

**Petroglyph Operating Co., Inc.**  
**P.O. Box 1839**  
**Hutchinson, KS 67504-1839**

November 7, 1996

Utah Division of Oil, Gas, & Mining  
Attn: Mr. Frank Matthews, Petroleum Engineer  
1594 West North Temple  
Box 145801  
Salt Lake City, UT 84114-5801

**RE: APPLICATION FOR PERMIT TO DRILL**  
**UTE TRIBAL #21-10**  
**Lot 3, SEC. 21, T5S, R3W**  
**DUCHESNE COUNTY, UTAH**  
**LEASE NO. BIA 14-20-H62-3516**  
**UTE TRIBAL LANDS**

Dear Mr. Matthews:

Enclosed please find a copy of the Application for Permit to Drill and associated attachments for the referenced well.

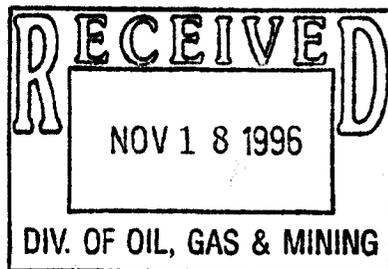
Please address further communication regarding this matter (including approval) to:

Ed Trotter  
P.O. Box 1910  
Vernal, UT 84078  
Phone # (801) 789-4120  
Fax # (801) 789-1420

Sincerely,

  
Ed Trotter  
Agent

**Petroglyph Operating Co., Inc.**



Attachments

/EHT/dmt

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK  
 DRILL  DEEPEN

b. TYPE OF WELL  
 OIL WELL  GAS WELL  OTHER  SINGLE ZONE  MULTIPLE ZONE

2. NAME OF OPERATOR  
 PETROGLYPH OPERATING COMPANY, INC.

3. ADDRESS AND TELEPHONE NO.  
 P.O. BOX 607, ROOSEVELT, UT 84066

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*)  
 At surface  
 2022' FSL & 3344' FWL Lot 3  
 At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 20.7 MILES SOUTHWEST OF MYTON, UTAH

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 2022'  
 (Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE  
 533.33

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.  
 6080.8' *GRV*

19. PROPOSED DEPTH

20. ROTARY OR CABLE TOOLS  
 ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 6302.8' GRADED GROUND

22. APPROX. DATE WORK WILL START\*  
 NOVEMBER, 1996

5. LEASE DESIGNATION AND SERIAL NO.  
 14-20-H62-3516

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
 UTE INDIAN TRIBE

7. UNIT AGREEMENT NAME

8. FARMOR LEASE NAME, WELL NO.  
 UTE TRIBAL

9. API WELL NO.  
 #21-10

10. FIELD AND POOL, OR WILDCAT  
 ANTELOPE CREEK 060

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 Sec. 21, T5S, R3W

12. COUNTY OR PARISH | 13. STATE  
 DUCHESNE | UTAH

*W. 500*

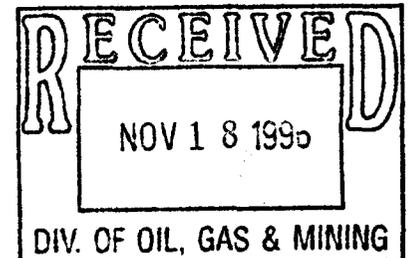
PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	8 5/8	24.0#	250'	135 sx class "G" + 2% CaCl <sub>2</sub> + 1/4 #/sx celloflake. 50/50 POZMIX + 2% GEL + 10% SALT TO 400' ABOVE ALL ZONES OF INTEREST (+ 10% EXCESS). LIGHT CEMENT (11 PPG + ) + LCM TO 200' ABOVE OIL SHALE OR FRESH WATER INTERVALS (+ 5% EXCESS).
7 7/8	5 1/2	15.5#	6080.8'	

CONFIDENTIAL

PETROGLYPH OPERATING COMPANY, INC. WILL BE THE DESIGNATED OPERATOR OF THE SUBJECT WELL UNDER BOND # BO 4556.

pc: Utah Division of Oil, Gas, and Mining  
 Bureau of Indian Affairs, Fort Duchesne, Utah  
 Ute Tribe, Fort Duchesne, Utah



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data 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.

24. SIGNED *Red L. Roth* TITLE AGENT FOR PETROGLYPH DATE 11-8-96

(This space for Federal or State office use)

PERMIT NO. 43-013-31748 APPROVAL DATE \_\_\_\_\_

Application approval 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. CONDITIONS OF APPROVAL, IF ANY:

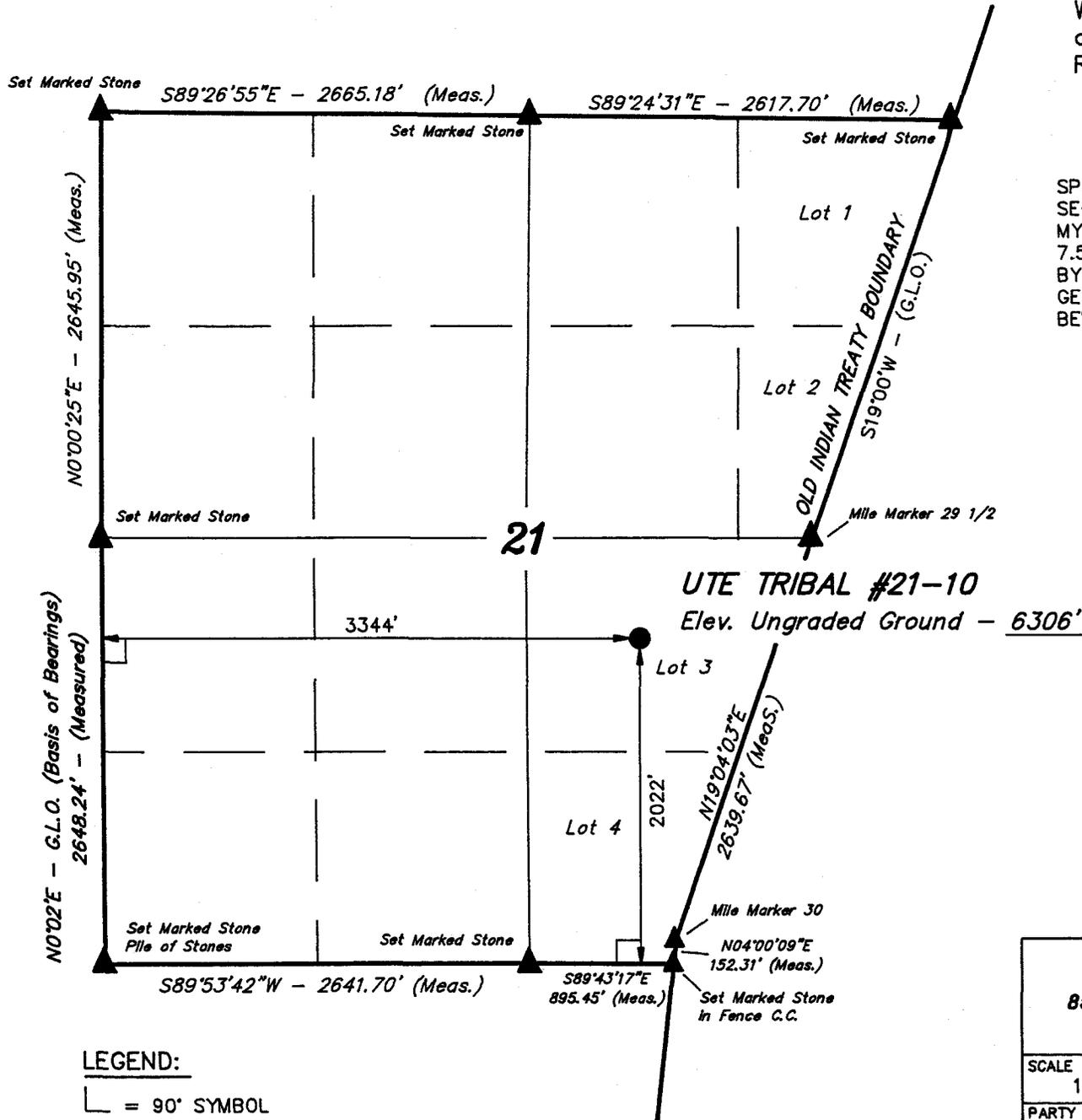
APPROVED BY *Matthews* TITLE Petroleum Engineer DATE 12/3/91

\*See Instructions On Reverse Side

T5S, R3W, U.S.B.&M.

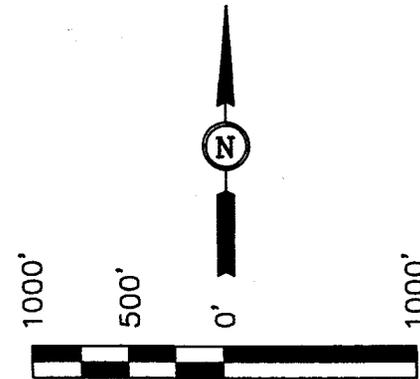
**PETROGLYPH OPERATING CO., INC.**

Well location, UTE TRIBAL #21-10, located as shown in Lot 3 of Section 21, T5S, R3W, U.S.B.&M. Duchesne County, Utah.



**BASIS OF ELEVATION**

SPOT ELEVATION LOCATED IN THE NW 1/4 SW 1/4 OF SECTION 28, T5S, R3W, U.S.B.&M. TAKEN FROM THE MYTON SW QUADRANGLE, UTAH, DUCHESNE COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 6573 FEET.



SCALE

**CERTIFICATE**

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.

*Robert L Kay*

REGISTERED LAND SURVEYOR  
REGISTRATION NO. 161319  
STATE OF UTAH

**UNTAH ENGINEERING & LAND SURVEYING**  
85 SOUTH 200 EAST - VERNAL, UTAH 84078  
(801) 789-1017

**LEGEND:**

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

SCALE 1" = 1000'	DATE SURVEYED: 10-18-96	DATE DRAWN: 10-28-96
PARTY B.B. B.H. D.R.B.	REFERENCES G.L.O. PLAT	
WEATHER COOL	FILE PETROGLYPH OPERATING CO., INC.	

EIGHT POINT PLAN

UTE TRIBAL #21-10  
Lot 3, SEC. 21, T5S R3W  
DUCHESNE COUNTY, UTAH

1. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS:

FORMATIONS	DEPTH	SUBSEA
Mahogany Shale	2884.8	3428
'X' marker	4466.8	1846
Douglas Creek	4606.8	1706
"B" Limestone	4983.8	1329
B/Castle Peak Limestone	5537.8	775
Basal Carbonate Limestone	5970.8	342
Total Depth	6080.8	232

Anticipated BHP                      2600 psi

2. ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERALS FORMATIONS:

Substance	Formation	Depth	Subsea
Oil/Gas	Douglas Creek	4606.8	1706
Oil/Gas	B/Castle Peak	5537.8	775
Other mineral zones	N/A		

3. PRESSURE CONTROL EQUIPMENT : BOP Schematic Diagram attached.

4. CASING PROGRAM :

HOLE SIZE	INTERVAL	LENGTH	SIZE	WEIGHT	GRADE	<u>MINIMUM SAFETY FACTOR</u>		
						<u>COLLAPSE</u>	<u>BURST</u>	<u>TENSILE</u>
12 1/4	0' - 250'	250'	8 5/8	24.0 #	J-55	1370 PSI	2950 PSI	263,000#
7 7/8	0' - 6080.8'	6080.8'	5 1/2	15.5 #	M-50	3650 PSI	4550 PSI	186,000#

All casing will be new or inspected.

EIGHT POINT PLAN

UTE TRIBAL #21-10  
Lot 3, SEC. 21, T5S R3W  
DUCHESNE COUNTY, UTAH

5. MUD PROGRAM

INTERVAL

0' - 250'  
250' - 4000'  
4000' - TD  
TD

MUD TYPE

Air  
Air/Mist & Aerated Water  
Air/3% KCL water or KCL substitute  
Gel/polyacrylamide polymer w/5-10% LCM

Sufficient mud inventory will be maintained on location during drilling to handle any adverse conditions that may arise.

6. VARIANCE REQUESTS:

- A. Petroglyph Operating Co., Inc. requests a variance to regulations requiring a straight run blooie line.
- B. Petroglyph Operating Co., Inc. requests a variance to regulations requiring an automatic ignitor or continuous pilot light on the blooie line.

7. EVALUATION PROGRAM:

Logs: Mud Logging	T.D. to base of surface csg.
Compensated Density-Compensated Neutron Log	T.D. to base of surface csg.
Dual Laterolog - Micro-SFL	T.D. to base of surface csg.
Numar (Magnetic Resonance Imaging Log)	@ Geologists discretion

Cores: None Programmed  
DST': None Programmed

Completion: To be submitted at a later date.

8. ABNORMAL CONDITIONS:

None anticipated.

EIGHT POINT PLAN

UTE TRIBAL #21-10  
Lot 3, SEC. 21, T5S R3W  
DUCHESNE COUNTY, UTAH

9. STANDARD REQUIRED EQUIPMENT:

- A. Choke Manifold
- B. Kelly Cock
- C. Stabbing Valve
- D. Visual Mud Monitoring

10. HAZARDOUS CHEMICALS:

No chemicals subject to reporting under SARA title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

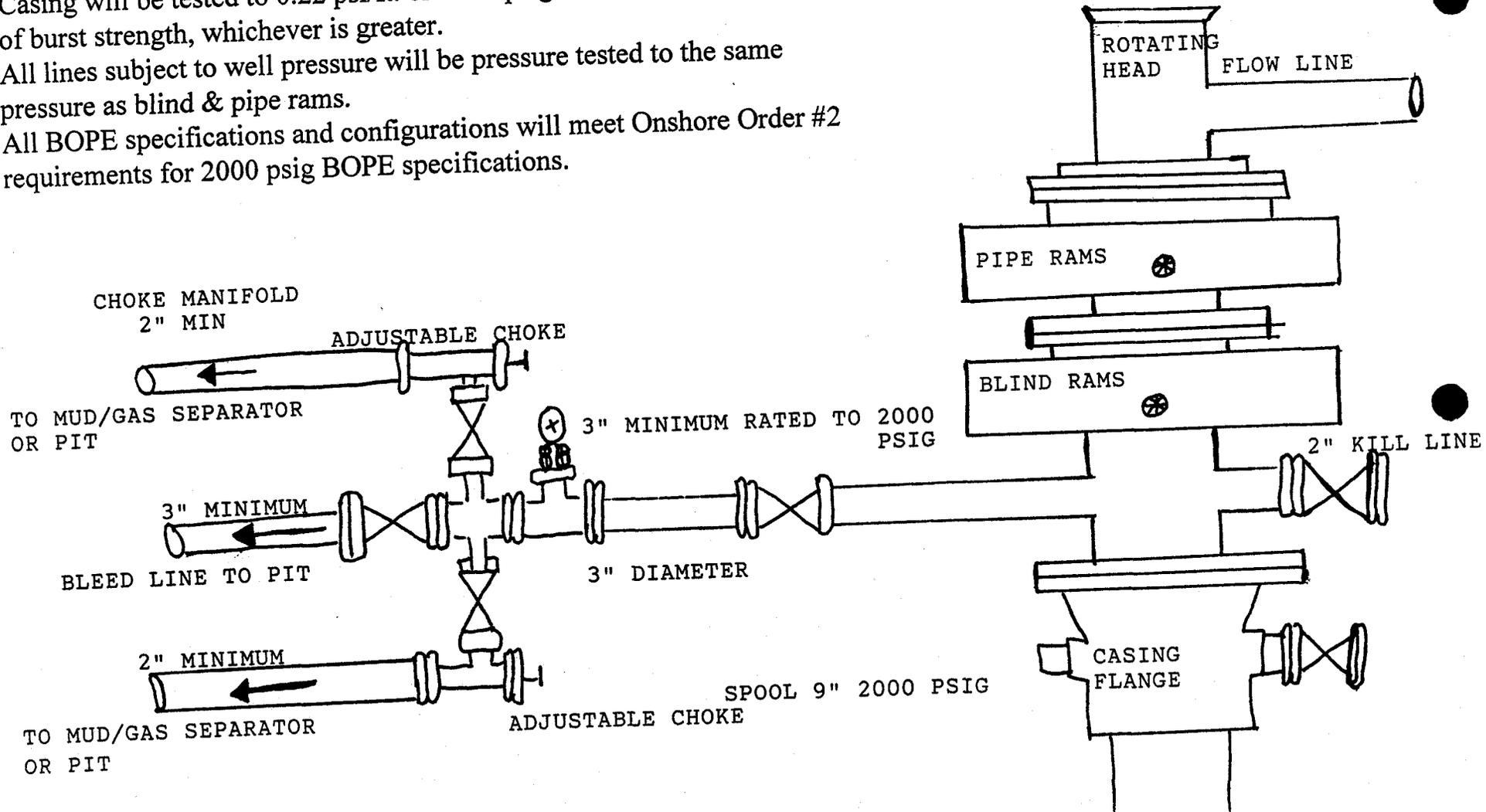
(Attachment: BOP Schematic Diagram)

# 2000 PSIG DIAGRAM

BOTH RAMS ARE 2000 PSIG RATED.  
 CASING FLANGE IS 9" 2000 PSIG RATED.  
 BOPE 9" 2000 PSIG

## TESTING PROCEDURE:

1. BOPE 's will be tested with a professional tester to conform to Onshore Order #2 with retest every 14 days.
2. Blind rams will be tested to rated working pressure, 2000 psig
3. Casing will be tested to 0.22 psi/ft. or 1500 psig. Not to exceed 70% of burst strength, whichever is greater.
4. All lines subject to well pressure will be pressure tested to the same pressure as blind & pipe rams.
5. All BOPE specifications and configurations will meet Onshore Order #2 requirements for 2000 psig BOPE specifications.



