

UTAH OIL AND GAS CONSERVATION COMMISSION

REMARKS: WELL LOG ELECTRIC LOGS  WATER SANDS  LOCATION INSPECTED SUB. REPORT/abd.

980803 contemp:

DATE FILED JANUARY 28, 1997

LAND: FEE & PATENTED STATE LEASE NO. PUBLIC LEASE NO. INDIAN #

DRILLING APPROVED: FEBRUARY 12, 1997 14-20-H62-3514

SPUDED IN: 5/25/97

COMPLETED: 6.24.97 POW PUT TO PRODUCING:

INITIAL PRODUCTION: 94 Bbl, 90 Mcf, 7 Bbl

GRAVITY A.P.I.

GOR:

PRODUCING ZONES: 4744-4988' PERK V

TOTAL DEPTH: 6162

WELL ELEVATION: 6498' ML

DATE ABANDONED:

FIELD: ANTELOPE CREEK

UNIT:

COUNTY: DUCHESNE

WELL NO. UTE TRIBAL 19-09 API NO. 43-013-31794

LOCATION 2032 FSL FT. FROM (N) (S) LINE, 551 FEL FT. FROM (E) (W) LINE. NE SE 1/4 - 1/4 SEC. 19

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
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QUATERNARY	Star Point	Chinle	Molas
Alluvium	Wahweap	Shinarump	Manning Canyon
Lake beds	Masuk	Moenkopi	Mississippian
Pleistocene	Colorado	Sinbad	Humberg
Lake beds	Sego	PERMIAN	Brazer
TERTIARY	Buck Tongue	Kaibab	Pilot Shale
Pliocene	Castlegate	Coconino	Madison
Salt Lake	Mancos	Cutler	Leadville
Oligocene	Upper	Hoskinnini	Redwall
Norwood	Middle	DeChelly	DEVONIAN
Eocene	Lower	White Rim	Upper
Duchesne River	Emery	Organ Rock	Middle
Uinta	Blue Gate	Cedar Mesa	Lower
Bridger	Ferron	Halgait Tongue	Ouray
Green River	Frontier	Phosphoria	Elbert
<i>B marker</i>	<i>4070</i>	Park City	McCracken
<i>X marker</i>	<i>4554</i>	Rico (Goodridge)	Aneth
<i>✓ marker</i>	<i>4389</i>	Supai	Simonson Dolomite
<i>✓ marker</i>	<i>4087</i>	Wolfcamp	Sevy Dolomite
<i>B Lime</i>	<i>5016</i>	CARBON I FEROUS	North Point
<i>CASTLE PEAK</i>	<i>5128</i>	Pennsylvanian	SILURIAN
<i>Basal Carb</i>	<i>1055</i>	Oquirrh	Laketown Dolomite
Colton	San Rafael Gr.	Weber	ORDOVICIAN
Flagstaff	Summerville	Morgan	Eureka Quartzite
North Horn	Bluff Sandstone	Hermosa	Pogonip Limestone
Almy	Curtis		CAMBRIAN
Paleocene	Entrada	Pardox	Lynch
Current Creek	Moab Tongue	Ismay	Bowman
North Horn	Carmel	Desert Creek	Tapeats
CRETACEOUS	Glen Canyon Gr.	Akah	Ophir
Montana	Navajo	Barker Creek	Tintic
Mesaverde	Kayenta		PRE - CAMBRIAN
Price River	Wingate	Cane Creek	
Blackhawk	TRIASSIC		

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

January 15, 1997

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 #19-09**  
**NE/SE SEC. 19, T5S, R3W**  
**DUCHESNE COUNTY, UTAH**  
**LEASE NO. BIA 14-20-H62-3514**  
**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

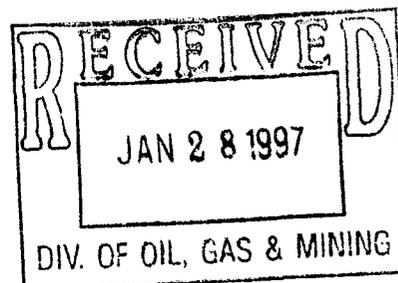
Sincerely,

  
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 <sup>619</sup> 2032' FSL & <sup>119</sup> 551' FEL NE/SE  
 At proposed prod. zone

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

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 551' (Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE  
 640

17. NO. OF ACRES ASSIGNED TO THIS WELL  
 40

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  
 6158'

19. PROPOSED DEPTH  
 6158'

20. ROTARY OR CABLE TOOLS  
 ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 6498.1' GRADED GROUND

22. APPROX. DATE WORK WILL START\*  
 JANUARY 1997

5. LEASE DESIGNATION AND SERIAL NO.  
 14-20-H62-3514

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

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO.  
 UTE TRIBAL

9. API WELL NO.  
 #19-09

10. FIELD AND POOL, OR WILDCAT  
 ANTELOPE CREEK

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 Sec. 19, T5S, R3W

12. COUNTY OR PARISH  
 DUCHESNE

13. STATE  
 UTAH

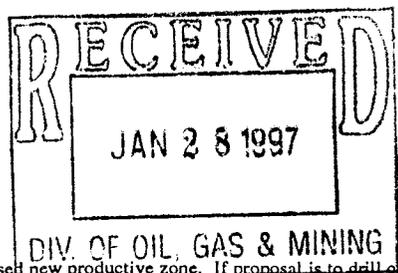
23. PROPOSED CASING AND CEMENTING PROGRAM

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#	6158'	

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 [Signature] TITLE AGENT FOR PETROGLYPH DATE 1-23-97

(This space for Federal or State office use)

PERMIT NO. 43-013-31794 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 \_\_\_\_\_ DATE 2/12/97

