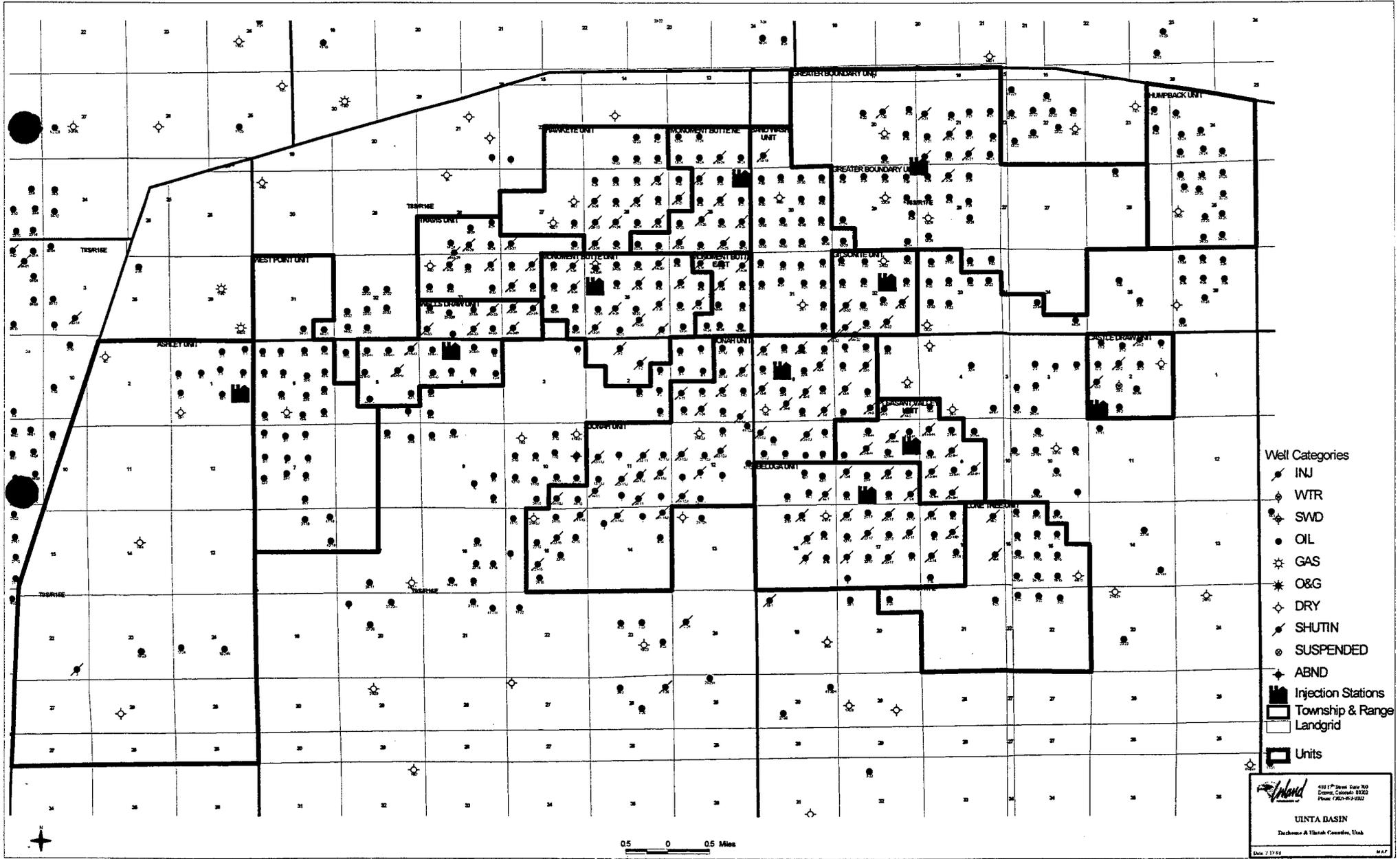
Scale: 1" = 1000'

File:

Date: 9/17/98

**Tri-State Land Surveying Inc.**  
**P.O. Box 533, Vernal, UT 84078**  
**435-781-2501 Fax 434-781-2518**

# EXHIBIT "C"



- Well Categories
- INJ
  - WTR
  - SWD
  - OIL
  - GAS
  - O&G
  - DRY
  - SHUTIN
  - SUSPENDED
  - ABND
  - Injection Stations
  - Township & Range
  - Landgrid
  - Units


 4811 P Street, Suite 300  
 Denver, Colorado 80222  
 Phone: 720-974-0102

**UINTA BASIN**  
 Decker and Tibbitts Counties, Utah

Date: 7/1/98

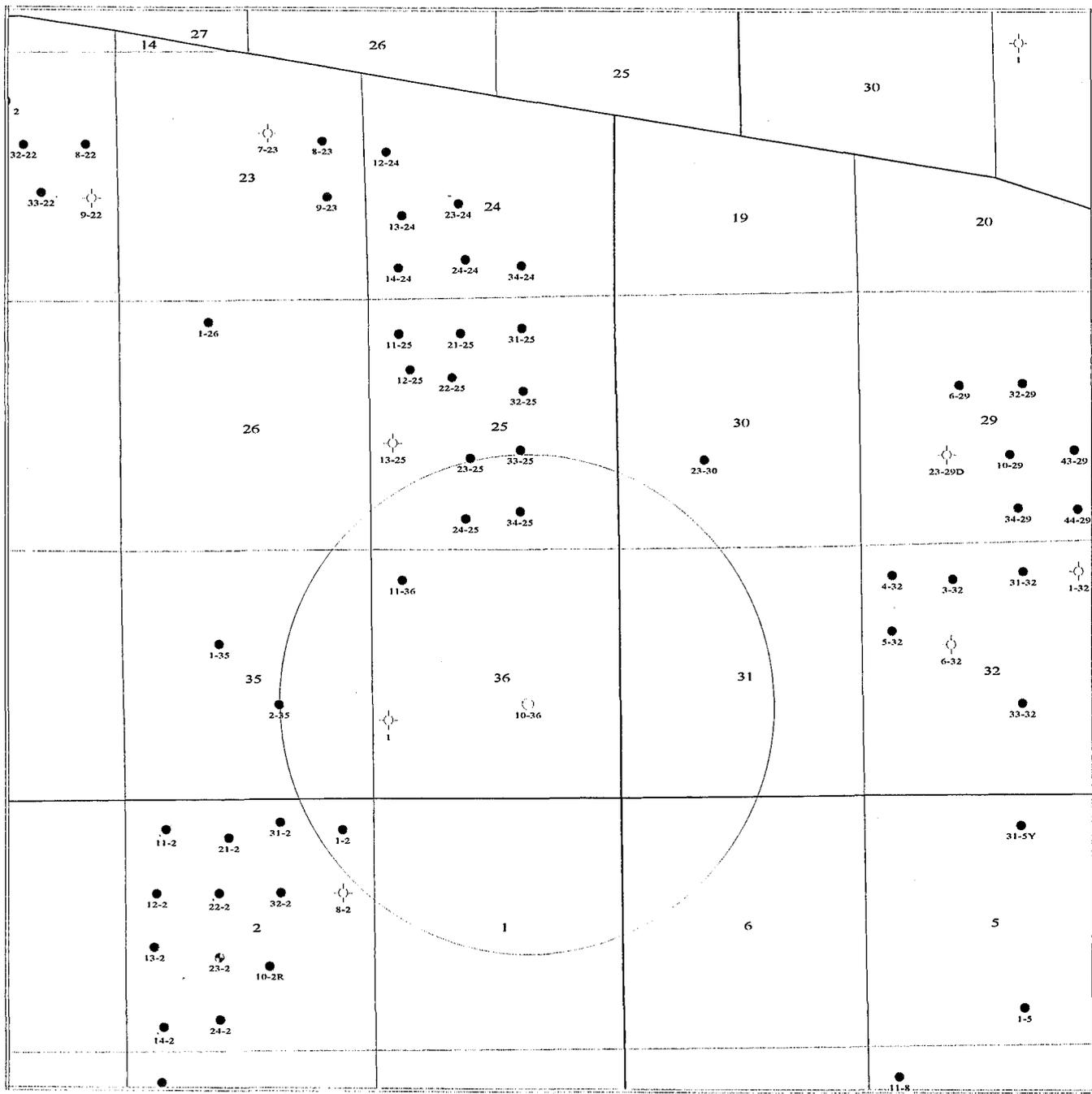


EXHIBIT "D"

INLAND PRODUCTION COMPANY		
ONE MILE RADIUS Odekirk Spring #10-36		
Josh Aselom	Scale 1:80044.37	2/3/1998

# INLAND PRODUCTION COMPANY

ODEKIRK SPRING #10-36-8-17  
SEC. 36, T8S, R17E, S.L.B.&M.

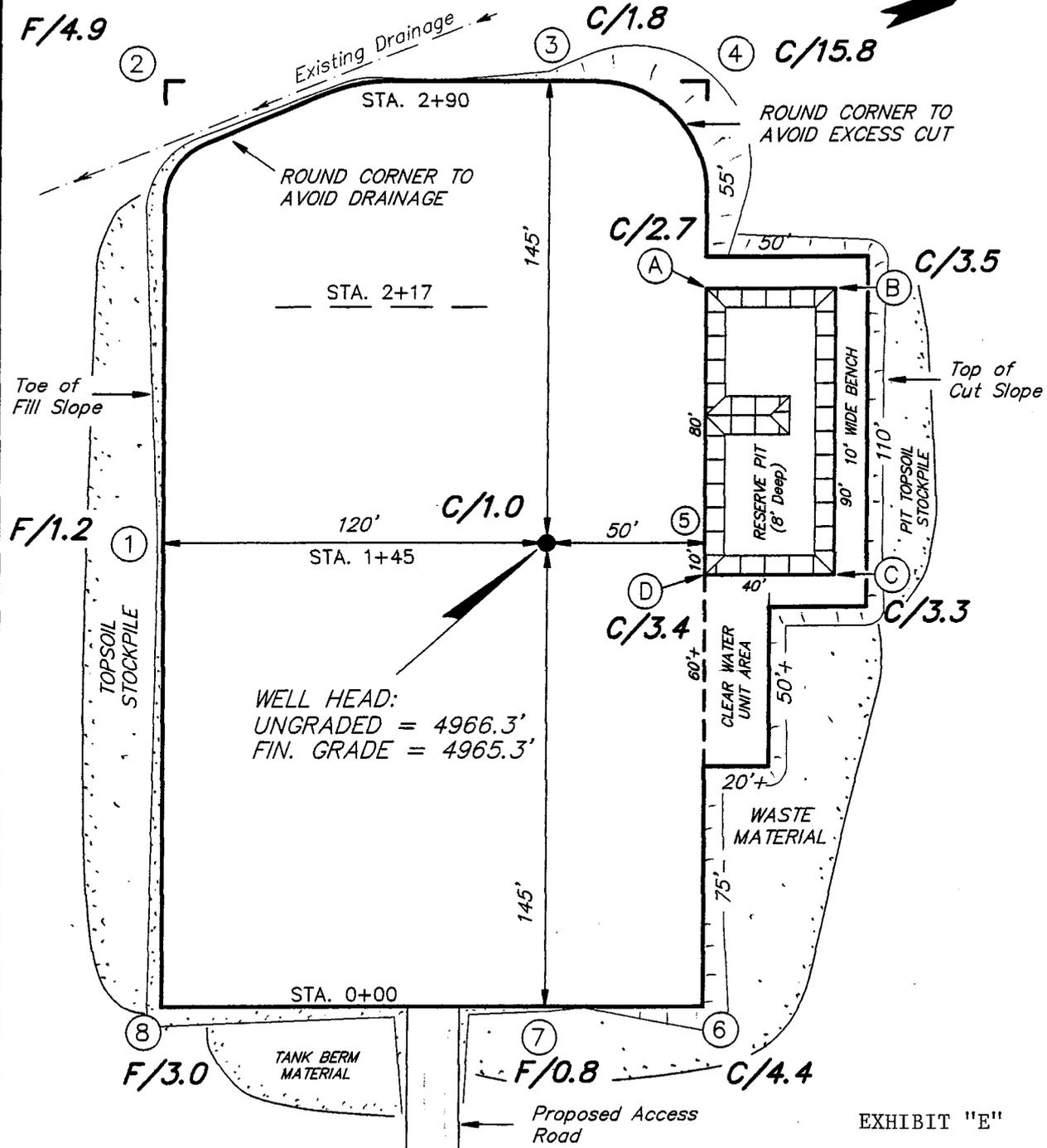
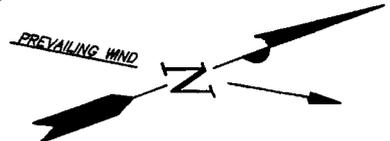


EXHIBIT "E"

**REFERENCE POINTS**

195' NORTHWEST = 4967.0'  
245' NORTHWEST = 4973.2'

SURVEYED BY:	D.S.
DRAWN BY:	J.R.S.
DATE:	9-20-98
SCALE:	1" = 50'
FILE:	

**Tri State**  
Land Surveying, Inc.  
(801) 781-2501  
38 WEST 100 NORTH VERNAL, UTAH 84078

# CROSS SECTIONS

## ODEKIRK SPRING #10-36-8-17

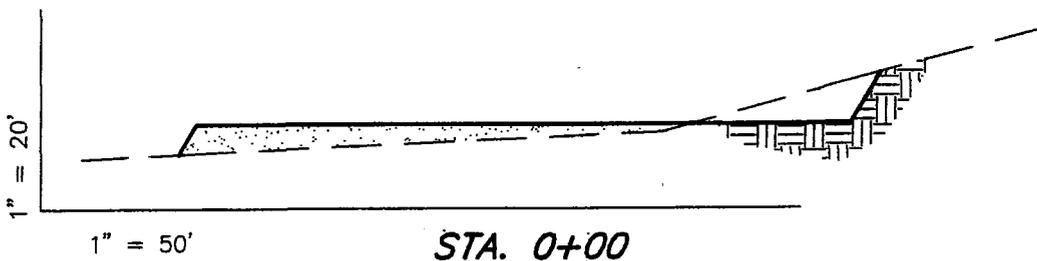
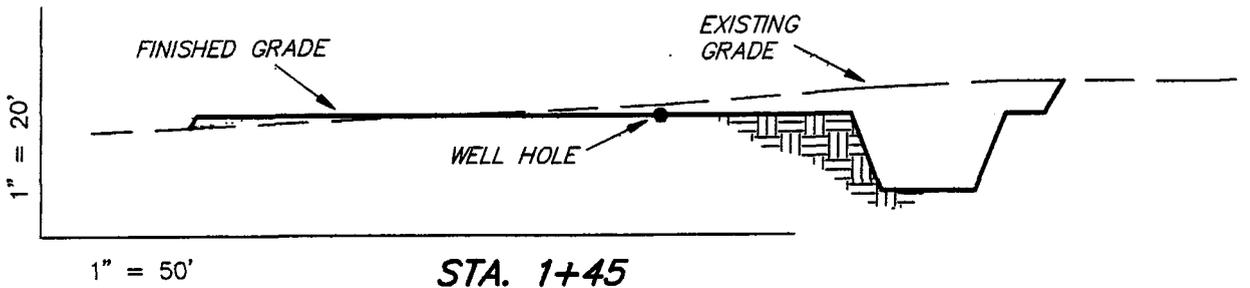
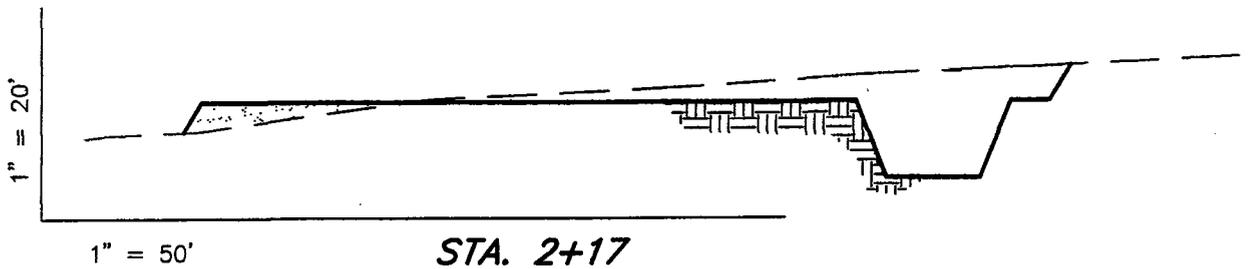


EXHIBIT "E-1"

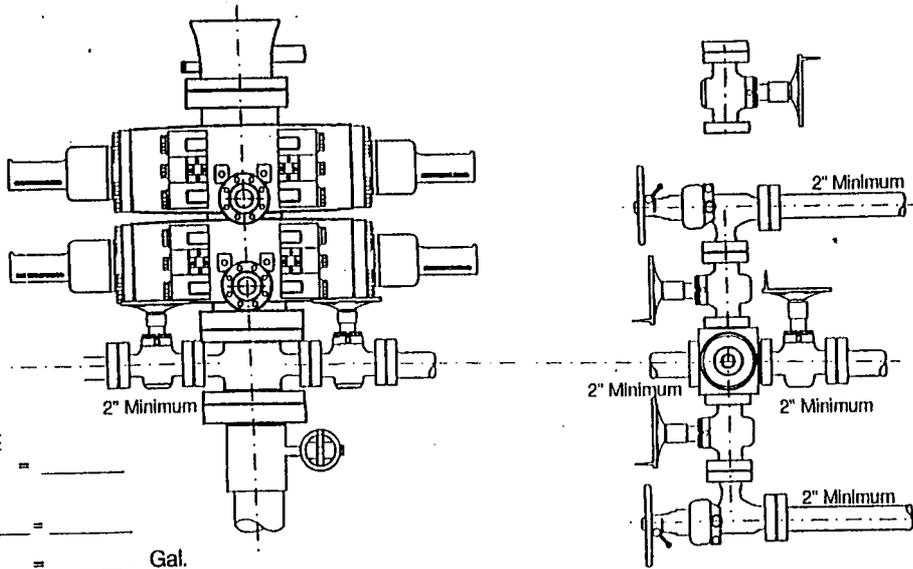
### APPROXIMATE YARDAGES

CUT = 1,790 Cu. Yds.  
FILL = 1,770 Cu. Yds.  
PIT = 920 Cu. Yds.  
6" TOPSOIL = 1,030 Cu. Yds.

**Tri State**  
Land Surveying, Inc.  
(801) 781-2501  
38 WEST 100 NORTH VERNAL, UTAH 84078

2-M SYSTEM

RAM TYPE B.O.P.  
 Make:  
 Size:  
 Model:



GAL TO CLOSE  
 Annular BOP = \_\_\_\_\_  
 Ramtype BOP  
 \_\_\_\_\_ Rams x \_\_\_\_\_ = \_\_\_\_\_ Gal.  
 \_\_\_\_\_ x 2 = \_\_\_\_\_ Total Gal.