**CONDITIONS OF APPROVAL  
FOR THE SURFACE USE PROGRAM OF THE  
APPLICATION FOR PERMIT TO DRILL**

Company/Operator: Petroglyph Operating Co., Inc.  
Well Name & Number: Ute Tribal #21-10  
Lease Number: BIA 14-20-H62-3516  
Location: 2022' FSL & 3344' FWL NW/SE, Lot 3, Sec. 21, T5S R3W  
U.S.B.&M., Duchesne County, Utah  
Surface Ownership: Ute Indian Tribe

**NOTIFICATION REQUIREMENTS**

Location Construction - forty-eight (48) hours prior to construction of location and access roads.

Location Completion - prior to moving on the drilling rig.

Spud Notice - at least twenty-four (24) hours prior to spudding the well.

Casing String and Cementing - twenty-four (24) hours prior to running casing and cementing all casing strings.

BOP and related Equipment Tests - twenty-four (24) hours prior to running casing and tests.

First Production Notice - within five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

For more specific details on notification requirements, please check the Conditions of Approval for Notice To Drill and Surface Use Program.

## THIRTEEN POINT SURFACE USE PROGRAM

### 1. EXISTING ROADS

- A. See attached Wellsite Plats showing directional reference stakes on location, and attached TOPO Map "B" showing access to location from existing road.
- B. The proposed well site is located approximately 20.7 miles southwest of Myton, Utah - See attached TOPO Map "A".
- C. Refer to attached Topographic Map "A" showing labeled access route to location.
- D. Existing roads will be maintained and repaired as necessary. No off lease Right-of-Way will be required.

### 2. PLANNED ACCESS ROAD

- A. The access road will be approximately 150 feet in length. See attached TOPO Map "B"
- B. The access road has a 30 foot ROW w/18 foot running surface.
- C. Maximum grade on access road will be 8%
- D. No turnouts will be required.
- E. Road drainage crossings shall be of the typical dry creek drainage crossing type.
- F. No culverts, bridges or major cuts & fills will be required.
- G. The access road will be dirt surface.
- H. No gates, cattleguards or fences will be required or encountered.

New or reconstructed roads will be centerlined - flagged at time of location staking.

All travel will be confined to existing access road Right-of-Way. Access roads and surface disturbing activities will conform to standards outlined in the Bureau of Land Management and Forest Service Publication: Surface Operating Standards For Oil & Gas Exploration and Development, (1989).

The road shall be upgraded to meet the standards of the anticipated traffic flow and all-weather road requirements. Upgrading shall include ditching, drainage, graveling, crowning, and capping the

roadbed as necessary to provide a well-constructed safe road.

Prior to upgrading, the road shall be cleared of any snow cover and allowed to dry completely. Traveling off the 30 foot Right-of- Way will not be allowed.

Road drainage crossings shall be of the typical dry creek drainage crossing type. Crossings shall be designed so they will not cause siltation or accumulation of debris in the drainage crossings nor shall the drainages be blocked by the roadbed. Erosion of drainage ditches by run off water shall be prevented by diverting water off at frequent intervals by means of cutouts. Upgrading shall not be allowed during muddy conditions. Should mud holes develop, they shall be filled in and detours around them avoided.

As operator, Petroglyph Operating Co., Inc. shall be responsible for all maintenance on cattleguards, or gates associated with this oil and/or gas operation.

3. LOCATION OF EXISTING WELLS WITHIN A ONE MILE RADIUS OF PROPOSED WELL LOCATION

- A. Water wells - None
- B. Abandoned wells - None
- C. Temporarily abandoned wells - None.
- D. Disposal wells - None.
- E. Drilling wells - None.
- F. Producing wells - 8\*
- G. Shut in wells - None
- H. Injection wells - None

(\*See attached TOPO map "C" for location)

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

A. ON WELL PAD

- 1. Tank batteries - Yes
- 2. Production facilities-To be submitted later
- 3. Oil gathering lines - None

4. Gas gathering lines-None
5. Injection lines - None
6. Disposal lines - None
7. Surface pits - None

**B. OFF WELL PAD**

1. Proposed location of attendant off pad flowlines shall be flagged prior to archaeological clearance.
2. A 4 1/2" OD steel pipeline will be laid approximately 150' from proposed location to a point in the NW/SE of Section 21, T5S, R3W, where it will tie into Petroglyph Operating Co., Inc.'s existing pipeline. Proposed pipeline crosses Ute Tribe lands, thus a Right-of-Way grant will be required. See attached TOPO Map D showing pipeline route.
3. Proposed pipeline will be a 4 1/2" OD steel, welded line laid on the surface.
4. Protective measures and devices for livestock and wildlife will be taken and/or installed where required.

If storage facilities/tank batteries are constructed on this lease, the facility/battery or the well pad shall be surrounded by a containment dike of sufficient capacity to contain, at a minimum, the entire contents of the largest tank within the facility/battery, unless more stringent protective requirements are deemed necessary by the authorized officer.

The production facilities will be placed on the North side of the location.

All permanent (on site for six months or longer) structures constructed or installed (including pumping units) will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the Rocky Mountain Five State Interagency Committee. All facilities required will be painted within 6 months of installation. Facilities required to comply with O.S.H.A.

(Occupational Safety and Health Act) will be excluded.  
The required paint color is Desert Brown.

5. LOCATION & TYPE OF WATER SUPPLY

- A. Water supply will be from Target Trucking's Roosevelt Brine Storage and/or Target's water source in SE 1/4, Sec. 1, T 4S, R 5W Duchesne County, Utah (State water right #43-10152). All water will come from a non-depletable source.
- B. Water will be hauled by Target Trucking.
- C. No water well will be drilled on lease.

6. SOURCE OF CONSTRUCTION MATERIAL

- A. All construction material for this location and access road will be of native borrow and soil accumulated during the construction of location.
- B. All construction material will come from Ute Tribal Land.
- C. No mineral materials will be required.

7. METHODS OF HANDLING WASTE DISPOSAL

A. METHODS AND LOCATION

- 1. Cuttings will be confined in the reserve pit.
- 2. A portable toilet will be provided for human waste during the drilling and completion of the well. Disposal will be at the Vernal sewage disposal plant.
- 3. Burning will not be allowed. Trash and other waste material will be contained in a wire mesh cage and disposed of at an approved waste disposal facility.
- 4. Produced waste water will be confined to a lined pit or storage tank for a period not to exceed 90 days after initial production. During the 90 day period, an application for approval of a permanent disposal method and location, together with the required water analysis, will be submitted for the AO's approval.

5. All chemicals will be disposed of at an authorized disposal site. Drip pans and absorbent pads will be used on drilling rig to avoid leakage of oil to pit.

B. Water from drilling fluids and recovered during testing operations will be disposed of by either evaporating in reserve pit or be removed and disposed of at an authorized disposal site. Introduction of well bore hydrocarbons to reserve pit will be avoided by flaring them off in flare pit at time of recovery.

Burning of trash will not be allowed. All trash must be contained in a trash cage and hauled away to an approved disposal site at the completion of the drilling activities.

On BIA administered land:

All reserve pits will be lined with either native clay, commercial bentonite or plastic sufficient to prevent seepage. (If a plastic nylon reinforced liner is used, it shall be torn and perforated after the pit dries and before backfilling of the reserve pit).

A 12 mill liner shall be installed in the reserve pit.

To protect the environment:

If the reserve pit is lined the operator will provide the BIA with a chemical analysis of the fluids in that pit no later than 90 days after the well completion to determine the method for final reclamation of the reserve pit. If the elemental concentrations shown by the chemical analysis exceeds the requirements described by part II, Standards of Quality for Waters of the State, Wastewater Disposal Regulations, State of Utah Division of Health, the contents and liner will be removed and disposed of at an authorized disposal site.

To protect the environment (without a chemical analysis)  
reserve pits will be constructed so as not to leak, break, or allow discharge of liquids.

Storage tanks will be used if drill sites are located on tribal

irrigable land, flood plains, or on lands under crop production. After first production, produced waste water will be confined to a lined pit or storage tank for a period not to exceed ninety (90) days. During the 90 day period, in accordance with NTL-2B, an application for approval of a permanent disposal method and location, along with required water analysis, shall be submitted for the AO's approval. Failure to file an application within the time allowed will be considered an incident of noncompliance.

## 8. ANCILLARY FACILITIES

- A. No airstrips or camps are planned for this well.

## 9. WELL SITE LAYOUT

- A. Refer to attached well site plat for related topography cuts and fills & cross sections.
- B. Refer to attached well site plat for rig layout and soil material stockpile location as approved on On-site.
- C. Refer to attached well site plat for rig orientation parking areas, and access road.

The reserve pit will be located on the South side of the location.

The flare pit will be located downwind of the prevailing wind direction on the South side of the location, a minimum of 100 feet from the well head and 30 feet from the reserve pit fence.

The stockpiled topsoil will be stored on the Northeast corner.

Access to the well pad will be from the Northwest.

N/A Diversion ditch(es) shall be constructed on the \_\_\_\_\_ side of the location (above/below) the cut slope, draining to the \_\_\_\_\_

N/A Soil compacted earthen berm(s) shall be placed on the \_\_\_\_\_ side(s) of the location between the \_\_\_\_\_

N/A The drainage(s) shall be diverted around the sides of the well pad location.

N/A The reserve pit and/or pad locations shall be constructed long and narrow for topographic reasons \_\_\_\_\_

X Corners No. 2, 4, 6, & 8 will be rounded off to minimize excavation.

## FENCING REQUIREMENTS

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

- A. 39 inch net wire shall be used with at least one strand of barbed wire on top of the net wire. (barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence).
- B. The net wire shall be no more than 2 inches above the ground. The barbed wire strand shall be 3 inches above the net wire. Total height of the fence shall be at least 42 inches.
- C. Corner posts shall be cemented and/or braced in such a manner to keep the fence 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 16'.
- 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 the three sides during drilling operations and on the fourth side when the rig moves off the location. Pits will be fenced and maintained until clean-up.

Each existing fence to be crossed by the access road shall be braced and tied off before cutting so as to prevent slacking of the wire. The opening shall be closed temporarily as necessary during construction to prevent the escape of livestock, and upon completion of construction the fence shall be repaired to BIA or SMA specifications. A cattleguard with an adjacent 16 foot gate shall be installed in any fence where a road is to be regularly travelled. If the well is a producer, the cattleguards (shall/ shall not) be permanently mounted on concrete bases. Prior to a new road, crossing any fence located on federal land, or any fence between federal land and private land, the operator will contact the BIA, who will in turn contact the grazing permittee or owner of said fence and offer him/her the opportunity to be present when the fence is cut in order to

satisfy himself/herself that the fence is adequately braced and tied off.

## 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, materials, trash, and junk not required for production.

Immediately upon well completion, any hydrocarbons on the pit shall be removed in accordance with CFR 3162.7-1.

If a plastic nylon reinforced liner is used, it shall be torn and perforated before backfilling of the reserve pit.

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 120 days from the date of well completion (weather permitting). Before any dirt work takes place, the reserve pit will be completely dry and all cans, barrels, pipe, fluid, and hydrocarbons, will be removed.

Contact appropriate surface management agency for required seed mixture.

### B. DRY HOLE/ABANDONED LOCATION

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

#### ON BIA Administered lands:

Abandoned well sites, roads, or other disturbed areas will be restored to near their original condition. This procedure will include: (a) reestablishing irrigation systems where applicable, (b) reestablishing soil conditions in irrigated fields in such a way as to ensure cultivation and harvesting of crops and, (c) ensuring revegetation of the disturbed areas to the specifications of the Ute Indian Tribe or the BIA at the time of abandonment.

11. SURFACE OWNERSHIP

Access road: Ute Indian Tribe

Location: Ute Indian Tribe

12. OTHER INFORMATION

- A. Petroglyph Operating Co., Inc. will inform all persons in the area who are associated with this project that they are subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator will immediately stop work that might further disturb such materials, and contact the AO. Within five working days the AO will inform the operator as to:  
-whether the materials appear eligible for the National Register of historic Places;

the mitigation measures the operator will likely have to undertake before the site can be used.

-a time frame for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wished, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials that may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that required mitigation has been completed, the operator will then be allowed to resume construction.

- B. As operator, Petroglyph Operating Co., Inc. will control noxious weeds along Right-of-Ways for roads, pipelines, well sites, or other applicable facilities. A list of noxious weeds will be obtained from the BIA,

or the appropriate County Extension Office. On BIA administered land, a Pesticide Use proposal shall be submitted, and given approval, prior to the application of herbicides or other pesticides or possible hazardous chemicals.

- C. Drilling rigs and/or equipment used during drilling operations on this well site will not be stacked or stored on Tribal Lands after the conclusion of drilling operations or at any other time without BIA authorization. However, if BIA authorization is obtained, it is only a temporary measure to allow time to make arrangements for permanent storage on commercial facilities.

On BIA administered land:

Operator's employees, including subcontractors, will not gather firewood along roads constructed by operators. If wood cutting is required, a permit will be obtained from the Forestry Department of the BIA pursuant to 25 CFR 169.13 "Assessed Damages Incident to Right-of-Way authorization". All operators, subcontractors, vendors, and their employees or agents may not disturb saleable timber (including firewood) without a duly granted wood permit from the BIA Forester.

If the surface rights are owned by the Ute Indian Tribe and mineral rights are owned by another entity, an approved right-of-way will be obtained from the BIA before the operator begins any construction activities. If the surface is owned by another entity and the mineral rights are owned by the Ute Indian Tribe, rights-of-way will be obtained from the other entity.

All roads constructed by operators on the Uintah and Ouray Indian Reservation will have appropriate signs. Signs will be neat and of sound construction. They will state: (a) that the land is owned by the Ute Indian Tribe, (b) the name of the operator, (c) that firearms are prohibited to all non-Ute Tribal members (d) that permits must be obtained from the BIA before cutting firewood or other timber products, and (e) only authorized personnel permitted. All well site locations on the Uintah and Ouray Indian Reservation will have an appropriate sign indicating the name of the operator,

the lease serial number, the well name and number, the survey description of the well (either footage or the quarter-quarter section, the section, township, and range).