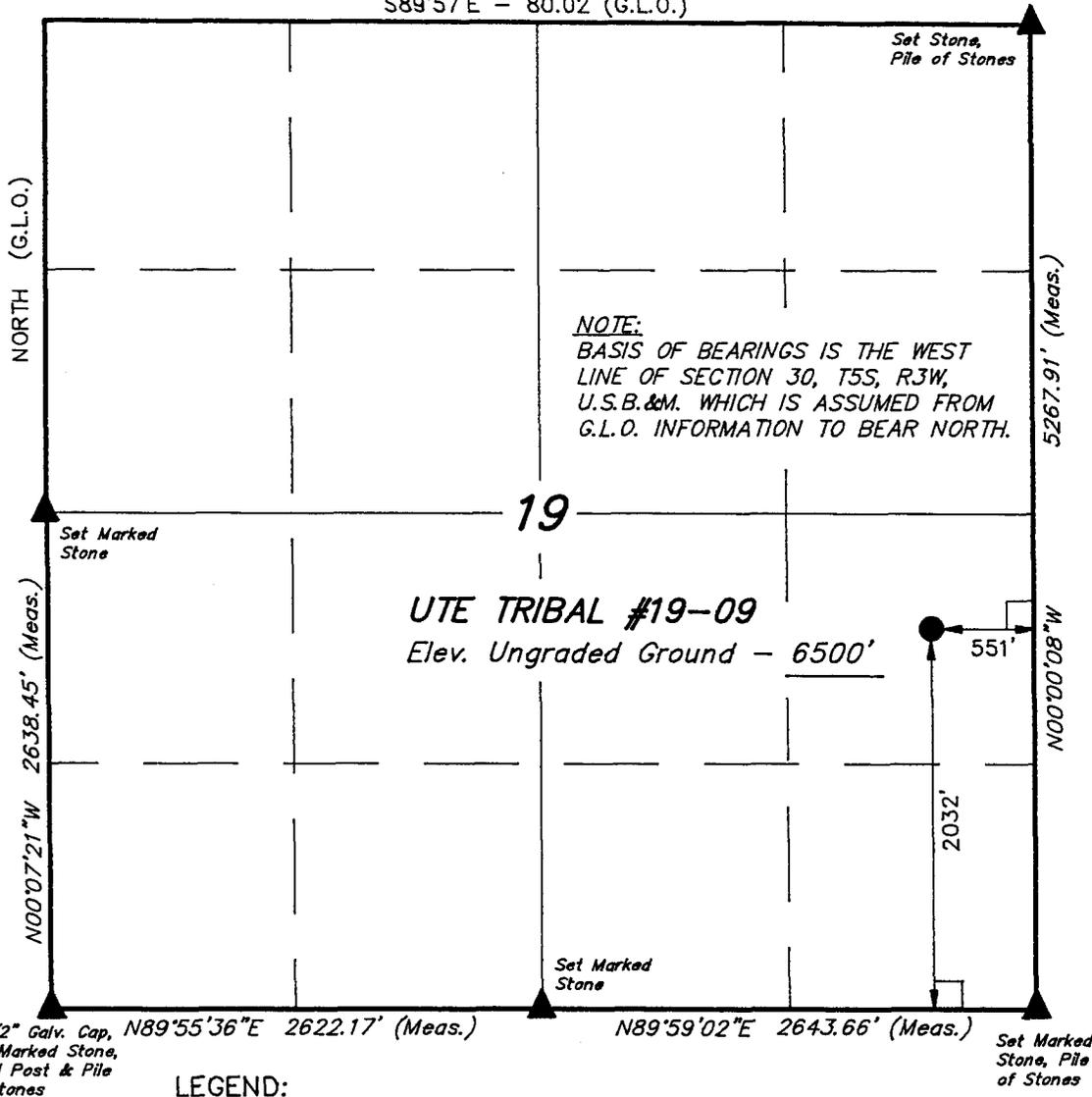
\*See Instructions On Reverse Side

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

**PETROGLYPH OPERATING CO., INC.**

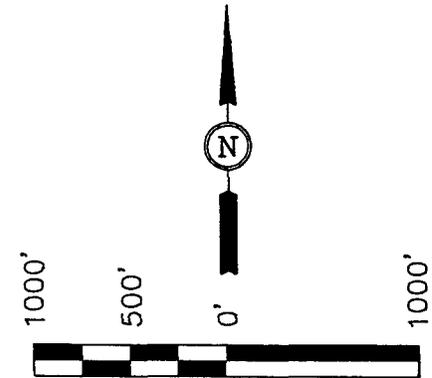
Well Location, UTE TRIBAL #19-09, located as shown in the NE 1/4 SE 1/4 of Section 19, T5S, R3W, U.S.B.&M. Duchesne County, Utah.

S89°57'E - 80.02 (G.L.O.)



**BASIS OF ELEVATION**

SPOT ELEVATION AT THE NORTHWEST CORNER OF SECTION 30, T5S, R3W, U.S.B.&M. TAKEN FROM THE DUCHESNE SE 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 6116 FEET.



**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

<b>UINTAH ENGINEERING &amp; LAND SURVEYING</b>		
85 SOUTH 200 EAST - VERNAL, UTAH 84078		
(801) 789-1017		
SCALE 1" = 1000'	DATE SURVEYED: 11-4-96	DATE DRAWN: 11-21-96
PARTY D.K. K.S. C.B.T.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE PETROGLYPH OPERATING CO., INC.	

**LEGEND:**

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

EIGHT POINT PLAN

UTE TRIBAL #19-09  
NE/SE SEC. 19, T5S R3W  
DUCHESNE COUNTY, UTAH

1. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS:

FORMATIONS	DEPTH	SUBSEA
Mahogany Shale	2970	3538
'B' marker	4058	2450
'X' marker	4551	1957
Douglas Creek	4688	1820
"B" Limestone	5076	1432
B/Castle Peak Limestone	5631	877
Basal Carbonate Limestone	6048	460
Total Depth	6158	350

Anticipated BHP                      2600 psi

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

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>	<u>Subsea</u>
Oil/Gas	Douglas Creek	4688	1820
Oil/Gas	B/Castle Peak	5631	877
Other mineral zones	N/A		

3. PRESSURE CONTROL EQUIPMENT : BOP Schematic Diagram attached.

4. CASING PROGRAM :

<u>HOLE SIZE</u>	<u>INTERVAL</u>	<u>LENGTH</u>	<u>SIZE</u>	<u>WEIGHT</u>	<u>GRADE</u>	<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' - 6158'	6158'	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 #19-09  
NE/SE SEC. 19, 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 #19-09  
NE/SE SEC. 19, 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.

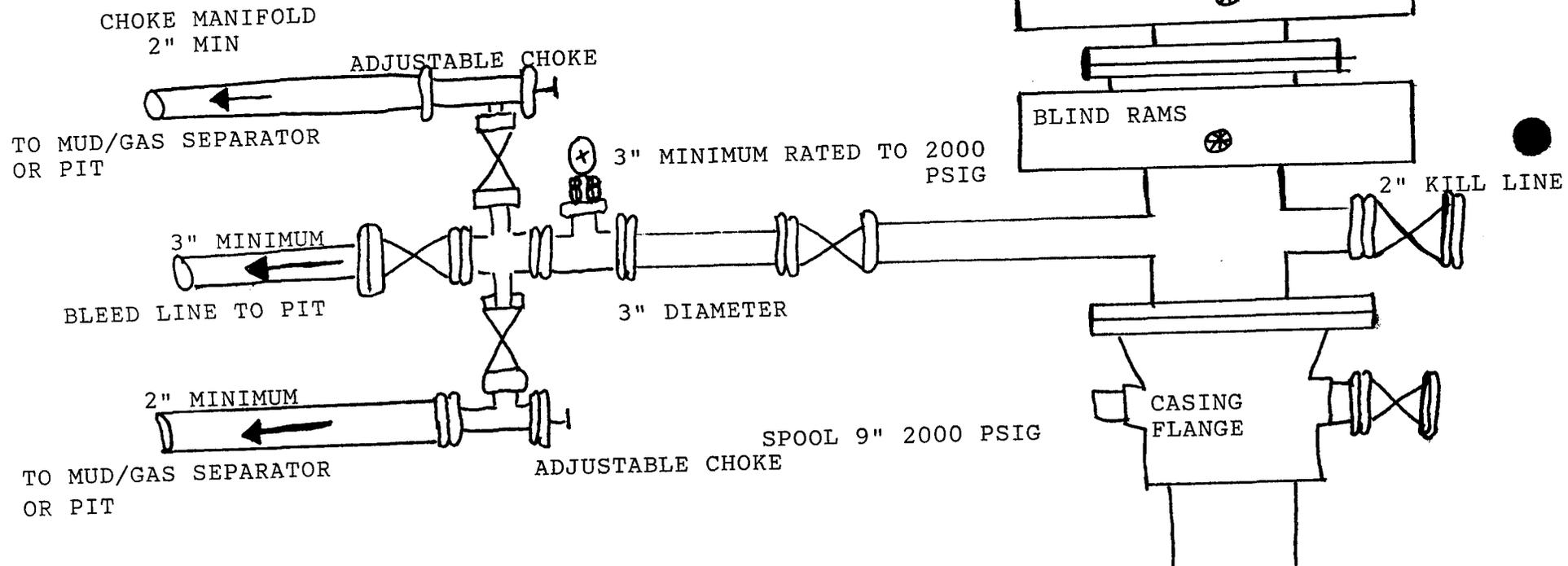
(Attachment: BOP Schematic Diagram)