Rounding off to the next higher  
 increment of 10 gal. would require  
 \_\_\_\_\_ Gal. (total fluid & nitro volume)

WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 09/28/98

API NO. ASSIGNED: 43-047-33198

WELL NAME: ODEKIRK SPRING 10-36-8-17  
 OPERATOR: INLAND PRODUCTION COMPANY (N5160)  
 CONTACT: Cheryl Cameron (435) 789-1866

PROPOSED LOCATION:  
 NWSE 36 - T08S - R17E  
 SURFACE: 1919-FSL-2007-FEL  
 BOTTOM: 1919-FSL-2007-FEL  
 UINTAH COUNTY  
 EIGHT MILE FLAT NORTH FIELD (590)

INSPECT LOCATION BY: / /		
TECH REVIEW	Initials	Date
Engineering	PJK	12-1-98
Geology		
Surface		

LEASE TYPE: STA  
 LEASE NUMBER: ML-44305  
 SURFACE OWNER: State

PROPOSED FORMATION: GRRV

RECEIVED AND/OR REVIEWED:

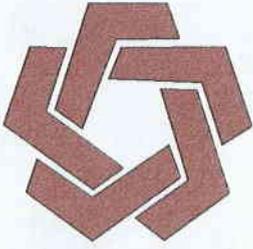
- Plat
- Bond: Federal  State  Fee   
 (No. 447/291)
- Potash (Y/N)
- Oil Shale (Y/N) \*190-5(B)
- Water Permit  
 (No. Johnson Water District)
- RDCC Review (Y/N)  
 (Date: \_\_\_\_\_)
- St/Fee Surf Agreement (Y/N)

LOCATION AND SITING:

- R649-2-3. Unit \_\_\_\_\_
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit  
 Board Cause No: \_\_\_\_\_  
 Date: \_\_\_\_\_

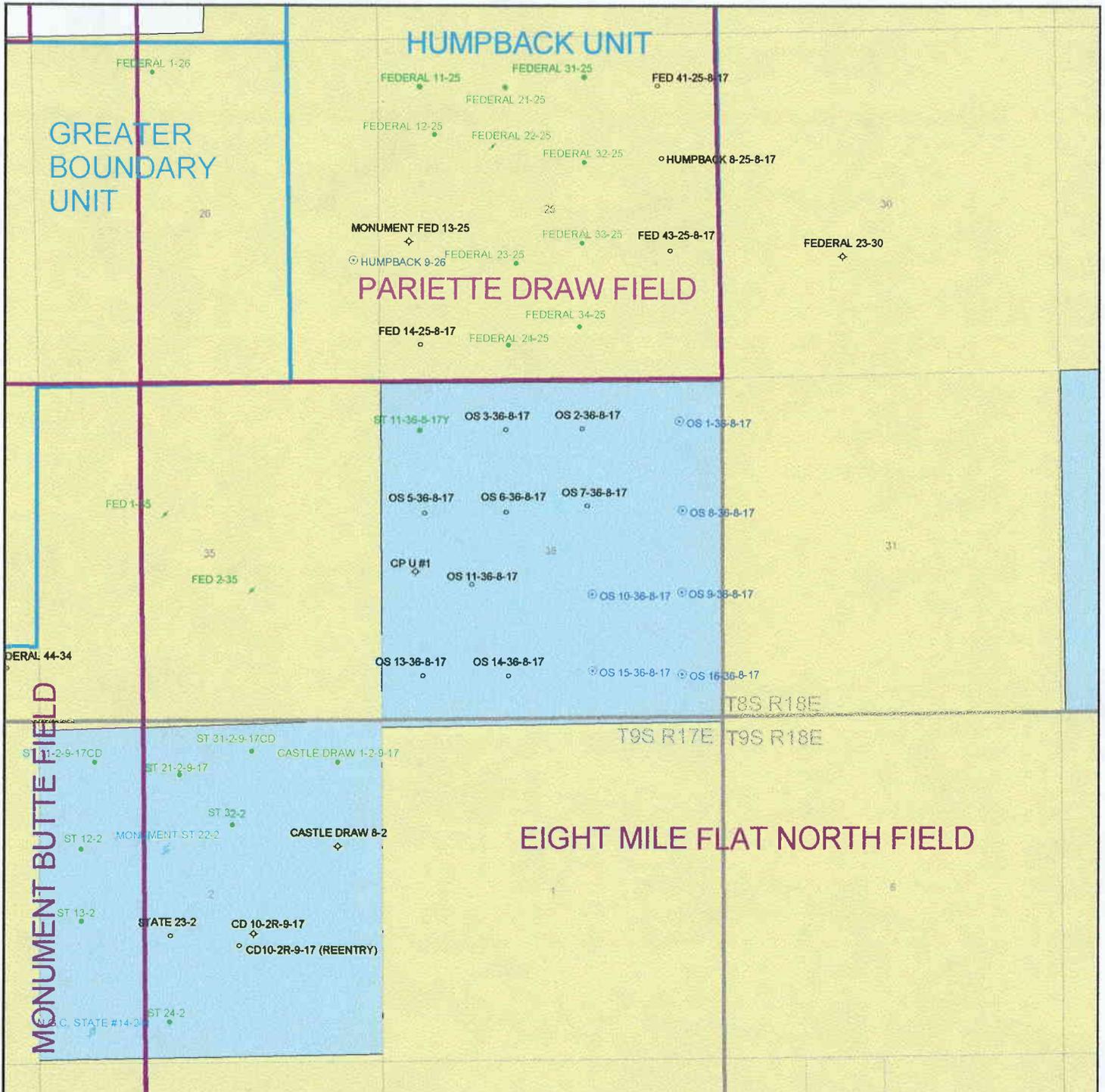
COMMENTS: \_\_\_\_\_

STIPULATIONS: ① STATEMENT OF BASIS



DIVISION OF OIL, GAS & MINING

OPERATOR: INLAND PRODUCTION COMPANY (N5160)  
FIELD: EIGHT MILE FLAT NORTH (590)  
SEC. 36, TWP 8S, RNG 17E,  
COUNTY: UINTAH STATE TRUST LANDS



DATE PREPARED:  
2-OCT-1998

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

**Operator Name:** INLAND PRODUCTION CO.

**Name & Number:** ODEKIRK SPRING 10-36

**API Number:** 43-047-33198

**Location:** 1/4, 1/4 NW/SE Sec. 36 T. 8S R. 17E

**Geology/Ground Water:**

The base of the moderately saline ground water is expected to be near the ground surface at this location. The Uinta Formation should have very limited fresh water resources in the near surface. The proposed casing and cement program should adequately protect any fresh water resources.

**Reviewer:** Brad Hill

**Date:** 11/24/98

**Surface:**

The pre-site investigation of the surface was performed by field personnel on 11/20/98. All applicable surface management agencies have been notified. No other agency personnel chose to attend. This site is in a unusually barren area with less than 2% ground cover from plants, and nearly no evidence of animal life.

**Reviewer:** DAVID W. HACKFORD

**Date:** 11/23/98

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

1. Reserve pit shall be constructed north of the wellbore.

ON-SITE PREDRILL EVALUATION

Division of Oil, Gas and Mining

OPERATOR: INLAND PRODUCTION CO.  
WELL NAME & NUMBER: ODEKIRK SPRING 10-36  
API NUMBER: 43-047-33198  
LEASE: ML 44305 FIELD/UNIT: MONUMENT BUTTE  
LOCATION: 1/4, 1/4 NW/SE Sec: 36 TWP: 8S RNG: 17E 1919' FSL 2006' FEL  
LEGAL WELL SITING: 1919' F SEC. LINE; 599' F 1/4, 1/4 LINE; \_\_\_\_\_ F ANOTHER WELL.  
GPS COORD (UTM) 12589390E 4436176N  
SURFACE OWNER: STATE TRUST LANDS

PARTICIPANTS

BRAD MECHAM, (INLAND); DAVID W. HACKFORD (DOGM).

REGIONAL/LOCAL SETTING & TOPOGRAPHY

SITE IS LOCATED IN A SMALL BASIN WITH RIDGES TO THE SOUTH, WEST AND NORTH. DRAINAGE IS TO THE EAST.

SURFACE USE PLAN

CURRENT SURFACE USE: LIVESTOCK AND WILDLIFE GRAZING.

PROPOSED SURFACE DISTURBANCE: LOCATION WILL BE 290' X 210'.  
ACCESS ROAD WILL BE 0.3 MILES.

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

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: \_\_\_\_\_  
ALL PRODUCTION FACILITIES WILL BE ON LOCATION AND ADDED AFTER DRILLING WELL. IT ISN'T EXPECTED THAT A PIPELINE WILL BE REQUIRED FOR THIS WELL.

SOURCE OF CONSTRUCTION MATERIAL: ALL CONSTRUCTION MATERIAL WILL BE BORROWED FROM THIS SITE DURING CONSTRUCTION AND IS NATIVE.

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: NATIVE GRASSES, SHADSCALE. (LESS THAN 2% GROUND COVER): PRONGHORN, RODENTS, COYOTES, BIRDS.

SOIL TYPE AND CHARACTERISTICS: LIGHT BROWN SANDY CLAY WITH NUMEROUS SANDSTONE BOULDERS AND A TRACE OF ALKALI.

SURFACE FORMATION & CHARACTERISTICS: UINTA FORMATION, SOUTH FLANK OF THE UINTA MOUNTAINS.

EROSION/SEDIMENTATION/STABILITY: MINOR EROSION, MINOR SEDIMENTATION, NO STABILITY PROBLEMS ANTICIPATED.

PALEONTOLOGICAL POTENTIAL: NONE OBSERVED.

RESERVE PIT

CHARACTERISTICS: 110' BY 40' AND 8' DEEP.

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

SURFACE RESTORATION/RECLAMATION PLAN

AS PER STATE LANDS.

SURFACE AGREEMENT: STATE TRUST LANDS.

CULTURAL RESOURCES/ARCHAEOLOGY: A REPORT OF THE ARCHAEOLOGY INVESTIGATION WAS SUBMITTED WITH THE APD.

OTHER OBSERVATIONS/COMMENTS

INVESTIGATION WAS DONE ON A COLD DAY WITH NO SNOW COVER.

ATTACHMENTS:

PHOTOS OF PROPOSED SITE WILL BE PLACED ON FILE.

DAVID W. HACKFORD  
DOGM REPRESENTATIVE

11/20/98 10:30 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>10</u>
Distance to Nearest Municipal Well (feet)		
>5280	0	
1320 to 5280	5	
500 to 1320	10	
<500	15	<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>0</u>
Fluid Type		
Air/mist	0	
Fresh Water	5	
TDS >5000 and <10000	15	
TDS >10000 or Oil Base	20	
Mud Fluid containing high levels of hazardous constituents		<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>
<b>Final Score</b>		<u>15</u>









Well name:	<b>Inland Odekirk 10-36-8-17</b>	
Operator:	<b>Inland Production Company</b>	
String type:	<b>Surface</b>	Project ID: <b>43-047-33198</b>
Location:	<b>Uintah Co.</b>	

**Design parameters:**

**Collapse**

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

**Burst**

Max anticipated surface pressure: 130 psi  
Internal gradient: 0.003 psi/ft  
Calculated BHP: 131 psi  
  
No backup mud specified.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**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: 262 ft

**Environment:**

H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 79 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 300 ft

Cement top: 1 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: 300 ft  
Injection pressure: 300 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	300	8.625	24.00	J-55	ST&C	300	300	7.972	14.4
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	131	1370	10.47	131	2950	22.54	6	244	38.79 J

Prepared RJK  
by: State of Utah

Date: December 1, 1998  
Salt Lake City, Utah

**ENGINEERING STIPULATIONS: NONE**

Collapse strength is based on the Westcott, Dunlop & Kernler method of biaxial correction for tension.  
Collapse is based on a vertical depth of 300 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes.  
In addition, burst strength is biaxially adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

Well name:	<b>Inland Odekirk 10-36-8-17</b>	
Operator:	<b>Inland Production Company</b>	
String type:	<b>Production</b>	Project ID: <b>43-047-33198</b>
Location:	<b>Uintah Co.</b>	

**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: 75 °F  
Bottom hole temperature 166 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 300 ft

Cement top: 391 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 buoyed 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	LT&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	1.42	2836	4812	1.70	88	217	2.47 J

Prepared RJK  
by: State of Utah

Date: December 1, 1998  
Salt Lake City, Utah

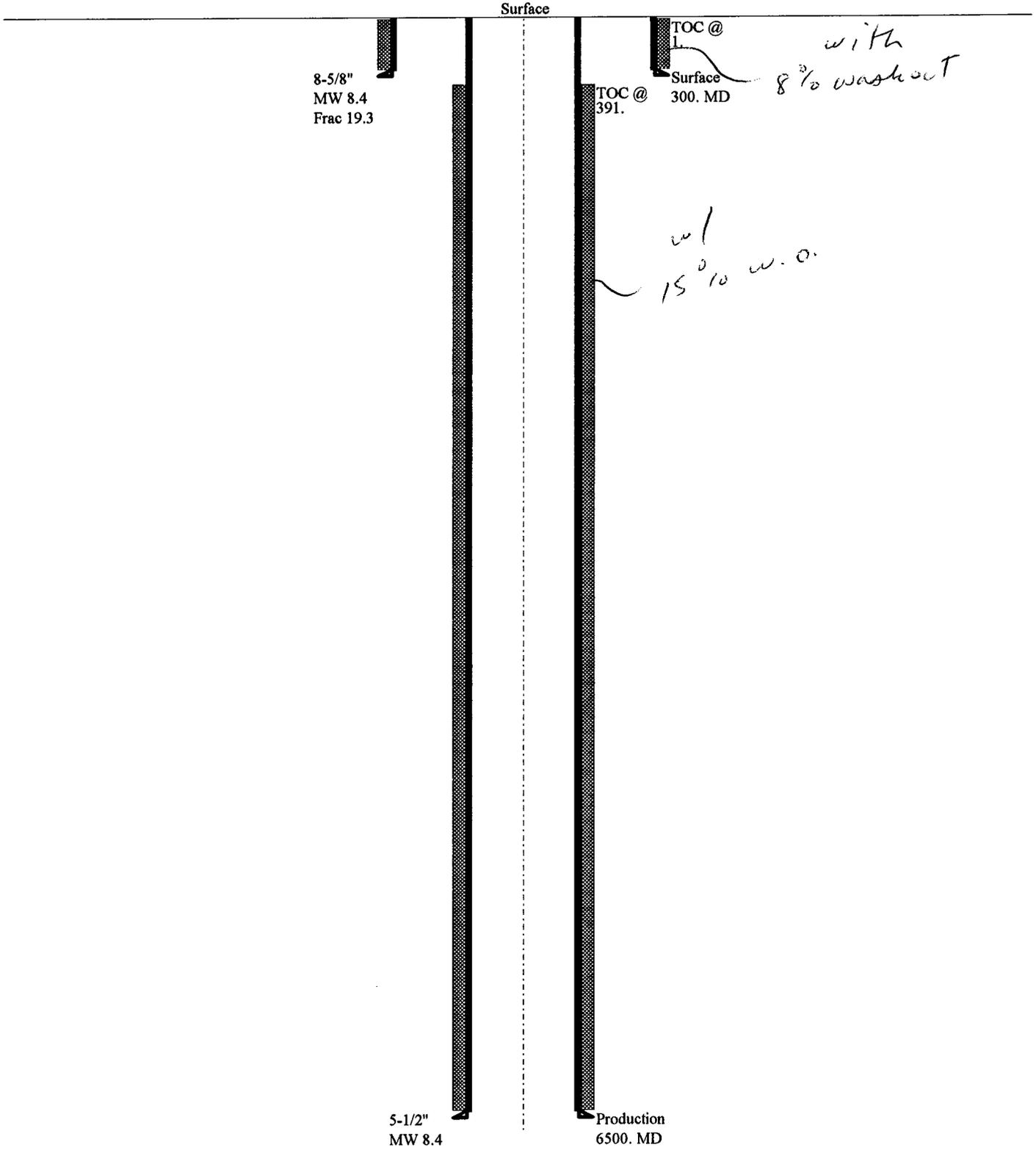
**ENGINEERING STIPULATIONS: NONE**

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.  
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.  
In addition, burst strength is biaxially adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

# Inland Odekirk 10-36-8-17

## Casing Schematic





State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
Lowell P. Braxton  
Division Director

1594 West North Temple, Suite 1210  
PO Box 145801  
Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

December 1, 1998

Inland Production  
P.O. Box 790233  
Vernal, Utah 84079

Re: Odekirk Spring 10-36-8-17 Well, 1919' FSL, 2007' FEL, NW SE, Sec. 36, T. 8 S.,  
R. 17 E., 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 43-047-33198.

Sincerely,

A handwritten signature in black ink that reads "John R. Baza". The signature is fluid and cursive.

John R. Baza  
Associate Director

lwp

Enclosures

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

**Operator:** Inland Production Company

**Well Name & Number:** Odekirk Spring 10-36-8-17

**API Number:** 43-047-33198

**Lease:** State **Surface Owner:** State

**Location:** NW SE **Sec.** 36 **T.** 8 S. **R.** 17 E.

### Conditions of Approval

#### 1. General

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

#### 2. Notification Requirements

Notify the Division 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

Division contacts (please leave a voice mail message if person is not available to take the call):

- . Dan Jarvis at (801) 538-5338
- . Robert Krueger at (801) 538-5274 (plugging)
- . Carol Daniels at (801) 538-5284 (spud)

#### 3. Reporting Requirements

All required reports, forms and submittals shall 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 Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

5. 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.