Additional Surface Stipulations

N/A No construction or drilling activities shall be conducted between

\_\_\_\_\_ and \_\_\_\_\_ because of \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

N/A No surface occupancy will be allowed within 1,000 feet of any sage grouse strutting ground.

N/A No construction or exploration activities are permitted within 1.5 mile radius of sage grouse strutting grounds from April 1 to June 30.

N/A There shall be no surface disturbance within 600 feet of live water (includes stock tanks, springs, and guzzlers).

N/A No cottonwood trees will be removed or damaged.

N/A Pond will be constructed according to BLM specifications approximately \_\_\_\_\_ ft. \_\_\_\_\_ of the location, as flagged on onsite.

LESSEE'S OR OPERATOR'S REPRESENTATIVE AND CERTIFICATION

PERMITTING

Ed Trotter  
1620 West 750 North  
Vernal UT 84078  
Telephone # (801)789-4120  
Fax # (801) 789-1420

OPERATIONS

Vince Guinn  
P.O. Box 607  
Roosevelt, UT 84066  
(801) 722-2531  
Fax # (801) 722-9145

All lease/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approval plan of operations, and any applicable Notice to Lessees. Petroglyph Operating Co., Inc. is fully responsible for the actions of their subcontractors. A copy of these conditions will be furnished to the field representative to insure compliance.

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

The BIA Office shall be notified upon site completion prior to moving on the drilling rig.

Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in the Plan are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Petroglyph Operating Co., Inc. and its contractors and sub-contractors in conformity with this Plan and the terms and conditions under which it is approved.

11-8-96

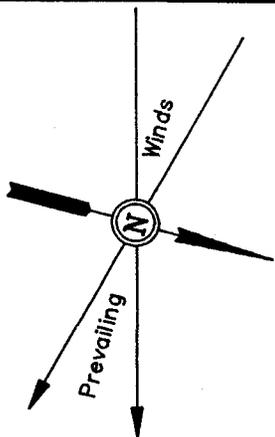
Date



**PETROGLYPH OPERATING CO., INC.**

**LOCATION LAYOUT FOR**

UTE TRIBAL #21-10  
SECTION 21, T5S, R3W, U.S.B.&M.  
2022' FSL 3344' FWL



*Ray*

Proposed Access Road

Sta. 2+90

Approx. Toe of Fill Slope

Sta. 1+65

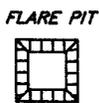
F-6.2'  
El. 296.6'

Sta. 0+00

SCALE: 1" = 50'  
DATE: 10-28-96  
Drawn By: D.R.B.

**NOTE:**

Flare Pit is to be located a min. of 100' from the Well Head.



FLARE PIT  
El. 313.8'  
C-19.0'  
(btm. pit)

NOTE:  
Pit Capacity W/2' of Freeboard is ±4,600 Bbls.

Approx. Top of Cut Slope

El. 318.6'  
C-23.8'  
(btm. pit)

El. 309.1'  
C-6.3'

El. 310.6'  
C-7.8'

C-12.3'  
El. 315.1'

C-6.8'  
El. 309.6'

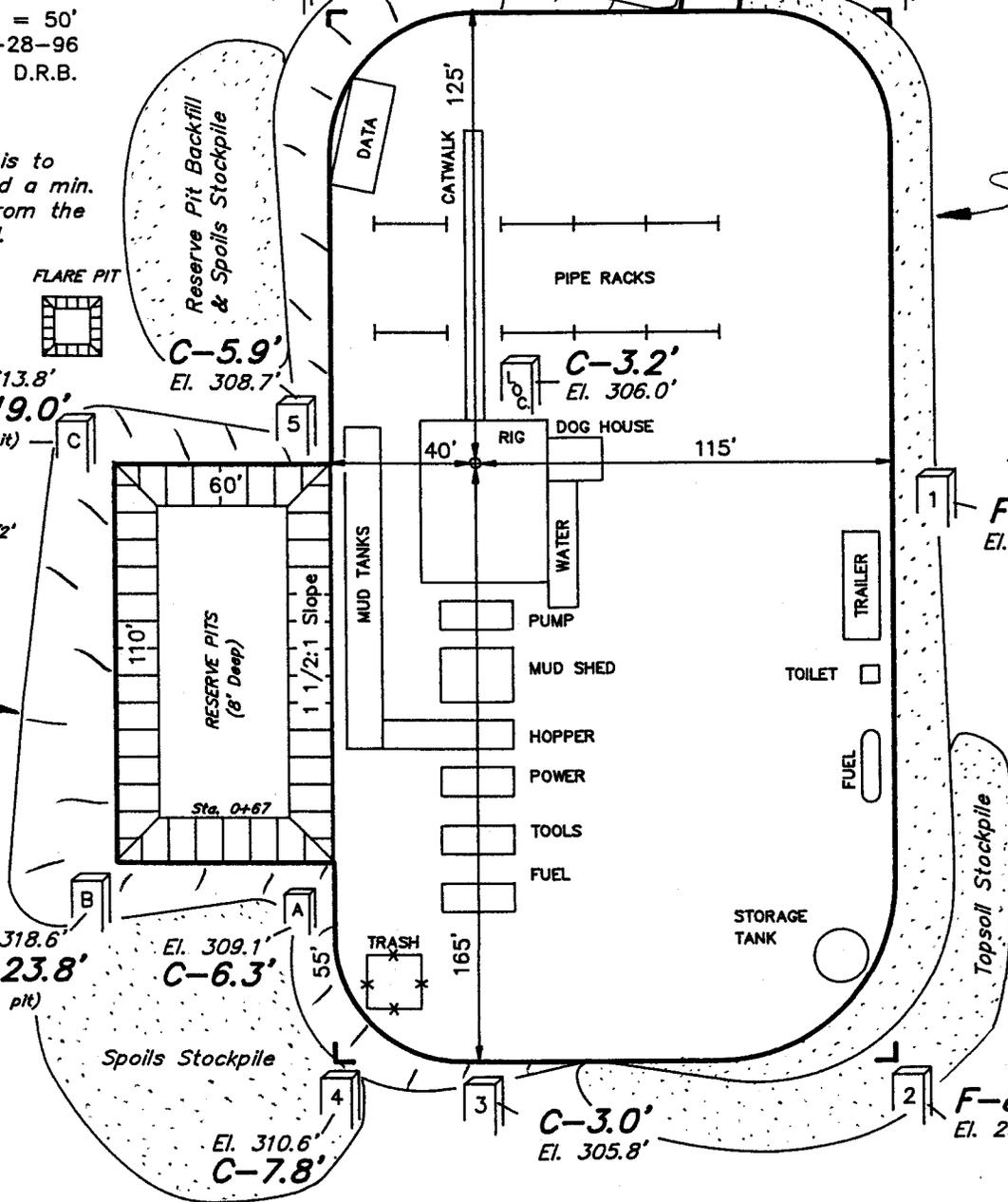
F-5.7'  
El. 297.1'

C-5.9'  
El. 308.7'

C-3.2'  
El. 306.0'

F-8.3'  
El. 294.5'

C-3.0'  
El. 305.8'



Elev. Ungraded Ground at Location Stake = 6306.0'

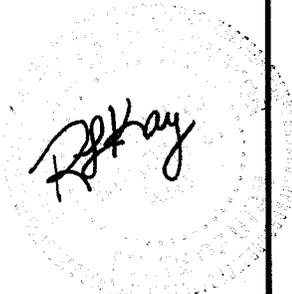
Elev. Graded Ground at Location Stake = 6302.8'

**UINTAH ENGINEERING & LAND SURVEYING**  
85 So. 200 East • Vernal, Utah 84078 • (801) 789-1017

PETROGLYPH OPERATING CO., INC.

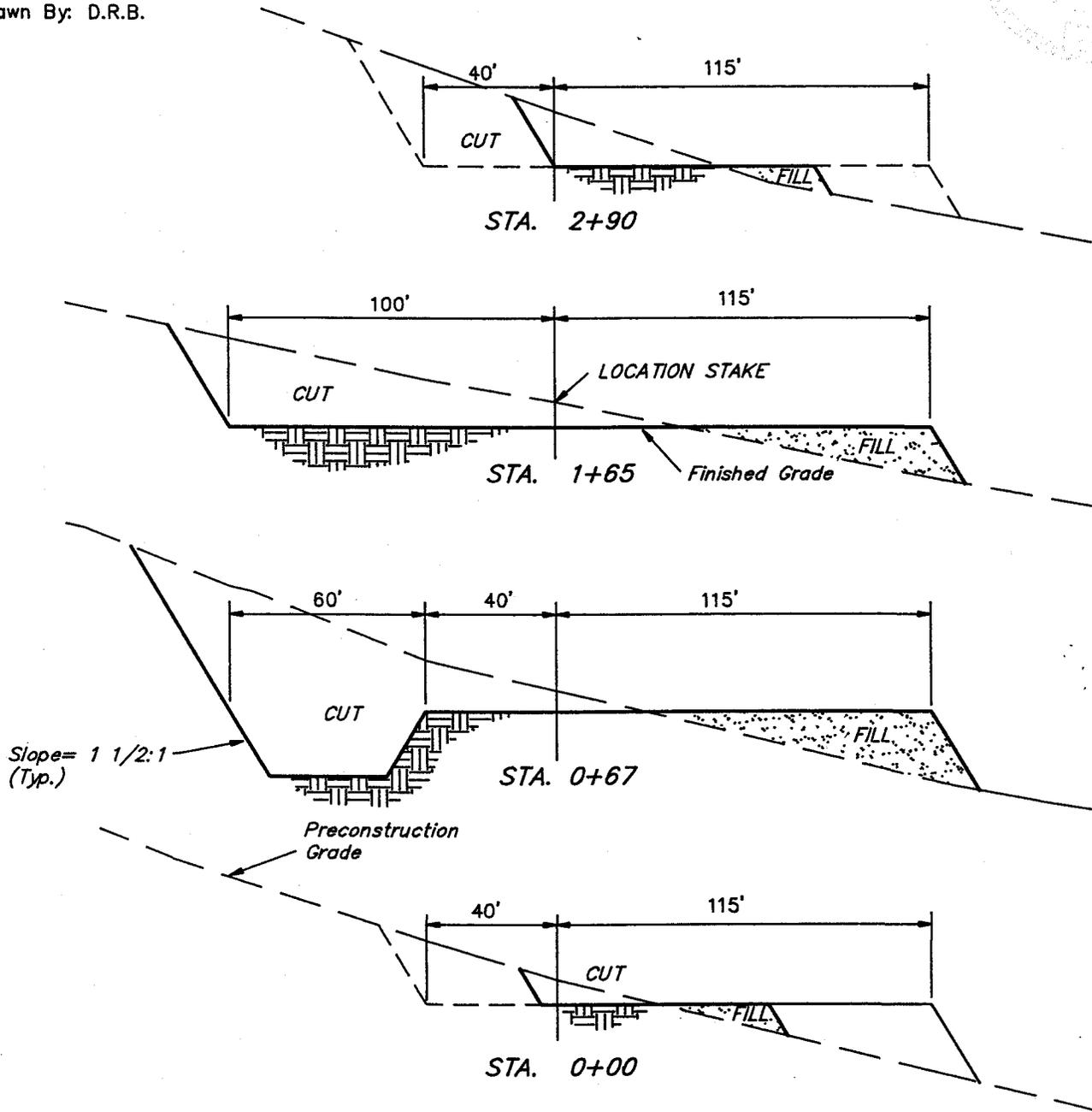
TYPICAL CROSS SECTIONS FOR

UTE TRIBAL #21-10  
SECTION 21, T5S, R3W, U.S.B.&M.  
2022' FSL 3344' FWL



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

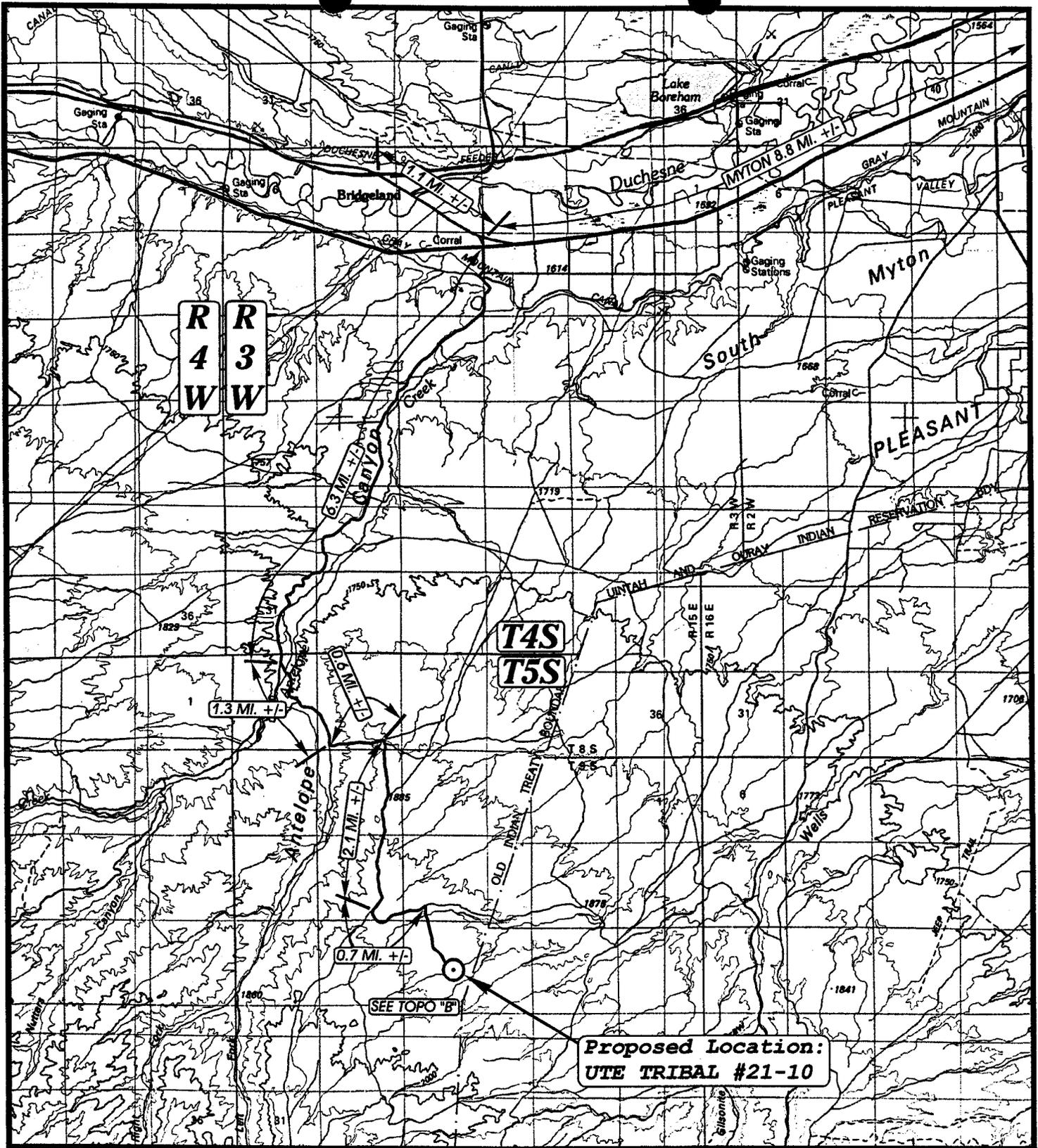
DATE: 10-28-96  
Drawn By: D.R.B.