## 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 #19-09  
Lease Number: BIA 14-20-H62-3514  
Location: 2032' FSL & 551' FEL NE/SE, Sec. 19, 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 20.3 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 0.1 miles 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 - 12\*
- 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 - None
- 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 above ground production pipeline will be laid approximately 1550' from proposed location to a point in the SE/SE of Section 19, T5S, R3W, where it will tie into Petroglyph Operating Co., Inc.'s existing facility at the Ute Tribal #19-16 tank battery. 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 Ute Tribal #19-16 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 East side of the location.

The flare pit will be located downwind of the prevailing wind direction on the East 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 West side.

Access to the well pad will be from the South.

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 \_\_\_\_\_

N/A Corner No. \_\_ will be rounded off to minimize the fill.

## 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.

1-23-97

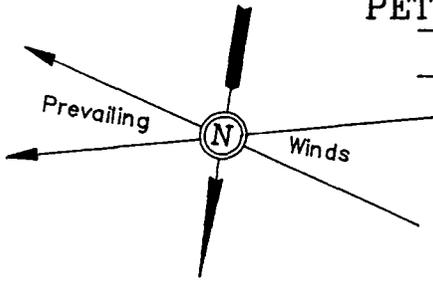
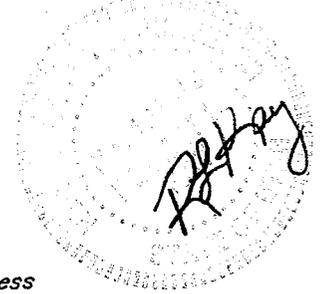
Date



# PETROGLYPH OPERATING CO., INC.

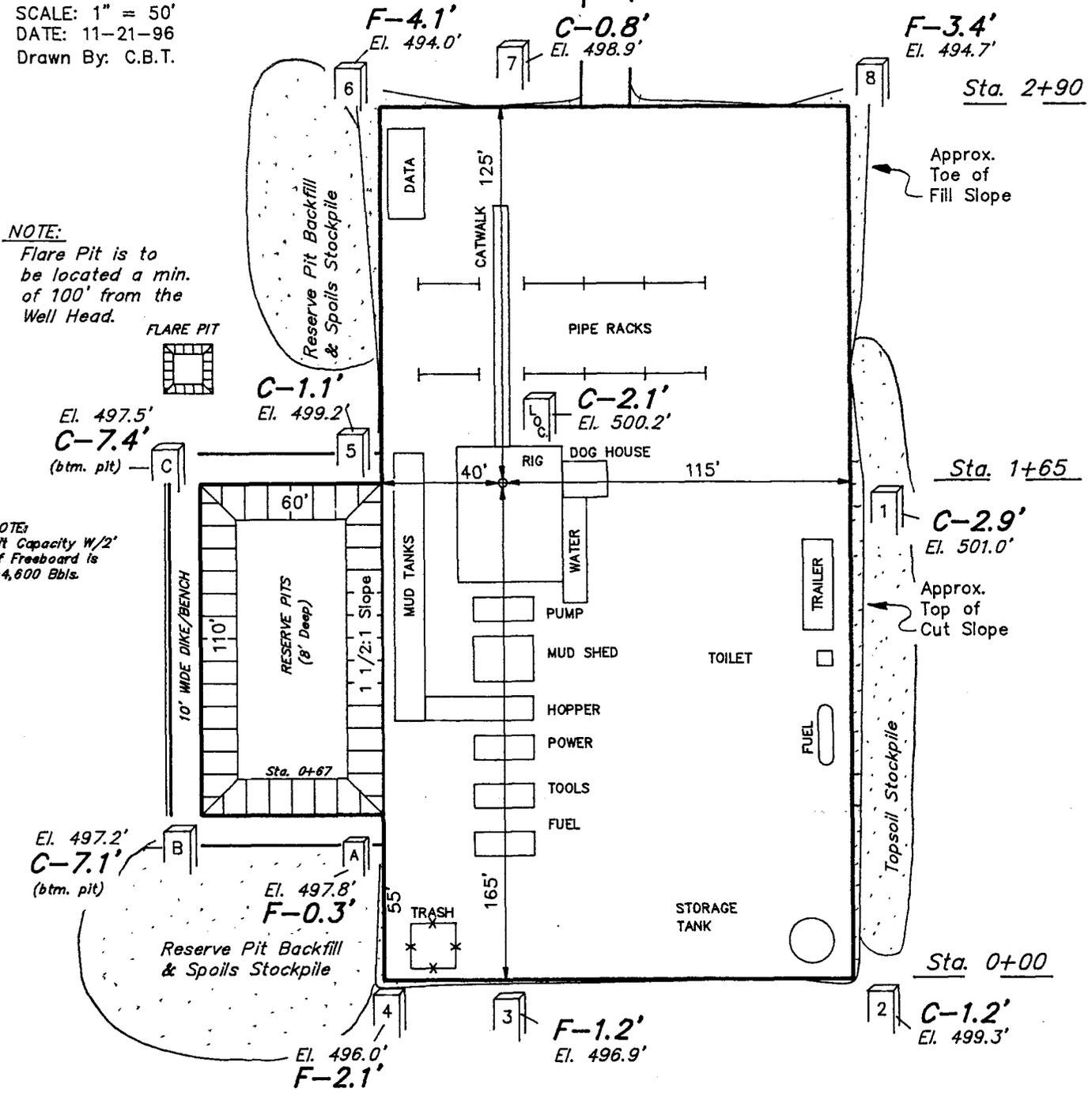
## LOCATION LAYOUT FOR

UTE TRIBAL #19-09  
SECTION 19, T5S, R3W, U.S.B.&M.  
2032' FSL 551' FEL

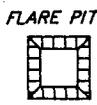


SCALE: 1" = 50'  
DATE: 11-21-96  
Drawn By: C.B.T.