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

<b>1. SUNDRY NOTICES AND REPORTS ON WELLS</b>  (Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT--" for such proposals.)  OIL <input type="checkbox"/> GAS <input type="checkbox"/> WELL <input checked="" type="checkbox"/> WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. <b>ML-44305</b>  6. IF INDIAN, ALLOTTEE OR TRIBAL NAME  <b>N/A</b>
<b>2. NAME OF OPERATOR</b> <b>INLAND PRODUCTION COMPANY</b>		7. UNIT AGREEMENT NAME  <b>N/A</b>
<b>3. ADDRESS OF OPERATOR</b> <b>410 17TH STREET, SUITE 700, DENVER, COLORADO 80202</b> <b>(303) 893-0102</b>		8. FARM OR LEASE NAME <b>Odekirk Spring 10-36-8-17</b>
<b>4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*</b> See also space 17 below.) At surface <b>NW/SE 1919' FSL 2007' FEL</b>		9. WELL NO. <b>10-36</b>  10. FIELD AND POOL, OR WILDCAT <b>Monument Butte</b>
<b>11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA</b> <b>NW/SE Sec. 36 T8S R17E</b>		12. COUNTY OR PARISH <b>Uintah</b>
<b>14. API NUMBER</b> <b>43-047-33198</b>	<b>15. ELEVATIONS (Show whether DF, RT, GR, etc.)</b> <b>4966.3' GR</b>	13. STATE <b>UT</b>

**16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF <input type="checkbox"/> PULL OR ALTER CASING <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> MULTIPLE COMPLETE <input type="checkbox"/> SHOOT OR ACIDIZE <input type="checkbox"/> ABANDON* <input type="checkbox"/> REPAIR WELL <input type="checkbox"/> (OTHER) <input checked="" type="checkbox"/> APD Extension	WATER SHUT-OFF <input type="checkbox"/> REPAIRING WELL <input type="checkbox"/> FRACTURE TREATMENT <input type="checkbox"/> ALTERING CASING <input type="checkbox"/> SHOOTING OR ACIDIZING <input type="checkbox"/> ABANDONMENT* <input type="checkbox"/> (OTHER) _____ <input type="checkbox"/> (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

**17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS.** (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

**Inland Production Company requests that a one year APD extension be granted to the above referenced location**

**COPY SENT TO OPERATOR**  
 Date: 2-16-00  
 initials: CHD

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

Date: 2/16/00  
 By: [Signature]

RECEIVED

FEB 14 2000

DIVISION OF  
OIL, GAS AND MINING

18. I hereby certify that the foregoing is true and correct

SIGNED Jon Holst \_\_\_\_\_ TITLE Counsel DATE 2/10/99

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

\* See Instructions On Reverse Side

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: INLAND PRODUCTION COMPANY

Well Name: ODEKIRK SPRINGS 10-36-8-17

Api No. 43-047-33198 LEASE TYPE: STATE

Section 36 Township 08S Range 17E County UINTAH

Drilling Contractor UNION DRILLING RIG # 14

SPUDDED:

Date 07/05//2000

Time 2:45 PM

How DRY

Drilling will commence \_\_\_\_\_

Reported by PAT WISENER

Telephone # 1-435-823-7468

Date 07/06/2000 Signed: CHD

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

OPERATOR: INLAND PRODUCTION COMPANY  
 ADDRESS: RT. 3 BOX 3630  
MYTON, UT 84052

OPERATOR ACCT. NO. NS160

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	12791	43-047-33198	Odeklrk 10-36	NW/SE	36	8S	17E	Uintah	July 5, 2000	7/5/00
WELL 1 COMMENTS: <i>000707 entity added.</i>											
ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
WELL 2 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 3 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 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 entity)
- B - Add new well to existing entity (group or LUG well)
- C - Reassign well from one existing entity to another existing entity
- D - Reassign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section appropriately with each Action Code as selected

Signature Kathie S. Jones  
 Production Clerk July 7, 2000  
 Title Doc

P. 02  
 JUL-06-00 THU 02:35 PM  
 INLAND PRODUCTION CO  
 FAX NO. 435 646 3031

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

<b>1. SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NO. <b>ML - 44305</b>	
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT--" for such proposals.)		6. IF INDIAN, ALLOTTEE OR TRIBAL NAME  N/A	
OIL <input type="checkbox"/> GAS <input type="checkbox"/> WELL <input checked="" type="checkbox"/> WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		7. UNIT AGREEMENT NAME  N/A	
2. NAME OF OPERATOR <b>INLAND PRODUCTION COMPANY</b>		8. FARM OR LEASE NAME <b>Odekirk Spring</b>	
3. ADDRESS OF OPERATOR <b>Route 3, Box 3630 Myton, Utah 84052 (435) 646-3721</b>		9. <b># 10-36-8-17</b>	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface <b>1919.1' FSL &amp; 2006.7' FEL NW/SE</b>		10. FIELD AND POOL, OR WILDCAT  <b>Monument Butte</b>	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA <b>Sec 36, T8s, R17E</b>	
14. API NUMBER <b>43-047-33198</b>	15. ELEVATIONS (Show whether DF, RT, GR, etc.) <b>4965.3' GR</b>	12. COUNTY OR PARISH <b>Uintah</b>	13. STATE <b>UT</b>

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>
MULTIPLE COMPLETE <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>
ABANDON* <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	(OTHER) <u>Surface Spud</u> <input checked="" type="checkbox"/>
(OTHER) _____ <input type="checkbox"/>	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17 DESCRIBE PROPOSED OR COMPLETED OPERATIONS. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

MIRU UNION RIG # 14. Set equipment . Drill mouse hole & rat hole. Spud well @ 2:45PM ON 7/5/00. Drill 17 1/4" hole and set 23' of 133/8" conductor. Nipple up cellar. Drill 12 1/4" hole with air mist to a depth of 328'. TIH w/ 85/8" J-55 24# csg. Landed @ 304.18 w/KB. Cement with \*141sks class "G" w/ 2% CaCL2 & 1/4#/sk Cello-flake mixed @ 15.8ppg.>1.17 YLD. Estimated 3 bbls cement to surface. WOC 4 hours. Break out & Nipple up BOP's. Pressure test Kelly, TIW, Choke manifold, & BOP's TO 2000 psi. Test 85/8" CSG. TO 1500 PSI. ALL TESTED GOOD. Utah DOGM, & Vernal BLM notified by phone. Drill 7 7/8" hole to a depth of 3810' with air mist. TOH with drill string & BHA. PU & MU, TIH w/ fluid bit#4, MM, & BHA.

18 I hereby certify that the foregoing is true and correct

SIGNED *Pat Wisener* TITLE Drilling Foreman DATE 07/10/2000

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

\* See Instructions On Reverse Side

RECEIVED

JUL 12 2000

DIVISION OF  
OIL, GAS AND MINING

# INLAND PRODUCTION COMPANY - CASING & CEMENT REPORT

8 5/8" CASING SET AT 304.18

LAST CASING 8 5/8' SET AT 304.18  
 DATUM 10' KB  
 DATUM TO CUT OFF CASING \_\_\_\_\_  
 DATUM TO BRADENHEAD FLANGE \_\_\_\_\_  
 TD DRILLER 328 LOGGER \_\_\_\_\_  
 HOLE SIZE 12 1/4"

OPERATOR INLAND PRODUCTION COMPANY  
 WELL Odekirk Springs 10-36-8-17  
 FIELD/PROSPECT Monument Butte  
 CONTRACTOR & RIG # UNION RIG 14

**LOG OF CASING STRING:**

PIECES	OD	ITEM - MAKE - DESCRIPTION	WT / FT	GRD	THREAD	CONDT	LENGTH
		LANDING JT					14
		WHI " 92 " CSG HEAD			8rd	A	0.95
8	8 5/8"	Maverick SC&T CSG	24 #	J-55	8rd	A	298.33
		SHOE - <b>GUIDE</b>			8rd	A	0.9

CASING INVENTORY BAL.	FEET	JTS	TOTAL LENGTH OF STRING	314.18
TOTAL LENGTH OF STRING	314.18	8	LESS CUT OFF PIECE	14
LESS NON CSG. ITEMS	15.85		PLUS DATUM TO T/CUT OFF CSG	10
PLUS FULL JTS. LEFT OUT	0	0	CASING SET DEPTH	<b>304.18</b>

TOTAL	298.35	8	} COMPARE
TOTAL CSG. DEL. (W/O THRDS)	298.35	8	
TIMING	1ST STAGE		
BEGIN RUN CSG.	1:45am		GOOD CIRC THRU JOB <u>YES</u>
CSG. IN HOLE	3:00am		Bbls CMT CIRC TO SURFACE <u>3 BBLs-</u>
BEGIN CIRC	3:15am	4:15am	RECIPROCATED PIPE FOR _____ THRU _____ FT STROKE
BEGIN PUMP CMT	4:30am		DID BACK PRES. VALVE HOLD ? <u>N/A</u>
BEGIN DSPL. CMT	4:38am		BUMPED PLUG TO _____ 200 _____ PSI
PLUG DOWN		4:48am	

CEMENT USED	CEMENT COMPANY- <u>B. J.</u>		
STAGE	# SX	CEMENT TYPE & ADDITIVES	
1	141	Class "G" w/ 2% CaCL2 + .1/4# /sk. Cello-Flake mixed @ 15.8 ppg 1.17 cf/sk yield	
2			

CENTRALIZER & SCRATCHER PLACEMENT	SHOW MAKE & SPACING
1 on middle of first JT, 1 on collar of the second & third JT. TOTAL 3	JUL 12 2000
	DIVISION OF OIL, GAS AND MINING

COMPANY REPRESENTATIVE Pat Wisener DATE 07/06/2000

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

<b>1. SUNDRY NOTICES AND REPORTS ON WELLS</b>  (Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT--" for such proposals.)  OIL <input type="checkbox"/> GAS <input type="checkbox"/> WELL <input checked="" type="checkbox"/> WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		<b>5. LEASE DESIGNATION AND SERIAL NO.</b> <p style="text-align: center;"><b>ML - 44305</b></p>	
<b>2. NAME OF OPERATOR</b> <p style="text-align: center;"><b>INLAND PRODUCTION COMPANY</b></p>		<b>6. IF INDIAN, ALLOTTEE OR TRIBAL NAME</b>  <p style="text-align: center;">N/A</p>	
<b>3. ADDRESS OF OPERATOR</b> <p style="text-align: center;"><b>Route 3, Box 3630 Myton, Utah 84052</b> <b>(435) 646-3721</b></p>		<b>7. UNIT AGREEMENT NAME</b>  <p style="text-align: center;">N/A</p>	
<b>4. LOCATION OF WELL</b> (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface <p style="text-align: center;"><b>1919.1' FSL &amp; 2006.7' FEL                      NW/SE</b></p>		<b>8. FARM OR LEASE NAME</b> <p style="text-align: center;"><b>Odekirk Spring</b></p>	
<b>14. API NUMBER</b> <p style="text-align: center;"><b>43-047-33198</b></p>		<b>9.</b> <p style="text-align: center;"><b># 10-36-8-17</b></p>	
<b>15. ELEVATIONS</b> (Show whether DF, RT, GR, etc.) <p style="text-align: center;"><b>4965.3' GR</b></p>		<b>10. FIELD AND POOL, OR WILDCAT</b>  <p style="text-align: center;"><b>Monument Butte</b></p>	
<b>12. COUNTY OR PARISH</b> <p style="text-align: center;"><b>Uintah</b></p>		<b>11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA</b> <p style="text-align: center;"><b>Sec 36, T8s, R17E</b></p>	
<b>13. STATE</b> <p style="text-align: center;"><b>UT</b></p>			

**16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>
MULTIPLE COMPLETE <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>
ABANDON* <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	(OTHER) <u>Weekly Status</u> <input checked="" type="checkbox"/>
(OTHER) _____ <input type="checkbox"/>	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

**17 DESCRIBE PROPOSED OR COMPLETED OPERATIONS.** (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Drill a 7 7/8" hole with water based mud to a depth of 6025'. Lay down drill string, & BHA. Open hole log. PU & MU 142 jt's 5 1/2" 15.5# J-55 csgn. Set at 6017' w/KB. Cement with \*265 sks Premlite ll w/10% GEL. & 3% KCL mixed to 11.ppg >3.43 YLD. \*480 sks 50/50 POZ w/3% GEL. & 3% KCL mixed to 14.4 ppg. >1.24YLD. Good returns with 20 bbls dye water to surface. Bump plug to 2005 psi. Nipple down BOP's. Drop slips with 70,000#. Release rig @ 2:00pm on 7/13/00.

18 I hereby certify that the foregoing is true and correct

SIGNED *Pat Wisena* TITLE Drilling Foreman DATE 07/17/2000

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

\* See Instructions On Reverse Side

RECEIVED  
 JUL 17 2000  
 DIVISION OF  
 OIL, GAS AND MINING

# INLAND PRODUCTION COMPANY - CASING & CEMENT REPORT

5 1/2" CASING SET AT 6017.57

LAST CASING 8 5/8' SET AT 310.18  
 DATUM 10' KB  
 DATUM TO CUT OFF CASING \_\_\_\_\_  
 DATUM TO BRADENHEAD FLANGE \_\_\_\_\_  
 TD DRILLER 6025 LOGGER 6037  
 HOLE SIZE 7 7/8'

OPERATOR INLAND PRODUCTION COMPANY  
 WELL Odekirk Springs 10-36-8-17  
 FIELD/PROSPECT Monument Butte  
 CONTRACTOR & RIG # UNION RIG 14

**LOG OF CASING STRING:**

PIECES	OD	ITEM - MAKE - DESCRIPTION	WT / FT	GRD	THREAD	CONDT	LENGTH
		LANDING JT					14
		(34' flag)					
142	5 1/2"	Maverick LT&C CSG	15.5#	J-55	8rd	A	6006.62
		SHOE - <b>FLOAT</b>			8rd	A	0.95

CASING INVENTORY BAL.	FEET	JTS	TOTAL LENGTH OF STRING	6021.57
TOTAL LENGTH OF STRING	6021.57	142	LESS CUT OFF PIECE	14
LESS NON CSG. ITEMS	14.95		PLUS DATUM TO T/CUT OFF CSG	10
PLUS FULL JTS. LEFT OUT	120.35	3	CASING SET DEPTH	<b>6017.57</b>

TOTAL	6126.97	145	} COMPARE
TOTAL CSG. DEL. (W/O THRDS)	6126.97	145	
TIMING	1ST STAGE	2nd STAGE	
BEGIN RUN CSG.	4:30am		GOOD CIRC THRU JOB <u>YES</u>
CSG. IN HOLE	8:00am		Bbls CMT CIRC TO SURFACE <u>20 bbls dye</u>
BEGIN CIRC	8:15am	9:03am	RECIPROCATED PIPE FOR <u>15MINS.</u> THRU <u>6'</u> FT STROKE
BEGIN PUMP CMT	9:11am	9:46am	DID BACK PRES. VALVE HOLD ? <u>YES</u>
BEGIN DSPL. CMT		10:34am	BUMPED PLUG TO <u>2005psi</u> PSI
PLUG DOWN		<b>10:55am</b>	

CEMENT USED	CEMENT COMPANY- <u>B. J.</u>	
STAGE	# SX	CEMENT TYPE & ADDITIVES
1	265	Prem Lite II w/ 10% GEL & 3% KCL mixed to 11.0 ppg > 3.43 YLD
2	480	50/50 POZ w/ 2% GEL & 3% KCL mixed to 14.4 ppg > 1.24 YLD

CENTRALIZER & SCRATCHER PLACEMENT SHOW MAKE & SPACING

1 on middle of first JT, 1 on collar of the second & third JT. Then every third collar for a total of 20.

**INLAND PRODUCTION COMPANY**  
**GEOLOGIC PROGNOSIS AND LOG DISTRIBUTION LIST**

(Updated 6/8/2000)

**WELL:** Odekirk Spring #10-36-8-17

**API Number:** 43-047-33198

**LOCATION:** 1919' FSL, 2007' FEL (NWSE)  
Section 36, T8S, R17E  
Uintah County, Utah

**ELEVATION:** 4965' Ground  
4975' KB

**TOPS:**

Uinta Formation	surface
Green River Formation	
Garden Gulch Member	3863'
Point Three Marker	4407'
'X' Marker	4618'
'Y' Marker	4654'
Douglas Creek Member	4785'
Bicarbonate	5027'
B Limestone	5153'
Castle Peak Limestone	5621'
Basal Limestones	

**ANTICIPATED PAY SANDS:**

GB-4	4304'
D-2	4847'
C-SD	4963'
A-3	5278'
LODC	5407'
CP-2	5726'

**TOTAL DEPTH:** 5850'

**CORES:** None planned

**DSTS:** None planned

**SAMPLES:** 30' samples from 3000' to TD

**DRILLING:**

Union Rig#14: (435) 828 6434

Pusher: (435) 828 6433 Rex Harris

Superintendent: David Gray (435) 828 8031 (cellular)

**REPORT WATER FLOWS TO UTAH DIVISION OF OIL, GAS AND MINING:** (801) 538 5340

**OPEN HOLE LOGGING:**

Phoenix Surveys: David Jull (435) 637 4420

DIGL/SP/GR Suite: TD to surface casing

CDL/CNL/GR/CAL Suite logs: TD to 3000'

Gamma Ray scale 0-150

Matrix density 2.68

LAS data floppy required.

**DATA DISTRIBUTION:**

**RECEIVED**

JUL 31 2000

**DIVISION OF  
OIL, GAS AND MINING**

Inland Production Company (Mail 6 copies)  
Route #3 Box 3630  
Myton, UT 84052  
Attn: Brad Mecham

Inland Production Company (Mail 6 copies,  
EXPRESS)  
410 17th St., Suite 700  
Denver, CO 80202  
Fax: 303-382-4455  
Attn: Josh Axelson

State of Utah  
Division of Oil, Gas and Mining (Mail 1 copy)  
1594 West North Temple, Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

Bureau of Land Management (Mail 1 copy)  
170 S. 500 East  
Vernal, UT 84078  
Attn: Ed Forsman

**COMPANY CONTACTS:**

**Pat Wisener** (District Drilling Foreman)  
(435) 646 3721 office  
(435) 646 3031 office fax  
(435) 823 7468 cellular  
(435) 646 1270 pager

**Brad Mecham** (District Manager)  
(435) 646 3721 office  
(435) 646 3031 office fax  
(435) 823 6205 cellular  
(435) 353 4211 home

**Donn Murphy** (Operations Manager)  
(303) 893 0102 X440 office  
(303) 526 7748 home  
(435) 823 3737 cellular

Yates Drilling Company  
Abo Petroleum Corporation  
Myco Industries, Inc.  
Attention: Mark Mauritsen  
105 South Fourth Street  
Artesia, NM 88210  
(505) 748 1471  
(505) 748 4570 office fax  
(Mail 1 field print & 2 copies of the final prints)  
**(Fax 1 Field print to: (505) 748 4321)**

**PARTNERS:**

Yates Petroleum Corporation

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

<b>1. SUNDRY NOTICES AND REPORTS ON WELLS</b>  (Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT--" for such proposals.)		<b>5. LEASE DESIGNATION AND SERIAL NO.</b> <p style="text-align: center;"><b>ML-44305</b></p>	
OIL <input type="checkbox"/> GAS <input type="checkbox"/> WELL <input checked="" type="checkbox"/> WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		<b>6. IF INDIAN, ALLOTTEE OR TRIBAL NAME</b>  <p style="text-align: center;">N/A</p>	
<b>2. NAME OF OPERATOR</b> <p style="text-align: center;"><b>INLAND PRODUCTION COMPANY</b></p>		<b>7. UNIT AGREEMENT NAME</b>  <p style="text-align: center;">NA</p>	
<b>3. ADDRESS OF OPERATOR</b> <p style="text-align: center;"><b>Route 3, Box 3630 Myton, Utah 84052</b> <b>(435) 646-3721</b></p>		<b>8. FARM OR LEASE NAME</b> <p style="text-align: center;"><b>Odekirk Spring</b></p>	
<b>4. LOCATION OF WELL</b> (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface <p style="text-align: center;"><b>1919.1' FSL &amp; 2006.7' FEL NW/SE</b></p>		<b>9.</b> <p style="text-align: center;"><b>10-36-8-17</b></p>	
<b>14 API NUMBER</b> <p style="text-align: center;"><b>43-047-33198</b></p>		<b>10 FIELD AND POOL, OR WILD CAT</b>  <p style="text-align: center;"><b>Monument Butte</b></p>	
<b>15. ELEVATIONS</b> (Show whether DF, RT, GR, etc.) <p style="text-align: center;"><b>4965.3' GR</b></p>		<b>11 SEC., T., R., M., OR BLK. AND SURVEY OR AREA</b> <p style="text-align: center;"><b>Section 36, T8S, R17E</b></p>	
<b>12 COUNTY OR PARISH</b> <p style="text-align: center;"><b>Uintah</b></p>		<b>13 STATE</b> <p style="text-align: center;"><b>UT</b></p>	

**16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>
MULTIPLE COMPLETE <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>
ABANDON* <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	(OTHER) <u>Weekly Status</u> <input checked="" type="checkbox"/>
(OTHER) _____ <input type="checkbox"/>	

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

**17 DESCRIBE PROPOSED OR COMPLETED OPERATIONS.** (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Status report for time period 7/31/00 through 8/6/00.  
 Subject well had completion procedures initiated on 8/1/00. Two Green River intervals were perforated and hydraulically fracture treated. Bridge plugs and sand plugs await removal from wellbore at present time.