APPROXIMATE YARDAGES

(12") Topsoil Stripping	=	1,910 Cu. Yds.
Remaining Location	=	7,280 Cu. Yds.
<b>TOTAL CUT</b>	<b>=</b>	<b>9,190 CU.YDS.</b>
<b>FILL</b>	<b>=</b>	<b>4,730 CU.YDS.</b>

EXCESS MATERIAL AFTER 5% COMPACTION	=	4,210 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	4,210 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	=	0 Cu. Yds.



**UELS**

**TOPOGRAPHIC  
MAP "A"**

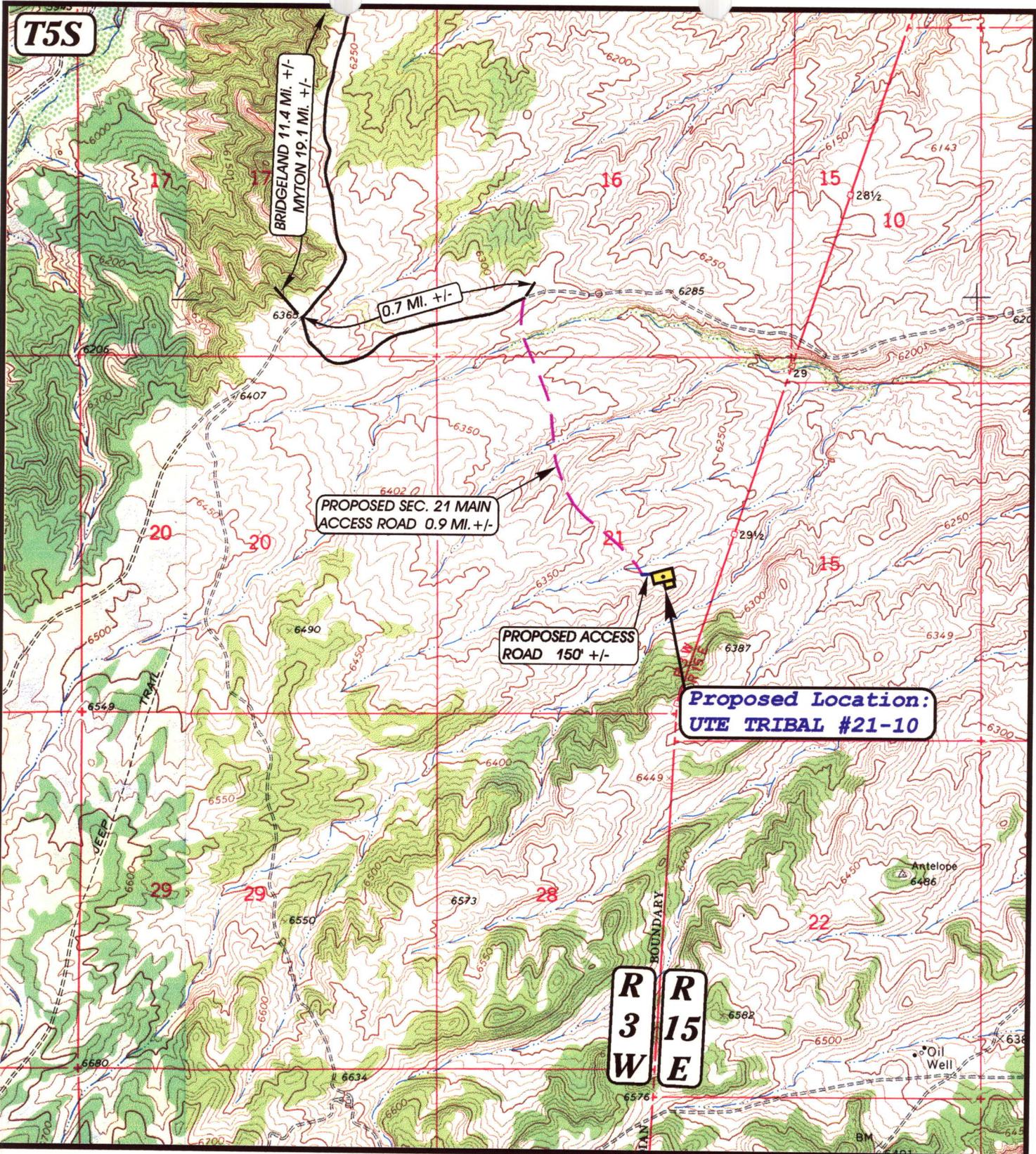
DATE: 10-29-96  
Drawn by: JLG

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East • Vernal, Utah 84078 • (801) 789-1017



**PETROGLYPH OPERATING CO., INC.**

**UTE TRIBAL #21-10  
SECTION 21, T5S, R3W, U.S.B.&M.  
2022' FSL 3344' FWL**



**T5S**

BRIDGELAND 11.4 MI. +/-  
MTON 19.1 MI. +/-

0.7 MI. +/-

PROPOSED SEC. 21 MAIN  
ACCESS ROAD 0.9 MI. +/-

PROPOSED ACCESS  
ROAD 150' +/-

**Proposed Location:  
UTE TRIBAL #21-10**

**R  
3  
W** **R  
15  
E**

**UELS**

**TOPOGRAPHIC  
MAP "B"**

DATE: 10-30-96  
Drawn by: D.COX

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East • Vernal, Utah 84078 • (801) 789-1017

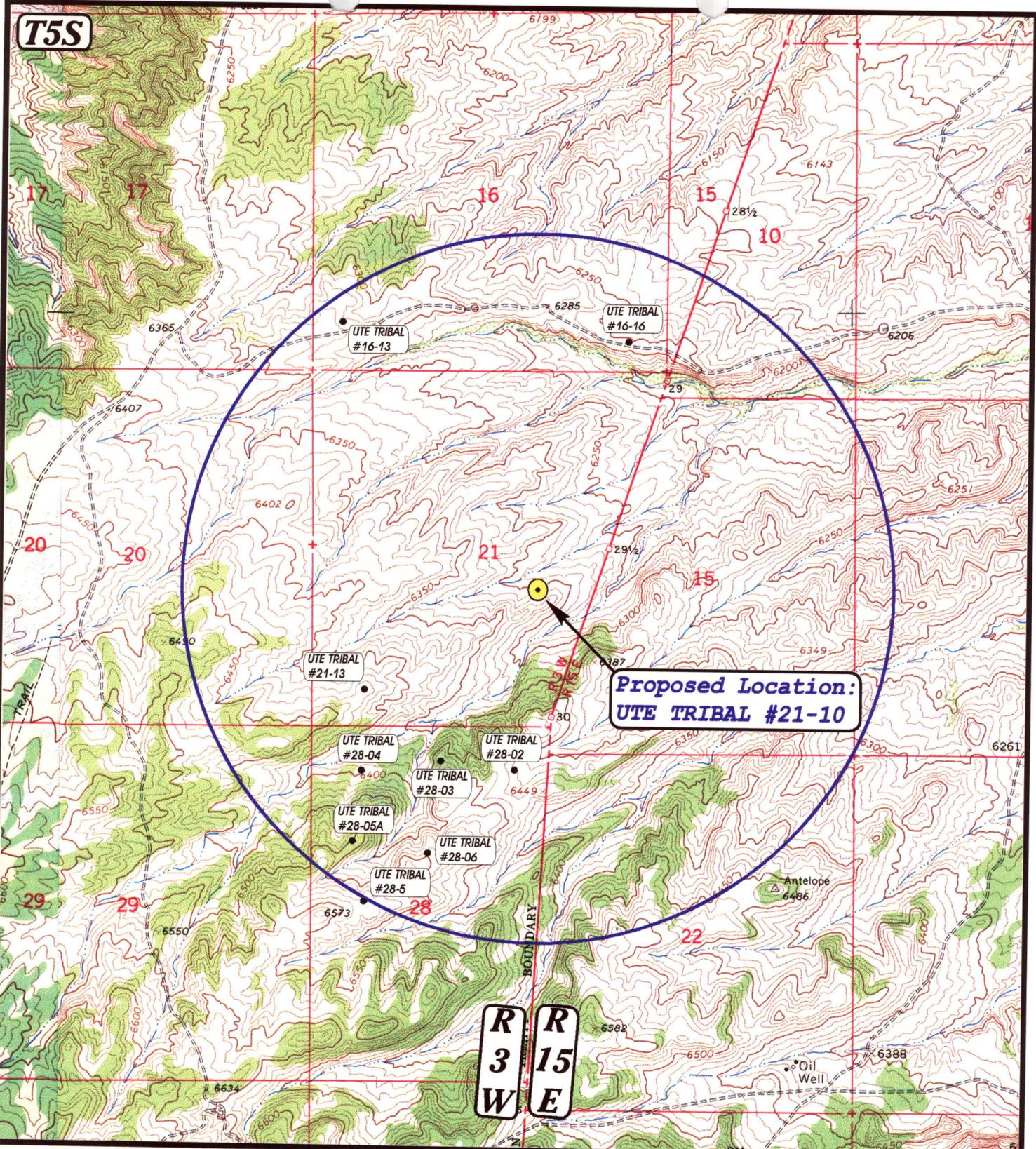


**PETROGLYPH OPERATING CO., INC.**

**UTE TRIBAL #21-10  
SECTION 21, T5S, R3W, U.S.B.&M.  
2022' FSL 3344' FWL**

SCALE: 1" = 2000'

**T5S**



**Proposed Location:  
UTE TRIBAL #21-10**

**R  
3  
W**   **R  
15  
E**

**LEGEND:**

**WELLS**

- Water Wells
- Abandoned Wells
- Temporarily Abandoned Wells
- Disposal Wells
- Drilling Wells
- Producing Wells
- Shut-in Wells



**PETROGLYPH OPERATING CO., INC.**

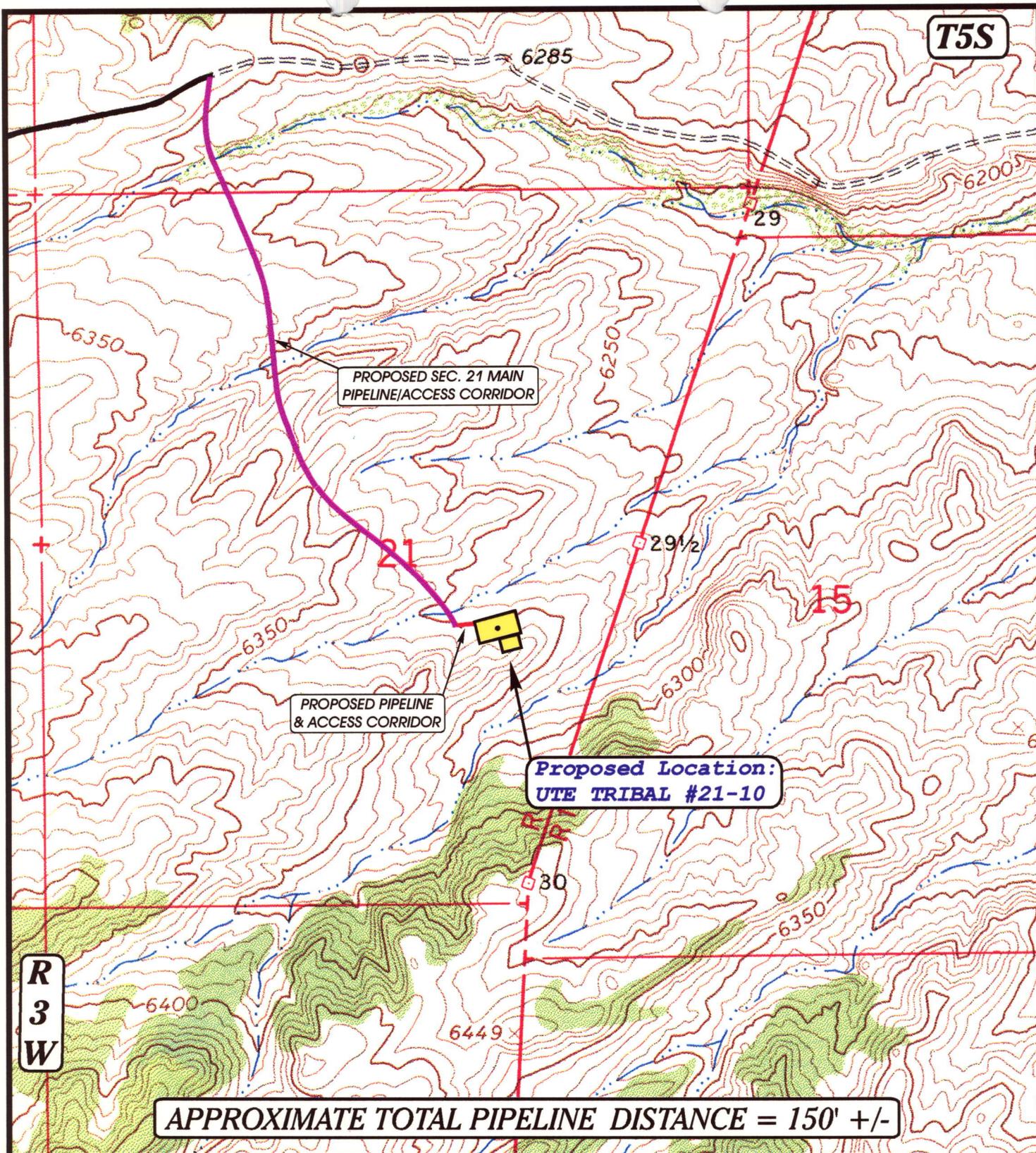
**UTE TRIBAL #21-10  
SECTION 21, T5S, R3W, U.S.B.&M.**

**TOPOGRAPHIC  
MAP "C"**

SCALE: 1" = 2000'

DATE: 10-30-96 Drawn by: D.COX

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East • Vernal, Utah 84078 • (801) 289-1017



**APPROXIMATE TOTAL PIPELINE DISTANCE = 150' +/-**

**TOPOGRAPHIC  
MAP "D"**

**UELS**

--- Proposed Pipeline & Road Corridor



**PETROGLYPH OPERATING CO., INC.**

**UTE TRIBAL #21-10  
SECTION 21, T5S, R3W, U.S.B.&M.**

DATE: 10-30-96  
Drawn by: D.COX

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East • Vernal, Utah 84078 • (801) 789-1017

SCALE: 1" = 1000'

WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/18/96

API NO. ASSIGNED: 43-013-31748

WELL NAME: UTE TRIBAL 21-10  
 OPERATOR: PETROGLYPH OPERATING CO (N3800)

PROPOSED LOCATION:  
 NWSE 21 - T05S - R03W  
 SURFACE: 2022-FSL-3344-FWL  
 BOTTOM: 2022-FSL-3344-FWL  
 DUCHESNE COUNTY <sup>1019</sup>  
 ANTELOPE CREEK FIELD (060)  
<sup>616</sup>

INSPECT LOCATION BY: / /		
TECH REVIEW	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: IND  
 LEASE NUMBER: 14-20-H62-3516

PROPOSED PRODUCING FORMATION: GRRV

RECEIVED AND/OR REVIEWED:

Plat

Bond: Federal  State  Fee   
 (Number 60 4556)

Potash (Y/N)

Oil shale (Y/N)

Water permit  
 (Number 43-10152)

RDCC Review (Y/N)  
 (Date: \_\_\_\_\_)

LOCATION AND SITING:

\_\_\_ R649-2-3. Unit: \_\_\_\_\_

R649-3-2. General.

\_\_\_ R649-3-3. Exception.