Proposed Access Road



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



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

El. 497.2' C-7.1' (btm. pit)  
El. 497.8' F-0.3'  
Reserve Pit Backfill & Spoils Stockpile

Elev. Ungraded Ground at Location Stake = 6500.2'  
Elev. Graded Ground at Location Stake = 6498.1'

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

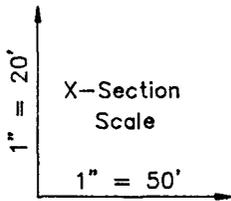
PETROGLYPH OPERATING CO., INC.

TYPICAL CROSS SECTIONS FOR

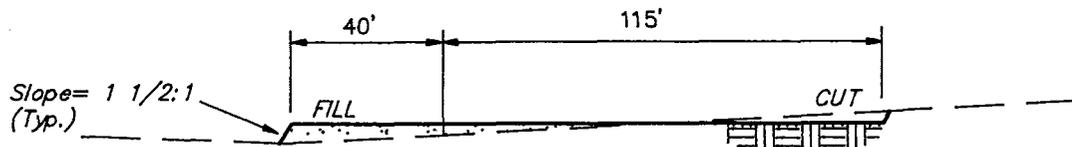
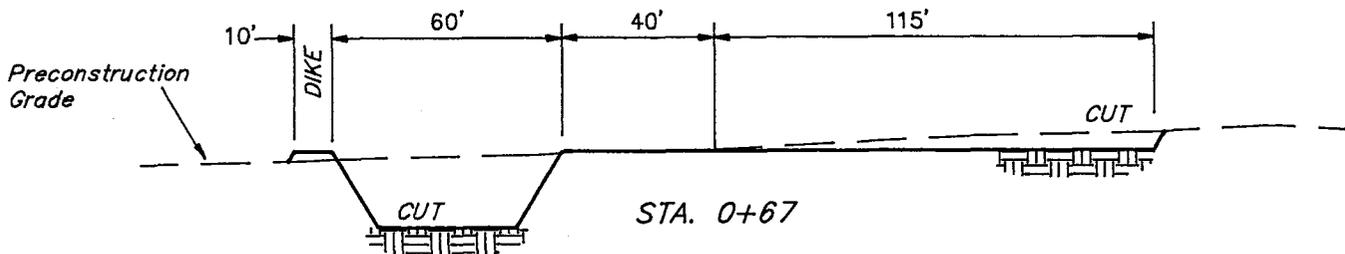
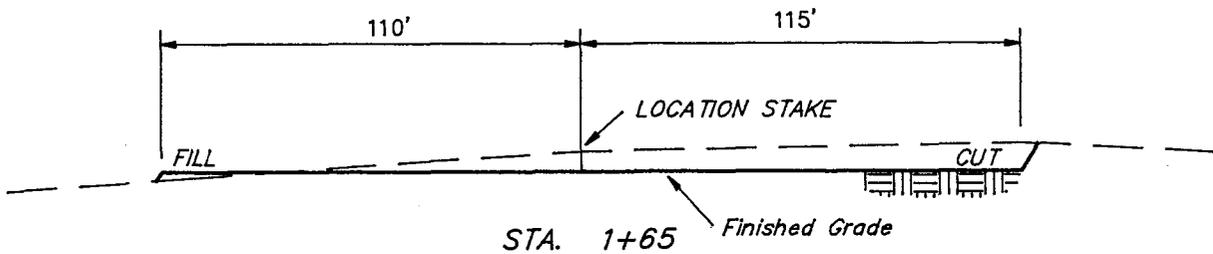
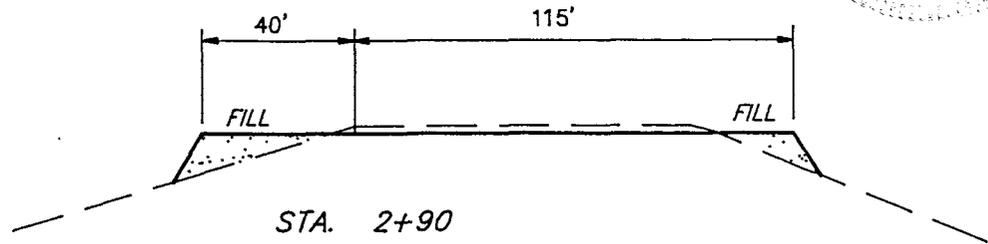
UTE TRIBAL #19-09

SECTION 19, T5S, R3W, U.S.B.&M.

2032' FSL 551' FEL



DATE: 11-21-96  
Drawn By: C.B.T.



NOTE:

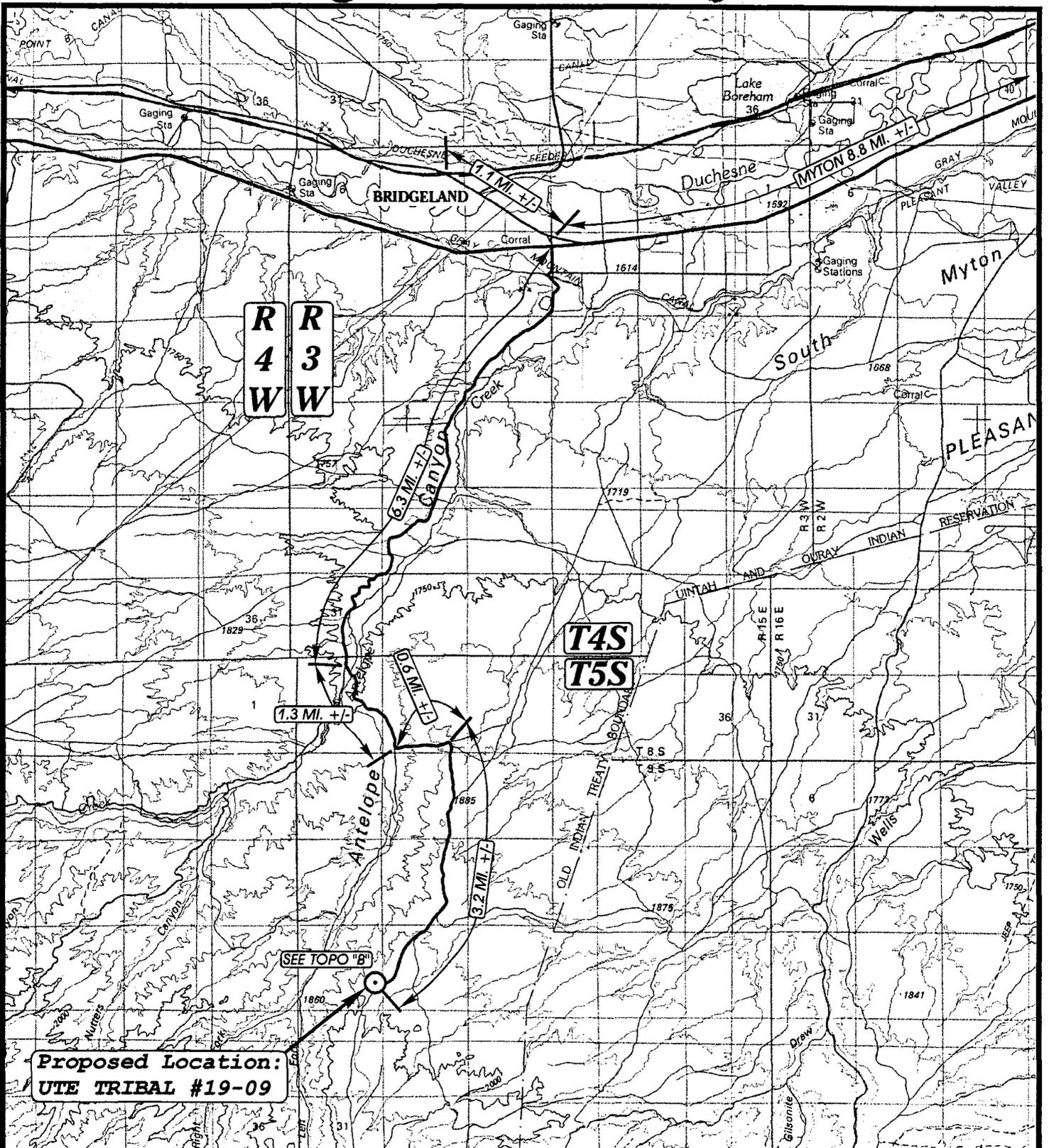
Topsoil should not be Stripped Below Finished Grade on Substructure Area.