18 I hereby certify that the foregoing is true and correct.

SIGNED <u><i>Gary Dietz</i></u>	TITLE <u>Completion Foreman</u>	DATE <u>8/7/00</u>
Gary Dietz		

(This space for Federal or State office use)  
 APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
 CONDITIONS OF APPROVAL, IF ANY:

RECEIVED

DIVISION OF OIL, GAS AND MINING

\* See Instructions On Reverse Side

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

		5. LEASE DESIGNATION AND SERIAL NO. <b>ML-44305</b>	
1. <b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  (Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT--" for such proposals.)		6. IF INDIAN, ALLOTTEE OR TRIBAL NAME  N/A	
		7. UNIT AGREEMENT NAME  NA	
2. NAME OF OPERATOR <b>INLAND PRODUCTION COMPANY</b>		8. FARM OR LEASE NAME <b>Odekirk Spring</b>	
3. ADDRESS OF OPERATOR <b>Route 3, Box 3630 Myton, Utah 84052 (435) 646-3721</b>		9. <b>10-36-8-17</b>	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface <b>1919.1' FSL &amp; 2006.7' FEL NW/SE</b>		10 FIELD AND POOL, OR WILDCAT  <b>Monument Butte</b>	
		11 SEC. T., R., M., OR BLK. AND SURVEY OR AREA <b>Section 36, T8S, R17E</b>	
14 API NUMBER <b>43-047-33198</b>	15. ELEVATIONS (Show whether DF, RT, GR, etc.) <b>4965.3' GR</b>	12 COUNTY OR PARISH <b>Uintah</b>	13 STATE <b>UT</b>

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>
MULTIPLE COMPLETE <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>
ABANDON* <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	(OTHER) <u>Weekly Status</u> <input checked="" type="checkbox"/>
(OTHER) _____ <input type="checkbox"/>	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17 DESCRIBE PROPOSED OR COMPLETED OPERATIONS. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Status report for time period 8/7/00 through 8/13/00.  
Subject well had completion procedures initiated on 8/1/00. Bridge plug and sand plug were removed from wellbore. Zones were swab tested to clean up sand. Production equipment was ran in well. Well began producing on pump on 8/9/00.

18 I hereby certify that the foregoing is true and correct

SIGNED *Gary Dietz* TITLE Completion Foreman DATE 8/14/00  
Gary Dietz

(This space for Federal or State office use)

APPROVED BY *[Signature]* TITLE Petr. Engr. DATE 8-15-00  
CONDITIONS OF APPROVAL, IF ANY:

**RECEIVED**  
  
AUG 15 2000  
  
DIVISION OF  
OIL, GAS AND MINING

\* See Instructions On Reverse Side

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

5. LEASE DESIGNATION AND SERIAL NO.

ML - 44305

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME, WELL NO.

Odekirk Spring 10-36-8-17

9. API WELL NO.

43-047-33198

10. FIELD AND POOL OR WILDCAT

Monument Butte

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

Sec. 36 - T8S - R17E

WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

1a. TYPE OF WORK

OIL WELL [X] GAS WELL [ ] DRY [ ] Other [ ]

1b. TYPE OF WELL

NEW WELL [X] WORK OVER [ ] DEEPEN [ ] PLUG BACK [ ] DIFF RESVR. [ ] Other [ ]

2. NAME OF OPERATOR

INLAND RESOURCES INC.

3. ADDRESS AND TELEPHONE NO.

410 17th St. Suite 700 Denver, CO 80202

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

At Surface

1919' FSL & 2007' FEL (NW SE) Section 36 - T8S - R17E

At top prod. Interval reported below

At total depth

14. PERMIT NO. 43-047-33198 DATE ISSUED 02/16/00

12. COUNTY OR PARISH

Uintah

13. STATE

UT

15. DATE SPUNDED

07/05/00

16. DATE T.D. REACHED

07/12/00

17. DATE COMPL. (Ready to prod.)

8-9-00

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

4966' GR

19. ELEV. CASINGHEAD

4976' KB

20. TOTAL DEPTH, MD & TVD

6037'

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

6011'

22. IF MULTIPLE COMPL., HOW MANY\*

23. INTERVALS ROTARY TOOLS

DRILLED BY RECEIVED

CABLE TOOLS

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

Green River 4878' TO 5422'

25. WAS DIRECTIONAL SURVEY MADE

No

26. TYPE ELECTRIC AND OTHER LOGS RUN

7-17-00 DIGL/SP/CDL - 8-8-00

DIVISION OF OIL, GAS AND MINING

27. WAS WELL CORED

No

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

Table with 6 columns: CASING SIZE/GRADE, WEIGHT, LB./FT., DEPTH SET (MD), HOLE SIZE, TOP OF CEMENT, CEMENTING RECORD, AMOUNT PULLED. Rows include 8-5/8, 5-1/2.

29. LINER RECORD

Table with 5 columns: SIZE, TOP (MD), BOTTOM (MD), SACKS CEMENT\*, SCREEN (MD).

30. TUBING RECORD

Table with 3 columns: SIZE, DEPTH SET (MD), PACKER SET (MD). Values: 2-7/8, EOT @ 5953', TA @.

31. PERFORATION RECORD (Interval, size and number)

Table with 3 columns: INTERVAL, JSPF, NUMBER. Rows for (A/LDC sds) 5299' - 5422' and (D/C sds) 4878' - 4996'.

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

Table with 2 columns: DEPTH INTERVAL (MD), AMOUNT AND KIND OF MATERIAL USED. Rows for 5299' - 5422' and 4878' - 4996'.

33.\* PRODUCTION

Table with 8 columns: DATE FIRST PRODUCTION, PRODUCTION METHOD, WELL STATUS, DATE OF TEST, HOURS TESTED, CHOKE SIZE, PROD'N. FOR TEST PERIOD, OIL--BBL., GAS--MCF., WATER--BBL., GAS-OIL RATIO, 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

Logs In Item #26

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

SIGNED

[Signature]

TITLE

Senior Operations Engineer

DATE

8/22/00

\*(See Instructions and Spaces for Additional Data on Reverse Side)

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			
				NAME	MEAS. DEPTH	TOP	TRUE VERT. DEPTH
			ODEKIRK SPRING 10-36-8-17	Garden Gulch Mkr Garden Gulch 2 Point 3 Mkr X Mkr Y-Mkr Douglas Creek Mkr BiCarbonate Mkr B Limestone Mkr Castle Peak Basal Carbonate Total Depth (LOGGERS)	3850' 4196' 4409' 4627' 4665' 4797' 5032' 5136' 5630' 6037'		

RECEIVED  
 DIVISION OF  
 OIL, GAS AND MINES



## 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

**OPERATOR CHANGE WORKSHEET**

**ROUTING**

1. GLH
2. CDW
3. FILE

Change of Operator (Well Sold)

Designation of Agent/Operator

**X Operator Name Change**

**Merger**

The operator of the well(s) listed below has changed, effective: **9/1/2004**

<b>FROM:</b> (Old Operator): N5160-Inland Production Company Route 3 Box 3630 Myton, UT 84052 Phone: 1-(435) 646-3721	<b>TO:</b> ( New Operator): N2695-Newfield Production Company Route 3 Box 3630 Myton, UT 84052 Phone: 1-(435) 646-3721
---	--

**CA No.** Unit: **ODEKIRK SPRING 36**

**WELL(S)**

NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
ODEKIRK SPRING 4-36-8-17	36	080S	170E	4304732764	13055	State	OW	P
ODEKIRK SPRING 6-36-8-17	36	080S	170E	4304733013	13055	State	OW	P
ODEKIRK SPRING 5-36-8-17	36	080S	170E	4304733014	13055	State	WI	A
ODEKIRK SPRING 3-36-8-17	36	080S	170E	4304733015	13055	State	WI	A
ODEKIRK SPRING 14-36-8-17	36	080S	170E	4304733075	13055	State	OW	P
ODEKIRK SPRING 11-36-8-17	36	080S	170E	4304733077	13055	State	WI	A
ODEKIRK SPRING 7-36-8-17	36	080S	170E	4304733078	13055	State	WI	A
ODEKIRK SPRING 2-36-8-17	36	080S	170E	4304733079	13055	State	OW	P
ODEKIRK SPRING 1-36-8-17	36	080S	170E	4304733195	13055	State	WI	A
ODEKIRK SPRING 8-36-8-17	36	080S	170E	4304733196	13055	State	OW	P
ODEKIRK SPRING 9-36-8-17	36	080S	170E	4304733197	13055	State	WI	A
ODEKIRK SPRING 10-36-8-17	36	080S	170E	4304733198	13055	State	OW	P
ODEKIRK SPRING 15-36-8-17	36	080S	170E	4304733199	13055	State	OW	P
ODEKIRK SPRING 16-36-8-17	36	080S	170E	4304733200	13055	State	OW	P

**OPERATOR CHANGES DOCUMENTATION**

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 9/15/2004
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 9/15/2004
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 2/23/2005
- Is the new operator registered in the State of Utah: YES Business Number: 755627-0143
- If **NO**, the operator was contacted on:

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 Communitization 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.

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**SUBMIT IN TRIPLICATE - Other Instructions on page 2**

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 (include are code)  
435.646.3721

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
1919 FSL 2007 FEL  
NWSE Section 36 T8S R17E

5. Lease Serial No.

UTAH STATE ML-44305

6. If Indian, Allottee or Tribe Name.

7. If Unit or CA/Agreement, Name and/or

GMBU

8. Well Name and No.

ODEKIRK SPRING 10-36-8-17

9. API Well No.

4304733198

10. Field and Pool, or Exploratory Area

MONUMENT BUTTE

11. County or Parish, State

UINTAH, UT

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" 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 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	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input checked="" 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 recomplete 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 recompletion 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.)

Newfield Production proposes to convert the above mentioned well from a producing oil well to an injection well.

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

I hereby certify that the foregoing is true and correct (Printed/ Typed)

Eric Sundberg  
Signature

Title

Regulatory Analyst

Date

5/16/10

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

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.

Title

Date

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 page 2)

**RECEIVED**

**MAY 12 2010**

**DIV. OF OIL, GAS & MINING**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8  
1595 WYNKOOP STREET  
DENVER, CO 80202-1129  
<http://www.epa.gov/region8>

SEP 13 2010

Ref: 8P-W-GW

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

Mr. Eric Sundberg  
Newfield Production Company  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

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

Re: FINAL Permit  
EPA UIC Permit UT22174-08788  
Well: Odekirk Spring 10-36-8-17  
NWSE Sec. 36-T8S-R17E  
Uintah County, UT  
API No.: 43-047-33198

Dear Mr. Sundberg:

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Permit for the proposed Odekirk Spring 10-36-8-17 injection well. A Statement of Basis that discusses the conditions and requirements of this EPA UIC Permit, is also included.

SEP 07 2010

The Public Comment period for this Permit ended on \_\_\_\_\_ No comments on the Draft Permit were received during the Public Notice period; therefore the Effective Date for this EPA UIC Permit is 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 as of the Effective Date of this Permit.

Please note that under the terms and conditions of this Final Permit you are authorized only to construct the proposed injection well. Prior to commencing injection, you first must fulfill all "Prior to Commencing Injection" requirements of the Final Permit, Part II Section C.1, and obtain written Authorization to Inject from the EPA. It is your responsibility to be familiar with and to comply with all provisions of your Final Permit. The EPA forms referenced in the permit are available at <http://www.epa.gov/safewater/uic/reportingforms.html>. Guidance documents for Cement Bond Logging, Radioactive Tracer testing, Step Rate testing, Mechanical Integrity demonstration, Procedure in the Event of a Mechanical Integrity Loss, and other UIC guidances, are available at [http://www.epa.gov/region8/water/uic/deep\\_injection.html](http://www.epa.gov/region8/water/uic/deep_injection.html). Upon request, hard copies of the EPA forms and guidances can be provided.

RECEIVED

SEP 22 2010

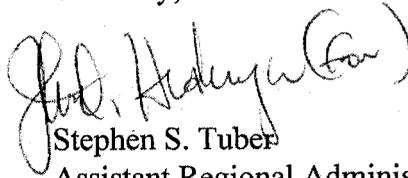


DIV. OF OIL, GAS & MINING  
Printed on Recycled Paper

This EPA UIC Permit is issued for the operating life of the well unless terminated (Part III, Section B). The EPA may review this Permit at least every five (5) years to determine whether any action is warranted pursuant to 40 CFR § 144.36(a).

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. 312-6174.

Sincerely,



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

enclosure: Final UIC Permit  
Statement of Basis

cc: Letter Only:

Uintah & Ouray Business Committee:  
Curtis Cesspooch, Chairman  
Frances Poowegup, Vice-Chairwoman  
Phillip Chimburas, Councilman  
Stewart Pike, Councilman  
Irene Cuch, Councilwoman  
Richard Jenks, Jr., Councilman

Daniel Picard  
BIA - Uintah & Ouray Indian Agency

cc: All Enclosures:

Mike Natchees  
Environmental Coordinator  
Ute Indian Tribe

Manual Myore  
Director of Energy & Minerals Dept.  
Ute Indian Tribe



Brad Hill  
Acting Associate Director  
Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office  
BLM - Vernal Office

Michael Guinn  
District Manager  
Newfield Production Company  
Myton, Utah



**UNDERGROUND INJECTION CONTROL PROGRAM  
PERMIT**

PREPARED: September 2010

**Permit No. UT22174-08788**

Class II Enhanced Oil Recovery Injection Well

**Odekirk Spring 10-36-8-17  
Uintah County, UT**

Issued To

**Newfield Production Co.**  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

## 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 Co.  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

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

Odekirk Spring 10-36-8-17  
1919' FSL & 2007' FEL, NWSE S36, T8S, R17E  
Uintah County, UT

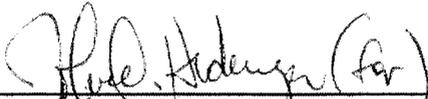
EPA regulates the injection of fluids into injection wells so that injection does not endanger underground sources of drinking water (USDWs). EPA UIC Permit conditions are based on authorities set forth at 40 CFR Parts 144 and 146, and address potential impacts to USDWs.

Under 40 CFR Part 144, Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General permit conditions for which the content is mandatory and not subject to site-specific differences are not discussed in this document. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize injury to persons or property or invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. (40 CFR §144.35) An EPA UIC Permit may be 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, and may be reviewed at least once every five (5) years to determine if action is required under 40 CFR §144.36(a).

This Permit is issued for the life of the well(s) unless modified, revoked and reissued, or terminated under 40 CFR §144.39 or 144.40. This EPA Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for a UIC Program is delegated to an Indian Tribe or State. Upon the effective date of delegation, reports, notifications, questions and other correspondence should be directed to the Indian Tribe or State Director.

Issue Date: SEP 13 2010

Effective Date SEP 13 2010



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 (MAIP) 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 seven calendar days prior to any mechanical integrity test unless the mechanical integrity test is conducted after a well construction, well conversion, or a well rework, in which case any prior notice is sufficient. 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.

### **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 isolates the injection zone and prevents the movement of fluids into or between underground sources of drinking water, and in accordance with 40 CFR 146.10 and other applicable Federal, State or local law or regulations. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. 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.

**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 any other Federal, 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 diagram.

Odekirk Spring 10-36-8-17 was drilled to a total depth of 6,037 feet (KB) in the Douglas Creek Member. Plug back total depth (PBSD) is 6,011 feet. Twenty-one (21) feet of 80% cement bond within "B" Shale Confining Zone.

Surface casing (8-5/8 inch) was set at a depth of 328 feet in a 12-1/4 inch hole using 141 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 6,018 feet (KB) in a 7-7/8 inch hole with 745 sacks cement. Well construction and cement bond are considered adequate to protect USDWs.

Cement Bond Log (CBL) identifies top of cement at 580 feet.

The schematic diagram shows enhanced recovery 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 4,145 feet (Top of Garden Gulch Member No. 2) and the top of the Wasatch Formation (Estimated to be 6,181 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 set no higher than 100 feet above the top perforation.