\_\_\_ Drilling Unit.  
 Board Cause no: \_\_\_\_\_  
 Date: \_\_\_\_\_

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

STIPULATIONS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



STATE OF UTAH, DIV OF OIL, GAS & MINERALS

Operator: PETROGLYPH OPERATING	Well Name: UTE TRIBAL 21-10
Project ID: 43-013-31748	Location: SEC. 21 - T5S - R3W

Design Parameters:

Mud weight ( 9.00 ppg) : 0.468 psi/ft  
 Shut in surface pressure : 2471 psi  
 Internal gradient (burst) : 0.061 psi/ft  
 Annular gradient (burst) : 0.000 psi/ft  
 Tensile load is determined using air weight  
 Service rating is "Sweet"

Design Factors:

Collapse : 1.125  
 Burst : 1.00  
 8 Round : 1.80 (J)  
 Buttress : 1.60 (J)  
 Other : 1.50 (J)  
 Body Yield : 1.50 (B)

Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost		
1	6,080	5.500	15.50	M-50	ST&C	6,080	4.820		
	Collapse Load (psi)	Strgth (psi)	S.F.	Burst Load (psi)	Min Int Strgth (psi)	Yield S.F.	Tension Load (kips)	Strgth (kips)	S.F.
1	2843	3650	1.284	2843	4550	1.60	94.24	186	1.97 J

Prepared by : MATTHEWS, Salt Lake City, Utah  
 Date : 12-03-1996  
 Remarks :

GREEN RIVER

Minimum segment length for the 6,080 foot well is 1,500 feet.

SICP is based on the ideal gas law, a gas gravity of 0.69, and a mean gas temperature of 115°F (Surface 74°F , BHT 159°F & temp. gradient 1.400°/100 ft.)

String type: Production

The mud gradient and bottom hole pressures (for burst) are 0.468 psi/ft and 2,843 psi, respectively.

**NOTE:** The design factors used in this casing string design are as shown above. As a general guideline, Lone Star Steel recommends using minimum design factors of 1.125 - collapse (with evacuated casing), 1.0 - (uniaxial) burst, 1.8 - API 8rd tension, 1.6 - buttress tension, 1.5 - body yield tension, and 1.6 - EUE 8rd tension. Collapse strength under axial tension was calculated based on the Westcott, Dunlop and Kemler curve. Engineering responsibility for use of this design will be that of the purchaser.  
 Costs for this design are based on a 1987 pricing model. (Version 1.07)



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

Michael O. Leavitt  
Governor

Ted Stewart  
Executive Director

James W. Carter  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340  
801-358-3940 (Fax)  
801-538-5319 (TDD)

December 3, 1996

Petroglyph Operating Company, Inc.  
P.O. Box 607  
Roosevelt, Utah 84066

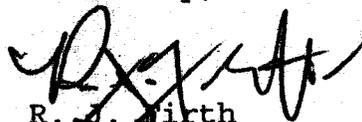
Re: Ute Tribal 21-10 Well, 2022' FSL, 3344' FWL, NW SE, Sec. 21,  
T. 5 S., R. 3 W., Duchesne County, Utah

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 43-013-31748.

Sincerely,

  
R. J. Birt  
Associate Director

lwp

Enclosures

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



Operator: Petroglyph Operating Company, Inc.  
Well Name & Number: Ute Tribal 21-10  
API Number: 43-013-31748  
Lease: 14-20-H62-3516  
Location: NW SE Sec. 21 T. 5 S. R. 3 W.

### Conditions of Approval

1. General

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

2. Notification Requirements

Notify the Division within 24 hours following spudding the well or commencing drilling operations. Contact Jimmie Thompson at (801)538-5336.

Notify the Division prior to commencing operations to plug and abandon the well. Contact Frank Matthews at (801)538-5334 or Mike Hebertson at (801)538-5333.

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.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK  
DRILL  DEEPEN

b. TYPE OF WELL  
OIL WELL  GAS WELL  OTHER   
SINGLE ZONE  MULTIPLE ZONE

2. NAME OF OPERATOR  
PETROGLYPH OPERATING COMPANY, INC.

3. ADDRESS AND TELEPHONE NO.  
P.O. BOX 607, ROOSEVELT, UT 84066 NOV 08 1996

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
At surface  
2022' FSL & 3344' FWL Lot 3  
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
20.7 MILES SOUTHWEST OF MYTON, UTAH

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 2022'  
(Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE  
533.33

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  
6080.8'

20. ROTARY OR CABLE TOOLS  
ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
6302.8' GRADED GROUND

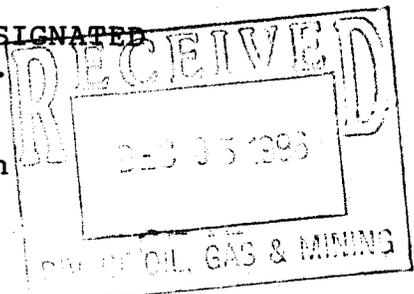
22. APPROX. DATE WORK WILL START\*  
NOVEMBER, 1996

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	8 5/8	24.0#	250'	135 sx class "G" + 2% CaCl <sub>2</sub> + 1/4 #/sx celloflake. 50/50 POZMIX + 2% GEL + 10% SALT TO 400' ABOVE ALL ZONES OF INTEREST (+ 10% EXCESS). LIGHT CEMENT (11 PPG + ) + LCM TO 200' ABOVE OIL SHALE OR FRESH WATER INTERVALS (+ 5% EXCESS).
7 7/8	5 1/2	15.5#	6080.8'	

PETROGLYPH OPERATING COMPANY, INC. WILL BE THE DESIGNATED OPERATOR OF THE SUBJECT WELL UNDER BOND # BO 4556.

pc: Utah Division of Oil, Gas, and Mining  
Bureau of Indian Affairs, Fort Duchesne, Utah  
Ute Tribe, Fort Duchesne, Utah



CONDITIONS OF APPROVAL ATTACHED

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data 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.

24. SIGNED [Signature] TITLE AGENT FOR PETROGLYPH DATE 11-8-96

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

Application approval 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. CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY [Signature] TITLE Assistant Field Manager Mineral Resources DATE DEC 04 1996

UTO 8071033

\*See Instructions On Reverse Side

UNITED STATES GOVERNMENT  
**memorandum**

DATE: **NOV 27 1996**

REPLY TO  
ATTN OF:

Superintendent, Uintah & Ouray Agency

SUBJECT:

Concurrence Letter for **PETROGLYPH OPERATING COMPANY**  
**TOWNSHIP 5 SOUTH, RANGE 3 WEST, USB&M**

TO: Ute Tribal #21-01, SWNE Sec. 21, Ute Tribe #21-10, NWSE, Sec.21  
Ute Tribal #21-02, SWSE, Sec. 21, Ute Tribal #21-08, SENE, Sec 21.

RECEIVED

NOV 27 1996

Bureau of Land Management, Vernal District Office  
Attention: Minerals and Mining Division

We recommend approval of the Application for Permit to Drill on the subject well.

Based on available information received on November 27, 1996, we cleared the proposed location in the following areas of environmental impact.

- YES  NO  Listed threatened or endangered species
- YES  NO  Critical wildlife habitat
- YES  NO  Archaeological or cultural resources
- YES  NO  Air quality aspects (to be used only if project is in or adjacent to a Class I area of attainment)
- YES  NO  Other (if necessary)

COMMENTS: The Ute Tribe Energy & Minerals is recommending the following criteria to be adhered during all phases of construction activities.

1. The Ute Tribe Energy and Minerals Department is to notified 48 hours prior to construction, as a Tribal Technician is to monitor construction.
2. A 50 foot corridor rights-of-way shall be granted with the following:
  - A. Access roads shall be limited to 22 feet, except as granted for sharp turns.
  - B. Surface pipelines shall be limited to 13 feet.
  - C. Buried pipelines shall be limited 15 feet, and will be monitored by Tribal Technician.
3. Due to the ferruginous hawks, the access road and pipeline will be staked and constructed according to Petroglyphs 96 Drilling Program Map, (attached)
4. Petroglyph Operating Company will assure the Ute Tribe that any/all contractors and any sub-contractors has acquired a Tribal Business License and have access permits prior to construction.
5. All vehicular traffic, personnel movement, construction and restoration operations should be confined to the areas examined, as referenced in report, and to the existing roadways and/or evaluated access routes.
6. All personnel should refrain from collecting artifacts and from disturbing any significant cultural resources in the area.
7. The personnel for the Ute Tribe Energy & Mineral Department should be consulted should cultural remains from subsurface deposits be exposed or identified during construction.
8. All mitigation stipulations contained in the Bureau of Indian Affairs combined site specific Environmental Analysis (EA) will be strictly adhered, during and after construction.
9. Upon completion of Application for Permit to Drill and Right-of-way, the Ute Tribe Energy & Minerals Resource Department will be notified by Petroglyph Operating Company so that a Tribal Technician can verify Affidavit of Completion's.

*Charles H Cameron*

OPTIONAL FORM NO. 10  
(REV. 1-80)  
GSA FPMR (41 CFR) 101-11.6  
5010-114

CONDITIONS OF APPROVAL  
APPLICATION FOR PERMIT TO DRILL

Company/Operator: Petroglyph Operating Company

Well Name & Number: Ute Tribal 21-10

API Number: 43-013-31748

Lease Number: 14-20-H62-3516

Location: Lot 3 Sec. 21 T. 5S R. 3W

**NOTIFICATION REQUIREMENTS**

- Location Construction - at least forty-eight (48) hours prior to construction of location and access roads.
- Location Completion - prior to moving on the drilling rig.
- Spud Notice - at least twenty-four (24) hours prior to spudding the well.
- Casing String and Cementing - at least twenty-four (24) hours prior to running casing and cementing all casing strings.
- BOP and Related Equipment Tests - at least twenty-four (24) hours prior to initiating pressure tests.
- First Production Notice - within five (5) business days after new well begins, or production resumes after well has been off production for more than ninety (90) days.

For more specific details on notification requirements, please check the Conditions of Approval for Notice to Drill and Surface Use Program.

## CONDITIONS OF APPROVAL FOR NOTICE TO DRILL

Approval of this application 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.

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Orders, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative by the operator to insure compliance.

Be aware fire restrictions may be in effect when location is being constructed and/or when well is being drilled. Contact the appropriate Surface Management Agency for information.

### A. DRILLING PROGRAM

#### 1. Estimated Depth at Which Oil, Gas, Water, or Other Mineral Bearing Zones are Expected to be Encountered

Report **ALL** water shows and water-bearing sands to Tim Ingwell of this office **prior to setting the next casing string or requesting plugging orders**. Faxed copies of State of Utah form OGC-8-X are acceptable. If noticeable water flows are detected, submit samples to this office along with any water analyses conducted.

All usable water and prospectively valuable minerals (as described by BLM at onsite) encountered during drilling, will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

#### 2. Pressure Control Equipment

The BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc., for a 2M system and individual components shall be operable as designed. Chart recorders shall be used for all pressure tests.

Test charts, with individual test results identified, shall be maintained on location while drilling and shall be made available to a BLM representative upon request.

If an air compressor is on location and is being utilized to provide air for the drilling medium while drilling, the special drilling requirements in Onshore Oil and Gas Order No. 2, regarding air or gas drilling shall be adhered to. If a mist system is being utilized then the requirement for a deduster shall be waived.

3. Casing Program and Auxiliary Equipment

Surface casing shall have centralizers on the bottom three joints, with a minimum of one centralizer per joint.

If conductor pipe is set it will be cemented to surface. If drive pipe is used it will be pulled prior to cementing surface casing.

As a minimum, the usable water and oil shale resources shall be isolated and/or protected by having a cement top for the production casing at least 200 ft. above the top of the usable water zone identified at  $\pm 567$  ft. or by setting the surface casing at  $\pm 617$  ft.. If gilsonite is encountered while drilling, it shall be isolated and/or protected via the cementing program.

4. Mud Program and Circulating Medium

Hazardous substances specifically listed by the EPA as a hazardous waste or demonstrating a characteristic of a hazardous waste will not be used in drilling, testing, or completion operations.

No chromate additives will be used in the mud system on Federal and Indian lands without prior BLM approval to ensure adequate protection of fresh water aquifers.

5. Coring, Logging and Testing Program

Daily drilling and completion progress reports shall be submitted to this office on a weekly basis.

All Drill Stem tests (DST) shall be accomplished during daylight hours, unless specific approval to start during other hours is obtained from the AO. However, DSTs may be allowed to continue at night if the test was initiated during daylight hours and the rate of flow is stabilized and if adequate lighting is available (i.e., lighting which is adequate for visibility and vaporproof for safe operations). Packers can be released, but tripping should not begin before daylight unless prior approval is obtained from the AO.

A cement bond log (CBL) will be run from the production casing shoe to **TOP OF CEMENT** if the surface casing is set at  $\pm 617$  ft. or it will be run to  $\pm 367$  ft. if the surface casing is set at  $\pm 250$  ft. and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. Samples (cuttings, fluids, and/or gases) will be submitted when requested by the AO.

6. Notifications of Operations

No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the AO. If operations are to be suspended, prior approval of the AO will be obtained and notification given before resumption of operations.

The Vernal District Office shall be notified, during regular work hours (7:45 a.m.-4:30 p.m., Monday through Friday except holidays), at least 24 hours prior to spudding the well.

Operator shall report production data to MMS pursuant to 30 CFR 216.5 using form MMS/3160.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported in accordance with the requirements of NTL-3A or its revision.

If a replacement rig is contemplated for completion operations, a "Sundry Notice" (Form 3160-5) to that effect will be filed, for prior approval of the AO, and all conditions of this approved plan are applicable during all operations conducted with the replacement rig.

The date on which production is commenced or resumed will be construed for oil wells as the date on which liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which liquid hydrocarbons are first produced into a permanent storage facility, whichever first occurs; and, for gas wells as the date on which associated liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which gas is first measured through permanent metering facilities, whichever first occurs.

Should the well be successfully completed for production, the AO will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, not later than five (5) days following the date on which the well is placed on production.

Gas produced from this well may not be vented or flared beyond an initial authorized test period of 30 days or 50 MMCF following its completion, whichever occurs first, without the prior written approval of the Authorized Officer. Should gas be vented or flared without approval beyond the authorized test period, the operator may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted and the operator shall be required to compensate the lessor for that portion of the gas vented or flared without approval which is determined to have been avoidably lost.

A schematic facilities diagram as required by 43 CFR 3162.7-5 (b.9. d.), and shall be submitted to the appropriate District Office within sixty (60) days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 43 CFR 3162.7-5 (b. 4).

No well abandonment operations will be commenced without the prior approval of the AO. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the AO. A "Subsequent Report of Abandonment" Form 3160-5, will be filed with the AO within thirty (30) days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration. Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the AO or his representative, or the appropriate Surface Managing Agency.

7. Other Information

All loading lines will be placed inside the berm surrounding the tank battery.

All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the AO.

The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy will be conducted following initial installation and at least quarterly thereafter. The AO will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the Vernal District Office. All meter measurement facilities will conform with Onshore Oil & Gas Order No. 4 for liquid hydrocarbons and Onshore Oil & Gas Order No. 5 for natural gas measurement.

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

There will be no deviation from the proposed drilling and/or workover program without prior approval from the AO. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.

"Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.

Section 102(b)(3) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3162.4-1(c), requires that "not later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed."

If you fail to comply with this requirement in the manner and time allowed, you shall be liable for a civil penalty of up to \$10,000 per violation for each day such violation continues, not to exceed a maximum of 20 days. See Section 109(c)(3) of the Federal Oil and Gas Royalty Management Act of 1982 and the implementing regulations at Title 43 CFR 3162.4-1(b)(5)(ii).

APD approval is valid for a period of one (1) year from the signature date. An extension period may be granted, if requested, prior to the expiration of the original approval period.

In the event after-hours approval or notification is necessary, please contact one of the following individuals:

Wayne Bankert (801) 789-4170  
Petroleum Engineer

Ed Forsman (801) 789-7077  
Petroleum Engineer

Jerry Kenczka (801) 789-1190  
Petroleum Engineer

BLM FAX Machine (801) 781-4410

### EPA'S LIST OF NONEXEMPT EXPLORATION AND PRODUCTION WASTES

While the following wastes are nonexempt, they are not necessarily hazardous.