APPROXIMATE YARDAGES

(12") Topsoil Stripping	=	1,910 Cu. Yds.
Remaining Location	=	1,880 Cu. Yds.
<b>TOTAL CUT</b>	<b>=</b>	<b>3,790 CU.YDS.</b>
<b>FILL</b>	<b>=</b>	<b>1,110 CU.YDS.</b>

EXCESS MATERIAL AFTER 5% COMPACTION	=	2,620 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	2,610 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	=	10 Cu. Yds.

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**Proposed Location:**  
**UTE TRIBAL #19-09**

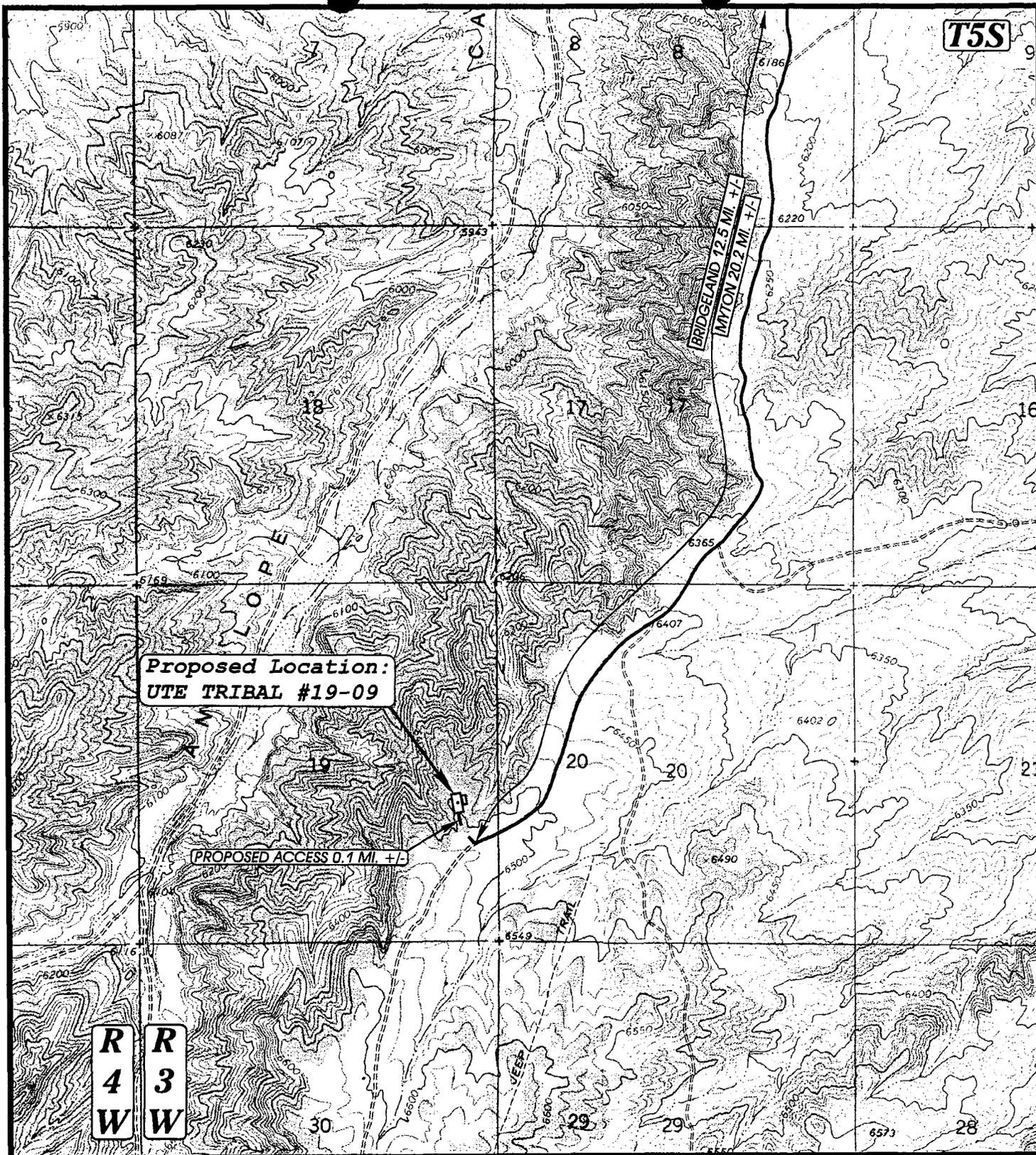
**TOPOGRAPHIC  
 MAP "A"**

DATE: 11-22-96  
 Drawn by: D. COX



**PETROGLYPH OPERATING CO., INC.**

**UTE TRIBAL #19-09  
 SECTION 19, T5S, R3W, U.S.B.&M.  
 2032' FSL 551' FEL**



**Proposed Location:  
UTE TRIBAL #19-09**