# UT 22174-08788 Odekirk Spring #10-36-8-17

Spud Date: 7/5/00  
Put on Production: 8/09/00  
GL: 4966' KB: 4976'

Initial Production: 71 BOPD,  
106 MCFPD, 13 BWPD

**SURFACE CASING**

CSG SIZE: 8-5/8"  
GRADE: J-55  
WEIGHT: 24#  
LENGTH: 8 jts. (304.18')  
DEPTH LANDED: 328'(GL)  
HOLE SIZE: 12-1/4"  
CEMENT DATA: 141 sxs Class G cmt,

Casing shoe @ 328'

Top of Cement @ 580'

**PRODUCTION CASING**

CSG SIZE: 5-1/2"  
GRADE: J-55  
WEIGHT: 15.5#  
LENGTH: 142 jts. (6021.57')  
DEPTH LANDED: 6017.57'  
HOLE SIZE: 7-7/8"  
CEMENT DATA: 265 sx Premium lite II & 480 sx 50/50 Poz  
CEMENT TOP AT: 580' per Cement Bond Log

**TUBING**

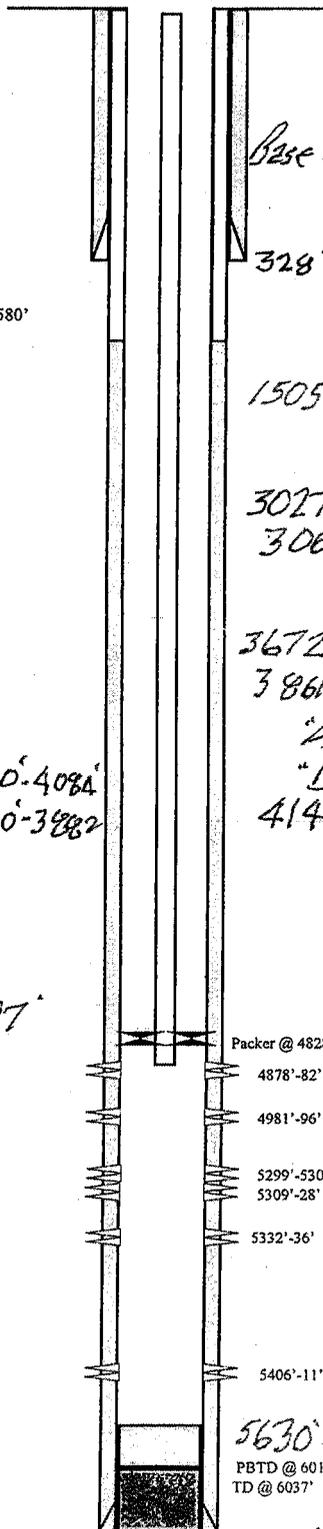
SIZE/GRADE/WT.: 2-7/8"/6.5#/J-55 tbg.  
NO. OF JOINTS: 171 jts.  
TUBING ANCHOR: 5364.71' KB  
NO. OF JOINTS: 2 jts (63.13)  
SEATING NIPPLE: 2-7/8" (1.10')  
SN LANDED AT: 5430.64' KB  
NO. OF JOINTS: 2 jts (62.83)  
TOTAL STRING LENGTH: EOT @ 5495.02' KB

*80% Bond { 4010-4084  
3600-3882*

*Douglas Creek 4797'*

**Proposed Injection**

**Wellbore Diagram**



**FRAC JOB**

8/2/00 5299'-5411'

Frac ALDC sands as follows:  
112,219# 20/40 sd in 610 bbls Viking I-25 fluid. Hole filled w/ 82 bbls. Perfs broke back @ 2713 psi @ 13 BPM. Treated @ avg press of 1900 psi w/ avg rate of 32 BPM. ISIP - 1820 psi, 5 min: 1690. RD BJ. Flwbk frac on 12/64" choke for 4-1/2 hours & died. Rec 179 BTF (est 29% of frac load). SIFN w/ est 477 BWTR

8/4/00 4878'-4996'

Frac D/C sand as follows:  
74,380# 20/40 sand in 461 bbls Viking I-25 fluid. Perfs broke back @ 3700' @ 10 BPM. Treated @ avg press of 1800 psi w/ avg rate of 32 BPM. ISIP: 1935 psi, 5 min: 1820 psi. RD BJ. Flowback frac on 12/64" choke for 1-1/2 hours & died. Rec 71 BTF (est 15% of frac load). SIFN w/ est 751 BWTR

Parted rods: Updated Tubing and Rod detail.

**PERFORATION RECORD**

Date	Depth Range	Perforations	Holes
8/2/00	5299'-5304'	4 JSPF	20 holes
8/2/00	5309'-5328'	4 JSPF	76 holes
8/2/00	5332'-5336'	4 JSPF	16 holes
8/2/00	5406'-5411'	4 JSPF	20 holes
8/2/00	5415'-5422'	4 JSPF	28 holes
8/3/00	4878'-4882'	4 JSPF	16 holes
8/3/00	4981'-4996'	4 JSPF	60 holes

**NEWFIELD**

Odekirk Spring #10-36-8-17  
1919 FSL 2007 FEL  
NWSE Section 36-T8S-R17E  
Uintah Co, Utah  
API #43-047-33198; Lease #ML-44305

## 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:** Odekirk Spring 10-36-8-17

TYPE OF TEST	DATE DUE
Standard Annulus Pressure	Prior to receiving authorization to inject and at least once within any five (5) year period following the last successful test.
Pore Pressure	Prior to receiving authorization to inject.

# 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)
Odekirk Spring 10-36-8-17	1,365

### 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: Odekirk Spring 10-36-8-17	APPROVED INJECTION INTERVAL (KB, ft)		FRACTURE GRADIENT (psi/ft)
	TOP	BOTTOM	
FORMATION NAME			
Green River	4,145.00	6,181.00	0.720

### 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.

<b>OBSERVE MONTHLY AND RECORD AT LEAST ONCE EVERY THIRTY DAYS</b>	
<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)
<b>ANNUALLY</b>	
<b>ANALYZE</b>	Injected fluid total dissolved solids (mg/l)
	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH
<b>ANNUALLY</b>	
<b>REPORT</b>	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and minimum annulus pressure(s) (psig)
	Each month's injected volume (bbl)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

In addition to these items, additional Logging and Testing results may be required periodically. For a list of those items and their due dates, please refer to APPENDIX B - LOGGING AND TESTING REQUIREMENTS.

## APPENDIX E

### PLUGGING AND ABANDONMENT REQUIREMENTS

The well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs and in accordance with other applicable Federal, State or local law or regulation. Tubing, packers, and any downhole apparatus shall be removed. Class A, C, G, and H cements, with additives such as accelerators and retarders that control or enhance cement properties, may be used for plugs. However, volume extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. Within sixty (60) days after plugging, the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. At a minimum, the following plugs are required:

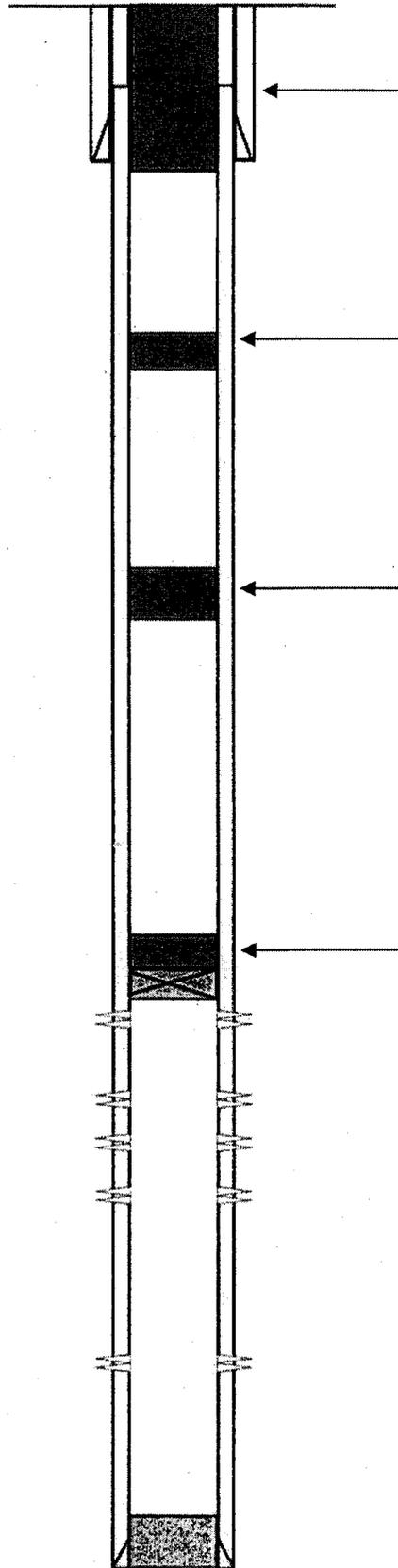
**PLUG NO. 1:** Set a cast iron bridge plug (CIBP) no more than 50 feet above the top perforation with a minimum 20-foot cement plug on top of the CIBP.

**PLUG NO. 2:** Perforate and squeeze cement up the backside of the 5-1/2 inch casing across the Trona Zone and the Mahogany Bench from approximately 2,978 feet 3,130 feet unless pre-existing backside cement precludes cement-squeezing this interval. Set a minimum 152-foot balanced cement plug inside the 5-1/2 inch casing from approximately 2,978 feet 3,130 feet.

**PLUG NO. 3:** Perforate and squeeze cement up the backside of the 5-1/2 inch casing across the contact between the Uinta Formation and Green River Formation (1,505 feet) from approximately 1,445 feet - 1,565 feet unless pre-existing backside cement precludes cement-squeezing this interval. Set a minimum 120-foot cement plug inside the 5-1/2 inch casing from approximately 1,445 feet to 1,565 feet.

**PLUG NO. 4:** Set a Class "G" cement plug within the 5-1/2 inch casing to 378 feet and up the 5-1/2 inch x 8-5/8 inch casing annulus to the surface.

## Plugging and Abandonment Diagram Odekirk Spring 10-36-8-17



Plug 4: Set a Class "G" cement plug within the 5-1/2 inch casing surface to 378 feet and up the 5-1/2 inch X 8-5/8 inch casing annulus to the surface.

Plug 3: Perforate and squeeze cement up the backside of the casing across the contact between the Uinta Formation and Green River Formation, 1,445 feet - 1,565 feet, unless existing backside cement precludes cement-squeezing this interval. Set a minimum 120-foot balanced cement plug inside the casing from approximately 1,445 feet - 1,565 feet.

Plug 2: Perforate and squeeze cement up the backside of the casing across the Trona Zone and Mahogany Bench from approximately 2,978 feet - 3,130 feet unless pre-existing backside cement precludes cement-squeezing this interval. Set a minimum 152-foot balanced cement plug inside of the casing approximately 2,978 feet - 3,130 feet.

Plug 1: Set a cast iron bridge plug (CIBP) no more than 50 ft above the top perforation with a minimum of 20 ft cement plug on top of the CIBP.

## APPENDIX F

### CORRECTIVE ACTION REQUIREMENTS

S-36-8-17 will be monitored weekly at the surface for evidence of fluid movement out of the injection zone.

Newfield developed a corrective action monitoring program, effective July 10, 2008, entitled "Procedure related to proposed Class II Enhanced Oil Recovery Injection Wells determined by the EPA to have specific Area of Review (AOR) wells with inadequate cement across the Confining Zone".

If possible fluid movement out of the injection zone is identified, either through the weekly monitoring, through Newfield's July 10, 2008 procedure described above, or through any other means (for example, evidence of fluid flow or increased bradenhead annulus pressure readings, tubing-casing annulus pressure readings, or other evidence of a mechanical integrity failure), the Permittee will shut in Odekirk Spring 10-36-8-17 immediately and notify the Director. No injection into Odekirk Spring 10-36-8-17 will be permitted until the Permittee has notified the Director that the situation has been resolved, submitted Rework Records (EPA Form No. 7520-12) and a schematic diagram, and received authorization from the Director to re-commence injection.

# NEWFIELD



ROCKY MOUNTAINS

**RE: Procedure related to proposed Class II Enhanced Oil Recovery Injection Wells determined by the EPA to have specific Area of Review (AOR) wells with inadequate cement across the confining zone**

Effective July 10, 2008 Newfield Production Company will implement the following procedure to address concerns related to protection of Underground Sources of Drinking Water (USDW) in AOR wells where the interval of cement bond index across the confining zone behind pipe has been determined to be inadequate. The procedure is intended to meet the corrective action requirements found in the UIC Class II permit, as well as provide data that could be used to detect and prevent fluid movement out of the proposed injection zone.

- 1) Establish baseline production casing by surface casing annulus pressures prior to water injection in subject well with a calibrated gauge.
- 2) Record the baseline pressure, report findings to Newfield engineering group and keep on file so it is available upon request
- 3) Place injection well in service. Run packer integrity and radioactive tracer logs to verify wellbore integrity and determine zones taking water.
- 4) Construct a geologic cross section showing zones taking water and their geologic equivalent zones in the AOR wells.
- 5) Submit a report of the packer integrity log, radioactive tracer log, and geologic cross section to the Newfield engineering staff for review and keep on file so it is available upon request
- 6) Weekly observations of the site will be made by Newfield during normal well operating activities. Any surface discharge of fluids will be reported immediately.
- 7) After injection well is placed in service, weekly observations of annulus pressure will be made and compared to baseline pressure and will be recorded once monthly. The recorded pressure information will be kept on file and be available upon request.
- 8) If pressure increases by more than 10% above baseline at any time in an AOR well with insufficient cement bond, Newfield will run a temperature survey log in subject well. This log, in concert with the geologic cross section, will enable the determination of water movement in the open hole by production casing annulus through a shift in geothermal gradient.
- 9) If water movement is determined in annulus, Newfield will shut in the injection well and repair the production casing by open hole annulus or leave the injection well out of service.

# **STATEMENT OF BASIS**

**NEWFIELD PRODUCTION CO.  
ODEKIRK SPRING 10-36-8-17  
UINTAH COUNTY, UT**

**EPA PERMIT NO. UT22174-08788**

***CONTACT:*** Emmett Schmitz  
U. S. Environmental Protection Agency  
Ground Water Program, 8P-W-GW  
1595 Wynkoop Street  
Denver, Colorado 80202-1129  
Telephone: 1-800-227-8917 ext. 312-6174

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.

EPA UIC permits regulate the injection of fluids into underground injection wells so that the injection does not endanger underground sources of drinking water. EPA UIC permit conditions are based upon the authorities set forth in regulatory provisions at 40 CFR Parts 144 and 146, and address potential impacts to underground sources of drinking water. Under 40 CFR 144.35 Issuance of this permit does not convey any property rights of any sort or any exclusive privilege, nor authorize injury to persons or property of invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. 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 the 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 operation of an "existing" 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 Co.  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

on

May 11, 2010

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

Odekirk Spring 10-36-8-17  
1919' FSL & 2007' FEL, NWSE S36, T8S, R17E  
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.

An "existing" well is an injection well which began injection operation prior to the November 25, 1988 effective date for the UIC Program on all Indian lands in Utah.

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.

All depths given in the Statement of Basis reference the Kelly Bushing datum unless otherwise specified.

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.

Odekirk Spring 10-36-8-17 is a Green River Formation oil production well. It is the intent of the applicant to move the packer from its current depth of 5,365 feet to a depth of 4,828 feet for well conversion from oil production to injection of brine for Class II enhanced recovery.

**TABLE 1.1**  
**WELL STATUS / DATE OF OPERATION**

<b>NEW WELLS</b>		
<b>Well Name</b>	<b>Well Status</b>	<b>Date of Operation</b>
Odekirk Spring 10-36-8-17	New	N/A

**PART II. Permit Considerations (40 CFR 146.24)**

**Hydrogeologic Setting**

Water wells for domestic supply in this area, when present, generally are completed into the shallow alluvium, the Duchesne River Formation, or the underlying Uinta Formation, and the water generally contains approximately 500 to 1,500 mg/l and higher total dissolved solids.

The Uinta-Animas aquifer in the Uinta Basin is present in water-yielding beds of sandstone, conglomerate, and siltstone of the Duchesne River and Uinta Formations, the Renegade Tongue of the Wasatch Formation, and the Douglas Creek Member of the Green River Formation. The Renegade Tongue of the Wasatch Formation and the Douglas Creek Member of the Green River Formation contain an aquifer along the southern and eastern margins of the basin where the rocks primarily consist of fluvial, massive, irregularly bedded sandstone and siltstone. Water-yielding units in the Uinta-Animas aquifer in the Uinta Basin commonly are separated from each other and from the underlying Mesaverde aquifer by units of low permeability composed of claystone, shale, marlstone, or limestone. In the Uinta Basin, for example, the part of the aquifer in the Duchesne River and Uinta Formations ranges in thickness from 0 feet at the southern margin of the aquifer to as much as 9,000 feet in the north-central part of the aquifer. Ground-water recharge to the Uinta-Animas aquifer generally occurs in the areas of higher altitude along the margins of the basin. Ground water is discharged mainly to streams, springs, and by transpiration from vegetation growing along stream valleys. The rate of ground-water withdrawal is small, and natural discharge is approximately equal to recharge. Recharge occurs near the southern margin of the aquifer, and discharge occurs near the White and Green Rivers (from USGS publication HA 730-C). Water samples from Mesaverde sands in the nearby Natural Buttes Unit yielded highly saline water.

**Geologic Setting (TABLE 2.1)**

The proposed Class II enhanced oil recovery injection well is located in the Greater Monument Butte Field, T7-9S and R15-19E, which lies near the center of the broad, gently northward dipping south flank of the Uinta Basin. More than 450 million barrels of oil (63 MT) have been produced from sediments of the Uinta Basin. The Uinta Basin is a topographic and structural trough encompassing an area of more than 9,300 square miles (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 was formed in Paleocene to Eocene time, creating a large area of internal drainage which was filled by the ancestral Lake Uinta. The lacustrine, or fresh water lake-formed, sediments deposited in and around Lake Uinta make up the Uintah and Green River Formations. The southern shore of Lake Uinta was very broad and flat, resulting in large cyclic shifts of the location of the shoreline during the many repeated transgressive and regressive cycles caused by the climatic and tectonic-induced rise and fall of

water levels of the lake. Distributary-mouth bars, distributary channels, and near-shore bars are the primary oil 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 Duchesne River Formation is absent in this area. Shale and siltstone of the Uintah Formation outcrop and compose the surface rock throughout the area. The lower 600 feet to 800 feet of the Uinta Formation, consisting generally of shale interbedded with occasionally water-bearing sandstone lenses between 5 feet to 20 feet thick, is underlain by the Green River Formation. The Green River Formation is further subdivided into several Member and local marker units. The cyclic nature of Green River deposition in the southern shore area resulted in numerous stacked, intertonguing deltaic and near-shore sand and silt deposits. Red alluvial shale and siltstone deposits that intertongue with the Green River sediments are of the Colton and Wasatch Formations. Under the Wasatch Formation is the Mesaverde Formation, which consists primarily of continental-origin deposits of interbedded shale, sandstone, and coal.

The geologic dip is about 200 feet per mile, and there are no known surface faults in this area. Veins of gilsonite, a natural resinous hydrocarbon occasionally mined as a resource, occurs in the greater Uintah Basin though it is predominantly found on the eastern margin of the basin near the Colorado border. Vertical veins, generally between 2 feet to 6 feet wide but up to 28 feet wide, may extend many miles in length and occasionally extend as deep as 2,000 feet.