- Unused fracturing fluids or acids
- Gas plant cooling tower cleaning wastes
- Painting wastes
- Oil and gas service company wastes, such as empty drums, drum rinsate, vacuum truck rinsate, sandblast media, painting wastes, spend solvents, spilled chemicals, and waste acids
- Vacuum truck and drum rinsate from trucks and drums, transporting or containing nonexempt waste
- Refinery wastes
- Liquid and solid wastes generated by crude oil and tank bottom reclaimers
- Used equipment lubrication oils
- Waste compressor oil, filters, and blowdown
- Used hydraulic fluids
- Waste solvents
- Waste in transportation pipeline-related pits
- Caustic or acid cleaners
- Boiler cleaning wastes
- Boiler refractory bricks
- Incinerator ash
- Laboratory wastes
- Sanitary wastes
- Pesticide wastes
- Radioactive tracer wastes
- Drums, insulation and miscellaneous solids.

## SURFACE CONDITIONS OF APPROVAL

The Surface Use Conditions of Approval all come from the BIA Concurrence letter and Environmental Analysis Mitigation Stipulations.

### Concurrence Letter:

1. The Ute Tribe Energy and Mineral Department is to be notified 48 hours prior to construction. A Tribal Technician is to monitor construction.
2. A 50 foot corridor rights-of-way shall be granted with the following: Access roads shall be limited to 22 feet, except as granted for sharp turns. Surface pipelines shall be limited to 13 feet. Buried pipelines shall be limited to 15 feet, and will be monitored by a Tribal Technician.
3. Due to the ferruginous hawks, the access road and pipeline will be staked and constructed according to Petroglyph's 1996 Drilling Program Map.
4. Petroglyph will assure the Ute Tribe that any/all contractors and subcontractors have acquired a Tribal Business License and have access permits prior to construction.
5. All vehicular traffic, personnel movement, construction, and restoration activities shall be confined to the areas examined, as referenced in report, and to the existing roadways and/or evaluated access routes.
6. All personnel should refrain from collecting artifacts and from disturbing any significant cultural resources in the area.
7. The Ute Tribe Energy & Mineral Department shall be consulted if cultural remains from subsurface deposits are exposed or identified during construction.
8. All mitigation Stipulations from the BIA combined site specific Environmental Analysis will be strictly adhered to.
9. Upon completion of APD and Right-of-way construction, the Ute Tribe Energy & Mineral Department will be notified by Petroglyph so that a Tribal Technician can verify an Affidavit of Completion.

### Environmental Analysis Mitigation Stipulations:

#### VEGETATION/LANDSCAPE

1. Before the site is abandoned, the company will be required to restore the well site and right-of-ways to near their original state. The disturbed areas will be reseeded with desirable perennial vegetation.
2. Noxious weeds will be controlled on the well site and rights-of-way. If noxious weeds spread from the project area onto adjoining land, the company will also be responsible for their control.

## SOILS/ RANGE/ WATERSHEDS

1. Soil Erosion will be mitigated by reseeding all disturbed areas.

## 2. PIPELINES

A surface pipeline is planned for the location. Refer to the APD for further details. Surface pipelines will be limited to 13 feet of the right-of-way.

### A. SURFACE PIPELINES

The pipeline will be constructed to lay on the soil surface, and the right-of-way for the pipeline will not be bladed or cleared of vegetation.

Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the right-of-way.

Where pipelines cross country between stations, they shall be welded in place at wellsites or on roads and then pulled into place with suitable equipment. Traffic will be restricted along these areas so that the pipeline right-of-way will not be used as an access road.

### B. BURIED PIPELINES

Refer to the Site Specific Environmental Analysis for a discussion of this option. Since a buried line is not mentioned in the APD the burying and related reseeding instructions are not mentioned as conditions of approval even though they are described in the Environmental Analysis.

3. An open drilling system will be used. Reserve pits will be lined with impervious synthetic liners. Prior to backfilling the reserve pit all fluids will be pumped from the pit into trucks and hauled to approved disposal sites. When the reserve pits are backfilled the cuttings and mud, etc. left in them to be buried will be buried a minimum of three feet below the surface of the soil.
4. A closed production system will be used. Production fluids will be contained in leak proof tanks. All production fluids will be disposed of at approved disposal sites. The indiscriminate dumping of production fluids on roads, wellsites or other areas will not be allowed.
5. Although there is a 50 foot right-of-way, the bladed areas of the access road will be limited to 22 feet in all areas except where deep cuts and fills are required, or sharp turns are required, and at intersections with other roads.

## WILDLIFE/VEGETATION/ THREATENED & ENDANGERED SPECIES

Because the wellsite is located more than one half mile from a Ferruginous Hawk nest, this well site does not have a seasonal restriction on construction and drilling.

#### CULTURAL RESOURCES

Surveys were performed by James A. Truesdale. The consultant recommends clearance for the project as it is presently staked.

#### UTE TRIBAL REGULATIONS

See the concurrence letter.

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: PETROGLYPH OPERATING

Well Name: UTE TRIBAL 21-10

Api No. 43-013-31748

Section 21 Township 5S Range 3W County DUCHESNE

Drilling Contractor UNION

Rig #: 16

SPUDDED:

Date: 12/7/96

Time: \_\_\_\_\_

How: ROTARY

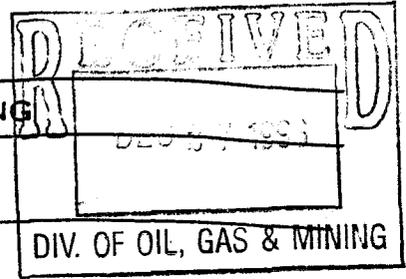
Drilling will commence: \_\_\_\_\_

Reported by: D. INGRAM

Telephone #: \_\_\_\_\_

Date: 12/16/96 Signed: JLT

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING



REPORT OF WATER ENCOUNTERED DURING DRILLING

1. Well name and number: UTE TRIBAL 21-10  
API number: 16-0120

2. Well Location: QQ \_\_\_\_\_ Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_ County \_\_\_\_\_

3. Well operator: PETROGLYPH

Address: P.O. Box 607  
Roosevelt, UT 84066 Phone: (316) 665-8500

4. Drilling contractor: Union Drilling

Address: P.O. Drawer 40  
Buckhannon, WV 26201 Phone: (304) 472-4610

5. Water encountered (attach additional pages as needed):

DEPTH		VOLUME (FLOW RATE OR HEAD)	QUALITY (FRESH OR SALTY)
FROM	TO		
0	227	0	DRY
227	529	Damp 1/8" x 7"	FRESH
529	1187	Damp	
1187		1/2" to 1" x 7" Blow TEST	FRESH

6. Formation tops: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If an analysis has been made of the water encountered, please attach a copy of the report to this form.

I hereby certify that this report is true and complete to the best of my knowledge. Date: 12-9-96

Name & Signature: Chris Chapman Deanna Bell Title: Driller

OPERATOR Petroglyph Operating Co., Inc.  
 ADDRESS P.O. Box 1839  
Hutchinson, KS 67504-1839

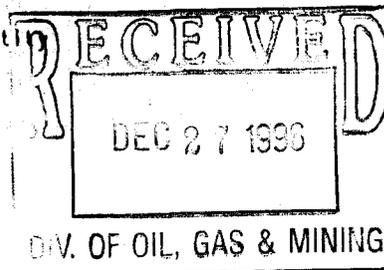
OPERATOR ACCT. NO. H 3800

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	12050	43-013-31756 31748	Ute Tribal 21-15 21-10	SWSE	21	5S	3W	Duchesne	12-7-96	
WELL 1 COMMENTS: Ute Tribal 21-10 will tie into battery at Ute Tribal 21-14 Entity added 12-30-96. See											
WELL 2 COMMENTS:											
WELL 3 COMMENTS:											
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

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

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

(3/89)



Deanna K. Bell  
 Signature Deanna K. Bell  
Operations Coordinator 12-11-96  
 Title Date  
 Phone No. (801) 722-2531

**EQUIPMENT INVENTORY**  
**UTAH DIVISION OF OIL, GAS AND MINING**  
**STATE OF UTAH**

Operator: PETROGLYPH Lease: State:      Federal:      Indian: X Fee:     

Well Name: UTER TRIBAL #21-10 API Number: 43-013-31748

Section: 21 Township: 5S Range 3W County DUCHESNE Field: ANTELOPE CREEK  
Well Status: POW Well Type: Oil: YES Gas:     

PRODUCTION LEASE EQUIPMENT: (NUMBER)

Boiler(s):      Compressor(s):      Separator(s):      Dehydrator(s):     

Shed(s):      Line Heater(s):      Heated Separator(s):      VRU:     

Heater Treater(s):     

**PUMPS:**

Triplex:      Chemical:      Centrifugal: (1)

**LIFT METHOD:**

Pumpjack: YES Hydraulic:      Submersible:      Flowing:     

**GAS EQUIPMENT: (NUMBER)**

Purchase Meter: NO Sales Meter: YES

**TANKS:**

NUMBER

SIZE

Oil Storage Tank(s): N/A      BBLs

Water Tank(s): N/A      BBLs

Power Water Tank:           BBLs

Condensate Tank(s):           BBLs

Propane Tank: NONE

**Central Battery Location: (IF APPLICABLE)**

Qtr/Qtr: SE/SW Section: 21 Township: 5S Range: 3W

REMARKS: PIPED OFF LEASE TO UT #21-14. LINE HEATER OFF LEASE. SALES GAS IS  
METERED OFF LEASE; FIELD GAS AND CASING GAS IS NOT METERED. ONE TRACE PUMP

Inspector: DENNIS L. INGRAM Date: 2/11/97

● PETROGLYPH OPERATING ●

UT #2-10

SEC 21; T55; R3W

POW

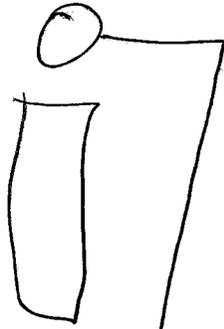
INDIAN

43013-31748

NORTH



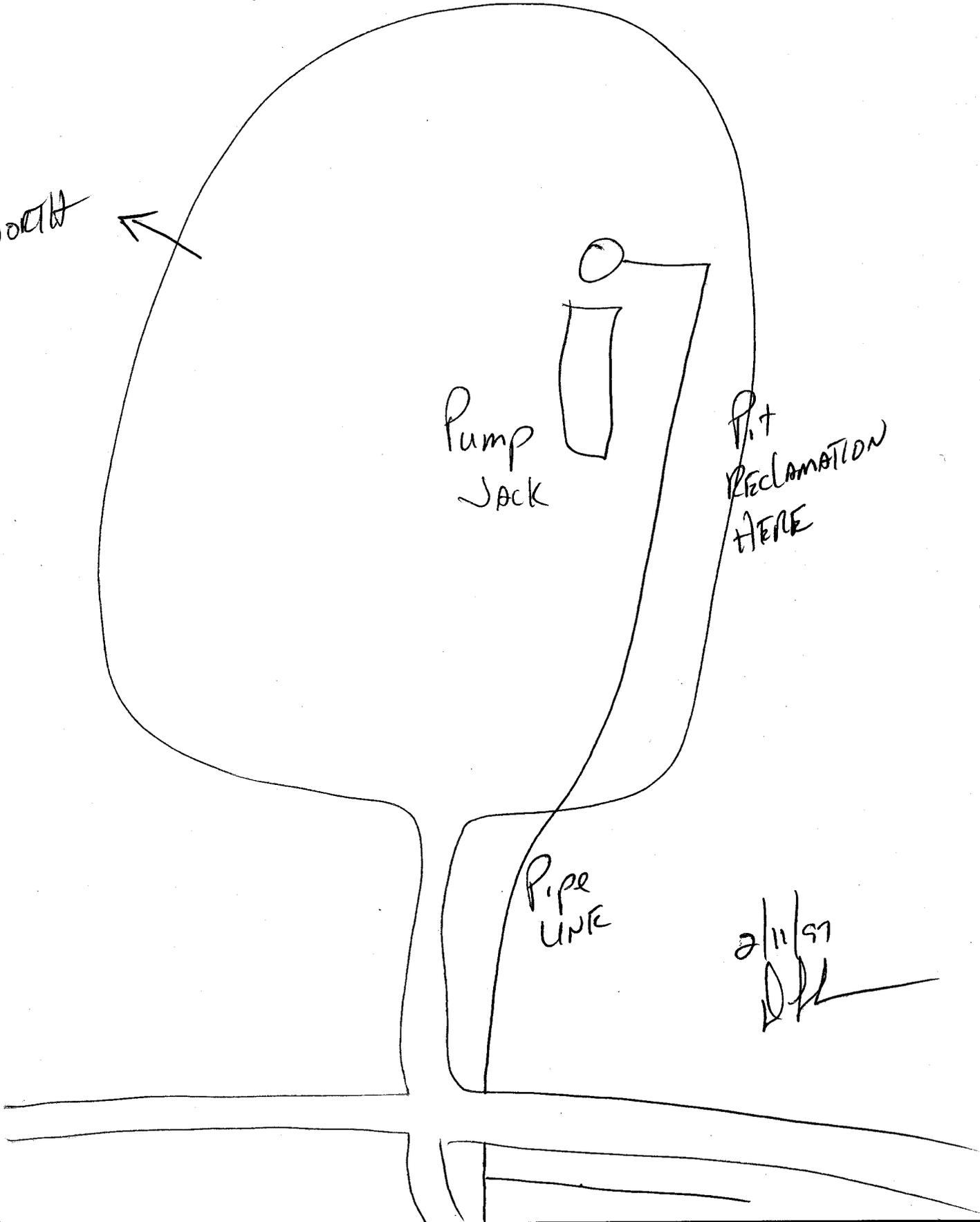
Pump  
Jack



Pit  
RECLAMATION  
HERE

Pipe  
LINE

2/11/57



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE\*

Form approved.  
Budget Bureau No. 1004-0137  
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG \*

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  Other \_\_\_\_\_

b. TYPE OF COMPLETION: NEW WELL  WORK OVER  DEEP-EN  PLUG BACK  DIFF. RESVR.  Other \_\_\_\_\_

2. NAME OF OPERATOR  
Petroglyph Operating Company, Inc.

3. ADDRESS OF OPERATOR  
P. O. Box 1839, Hutchinson, KS 67504-1839

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface 2022' FSL & 3344' FWL, Lot 3

At top prod. interval reported below

At total depth 6081' RID

**CONFIDENTIAL**

14. PERMIT NO. 43-013-31748 DATE ISSUED \_\_\_\_\_

5. LEASE DESIGNATION AND SERIAL NO.  
14-20-H62-3516

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
Ute Indian Tribe

7. UNIT AGREEMENT NAME  
14-20-H62-4650

8. FARM OR LEASE NAME  
Ute Tribal

9. WELL NO.  
21-10

10. FIELD AND POOL, OR WILDCAT  
Antelope Creek

11. SEC. T. R. M., OR BLOCK AND SURVEY OR AREA  
Sec 21-T5S-R3W

12. COUNTY OR PARISH  
Duchesne

13. STATE  
Utah

15. DATE SPUDDED 12-7-96 16. DATE T.D. REACHED 12-13-96 17. DATE COMPL. (Ready to prod.) 1-27-97 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* 6303'

20. TOTAL DEPTH, MD & TVD 6081' 21. PLUG BACK T.D., MD & TVD 6039' 22. IF MULTIPLE COMPL. HOW MANY\* \_\_\_\_\_ 23. INTERVALS DRILLED BY \_\_\_\_\_ ROTARY TOOLS \_\_\_\_\_ CABLE TOOLS \_\_\_\_\_

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\*  
Green River 25. WAS DIRECTIONAL SURVEY MADE \_\_\_\_\_

26. TYPE ELECTRIC AND OTHER LOGS RUN  
CNL, AIT 4-29-97 27. WAS WELL CORED \_\_\_\_\_

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8	24#	507	12-1/4	300 sx G Neat + 2% CaCl2	
5-1/2	15.5#	6081	7-7/8	95 sx Hifill + 325 sx Thixotropic	