**PROPOSED ACCESS 0.1 MI +/-**

**BRIDGE LAND 12.5 MI +/-  
LIMTON 20.2 MI +/-**

**R  
4  
W** **R  
3  
W**

**UELS**

**TOPOGRAPHIC  
MAP "B"**

**DATE: 11-22-96  
Drawn by: D.COX**

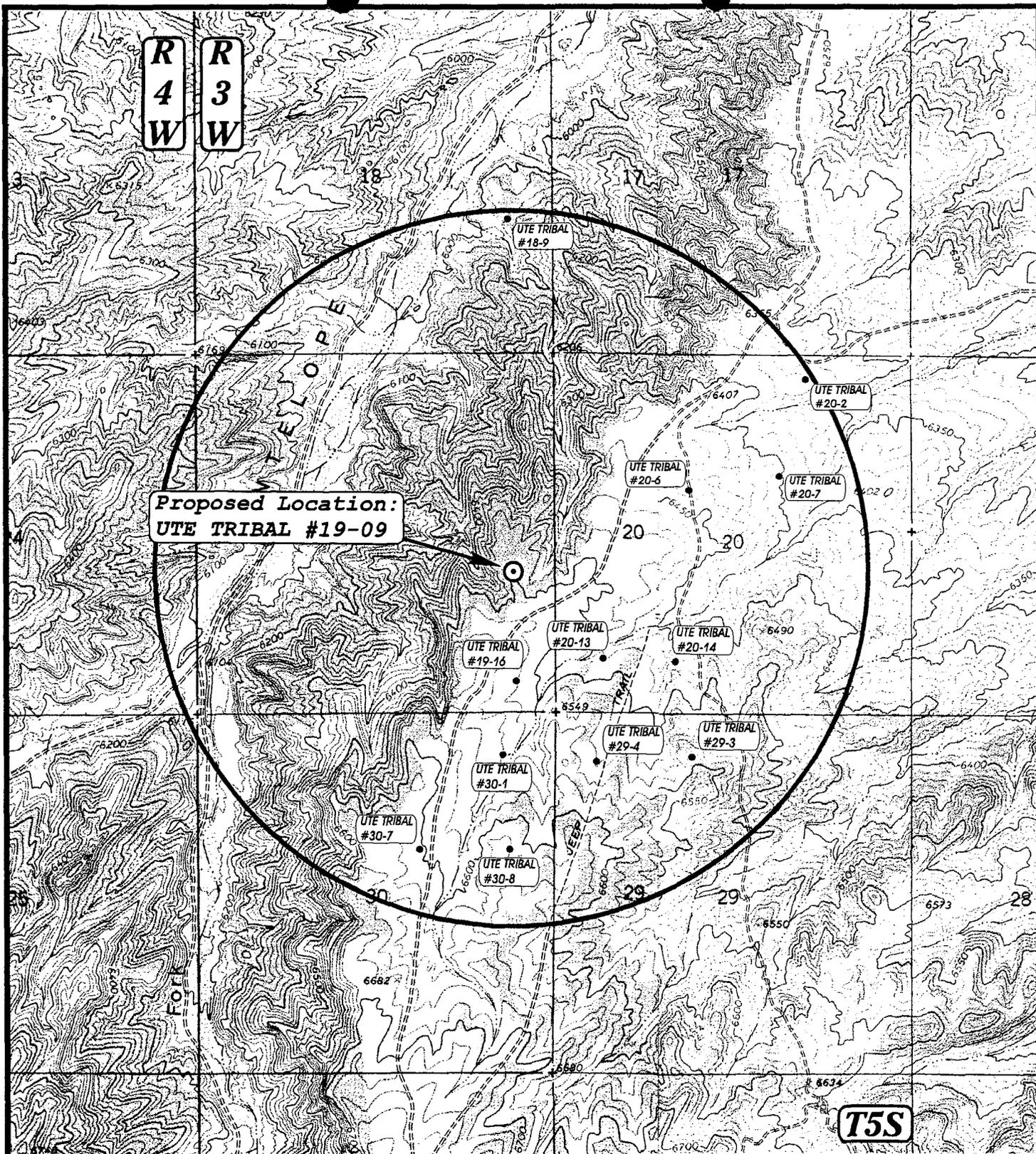
**UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East • Vernal, Utah 84078 • (801) 789-1017**



**PETROGLYPH OPERATING CO., INC.**

**UTE TRIBAL #19-09  
SECTION 19, T5S, R3W, U.S.B.&M.  
2032' FSL 551' FEL**

**SCALE: 1" = 2000'**



**Proposed Location:**  
**UTE TRIBAL #19-09**

**T5S**

**LEGEND:**

**UEIS**

- Water Wells
- Abandoned Wells
- ◐ Temporarily Abandoned Wells
- ⊙ Disposal Wells
- Drilling Wells
- Producing Wells
- Shut-In Wells

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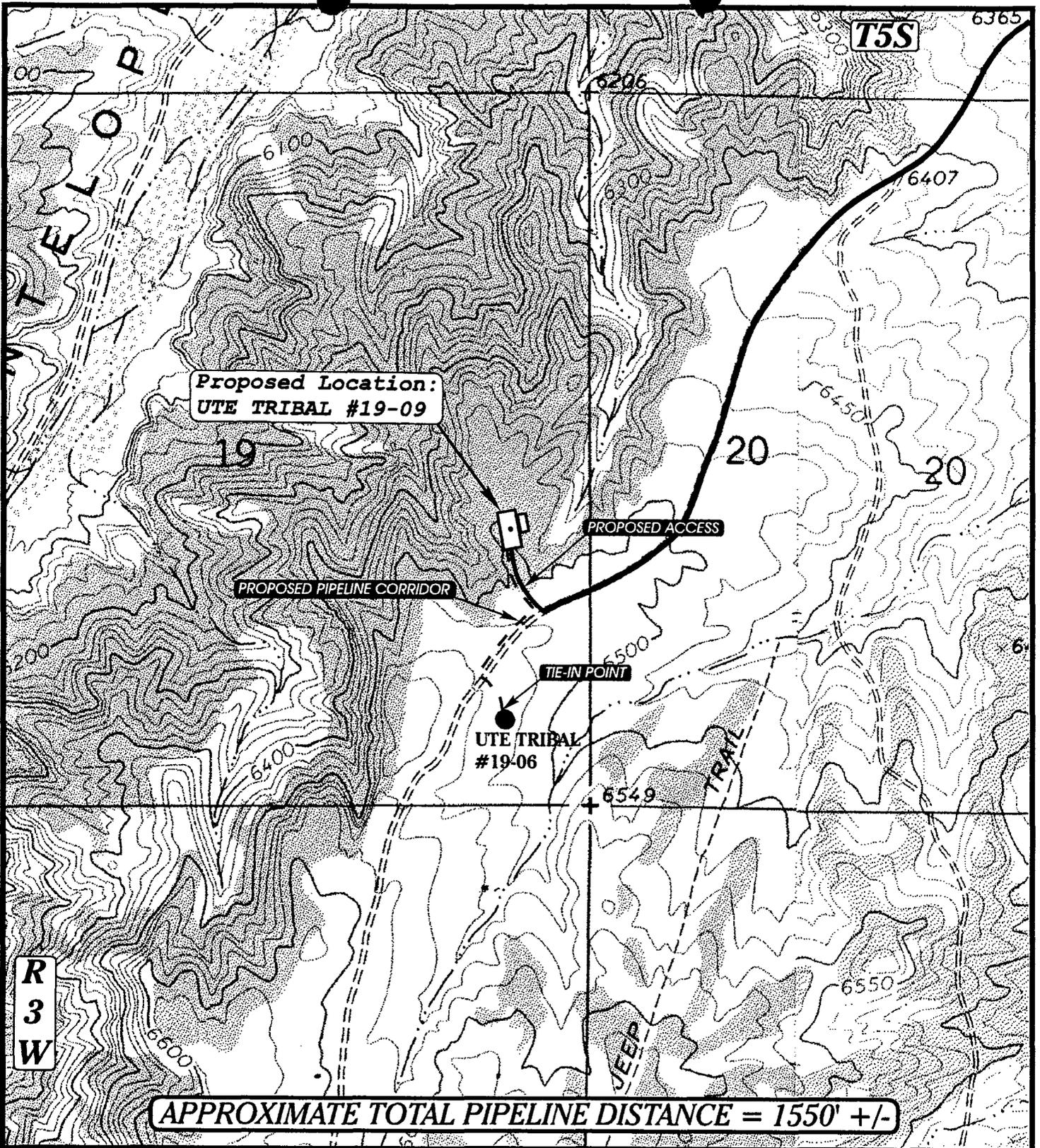
SCALE: 1" = 2000'