**TABLE 2.1**  
**GEOLOGIC SETTING**  
**Odekirk Spring 10-36-8-17**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Uinta: Publication 92	0	100	< 10,000	Sand and shale.
Uinta	100	1,505		Interbedded lacustrine sand, shale and carbonate with some fluvial sand and shale.
Green River	1,505	6,181		Interbedded lacustrine sand, shale, carbonate and minor evaporite with some fluvial sand and shale.
Green River: Trona	3,028	3,064		Evaporite.
Green River: Mahogany Bench	3,064	3,080		Oil shale.
Green River: Administrative Confining Zone	3,672	3,861		Shale.
Green River: Garden Gulch Marker	3,861	4,145		Lacustrine sand, shale and carbonate with some fluvial sands and shale.
Green River: Shale "A"	3,954	4,035		Shale.
Green River: Shale "B" Confining Zone	4,063	4,145		Shale.
Green River: Garden Gulch No. 2	4,145	4,797		Interbedded lacustrine sand, shale and carbonate with some fluvial sand and shale.
Green River: Douglas Creek Member	4,797	6,056	5,442	Interbedded lacustrine sand, shale and carbonate with some fluvial sand and shale.
Green River: Basal Carbonate Member	6,056	6,181		Carbonate. Depth estimated.

**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.

EPA approved injection interval is located between the top of the Garden Gulch Member No. 2 (4,145 feet) and the top of the Wasatch Formation estimated to be 6,181 feet.

**TABLE 2.2**  
**INJECTION ZONES**  
**Odekirk Spring 10-36-8-17**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
Green River	4,145	6,181		0.720		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 82-foot (4,063 feet - 4,145 feet) "B" Shale Confining Zone directly overlies the top of the Garden Gulch Member No. 2. The "B" Shale contains twenty-one (21) feet of 80% cement bond.

**TABLE 2.3**  
**CONFINING ZONES**  
**Odekirk Spring 10-36-8-17**

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Green River: Shale "B".	Shale	4,063	4,145

**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.

Enhanced oil recovery operations are ongoing throughout the Greater Monument Butte Field area. Historic water samples of the Green River Formation taken in conjunction with this activity have generally exhibited a Total Dissolved Solids (TDS) content in excess of 10,000 mg/l. More recent water samples from the field show TDS values lower than 10,000 mg/l and these occurrences are often attributable to the introduction of fresh water for the purpose of enhanced oil recovery.

The TDS of water produced from the proposed injection well is less than 10,000 mg/l. EPA has evaluated additional data and information and concluded that the original Green River formation water at this location was saline prior to enhanced oil recovery water flooding. The weight of evidence supports the conclusion that the occasional water sample from this area showing less than 10,000 mg/l is not representative of original Green River formation water, and is attributed to injection of relatively freshwater during enhanced oil recovery operations. Because this freshening

effect from water flood operations is considered by EPA to be a temporary, artificial condition, an aquifer exemption is not required for this proposed injection well.

The State of Utah Division of Water Rights website at <http://utstnrwrt6.waterrights.utah.gov>, identifies no public water supply wells within the one-quarter (1/4) mile Area-of-Review (AOR) around the Odekirk Spring 10-36-8-17.

Technical Publication No. 92: State of Utah, Department of Natural Resources, cites the lowermost base of Underground Sources of Drinking Water (USDW) to be approximately 100 feet from the surface. Absent definitive information on the water quality of the Uinta Formation, from the depth of 100 feet to the base of the Uinta Formation at 1,505 feet, EPA will require, during plugging and abandonment, a cement plug at the base of the Uinta Formation to prevent contamination of possible Uinta USDWs

**TABLE 2.4**  
**UNDERGROUND SOURCES OF DRINKING WATER (USDW)**  
**Odekirk Spring 10-36-8-17**

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uinta: Publication 92	Sand and shale.	0	100	< 10,000
Uinta	Interbedded lacustrine sand, shale and carbonate with some fluvial sand and shale.	100	1,505	

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

Odekirk Spring 10-36-8-17 was drilled to a total depth of 6,037 feet (KB) in the Douglas Creek Member. Plug back total depth (PBSD) is 6,011 feet. Twenty-one (21) feet of 80% cement bond within "B" Shale Confining Zone.

Surface casing (8-5/8 inch) was set at a depth of 328 feet in a 12-1/4 inch hole using 141 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 6,018 feet (KB) in a 7-7/8 inch hole with 745 sacks cement. Well construction and cement bond are considered adequate to protect USDWs.

Cement Bond Log (CBL) identifies top of cement at 580 feet.

The schematic diagram shows enhanced recovery 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 4,145 feet (Top of Garden Gulch Member No. 2) and the top of the Wasatch Formation (Estimated to be 6,181 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 set no higher than 100 feet above the top perforation.

**TABLE 3.1**  
**WELL CONSTRUCTION REQUIREMENTS**  
**Odekirk Spring 10-36-8-17**

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Surface	12.25	8.63	0 - 328	0 - 328
Production	7.88	5.50	0 - 6,018	580 - 6,037

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 of this "existing" 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 details for "existing" injection 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 TCA must be kept closed to allow any pressure buildup inside the TCA to be detected and for monitoring of the TCA as required by 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  
AOR AND CORRECTIVE ACTION**

Well Name	Type	Status (Abandoned Y/N)	Total Depth (ft)	TOC Depth (ft)	CAP Required (Y/N)
Odekirk Spring 11-36-8-17	Injector	No	6,150	1,080	No
Odekirk Spring 15-36-8-17	Injector	No	6,150	580	No
Odekirk Spring 9-36-8-17	Injector	No	5,939	650	No
Odekirk Spring M-36-8-17	Producer	No	6,332	78	No
Odekirk Spring S-36-8-17	Producer	No	6,261	1,150	Yes

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.

Under 40 CFR 144.55, "existing" wells are exempt from corrective action requirements. The applicant has shown that this well qualifies for such an exemption because the well began injection operation prior to the November 25, 1988 effective date of the UIC Program on all Indian lands in Utah.

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

**TABLE 5.1**  
**INJECTION ZONE PRESSURES**  
**Odekirk Spring 10-36-8-17**

Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
Green River	4,878	0.720	1,365

### 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 and drum rinsate from trucks and drums transporting or containing non-exempt waste, is prohibited.

The injectate is a blend of drinking water from the Johnson Water District supply pipeline and/or the Green River supply pipeline, as well as produced Green River Formation water from wells proximate to the Odekirk Spring 10-36-8-17. All sources are blended at Newfield's relative injection facility. A January 5, 2010, analysis of the injectate describes total dissolved solids as 2,897mg/l with a specific gravity (SG) of 1.002 mg/l. Prior to January 3, 2007, Newfield historically, with EPA concurrence, used a SG 1.005 on most calculations of injection pressure. In anticipation of increased water production vis a vis increased well completions, Newfield, on January 3, 2007, with EPA concurrence, raised the SG to 1.015 on most future Permits, excepting occurrences of TDS and SG exceeding 1.015.

### **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 or daily volume of authorized Class II fluid injected into the approved Green River Formation interval.

### **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.

Internal Mechanical Integrity (Part I MI) will be demonstrated prior to beginning injection. A successful Part I Mechanical Integrity Test (MIT) is required prior to receiving authorization to inject and no less than five years after the last successful MIT. A demonstration of Part I MI is also required prior to resuming injection following any workover operation that affects the tubing, packer, or casing. Part I MI is demonstrated by a standard annulus pressure test using the maximum permitted injection pressure or 1000 psi, whichever is less, with a ten percent or less pressure loss over thirty minutes.

External Mechanical Integrity (Part II MI) has been demonstrated by the Cement Bond Log (CBL)

for Odekirk Spring 10-36-8-17 which shows a sufficient interval of 80 percent cement bond index through the Confining Zone. This CBL will be held by EPA as a continual demonstration of Part II MI for Odekirk Spring 10-36-8-17 and will fulfill the Federal requirements for the Part II MI demonstration to be repeated no less than once every 5 years. No further demonstration of Part II MI is required at the time of Permit issue.

## **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, annulus pressure, monthly injection flow rate and cumulative fluid volume. 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 shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs, and in accordance with any applicable Federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520 13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The plugging and abandonment plan is described in Appendix E of the Permit.

Plug No. 1 is required to prevent migration of fluids out of the injection zone. It is believed that there are no USDWs below Plug No. 1.

Plug 2 ( 2,978 feet to 3,130 feet.): This plug is required to isolate the Trona-Bird's Nest aquifer which is known to contain USDWs in some parts of the Uinta Basin. The Mahogany Bench oil shale is included in this plug to fulfill requirements set by the Bureau of Land Management (BLM) to prevent fluid movement into that resource. The Permittee is responsible for being aware of, and complying with, all BLM requirements in addition to EPA requirements described in this Permit.

Plug 3 (1,445 feet to 1,565 feet): This plug is required to prevent fluid movement into or between the Uinta and Green River Formations, both of which are known to contain USDWs.

Plug 4 (Surface to 378 feet): This plug is required to isolate shallow USDWs from surface water runoff into the abandoned well and to prevent fluid movement into or between shallow USDWs and the Uinta Formation. It is set to a depth of 50 feet below the base of surface casing or to 50 feet below the lowermost USDW according to Technical Publication 92, whichever is deeper.

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

### **Demonstration of Financial Responsibility**

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 demonstration of Financial Responsibility in the amount of \$59,344 has been reviewed and approved by the EPA.

The Director may revise the amount required, and may require the Permittee to obtain and provide updated estimates of plugging and abandonment costs according to the approved Plugging and Abandonment Plan.

Financial Statement, received May 16, 2008

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

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

5. LEASE DESIGNATION AND SERIAL NUMBER:  
UTAH STATE ML-44305

**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:  
GMBU

1. TYPE OF WELL: OIL WELL  GAS WELL  OTHER

8. WELL NAME and NUMBER:  
ODEKIRK SPRING 10-36-8-17

2. NAME OF OPERATOR:  
NEWFIELD PRODUCTION COMPANY

9. API NUMBER:  
4304733198

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:  
GREATER MB UNIT

4. LOCATION OF WELL:  
FOOTAGES AT SURFACE: 1919 FSL 2007 FEL

COUNTY: UINTAH

OTR/OTR. SECTION. TOWNSHIP. RANGE. MERIDIAN: NWSE, 36, T8S, R17E

STATE: UT

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

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:	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
10/27/2010	<input checked="" 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 type="checkbox"/> OTHER: -
	<input checked="" 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.

The subject well has been converted from a producing oil well to an injection well on 10/20/10.  
New interval added: 5686-5746' 3JSPF.

On 10/20/2010 Jason Deardorff with the EPA was contacted concerning the initial MIT on the above listed well. On 10/27/2010 the casing was pressured up to 1450 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 0 psig during the test. There was not an EPA representative available to witness the test.

EPA# UT22174-08788 API# 43-047-33198

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

NAME (PLEASE PRINT) Lucy Chavez-Naupoto

TITLE Administrative Assistant

SIGNATURE



DATE 11/03/2010

(This space for State use only)

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NOV 08 2010

DIV. OF OIL, GAS & MINING

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.

**SUBMIT IN TRIPLICATE - Other Instructions on page 2**

5. Lease Serial No.  
UTAH STATE ML-44305

6. If Indian, Allottee or Tribe Name.

7. If Unit or CA/Agreement, Name and/or  
GMBU

8. Well Name and No.  
ODEKIRK SPRING 10-36-8-17

9. API Well No.  
4304733198

10. Field and Pool, or Exploratory Area  
GREATER MB UNIT

11. County or Parish, State  
UINTAH, UT

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 (include are code)  
435.646.3721

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
1919 FSL 2007 FEL  
NWSE Section 36 T8S R17E

**12. CHECK APPROPRIATE BOX(ES) TO INIDICATE 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	<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	Change Status _____	
	<input checked="" 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 recompletion 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.)

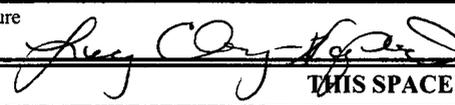
The subject well has been converted from a producing oil well to an injection well on 10/20/10.  
New interval added: 5686-5746' 3JSPF.  
On 10/20/2010 Jason Deardorff with the EPA was contacted concerning the initial MIT on the above listed well. On 10/27/2010 the casing was pressured up to 1450 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 0 psig during the test. There was not an EPA representative available to witness the test.

EPA# UT22174-08788 API# 43-047-33198

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**NOV 08 2010**

**DIV. OF OIL, GAS & MINING**

I hereby certify that the foregoing is true and correct (Printed/ Typed) Lucy Chavez-Naunoto	Title Administrative Assistant
	Signature 
	Date 11/03/2010

**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 page 2)

# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
Underground Injection Control Program  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

**RECEIVED**

NOV 08 2010

EPA Witness: \_\_\_\_\_ Date: 10 / 27 / 10 DIV. OF OIL, GAS & MINING  
Test conducted by: Austin Harrison  
Others present: \_\_\_\_\_

Well Name: <u>Onekik Spring 10-36-8-17</u>	Type: ER SWD	Status: AC TA UC
Field: <u>Monument Butte</u>		
Location: <u>10</u> Sec: <u>36</u> T <u>8</u> N <u>(S)</u> R <u>17</u> <u>(E)</u> W	County: <u>Uintah</u>	State: <u>UT</u>
Operator: <u>NEWFIELD PRODUCTION</u>		
Last MIT: <u>  </u> / <u>  </u> / <u>  </u>	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: 0 psig

MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	<u>0</u> psig	psig	psig
End of test pressure	<u>0</u> psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	<u>1450</u> psig	psig	psig
5 minutes	<u>1450</u> psig	psig	psig
10 minutes	<u>1450</u> psig	psig	psig
15 minutes	<u>1450</u> psig	psig	psig
20 minutes	<u>1450</u> psig	psig	psig
25 minutes	<u>1450</u> psig	psig	psig
30 minutes	<u>1450</u> psig	psig	psig
_____ minutes	psig	psig	psig
_____ minutes	psig	psig	psig
<b>RESULT</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Does the annulus pressure build back up after the test ?     Yes     No

## MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness: \_\_\_\_\_

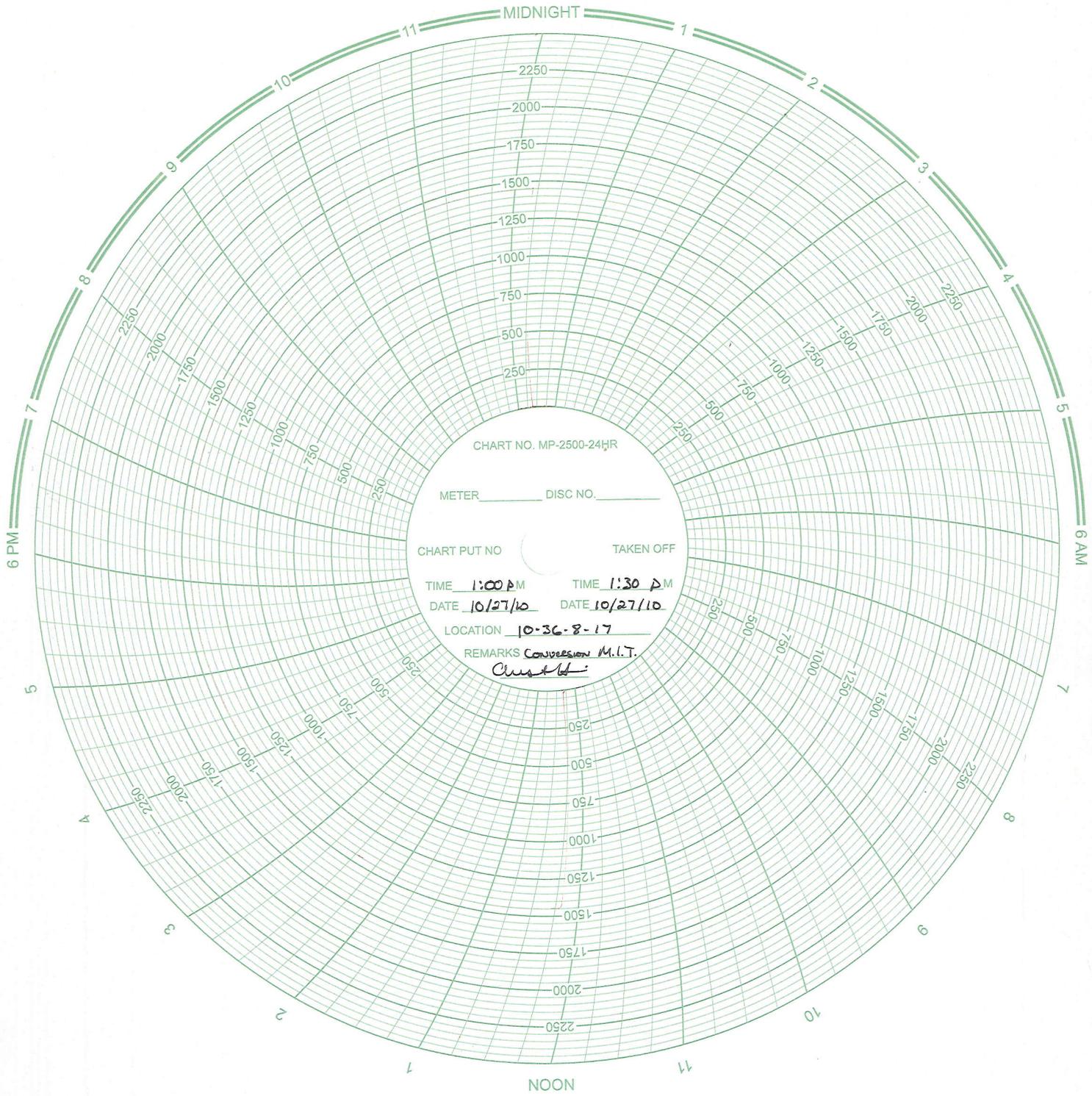


CHART NO. MP-2500-24HR

METER \_\_\_\_\_ DISC NO. \_\_\_\_\_

CHART PUT NO. \_\_\_\_\_ TAKEN OFF \_\_\_\_\_

TIME 1:00 PM DATE 10/27/10 TIME 1:30 PM DATE 10/27/10

LOCATION 10-36-8-17

REMARKS Conversion M.I.T.  
Crested

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DIV. OF OIL, GAS & MINING

**Daily Activity Report****Format For Sundry****ODEKIRK 10-36-8-17****8/1/2010 To 12/30/2010****10/15/2010 Day: 1****Conversion**

Nabors #809 on 10/15/2010 - MIRUSU. LD rod string on trailer. - MIRUSU. Hot oiler had pumped 60 BW down csg @ 250°. RD pumping unit. Unseat rod pump. Flush tbg & rods w/ 40 BW @ 250°. Soft seat rod pump. Fill tbg & pressure test to 3000 psi. LD rods as detailed. SWIFN.