29. LINER RECORD 30. TUBING RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2-7/8	5944	

31. PERFORATION RECORD (Interval, size and number) 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

PERFORATION RECORD		ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
INTERVAL	SHOTS	DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5896-99	13	5896-99	3565 gal fluid; 13900# prop
5683-87	17	5683-87	4187 gal fluid; 18000# prop
5605-15	41	5605-15	8912 gal fluid; 35500# prop
5524-28	17	5524-28	3616 gal fluid; 15700# prop

33. PRODUCTION RECORD

DATE FIRST PRODUCTION 2-4-97 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) pumping; 2-1/2 x 1-3/4 x 16 40 ring PA WELL STATUS (Producing or shut-in) producing

DATE OF TEST 2-5-97 HOURS TESTED 24 CHOKER SIZE \_\_\_\_\_ PROD'N. FOR TEST PERIOD \_\_\_\_\_ OIL—BBL. 29 GAS—MCF. 0 WATER—BBL. 80 GAS-OIL RATIO \_\_\_\_\_

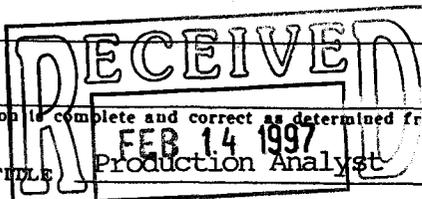
FLOW. TUBING PRESS. \_\_\_\_\_ CASING PRESSURE 600 CALCULATED 24-HOUR RATE \_\_\_\_\_ OIL—BBL. \_\_\_\_\_ GAS—MCF. \_\_\_\_\_ WATER—BBL. \_\_\_\_\_ OIL GRAVITY-API (CORR.) \_\_\_\_\_

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)  
sold; used for fuel TEST WITNESSED BY Dave Schreiner

35. LIST OF ATTACHMENTS

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

SIGNED Jenna S. Balsuch TITLE Production Analyst DATE 2-11-97



\*(See Instructions and Space for Additional GAS & MINING 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);

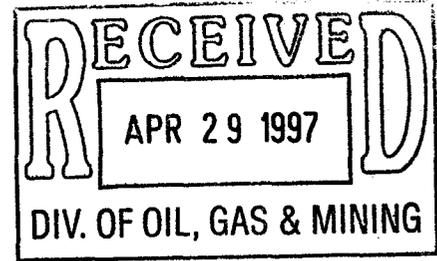
38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
X Marker	4469					
Douglas Creek	4610					
B Limestone	4985					
Castle Peak	5542					
Basal Carbonate	5968					

Ute Tribal 21-10

32. (cont.)

4805-4810	3708 gal fluid, 15400# prop
4650-4656	4174 gal fluid, 17500# prop



April 23, 1997

Vicky Dyson  
State of Utah  
Division of Oil, Gas & Mining  
1594 W. North Temple, Ste.1210  
Salt Lake City, UT 84114

**CONFIDENTIAL**

Ms. Dyson:

Enclosed please find the logs listed below for the wells located in Duchesne County, Utah.

<u>Well Name</u>	<u>Log</u>
Ute Tribal 18-15	CNL, AIT
Ute Tribal 21-02	CNL, AIT
Ute Tribal 21-05	CNL, AIT
Ute Tribal 21-07	CNL, AIT
Ute Tribal 21-10	CNL, AIT
Ute Tribal 21-15	CNL, AIT

*13 013 31748 553W 21*

Please hold these in confidence as permitted in division guidelines. If you need further information, please do not hesitate to call me at 316-665-8500.

Sincerely,

April Menzies  
Petroleum Engineering/Geology Technician



Petroglyph Energy, Inc.

4116 West 3000 So. Ioka Lane 435 722-2531  
P.O. Box 607 435 722-9145 fax  
Roosevelt, UT 84066

August 13, 2002

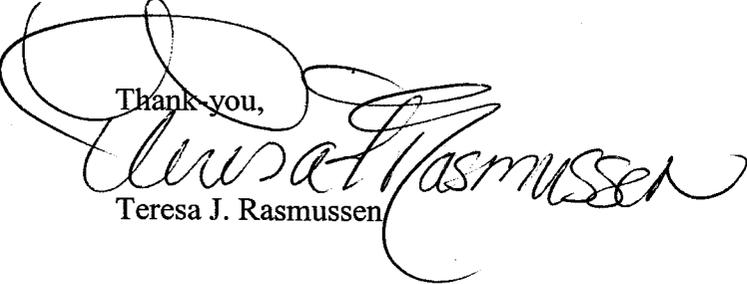
State of Utah  
Department of Natural Resources  
Division of Oil, Gas, & Mining  
1594 West North Temple, Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

Mr. John R. Baza

I would like to introduce myself. I am Teresa Rasmussen. I have been working with Petroglyph Energy for a little over a year now, and with the departure of Mike I will be taking over the Sundries and so forth.

As you can see with my first attempts I made some mistakes. But by the third and forth I improved a little. If you notice mistakes please bring it to my attention. I hope to learn as much as I can, and not be of any burden to any one.

Thank you,

  
Teresa J. Rasmussen

**RECEIVED**

**AUG 14 2002**

**DIVISION OF  
OIL, GAS AND MINING**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0135  
Expires: November 30, 2000

**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 reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. 14-20-H62-3516
2. Name of Operator PETROGLYPH OPERATING CO.		6. If Indian, Allottee or Tribe Name UTE INDIAN TRIBE
3a. Address P.O. BOX 607 ROOSEVELT, UT 84066		7. If Unit or CA/Agreement, Name and/or No. 14-20-H62-4560
3b. Phone No. (include area code) Ph: 435.722.2531 Fx: 435.722.9145		8. Well Name and No. UTE TRIBAL 21-10
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 21 T5S R3W NWSE 2022FSL 3344FWL		9. API Well No. 43-013-31748
		10. Field and Pool, or Exploratory ANTELOPE CREEK
		11. County or Parish, and State DUCHENSE COUNTY, UT

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

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

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

Zone E1-2; 5605-15' 2 SPF 21 holes with 1430 gallons 15% HCl, Xylene, Additives with 16 bbls into perfs got communication with CP 5524-28' 4 SPF 17 holes.  
Zone D3; 5089-95' 4 SPF 25 holes with 910 gallons 15% HCl, Xylene, Additives.  
Zone C6; 4805-10' 4 SPF 21 holes with 715 gallons 15% HCl, Xylene, Additives.  
Zone C4; 4650-56' 4 SPF 25 holes with 910 gallons 15% HCl, Xylene, Additives.

6/26/02 *pu Teresa*

**RECEIVED**  
AUG 14 2002  
DIVISION OF  
OIL, GAS AND MINING

14. I hereby certify that the foregoing is true and correct.  
**Electronic Submission #13521 verified by the BLM Well Information System For PETROGLYPH OPERATING CO., sent to the Vernal**

Name (Printed/Typed) TERESA J. RASMUSSEN	Title AUTHORIZED REPRESENTATIVE
Signature <i>[Signature]</i> (Electronic Submission)	Date 08/13/2002

**(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 or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* ORIGINAL \*\* ORIGINAL \*\***



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

999 18<sup>TH</sup> STREET – SUITE 200  
DENVER, CO 80202-2466  
Phone: 800-227-8917  
<http://www.epa.gov/region08>

OCT 19 2006

Ref: 8P-W-GW

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

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

Mr. Steve Wall  
District Manager  
Petroglyph Energy, Inc.  
4116 West 3000 So. Ioka Lane  
Roosevelt, UT 84066

Re: Additional Well to Antelope Creek Area Permit  
**UIC Permit No. UT20736-00000**  
**Well ID: UT20736-07117**

Ute Tribal No. 21-10  
Duchesne County, Utah  
43,013 · 31748

Dear Mr. Wall:

55 3W 21

The Petroglyph Operating Company, Inc.'s (Petroglyph) request to convert the former Green River Formation oil well Ute Tribal No. 21-10 to an enhanced recovery injection well in the Antelope Creek Waterflood project is hereby authorized by the Environmental Protection Agency (EPA) under the terms and conditions of the Authorization For Additional Well.

The addition of the proposed injection well, within the exterior boundary of the Uintah & Ouray Indian Reservation, is being made under the authority of 40 CFR §144.33 (c) and terms of the Antelope Creek Waterflood UIC Area Permit No. UT20736-00000. Unless specifically mentioned in the enclosed Authorization For Additional Well, the Ute Tribal No. 21-10 is subject to all terms and conditions of the UIC Area Permit UT20736-00000 as modified.

Please be aware that Petroglyph does not have authorization to begin injection operations into the well until all Prior to Commencing Injection requirements have been submitted and evaluated by the EPA, and Petroglyph has received written authorization from the Director to begin injection.

Prior to receiving authorization to inject, the EPA requires that Petroglyph submit for review and approval the following: (1) the results of a **Part I (Internal) mechanical integrity test (MIT)**, (2) a **pore pressure** calculation of the injection interval, and (3) a completed **EPA Form No. 7520-12 Well Rework Record**.

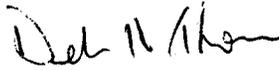
**RECEIVED**  
**OCT 24 2006**

DIV. OF OIL, GAS & MINING

The initial Maximum Allowable Injection Pressure (MAIP) for the Ute Tribal No. 21-10 was determined to be **1437 psig**. UIC Area Permit UT20736-00000 also provides the opportunity for the permittee to request a change in the MAIP based upon results of a step rate test that demonstrates that the formation breakdown pressure will not be exceeded.

If you have any questions, please call Ms. Linda Bowling at (303) 312-6254 or 1.800.227.8917 (Ext. 6254). Please submit the required data to **ATTENTION: LINDA BOWLING**, at the letterhead address, citing **MAIL CODE: 8P-W-GW** very prominently.

Sincerely,



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

encl: Authorization For Conversion of An Additional Well  
EPA Form No. 7520-12 (Well Rework Record)

**cc: without enclosures**

Maxine Natchees, Acting Chairperson  
Uintah & Ouray Business Committee  
Ute Indian Tribe  
P.O. Box 190  
Fort Duchesne, UT 84026

Chester Mills, Superintendent  
BIA - Uintah & Ouray Indian Agency  
P.O. Box 130  
Fort Duchesne, UT 84026

**cc: with enclosures;**

S. Elaine Willie  
Environmental Coordinator  
Ute Indian Tribe  
P.O. Box 460  
Fort Duchesne, UT 84026

Gilbert Hunt  
Associate Director  
Utah Division of Oil, Gas, and Mining  
1594 West North Temple - Suite 1220  
Salt Lake City, UT 84114-5801

Fluid Mineral Engineering Office  
U.S. Bureau of Land Management – Vernal Office  
170 South 500 East  
Vernal, UT 84078

Lynn Becker, Director  
Energy and Minerals Department  
Ute Indian Tribe  
P.O. Box 70  
Ft. Duchesne, UT 84026

Mr. Kenneth Smith  
Executive Vice President and Chief Operating Officer  
Petroglyph Energy, Inc.  
555 S. Cole Blvd.  
Boise, ID 83709



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 200
DENVER, CO 80202-2466
Phone 800-227-8917
http://www.epa.gov/region08

AUTHORIZATION FOR ADDITIONAL WELL

UIC Area Permit No: UT20736-00000

The Antelope Creek Waterflood Final UIC Area Permit No. UT20736-00000, effective July 12, 1994, authorizes injection for the purpose of enhanced oil recovery into multiple lenticular sand units which are distributed throughout the lower portion of the Green River Formation. On February 06, 2006, the permittee provided notice to the Director concerning the following additional enhanced recovery injection well:

Well Name: Ute Tribal 21-10
EPA Well ID Number: UT20736-07117
Location: 2022 ft FSL & 3344 ft FWL
Sec. 21 - T5S - R3W
Duchesne County, Utah.

Pursuant to 40 CFR §144.33, Area UIC Permit No. UT20736-00000 authorizes the permittee to construct and operate, convert, or plug and abandon additional enhanced recovery injection wells within the area permit. This well was determined to satisfy additional well criteria required by the permit.

This well is subject to all provisions of UIC Area Permit No. UT20736-00000, as modified and as specified in the Well Specific Requirements detailed below. This Authorization shall expire one year after the Effective Date unless the permittee has converted the well to injection or submits a written request to extend this Authorization prior to the expiration date.

This Authorization is effective upon signature.

Date: OCT 19 2006

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

\* The person holding this title is referred to as the Director throughout the permit and Authorization

## WELL-SPECIFIC REQUIREMENTS

Well Name: Ute Tribal 21-10  
EPA Well ID Number: UT20736-07117

**Prior to commencing injection operations, the permittee shall submit the following information and receive written Authority to Inject from the Director:**

1. a successful Part I (Internal) Mechanical Integrity Test (MIT);
2. pore pressure calculation of the proposed injection zone; and
3. completed Well Rework Record EPA Form No. 7520-12 and schematic diagram.

**Approved Injection Zone:** Injection is approved between the base of the Green River A Lime Marker, at approximately 3956 ft (KB)<sub>CBL</sub>, to the top of the Basal Carbonate, at approximately 5968 ft (KB)<sub>CBL</sub>.

**Maximum Allowable Injection Pressure (MAIP):** The initial MAIP is 1437 psig, based on the following calculation:

$$\begin{aligned} \text{MAIP} &= [\text{FG} - (0.433)(\text{SG})] * \text{D}, \text{ where} \\ \text{FG} &= 0.80 \text{ psi/ft} \quad \text{SG} = 1.009 \quad \text{D} = 3958 \text{ ft (top perforation depth KB)} \\ \text{MAIP} &= \underline{1437 \text{ psig}} \end{aligned}$$

UIC Area Permit No. UT20736-00000 also provides the opportunity for the permittee to request a change of the MAIP based upon results of a step rate test that demonstrates the formation breakdown pressure will not be exceeded.

**Well Construction and Corrective Action:** *No Corrective Action is required.*

Based on review of well construction and cementing records, including CBL, well construction is considered adequate to prevent fluid movement out of the injection zone and into USDWs.

**Tubing and Packer:** *No Corrective Action is required.*

The 2-7/8" or similar size injection tubing is approved. The packer shall be set at a depth no more than 100 ft above the top perforation.

**Corrective Action for Wells in Area of Review:** *No Corrective Action is required.*

The following wells that penetrate the confining zone are within or proximate to a 1/4 mile radius around the Ute Tribal No. 21-10 were evaluated to determine if any corrective action is necessary to prevent fluid movement into USDWs:

Well: Ute Tribal No. 21-06F	Location: Sec. 21-T5S-R3W
Well: Ute Tribal No. 21-07	Location: Sec. 20-T5S-R3W
Well: Ute Tribal No. 21-11	Location: Sec. 21-T5S-R3W
Well: Ute Tribal No. 21-11L	Location: Sec. 21-T5S-R3W
Well: Ashley Federal 11-15-9-15	Location: Sec. 15-T9S-R15E

**Demonstration of Mechanical Integrity:** A successful demonstration of Part I (Internal) Mechanical Integrity using a standard Casing-Tubing pressure test is required prior to injection

*Authorization for Additional Well: UIC Area Permit UT20736-00000*  
*Well: Ute Tribal 21-10 EPA Well ID: UT20736-07117*

and at least once every five years thereafter. EPA reviewed the cement bond log and determined the cement will provide an effective barrier to significant upward movement of fluids through vertical channels adjacent to the well bore pursuant to 40 CFR 146.8 (a)(2). Therefore, further demonstration of Part II (External) Mechanical Integrity is not required at this time.

**Demonstration of Financial Responsibility:** The applicant has demonstrated financial responsibility in the amount of \$15,000 via a Surety Bond that has been reviewed and approved by the EPA.