**PETROGLYPH OPERATING CO., INC.**

**UTE TRIBAL #19-09**  
**SECTION 19, T5S, R3W, U.S.B.&M.**

**TOPOGRAPHIC**  
**MAP "C"**

DATE: 11-22-96 Drawn by: D.COX



**APPROXIMATE TOTAL PIPELINE DISTANCE = 1550' +/-**

**TOPOGRAPHIC  
MAP "D"**

— — — — Existing Pipeline  
 - - - - Proposed Pipeline

**U**  
**E**  
**E**  
**L**  
**S**

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

SCALE: 1" = 1000'

**PETROGLYPH OPERATING CO., INC.**  
**UTE TRIBAL #19-09**  
**SECTION 19, T5S, R3W, U.S.B.&M.**

DATE: 11-22-96  
 DRAWN BY: D.COX

WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 01/28/97

API NO. ASSIGNED: 43-013-31794
--------------------------------

WELL NAME: UTE TRIBAL 19-09  
 OPERATOR: PETROGLYPH OPERATING (N3800)

PROPOSED LOCATION:  
 NESE 19 - T05S - R03W  
 SURFACE: 2032-FSL-0551-FEL  
 BOTTOM: 2032-FSL-0551-FEL  
 DUCHESNE COUNTY  
 ANTELOPE CREEK FIELD (060)

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

LEASE TYPE: IND  
 LEASE NUMBER: 14-20-H62-3514

PROPOSED PRODUCING FORMATION: GRRV

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Federal [ State [] Fee []  
 (Number BD 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: \_\_\_\_\_

\_\_\_\_\_

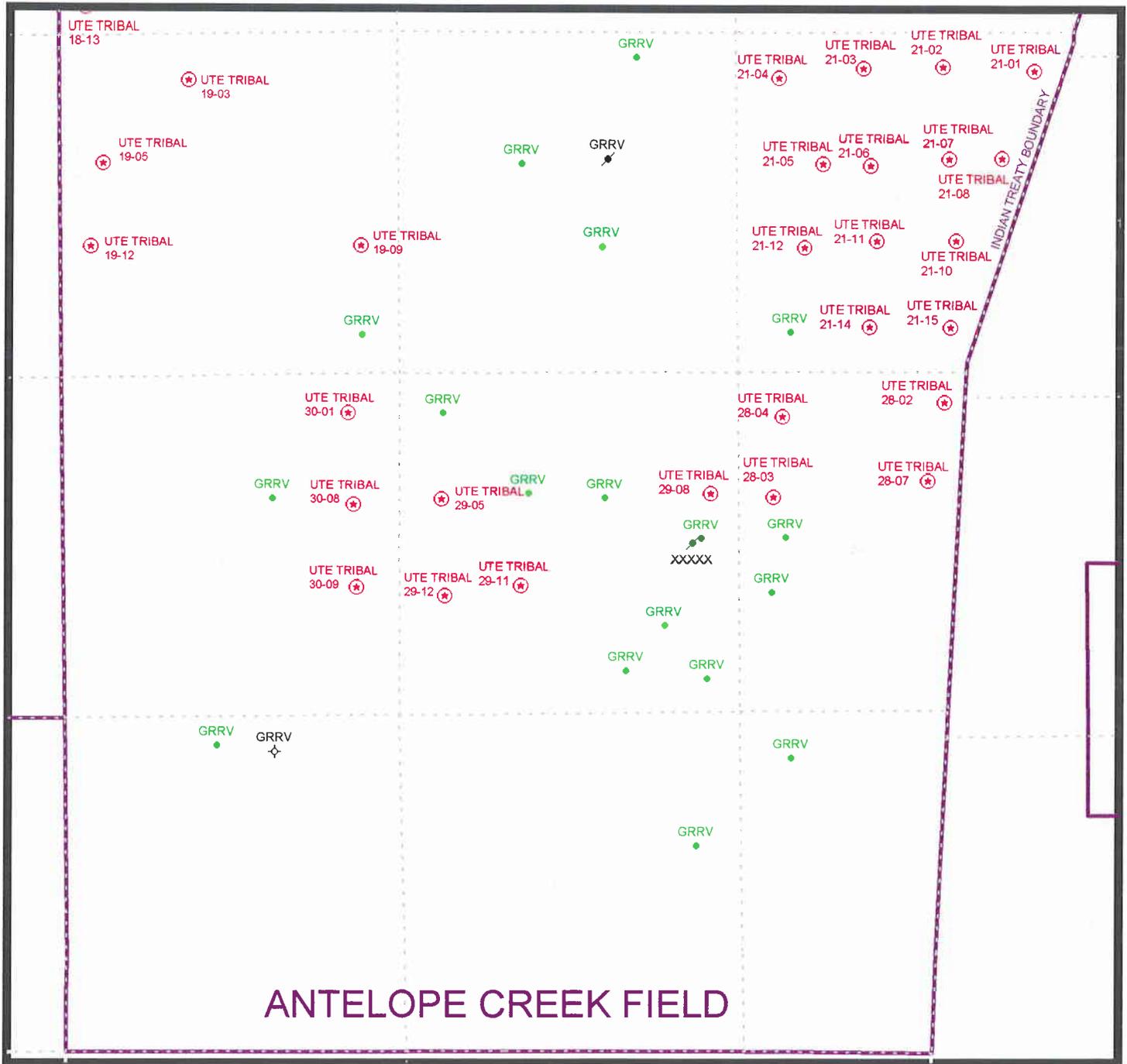
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**OPERATOR: PETROGLYPH  
FIELD: ANTELOPE CREEK (060)  
SEC. TWP. RNG: 19,29,30, T5S R3W  
COUNTY: DUCHESNE  
UAC: R649-3-2**



PREPARED:  
DATE: 28-JAN-97



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

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

February 12, 1997

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

Re: Ute Tribal 19-09 Well, 2032' FSL, 551' FEL, NE SE, Sec. 19,  
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 43-013-31794.