**Daily Cost:** \$0**Cumulative Cost:** \$57,168**10/19/2010 Day: 2****Conversion**

Nabors #809 on 10/19/2010 - TOH w/ tbg (talleying, breaking collars & applying liquid O-ring to threads). Perforate CP2 & CP1 sds. - Talley & PU RBP, pkr & N-80 frac tbg. Set RBP @ 5706', PUH @ set pkr @ 5664'. Pressure tbg to 5000 psi attempting to break perfs w/o success (200 psi loss in 5 min). Release RBP, TIH & set RBP @ 5722'. PUH & set pkr @ 5664'. Break down perfs @ 4400 psi, establish injection rate of 1/4 BPM @ 3050 psi. Release pkr, TIH to RBP & release RBP. TIH & set RBP @ 5773'. PUH & set pkr @ 5726'. Pressure tbg to 5000 psi attempting to break down perfs w/o success. Wait for frac crew. RU BJ services. Pressure tbg to 7000 psi, pressure was slowly dropping. Perfs broke @ 4912 psi, establish injection rate of 3350 psi @ 2 1/2 BPM. Release pkr, PUH & set pkr @ 5640 psi. Frac CP2 & CP1 sds as detailed. Open for immediate flowback @ approx 3 BPM. Well flowed for approx 30 min & died. Recovered approx 85 bbls. Pressure csg to 200 psi & release pkr. Circulate well clean. TIH w/ tbg & tag fill @ 5753'. Clean out to RBP @ 5773'. Circulate well clean. Latch onto & release RBP. LD 30- jts 2 7/8" N-80 frac tbg. SWIFN. - Check pressure on well, 0 psi tbg & 100 psi csg. X-over for tbg. ND wellhead. TA was not set. NU BOPs. RU rig floor. TOH w/ tbg (talleying, breaking collars & applying liquid O-ring to threads). Flushed tbg w/ total of 60 BW @ 250° during TOH. LD 21- jts tbg & BHA. RU WLT. RIH w/ 4 3/4" gauge ring to 6003'. Perforate CP2 sds @ 5744-46' & 5732-33', CP1 sds @ 5712-14' & 5686-87'. POH w/ WL & RD WLT. SWIFN. - Check pressure on well, 0 psi tbg & 100 psi csg. X-over for tbg. ND wellhead. TA was not set. NU BOPs. RU rig floor. TOH w/ tbg (talleying, breaking collars & applying liquid O-ring to threads). Flushed tbg w/ total of 60 BW @ 250° during TOH. LD 21- jts tbg & BHA. RU WLT. RIH w/ 4 3/4" gauge ring to 6003'. Perforate CP2 sds @ 5744-46' & 5732-33', CP1 sds @ 5712-14' & 5686-87'. POH w/ WL & RD WLT. SWIFN. - Talley & PU RBP, pkr & N-80 frac tbg. Set RBP @ 5706', PUH @ set pkr @ 5664'. Pressure tbg to 5000 psi attempting to break perfs w/o success (200 psi loss in 5 min). Release RBP, TIH & set RBP @ 5722'. PUH & set pkr @ 5664'. Break down perfs @ 4400 psi, establish injection rate of 1/4 BPM @ 3050 psi. Release pkr, TIH to RBP & release RBP. TIH & set RBP @ 5773'. PUH & set pkr @ 5726'. Pressure tbg to 5000 psi attempting to break down perfs w/o success. Wait for frac crew. RU BJ services. Pressure tbg to 7000 psi, pressure was slowly dropping. Perfs broke @ 4912 psi, establish injection rate of 3350 psi @ 2 1/2 BPM. Release pkr, PUH & set pkr @ 5640 psi. Frac CP2 & CP1 sds as detailed. Open for immediate flowback @ approx 3 BPM. Well flowed for approx 30 min & died. Recovered approx 85 bbls. Pressure csg to 200 psi & release pkr. Circulate well clean. TIH w/ tbg & tag fill @ 5753'. Clean out to RBP @ 5773'. Circulate well clean. Latch onto & release RBP. LD 30- jts 2 7/8" N-80 frac tbg. SWIFN.

**Daily Cost:** \$0**Cumulative Cost:** \$37,262**RECEIVED**

NOV 08 2010

**10/21/2010 Day: 4****Conversion**

DIV. OF OIL, GAS &amp; MINING

Nabors #809 on 10/21/2010 - Con't LD frac tbg & tools. TIH W/ packer & test injection string. Set & test packer. RDMOSU. - RU HO trk & flush tbg W/ 40 BW @ 250°F. Pump 30 BW dn annulus to clean OD. Con't TOH & LD N-80 work string, pkr & plug. MU & TIH W/ new Weatherford 5 1/2" Arrowset 1-X packer (W/ wicker slips & W.L. re-entry guide), new 2 7/8 SN and 154 jts 2 7/8 8rd 6.5# J-55 tbg. Re-torque each connection on TIH. RU HO trk & pump 10 bbls pad. Drop standing valve & pump to SN. Pressure test tbg to 3000 psi. Bled air & re-bumped pressure several times. Final test held solid for 30 minutes. Retrieve standing valve W/ overshot on sandline. ND BOP & land tbg on flange. Mix 15 gals Multi-Chem C-6031 & 5 gals B-8850 in 70 bbls fresh water. Pump dn annulus @ 90°F. PU on tbg & set pkr W/ SN @ 4835', CE @ 4839' & EOT @ 4844'. Land tbg W/ 15,000# tension. NU wellhead. Pressure test annulus & pkr to 1500 psi. Holds solid for 1 hour. RDMOSU. - Perform MIT. Run Vaughn Energy Services gyro survey.

**Daily Cost:** \$0

**Cumulative Cost:** \$85,577

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**11/1/2010 Day: 5**

**Conversion**

Rigless on 11/1/2010 - Conversion MIT. - On 10/20/2010 Jason Deardorff with the EPA was contacted concerning the Conversion MIT on the above listed well (Odekirk 10-36-8-17). On 10/27/2010 the csg was pressured up to 1450 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tbg pressure was 0 psig during the test. There was not an EPA representative available to witness the test. Final Report EPA# UT 22174-08788 API#43-047-33198 **Finalized**

**Daily Cost:** \$0

**Cumulative Cost:** \$110,897

---

**Pertinent Files: [Go to File List](#)**

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NOV 08 2010

DIV. OF OIL, GAS & MINING



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8**

1595 Wynkoop Street  
DENVER, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

**NOV 24 2010**

Ref: 8P-W-GW

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

Mr. Michael Guinn  
District Manager  
Newfield Production Company  
Route 3 - Box 3630  
Myton, UT 84052

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

RE: Underground Injection Control (UIC)  
Authorization to Commence Injection  
EPA UIC Permit UT22174-08788  
Well: Odekirk Spring 10-36-8-17  
NWSE Sec. 36-8S-R17E  
Uintah County, UT  
API No.: 43-047-33198

Dear Mr. Guinn:

The U.S. Environmental Protection Agency (EPA), Region 8, has received Newfield Production Company's (Newfield) November 3, 2010, letter with enclosures. The enclosed Part I (internal) Mechanical Integrity test, Well Rework Record (EPA Form 7520-12), schematic diagram, and calculated pore pressure were reviewed and approved by EPA, satisfactorily completing all Prior to Commencing Injection Requirements for UIC Permit UT22174-08788.

As of the date of this letter, Newfield is authorized to commence injection into the Odekirk Spring 10-36-8-17 well at a Maximum Allowable Injection Pressure (MAIP) of 1,365 psig. You may apply for a higher MAIP at a later date. Your application should be accompanied by the interpreted results of a step rate test that measures the fracture parting pressure and calculates the fracture gradient at this depth and location. Newfield must receive prior authorization from the Director to inject at pressures greater than the permitted MAIP during any test.

As of this approval, responsibility for permit compliance and enforcement is transferred to EPA's UIC Technical Enforcement Program. Therefore, please direct all monitoring and compliance correspondence to Nathan Wiser at the following address, referencing the well name and UIC Permit number on all correspondence:

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**DEC 09 2010**

**DIV. OF OIL, GAS & MINING**

Mr. Nathan Wiser  
U.S. EPA Region 8: 8ENF-UFO  
1595 Wynkoop Street  
Denver, CO 80202-1129

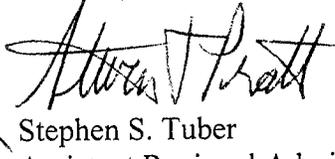
Or, you may reach Mr. Wiser by telephone at 303-312-6211, or 1 800-227-8927, ext. 312-6211.

Please remember that it is your responsibility to be aware of and to comply with all conditions of injection well Permit UT22174-08788.

If you have questions regarding the above action, please call Emmett Schmitz at 303-312-6174 or 1 800-227-8917, ext. 312-6174.

**FOR RECORD ONLY**

Sincerely,



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

cc: Uintah & Ouray Business Committee:  
Frances Poowegup, Vice-Chairwoman  
Curtis Cesspooch, Councilman  
Phillip Chimburas, Councilman  
Stewart Pike, Councilman  
Irene Cuch, Councilwoman  
Richard Jenks, Jr., Councilman

Daniel Picard  
BIA - Uintah & Ouray Indian Agency

Mike Natchees  
Environmental Coordinator  
Ute Indian Tribe

Manual Myore  
Director of Energy & Minerals Dept.  
Ute Indian Tribe

Brad Hill  
Acting Associate Director  
Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office  
BLM - Vernal Office

Eric Sundberg, Regulatory Analyst  
Newfield Production Company  
Denver, CO



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9  5. LEASE DESIGNATION AND SERIAL NUMBER: ML-44305
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  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: GMBU (GRRV)
1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: ODEKIRK SPRING 10-36-8-17
2. NAME OF OPERATOR: NEWFIELD PRODUCTION COMPANY	9. API NUMBER: 43047331980000
3. ADDRESS OF OPERATOR: Rt 3 Box 3630 , Myton, UT, 84052	PHONE NUMBER: 435 646-4825 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1919 FSL 2007 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 36 Township: 08.0S Range: 17.0E Meridian: S	9. FIELD and POOL or WILDCAT: MONUMENT BUTTE  COUNTY: UINTAH  STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 9/5/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text" value="2 YR MIT Inactive well"/>

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

On 09/04/2012 Nathan Wiser with the EPA was contacted concerning the 2-year MIT on the above listed inactive well. On 09/05/2012 the csg was pressured up to 1430 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tbg pressure was 0 psig during the test. There was not an EPA representative available to witness the test. EPA #UT22174-08788

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**  
September 11, 2012

NAME (PLEASE PRINT) Lucy Chavez-Naupoto	PHONE NUMBER 435 646-4874	TITLE Water Services Technician
SIGNATURE N/A	DATE 9/5/2012	

## Mechanical Integrity Test Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
Underground Injection Control Program  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

EPA Witness: \_\_\_\_\_ Date: 9/15/2012  
 Test conducted by: AUSTIN HARRISON  
 Others present: \_\_\_\_\_

UT22174-08788

Well Name: <u>Ondevic Spring 10-36-8-17</u>	Type: ER SWD	Status: AC TA UC
Field: <u>Monument Butte</u>		
Location: <u>10</u> Sec: <u>36</u> T <u>8</u> N/S R <u>17</u> E/W	County: <u>Uinta</u>	State: <u>UT</u>
Operator: <u>Newfield Prod. Co.</u>		
Last MIT: <u>1</u> / <u>1</u>	Maximum Allowable Pressure: <u>1365</u>	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: 0 psig

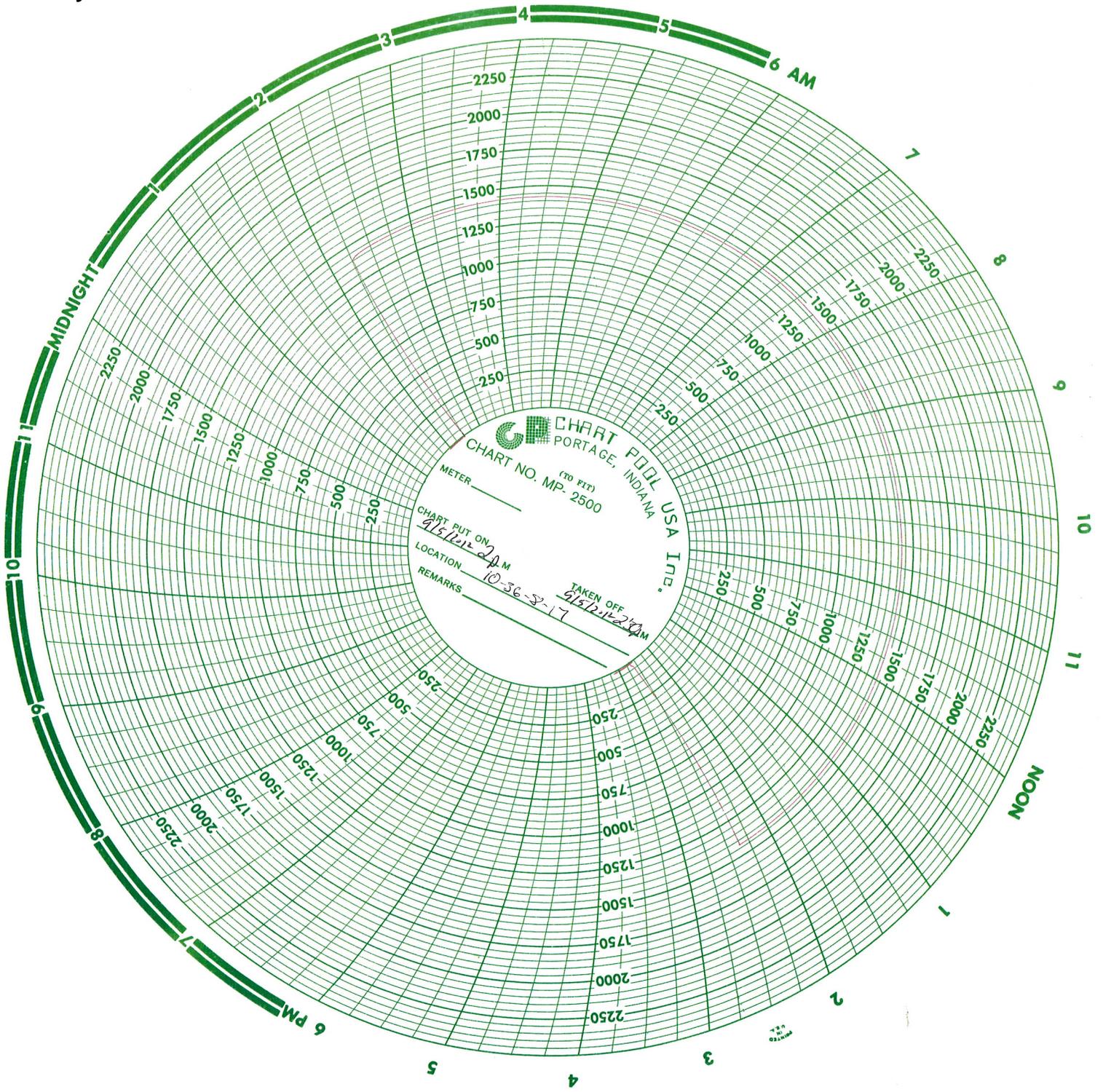
MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	<u>0</u> psig	psig	psig
End of test pressure	<u>0</u> psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	<u>1430</u> psig	psig	psig
5 minutes	<u>1430</u> psig	psig	psig
10 minutes	<u>1430</u> psig	psig	psig
15 minutes	<u>1430</u> psig	psig	psig
20 minutes	<u>1430</u> psig	psig	psig
25 minutes	<u>1430</u> psig	psig	psig
30 minutes	<u>1430</u> psig	psig	psig
_____ minutes	psig	psig	psig
_____ minutes	psig	psig	psig
<b>RESULT</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Does the annulus pressure build back up after the test?     Yes     No

### MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness: \_\_\_\_\_





GARY R. HERBERT  
Governor

GREGORY S. BELL  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

September 14, 2012

CERTIFIED MAIL NO.: 70110110000135682301

Mr. Tom Walker  
Newfield Production Company  
Route 3 Box 3630  
Myton, UT 84052

43 047 33198  
Odeleark Springs 10-36-8-17  
8S 17E 36

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

Dear Mr. Walker:

The Division of Oil, Gas and Mining (Division) would like to bring to the attention that Newfield Production Company (Newfield) has recently had three (3) State Lease Wells and one (1) Fee Lease Well added (see attachment A) as being in non-compliance with the requirements for extended shut-in or temporarily abandoned (SI/TA) status. One (1) additional State Lease Well has previously been issued a First Notice of SI/TA non-compliance. Newfield also has five (5) State Lease Wells that are past due on extended SI/TA status, which expired at the end of this summer (attachment A.) The Division recognizes that recent MIT's have been completed on these wells. For an extension to be considered, a sundry requesting extension with reason for extension needs to be submitted for each well (See Requirements Below.)

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
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).



Page 2  
Newfield Production Company  
September 14, 2012

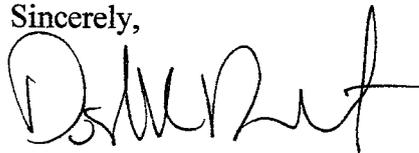
Please note that the Divisions preferred method for showing well integrity is by MIT.

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/ear

cc: LaVonne Garrison, SITLA  
Compliance File  
Well File

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

# ATTACHMENT A

	Well Name	API	LEASE	Years Inactive	Extension Expires
<b>Previously Received 1<sup>st</sup> Notice</b>					
1	CASTLE PK ST 43-16	43-013-30594	ML-16532	2 Years 1 Month	
<b>1<sup>st</sup> Notice</b>					
2	ASHLEY ST 6-2-9-15	43-013-32584	ML-43538	1 Year 6 Months	
3	NGC ST 33-32	43-047-31116	ML-22058	1 Year 5 Months	
4	REX LAMB 34-2	43-047-31692	FEE	1 Year 7 Months	
5	ODEKIRK SPRING 10-36-8-17	43-047-33198	ML-44305	1 Year 3 Months	
<b>Past due SI/TA Extension</b>					
6	STATE 16-2	43-013-30552	ML-3453B	38 Years 9 Months	
7	SUNDANCE 16-32-8-18	43-047-34466	ML-22058	8 Years	
8	GULF STATE 36-22	43-047-31892	ML-22057	5 Years 3 Months	
9	GULF STATE 36-13	43-047-31345	ML-22057	4 Years 6 Months	
10	GULF STATE 36-12	43-047-31864	ML-22057	3 Years 3 Months	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML-44305
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  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> ODEKIRK SPRING 10-36-8-17
<b>2. NAME OF OPERATOR:</b> NEWFIELD PRODUCTION COMPANY	<b>9. API NUMBER:</b> 43047331980000
<b>3. ADDRESS OF OPERATOR:</b> Rt 3 Box 3630 , Myton, UT, 84052	<b>PHONE NUMBER:</b> 435 646-4825 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1919 FSL 2007 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSE Section: 36 Township: 08.0S Range: 17.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> MONUMENT BUTTE  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 10/5/2012	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input checked="" type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input type="text" value="Shut In"/>

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

Converted to an injection well on 10/20/2010. Trunk line supplying injection water has not been installed. Therefore, injection has not commenced on this well but will do so once trunk line is in place. A MIT was performed on 9/4/12 and submitted to the State showing that the wellbore has integrity. WBD attached.