**Plugging and Abandonment:** The well shall be plugged in a manner that isolates the injection zone and prevents movement of fluids into or between USDWs. 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. 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. At a minimum, the following plugs are required:

- PLUG NO. 1: Set a cast iron bridge plug (CIBP) no more than 50 ft above the top perforation (located at 3958 ft (KB)) with a minimum 20 ft cement plug on top of the CIBP.
- PLUG NO. 2: Set a minimum 200 ft cement plug inside of the 5-1/2" casing and on the backside of the 5-1/2" casing across the Trona Zone and the Mahogany Shale, between approximately 2700 ft (KB) to 2946 ft (KB).
- PLUG NO. 3: Set a minimum 200 ft cement plug inside of the 5-1/2" casing and on the backside of the 5-1/2" casing across the base of the USDW, between approximately 1120 ft (KB) to 1320 ft (KB). This plug fulfills the Utah BLM P&A requirement.
- PLUG NO. 4: Set a minimum 50 ft cement plug on the backside of the 5-1/2" casing, across the surface casing shoe at 507 ft (KB) (unless pre-existing backside cement precludes cement-squeezing this interval.)
- PLUG NO. 5: Set a cement plug inside of the 5-1/2" casing, from at least 482 ft (KB) to 532 ft (KB).
- PLUG NO. 6: Set a cement plug on the backside of the 5-1/2" casing, from surface to a depth of at least 50 ft.
- PLUG NO. 7: Set a cement plug inside of the 5-1/2" casing from surface to a depth of at least 50 ft.

Cut off surface and 5-1/2" casing at least 4 ft below ground level and set P&A marker; submit Sundry Notices and all necessary data as required by the EPA and other regulatory agencies.

**Reporting of Noncompliance:**

- (a) Anticipated Noncompliance. The operator 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.
- (b) Compliance Schedules. Reports of compliance or noncompliance with, or any progress on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than thirty (30) days following each schedule date.
- (c) Written Notice of any noncompliance which may endanger health or the environment shall be reported to the Director within five (5) days of the time the operator becomes aware of the noncompliance. The written notice shall contain a description of the noncompliance and its cause; the period of noncompliance including dates and times; if the noncompliance has not been corrected the anticipated time it is expected to continue; and steps taken or planned to prevent or reduce recurrence of the noncompliance.

**Twenty-Four Hour Noncompliance Reporting:**

The operator shall report to the Director any noncompliance which may endanger health or environment. Information shall be provided, either orally or by leaving a message, within twenty-four (24) hours from the time the operator becomes aware of the circumstances by telephoning 1.800.227.8917 and asking for the EPA Region 8 UIC Program Compliance and Enforcement Director, or by contacting the Region 8 Emergency Operations Center at 303.293.1788 if calling from outside EPA Region 8. The following information shall be included in the verbal report:

- (a) Any monitoring or other information which indicates that any contaminant may cause an endangerment to a USDW.
- (b) Any noncompliance with a Permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.

**Oil Spill and Chemical Release Reporting:**

The operator shall comply with all other reporting requirements related to oil spills and chemical releases or other potential impacts to human health or the environment by contacting the **National Response Center (NRC) 1.800.424.8802 or 202.267.2675**, or through the NRC website at **<http://www.nrc.uscg.mil/index.htm>**.

**Other Noncompliance:**

The operator shall report all other instances of noncompliance not otherwise reported at the time monitoring reports are submitted.

Other Information:

Where the operator becomes aware that he 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 operator shall submit such correct facts or information within two (2) weeks of the time such information became known to him.

## WELL-SPECIFIC CONSIDERATIONS

Well Name: Ute Tribal 21-10  
EPA Well ID: UT20736-007117

**Underground Sources of Drinking Water (USDWs):** USDWs in the Antelope Creek Waterflood area generally may occur within the Uinta Formation, which extends from the surface to the top of the Green River Formation at approximately 1592 ft (KB). According to "Base of Moderately Saline Ground Water in the Uinta Basin, Utah, State of Utah Technical Publication No. 92," the base of moderately saline ground water may be found at approximately 173 ft. below ground surface at this well location. Based on information reported by Petroglyph in the cement bond log (CBL) submitted, the base of a USDW was found at 1218 ft (KB) in the Ute Tribal 21-10. Based on analysis of the submitted CBL the top of casing cement in this well is at approximately 2320 ft (KB).

**Confining Zone:** The Confining Zone at this location is approximately 204 ft of interbedded limestone and shale between the depths of 3752 ft to 3956 ft (KB) which directly overlies the Injection Zone, based on correlation to the Antelope Creek Ute Tribal 04-03 well Type Log. Additional impermeable lacustrine shale beds above the Confining Zone provide for further protection for any overlying USDW.

**Injection Zone:** The Injection Zone at this well location is an approximately 2012 ft section of multiple lenticular sand units interbedded with shale, marlstone and limestone from the base of the Confining Zone at 3956 ft (KB) to the top of the Basal Carbonate Formation at 5968 ft (KB), based on correlation to the Antelope Creek Ute Tribal 04-03 well Type Log.

**Well Construction:** The CBL shows more than 204 ft of 80% or greater bond across the confining zone, at approximately 3752 ft (KB) to 3956 ft (KB).

**Surface Casing:** 8-5/8" casing is set at 507 ft (KB) in a 12-1/4" hole, using 300 sacks cement circulated to the surface

**Longstring Casing:** 5-1/2" casing is set at 6081 ft (KB) in a 7-7/8" 6081 ft (KB) total depth hole with plugged back total depth (PBSD) of 6039 ft (KB), cemented with 420 sacks cement

**Top of Cement :** 2320 ft (KB)<sub>CBL</sub>

**Perforations:** Top: 3958 ft (KB) Bottom : 5969 ft (KB)

**Wells in Area of Review (AOR):** Construction and cementing records, including cement bond logs (CBL) as available, for two wells in the 1/4 mile AOR that penetrated the confining zone were reviewed and found adequate to prevent fluid movement out of the injection zone and into USDWs.

Well: Ute Tribal No. 21- 06F	Casing Cement top: 2002 ft (KB) <sub>CBL</sub>
Well: Ute Tribal No. 21- 07	Casing Cement top: 2520 ft (KB) <sub>CBL</sub>
Well: Ute Tribal No. 21- 11	Casing Cement top: 2552 ft (KB) <sub>CBL</sub>
Well: Ute Tribal No. 21- 11L	Casing Cement top: 850 ft (KB) <sub>CBL</sub>
Well: Ashley Federal 11-15-9-15	Casing Cement top: 112 ft (KB) <sub>CBL</sub>

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460



**WELL REWORK RECORD**

NAME AND ADDRESS OF PERMITTEE	NAME AND ADDRESS OF CONTRACTOR
-------------------------------	--------------------------------

<p style="text-align: center;">LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT — 640 ACRES</p> <div style="text-align: center;"> <p>N</p> <table border="1" style="width: 100%; height: 150px; border-collapse: collapse;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table> <p style="text-align: center;">S</p> <p style="position: absolute; left: -40px; top: 50%; transform: translateY(-50%);">W</p> <p style="position: absolute; right: -40px; top: 50%; transform: translateY(-50%);">E</p> </div>																																																																	STATE	COUNTY	PERMIT NUMBER
SURFACE LOCATION DESCRIPTION																																																																			
¼ OF      ¼ OF      ¼ SECTION      TOWNSHIP      RANGE																																																																			
LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT Surface Location ____ ft. from (N/S) ____ Line of quarter section and ____ ft. from (E/W) ____ Line of quarter section																																																																			
WELL ACTIVITY <input type="checkbox"/> Brine Disposal <input type="checkbox"/> Enhanced Recovery <input type="checkbox"/> Hydrocarbon Storage  Lease Name _____		Total Depth Before Rework _____ Total Depth After Rework _____ Date Rework Commenced _____ Date Rework Completed _____	TYPE OF PERMIT <input type="checkbox"/> Individual <input type="checkbox"/> Area Number of Wells _____  Well Number _____																																																																

WELL CASING RECORD — BEFORE REWORK						
Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	

WELL CASING RECORD — AFTER REWORK (Indicate Additions and Changes Only)						
Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	

DESCRIBE REWORK OPERATIONS IN DETAIL USE ADDITIONAL SHEETS IF NECESSARY	WIRE LINE LOGS, LIST EACH TYPE	
	Log Types	Logged Intervals

**CERTIFICATION**

*I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32).*

NAME AND OFFICIAL TITLE (Please type or print)	SIGNATURE	DATE SIGNED
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# Prior to Beginning Injection Checklist

Permit: UT20736- 07117 . Well: Ute Tribal .

Prior to beginning injection, the following items must be completed:

- Completion Report / Well Rework Report**
- Injection Zone Pressure**
- Standard Annulus Pressure Test- MIT (Part I)**
- Radioactive Tracer Survey - MIT (Part II)**
- Temperature Survey - MIT (Part II)**
- Oxygen Activation Log - MIT (Part II)**
- Step Rate Test \_\_\_\_\_ CBL/CET**
- Remedial Cementing**
- Other Corrective Action**
- Injection Zone Fluid Sample**
- Aquifer Exemption Determination**
- Injection Zone Temperature**
- Analysis of Source Fluid (injectate)**
- Other \_\_\_\_\_**

Comments:

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

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

<b>1. TYPE OF WELL</b> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER:
<b>2. NAME OF OPERATOR:</b> Petroglyph Operating Company, Inc.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
<b>3. ADDRESS OF OPERATOR:</b> P. O. Box 607 CITY Roosevelt STATE UT ZIP 84066		7. UNIT or CA AGREEMENT NAME:
PHONE NUMBER: (435) 722-5304		8. WELL NAME and NUMBER:
<b>4. LOCATION OF WELL</b> FOOTAGES AT SURFACE: 2022' FSL, 3344' FWL, Sec 21, T5S, R3W QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSE 21 T5S R3W		9. API NUMBER: 43-013-31748
COUNTY: Duchesne STATE: UTAH		10. FIELD AND POOL, OR WILDCAT:

**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> (Submit in Duplicate) Approximate date work will start: _____  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> (Submit Original Form Only) Date of work completion: _____	<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"/> TEMPORARILY 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 FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<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.**

This sundry is serving notice that Petroglyph Operating Company, Inc. (POCI) plans to convert the Ute Tribal 21-10 to an injection well from a producing well. This work is being performed under our area UIC permit number UT20736-00000. POCI has obtained approval to perform the conversion on Ute Tribal 21-10 from the EPA. After the conversion on the Ute Tribal 21-10 is complete, POCI will submit the necessary information to the EPA to obtain approval to begin injection operations.

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

RECEIVED

OCT 26 2006

DIV. OF OIL, GAS & MINING

NAME (PLEASE PRINT) <u>Steve Wall</u>	TITLE <u>Manager</u>
SIGNATURE <u><i>Steve Wall</i></u>	DATE <u>10/25/2006</u>

(This space for State use only)

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

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>1420h23516</b>
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>UINTAH AND OURAY</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.		7. UNIT or CA AGREEMENT NAME: <b>1420H624650</b>
		8. WELL NAME and NUMBER: <b>UTE TRIBAL 21-10</b>
1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____	9. API NUMBER: <b>4301331748</b>	
2. NAME OF OPERATOR: <b>Petroglyph Operating Company, Inc.</b>	PHONE NUMBER: <b>(435) 722-5304</b>	10. FIELD AND POOL, OR WILDCAT: <b>ANTELOPE CREEK</b>
3. ADDRESS OF OPERATOR: P. O. Box 607 CITY <b>Roosevelt</b> STATE <b>UT</b> ZIP <b>84066</b>		
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>1920' FSL 3300' FWL</b>	COUNTY: <b>Duchesne</b>	
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NWSE 21 5S 3W</b>	STATE: <b>UTAH</b>	

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 start: _____	<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 checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY 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 FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<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.

This well has been converted to a water injection well to support the ongoing secondary waterflood currently active in the Antelope Creek field. The rods and tubing have been pulled from this well. The injection string consists of 2 3/8", 4.7#, J-55 EUE tubing. The packer is installed at 4573' +/- KB. Packer fluid has been circulated in the casing and a successful MIT test performed and submitted to the EPA.

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

NAME (PLEASE PRINT) <u>Steve Wall</u>	TITLE <u>Manager</u>
SIGNATURE <u><i>Steve Wall</i></u>	DATE <u>11/30/2006</u>

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**RECEIVED  
DEC 05 2006**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

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

Ref: 8P-W-GW

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

IAN 3 0 2007

Steve Wall, District Manager  
Petroglyph Energy, Inc.  
4116 West 3000 So. Ioka Lane  
Roosevelt, UT 84066

43-013-31748  
5S 3W 21

RE: Authorization to Inject  
UIC Permit No. UT20736-00000  
Well ID: UT20736-07117  
Ute Tribal No. 21-10  
Duchesne County, Utah

RECEIVED  
FEB 09 2007

DIV. OF OIL, GAS & MINING

Dear Mr. Wall:

Thank you for submitting information pertaining to the newly constructed or converted Ute Tribal No. 21-10 enhanced recovery injection well to the Region 8 Ground Water Program office of the Environmental Protection Agency (EPA). The "Prior To Commencing Injection" requirements for the Ute Tribal No. 21-10 injection well required well owner and operator Petroglyph Operating Company, Inc. to submit the following information to the Director:

- I. A successful mechanical integrity test (MIT) demonstrating Part I Internal MI,
- II. Pore pressure calculation of the proposed injection zone, and
- III. Completed EPA Form No. 7520-12.

All required information has been submitted, and has been reviewed and approved by the EPA. Therefore, effective upon your receipt of this letter, Administrative approval hereby is granted for injection into the Ute Tribal No. 21-10 enhanced recovery injection well under the conditions of the Authorization for Additional Well and UIC Area Permit UT20736-00000 as modified.

As of this approval, responsibility for permit compliance and enforcement is transferred to the Region 8 UIC Technical Enforcement Program office. Therefore, please direct all future notification, reporting, monitoring and compliance correspondence to the following address, referencing your well and UIC Permit number on all correspondence regarding this well.

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



Elaine Willie  
Environmental Coordinator  
Ute Indian Tribe  
P.O. Box 460  
Fort Duchesne, UT 84026

Gil Hunt  
Technical Services Manager  
Utah Division of Oil, Gas, and Mining  
1594 West North Temple - Suite 1220  
Salt Lake City, UT 84114-5801

Kirk Fleetwood, PE  
BLM - Vernal District  
170 South 500 East  
Vernal, UT 84078



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

FORM 9

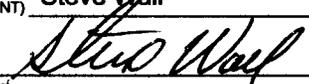
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>1420H623516</b>
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>Ute Indian Tribe</b>
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Water Injection Well</u>		7. UNIT or CA AGREEMENT NAME: <b>1420H624650</b>
2. NAME OF OPERATOR: <b>Petroglyph Operating Company, Inc.</b>		8. WELL NAME and NUMBER: <b>Ute Tribal 21-10</b>
3. ADDRESS OF OPERATOR: P. O. Box 607 CITY <u>Roosevelt</u> STATE <u>UT</u> ZIP <u>84066</u>		9. API NUMBER: <b>4301331748</b>
4. LOCATION OF WELL <u>2072 3344</u> FOOTAGES AT SURFACE: <u>1920' FSL 3300' FWL</u>		10. FIELD AND POOL, OR WILDCAT: <b>Antelope Creek</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NWSE 21 T5S R3W</b>		COUNTY: <b>Duchesne</b>
		STATE: <b>UTAH</b>

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 start: _____	<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"/> TEMPORARILY 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 FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: <u>2/1/2007</u>	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<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.  
**First date of Injection February 1, 2007**

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

NAME (PLEASE PRINT) <u>Steve Wall</u>	TITLE <u>Manager</u>
SIGNATURE 	DATE <u>2/1/2007</u>

(This space for State use only)

**RECEIVED**  
**FEB 09 2007**