**Approved by the Utah Division of Oil, Gas and Mining**  
**Date:** November 19, 2012  
**By:** *Derek Duff*

<b>NAME (PLEASE PRINT)</b> Mandie Crozier	<b>PHONE NUMBER</b> 435 646-4825	<b>TITLE</b> Regulatory Tech
<b>SIGNATURE</b> N/A	<b>DATE</b> 10/5/2012	



**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices**

**Sundry Conditions of Approval Well Number 43047331980000**

**MIT testing as required through UIC permit and program.**

# Odekirk Spring 10-36-8-17

Spud Date: 7/5/00

Put on Production: 8/09/00  
GL: 4966' KB: 4976'

**SURFACE CASING**

CSG SIZE: 8-5/8"  
GRADE: J-55  
WEIGHT: 24#  
LENGTH: 8 jts. (304.18')  
DEPTH LANDED: 328'(GL)  
HOLE SIZE: 12-1/4"  
CEMENT DATA: 141 sxs Class G cmt,

Casing shoe @ 328'  
Top of Cement @ 580'

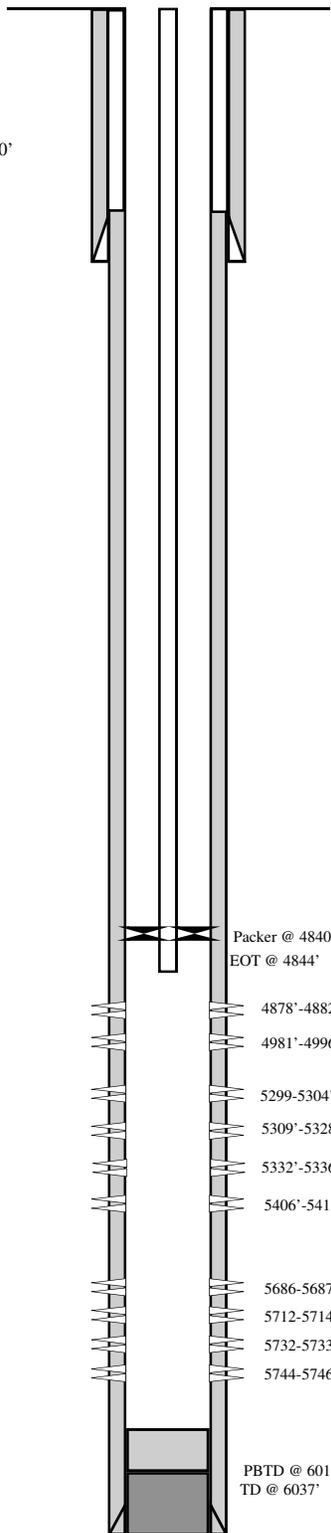
**PRODUCTION CASING**

CSG SIZE: 5-1/2"  
GRADE: J-55  
WEIGHT: 15.5#  
LENGTH: 142 jts. (6021.57')  
DEPTH LANDED: 6017.57'  
HOLE SIZE: 7-7/8"  
CEMENT DATA: 265 sx Premium lite II & 480 sx 50/50 Poz  
CEMENT TOP AT: 580' per Cement Bond Log

**TUBING (GI 10/15/10)**

SIZE/GRADE/WT.: 2-7/8"/J-55 / 6.5#  
NO. OF JOINTS: 154 jts. (4825.2)  
SEATING NIPPLE: 2-7/8" (1.10')  
SN LANDED AT: 4835.2' KB  
CE @ 4839.5'  
TOTAL STRING LENGTH: EOT @ 4844' KB

**Injection Wellbore Diagram**



Initial Production: 71 BOPD,  
106 MCFPD, 13 BWPD

**FRAC JOB**

**8/2/00 5299'-5422'** **Frac ALDC sands as follows:**  
112,219# 20/40 sd in 610 bbls Viking I-25 fluid. Hole filled w/ 82 bbls. Perfs broke back @ 2713 psi @ 13 BPM. Treated @ avg press of 1900 psi w/ avg rate of 32 BPM. ISIP - 1820 psi, 5 min: 1690. RD BJ. Flwbk frac on 12/64" choke for 4-1/2 hours & died. Rec 179 BTF (est 29% of frac load). SIFN w/ est 477 BWTR

**8/4/00 4878'-4996'** **Frac D/C sand as follows:**  
74,380# 20/40 sand in 461 bbls Viking I-25 fluid. Perfs broke back @ 3700' @ 10 BPM. Treated @ avg press of 1800 psi w/ avg rate of 32 BPM. ISIP: 1935 psi, 5 min: 1820 psi. RD BJ. Flowback frac on 12/64" choke for 2-1/2 hours & died. Rec 71 BTF (est 15% of frac load). SIFN w/ est 751 BWTR

**8-24-06** **Parted rods:** Updated Tubing and Rod detail.

**10/19/10 5686-5746'** **Frac CPI & CP2 sands as follows:**  
29595# 20/40 sands in 255 blls Lighting 17 fluid.

**10/20/10** **Convert to Injection well** – tbg detail updated

**10/27/10** **Conversion MIT Completed**

**PERFORATION RECORD**

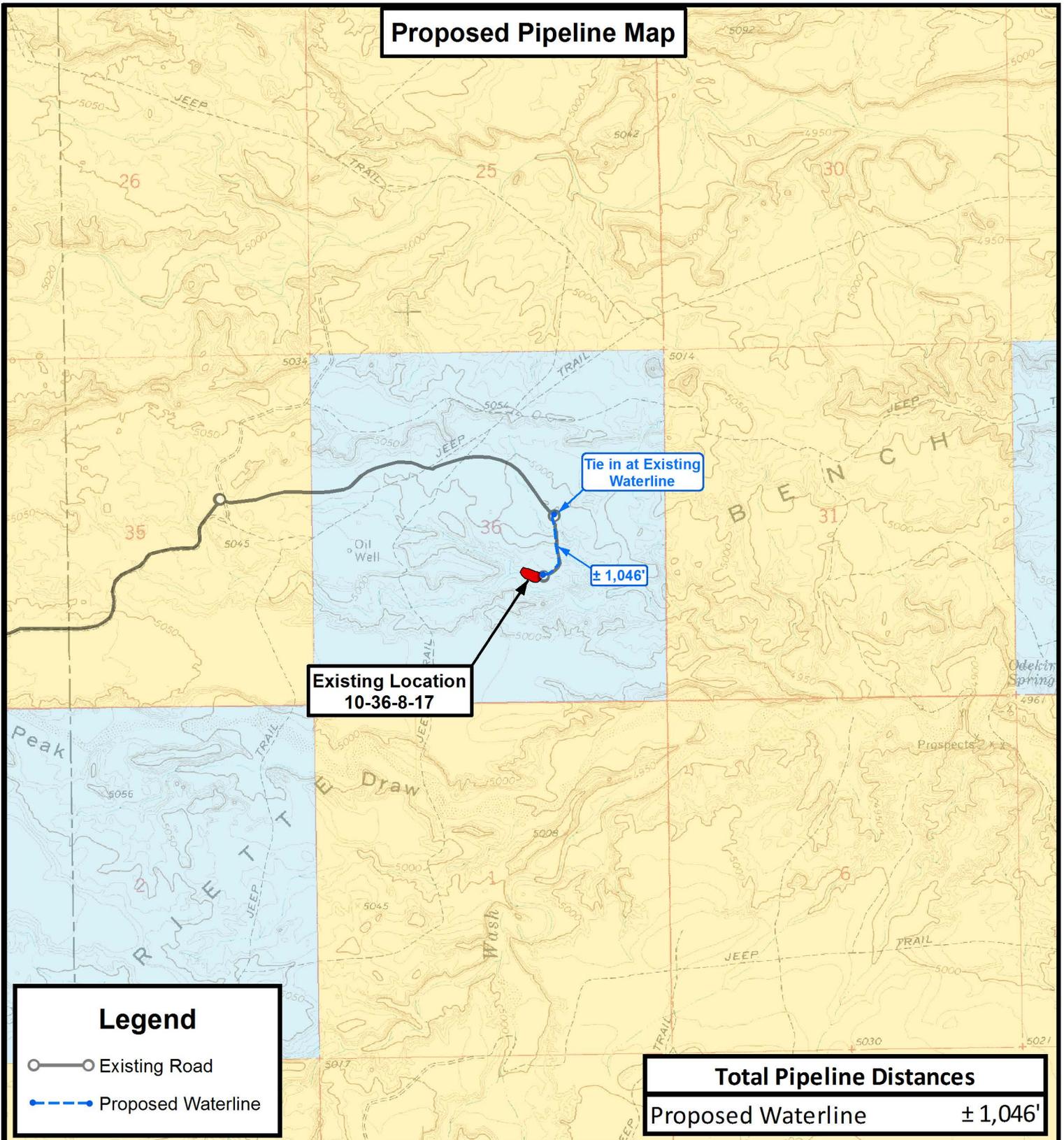
Date	Interval	Perforations	Holes
8/2/00	5299'-5304'	4 JSPF	20 holes
8/2/00	5309'-5328'	4 JSPF	76 holes
8/2/00	5332'-5336'	4 JSPF	16 holes
8/2/00	5406'-5411'	4 JSPF	20 holes
8/2/00	5415'-5422'	4 JSPF	28 holes
8/3/00	4878'-4882'	4 JSPF	16 holes
8/3/00	4981'-4996'	4 JSPF	60 holes
10/19/10	5744-5746'	3 JSPF	6 holes
10/19/10	5732-5733'	3 JSPF	3 holes
10/19/10	5712-5714'	3 JSPF	6 holes
10/19/10	5686-5687'	3 JSPF	3 holes

**NEWFIELD**

**Odekirk Spring 10-36-8-17**  
1919' FSL & 2007 FEL  
NWSE Section 36-T8S-R17E  
Uintah Co, Utah  
API #43-047-33198; Lease #ML-44305

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-44305
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> ODEKIRK SPRING 10-36-8-17	
<b>2. NAME OF OPERATOR:</b> NEWFIELD PRODUCTION COMPANY	<b>9. API NUMBER:</b> 43047331980000	
<b>3. ADDRESS OF OPERATOR:</b> Rt 3 Box 3630 , Myton, UT, 84052	<b>PHONE NUMBER:</b> 435 646-4825 Ext	<b>9. FIELD and POOL or WILDCAT:</b> MONUMENT BUTTE
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1919 FSL 2007 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSE Section: 36 Township: 08.0S Range: 17.0E 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: 12/10/2012  <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 type="checkbox"/> OTHER	
	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input checked="" type="checkbox"/> <b>NEW CONSTRUCTION</b> <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: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>Newfield request approval of a 3" diameter buried pipeline for purposes of water injection to the existing 10-36-8-17 well in GMBU, E/2 of section 36 T8 R17E. 1046' x 15' disturbance would be necessary to install the line. Reclamation activities would commence after construction within season.</p>		<p><b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY December 20, 2012</b></p>
<b>NAME (PLEASE PRINT)</b> Tim Eaton	<b>PHONE NUMBER</b> 465 646-4858	<b>TITLE</b> Regulatory Tech
<b>SIGNATURE</b> N/A	<b>DATE</b> 12/10/2012	

**Proposed Pipeline Map**



**Existing Location  
10-36-8-17**

**Tie in at Existing  
Waterline**

**± 1,046'**

**Legend**

- Existing Road
- Proposed Waterline

<b>Total Pipeline Distances</b>	
Proposed Waterline	± 1,046'

THE PARCEL INFORMATION SHOWN HAS NOT BEEN SURVEYED BY TRI-STATE LAND SURVEYING, INC. - TRI-STATE DOES NOT WARRANTY PROPERTY PARCEL DATA OR ANY ASSOCIATED INFORMATION. A PROPERTY SURVEY IS REQUIRED TO DETERMINE THE ACTUAL LOCATION OF PROPERTY LINES AND SHOW ACCURATE DISTANCES ACROSS PARCELS.

**Tri State  
Land Surveying, Inc.**  
180 NORTH VERNAL AVE. VERNAL, UTAH 84078

P: (435) 781-2501  
F: (435) 781-2518



**NEWFIELD EXPLORATION COMPANY**

**10-36-8-17  
SEC. 36, T8S, R17E, S.L.B.&M.  
Uintah County, UT.**

DRAWN BY:	D.C.R.	REVISED:	VERSION:
DATE:	10-26-2012		<b>V1</b>
SCALE:	1" = 2,000'		

**TOPOGRAPHIC MAP**

SHEET  
**C**

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  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>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML-44305
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>1. TYPE OF WELL</b> Water Injection Well		<b>7. UNIT or CA AGREEMENT NAME:</b> GMBU (GRRV)
<b>2. NAME OF OPERATOR:</b> NEWFIELD PRODUCTION COMPANY		<b>8. WELL NAME and NUMBER:</b> ODEKIRK SPRING 10-36-8-17
<b>3. ADDRESS OF OPERATOR:</b> Rt 3 Box 3630 , Myton, UT, 84052		<b>9. API NUMBER:</b> 43047331980000
<b>PHONE NUMBER:</b> 435 646-4825 Ext		<b>9. FIELD and POOL or WILDCAT:</b> MONUMENT BUTTE
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1919 FSL 2007 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSE Section: 36 Township: 08.0S Range: 17.0E Meridian: S		<b>COUNTY:</b> UINTAH
		<b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 1/18/2013	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input checked="" type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input checked="" type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input type="text" value="Put on Injection"/>

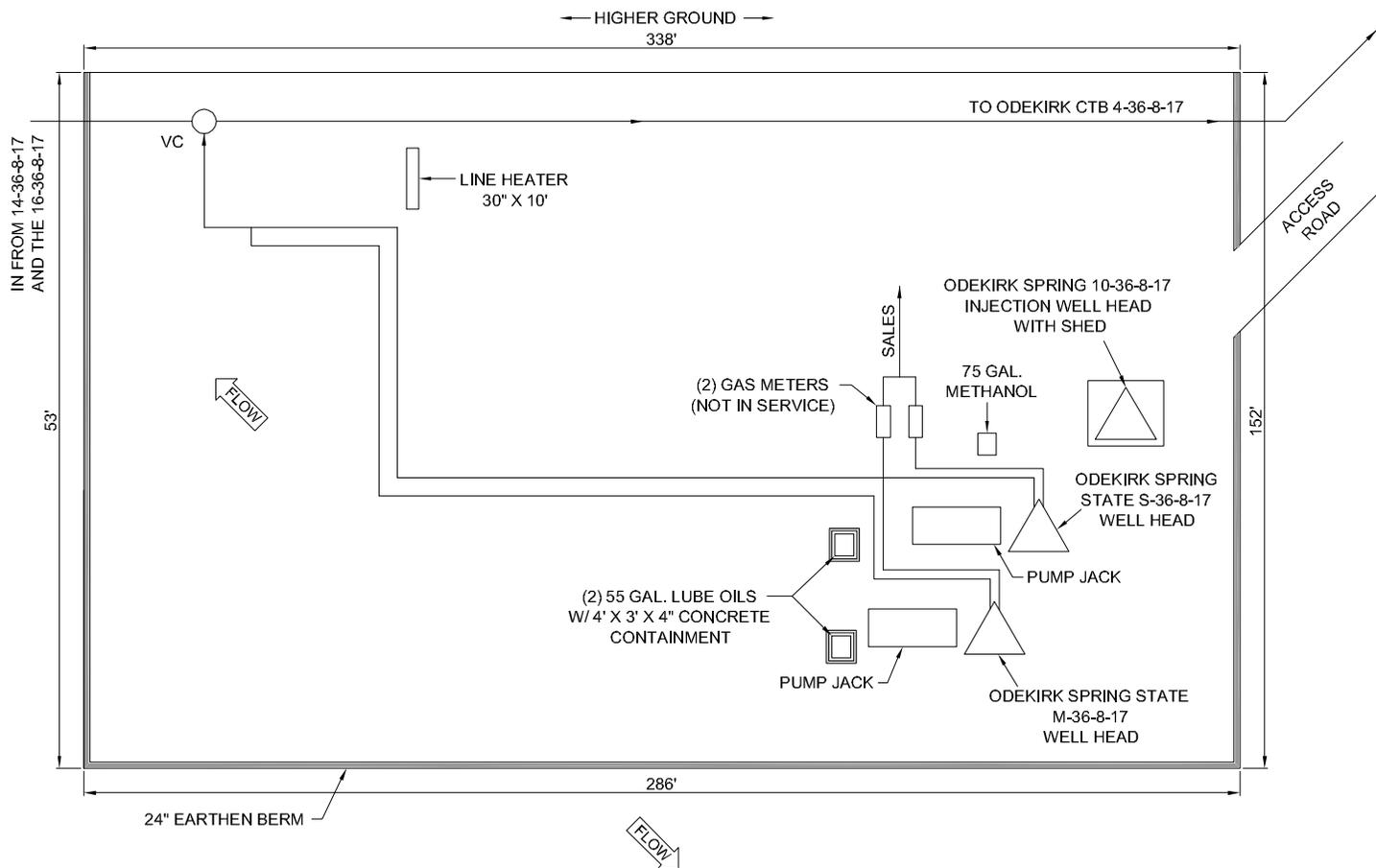
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The above reference well was put on injection at 4:00 PM on  
01/18/2013. EPA # UT22197-08788

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY  
February 12, 2013**

<b>NAME (PLEASE PRINT)</b> Lucy Chavez-Naupoto	<b>PHONE NUMBER</b> 435 646-4874	<b>TITLE</b> Water Services Technician
<b>SIGNATURE</b> N/A	<b>DATE</b> 1/21/2013	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9	
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<b>2. NAME OF OPERATOR:</b> NEWFIELD PRODUCTION COMPANY		<b>9. API NUMBER:</b> 43047331980000	
<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> MONUMENT BUTTE	
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1919 FSL 2007 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSE Section: 36 Township: 08.0S Range: 17.0E Meridian: S		<b>COUNTY:</b> UINTAH	
		<b>STATE:</b> UTAH	
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TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 1/23/2014  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <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: <input type="text" value="Site Facility/Site Security"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.			
SEE ATTACHED REVISED SITE FACILITY DIAGRAM			
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 27, 2014</b>			
<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> 1/23/2014	



Federal Lease #: UTU-87538X  
(ML-44305)

	ODEKIRK SPRING 10-36-8-17, ODEKIRK SPRING STATE S-36-8-17, AND ODEKIRK SPRING STATE M-36-8-17
	Newfield Exploration Company NWSE Sec 36, T8S, R17E Uintah County, UT
N.T.S.	
M.G.	
FEB 2013	

RECEIVED: Jan. 23, 2014