Sincerely,

R. J. Firth  
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 19-09  
API Number: 43-013-31794  
Lease: 14-20-H62-3514  
Location: NE SE Sec. 19 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 R. J. Firth (801)538-5274 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

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*)  
 At surface: 2032' FSL & 551' FEL NE/SE  
 At proposed prod. zone

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

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 551'  
 (Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE: 640

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

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 6158'

19. PROPOSED DEPTH: 6158'

20. ROTARY OR CABLE TOOLS: ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 6498.1' GRADED GROUND

22. APPROX. DATE WORK WILL START\*  
 JANUARY 1997

5. LEASE DESIGNATION AND SERIAL NO.  
 14-20-H62-3514

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

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO.  
 UTE TRIBAL

9. API WELL NO.  
 #19-09

10. FIELD AND POOL, OR WILDCAT  
 ANTELOPE CREEK

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 Sec. 19, T5S, R3W

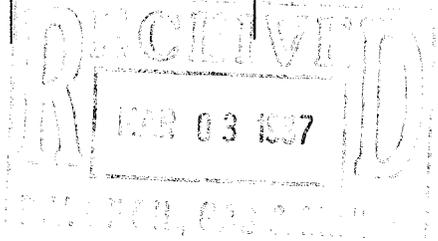
12. COUNTY OR PARISH  
 DUCHESNE

13. STATE  
 UTAH

23. PROPOSED CASING AND CEMENTING PROGRAM

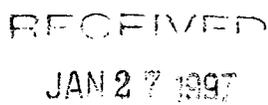
SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	8 5/8	24.0#	250'	135 sx class "G" + 2% CaCl <sub>2</sub> + 1/4 #/sx celloflake.
7 7/8	5 1/2	15.5#	6158'	

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).



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: *[Signature]* TITLE: AGENT FOR PETROGLYPH DATE: 1-23-97

(This space for Federal or State office use)

CONDITIONS OF APPROVAL ATTACHED

PERMIT NO. \_\_\_\_\_  
 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: FEB 18 1997

\*See Instructions On Reverse Side

CONDITIONS OF APPROVAL  
APPLICATION FOR PERMIT TO DRILL

Company/Operator: Petroglyph Operating Company Inc.

Well Name & Number: Ute Tribal 19-09

API Number: 43-013-31794

Lease Number: 14-20-H62-3514

Location: NESE Sec. 19 T.5S R. 3W

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.

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.

As a minimum, the usable water shall be isolated and/or protected by having a cement top for the production casing at least 200 ft. above the base of the usable water zone, identified at 513 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  $\pm 119$  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.

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 3162.7-2, 3162.7-3, and 3162.7-4 shall be submitted to the appropriate District Office within thirty (30) days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 43 CFR 3162.7-4.

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 onlease 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 and tested for meter accuracy 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 approvals are necessary, please contact one of the following individuals:

Ed Forsman (801) 789-7077  
Petroleum Engineer

Wayne P. Bankert (801) 789-4170  
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, spent 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 USE PROGRAM**  
Conditions of Approval (COAs)

The Surface Use Conditions of Approval (COA's) are from the Bureau of Indian Affairs concurrence memorandum and the site specific Environmental Analysis.

The Ute Tribe Energy and Minerals Department is to be notified 48 hours prior to construction. A Tribal Technician shall monitor construction.

Fifty (50) foot wide Rights-Of-Way (ROWs) corridor shall be granted for the following:

Buried pipelines shall be limited to 15 feet wide; buried a minimum of 3 feet below the soil surface; and, monitored by a Tribal Technician.

After construction of the pipeline is completed, the disturbed area of the ROW shall be contoured to blend into the natural landscape and reseeded with desirable vegetation between September 15 and November 15 of the same year following construction.

Pipelines adjacent to access roads shall be buried within 1.5 feet from the outside edge of the barrow ditch. Any additional pipelines shall be parallel to the outer side of the first pipeline and shall be constructed as close to the first pipeline as safety requirements allow.

Surface pipelines shall be limited to 13 feet and the ROW will not be bladed or cleared of vegetation.

Where surface lines parallel roads, the pipe may be welded on the road then lifted from the road to the ROW.

Where surface lines do not parallel roads, the pipe may be welded on the road or well site and then pulled cross country with suitable equipment. The surface pipeline ROW will not be used as an access road.

The constructed travel width of the access road shall be limited to 22 feet, except, as granted, for sharp curves or intersections. Surface pipelines will be restricted to one side of the road ROW and, buried pipelines will be restricted to the other side.

Petroglyph Operating Company will assure the Ute Tribe that any/all contractors and any/all subcontractors have acquired a Tribal Business License and have access permits prior to construction.

All vehicular traffic, personnel movement, and construction and restoration operations shall be confined to areas examined, as referenced in report, and to the existing roadways and/or evaluated access routes.

All personnel shall refrain from collecting artifacts and from disturbing any significant cultural resources in the area.

Personnel from the Ute Tribe Energy & Minerals Department shall be consulted should cultural remains from subsurface deposits be exposed or identified during construction.

Before the site is abandoned the company will be required to restore the well site and ROW's to near their original state. The disturbed areas will be reseeded with desirable perennial vegetation.

Noxious weeds will be controlled on the well site and ROWs. If noxious weeds spread from the project area onto adjoining land, the company will also be responsible for their control.

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 pit is backfilled the surplus oil, mud, etc., will be buried a minimum of three (3) feet below the soil surface.

A closed production system shall be used. Production fluids will be contained in leak proof tanks. All production fluids will be taken to and disposed of at approved disposal sites. The indiscriminate dumping of production fluids on roads, well sites, or other areas will not be allowed.

DIVISION OF OIL, GAS AND MINING

**CONFIDENTIAL**

SPUDDING INFORMATION

Name of Company: PETROGLYPH OPERATING

Well Name: UTE TRIBAL 19-09

Api No. 43-013-31794

Section: 19 Township: 5S Range: 3W County: DUCHESNE

Drilling Contractor UNION

Rig # 16

SPUDDED:

Date 5/25/97

Time \_\_\_\_\_

How ROTARY

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

Reported by DEANNA

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

Date: 5/30/97 Signed: JLT

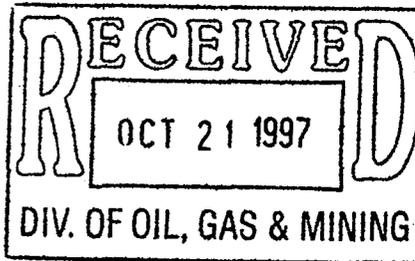


# PETROGLYPH Operating Company, Inc.

6209 North Highway 61, Hutchinson, Kansas 67502 • P.O. Box 1839, Hutchinson, Kansas 67504-1839

October 15, 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 19-06	CNL & AIT
Ute Tribal 16-07	CNL & AIT
Ute Tribal 19-05	CNL & AIT
Ute Tribal 18-11	CNL & AIT
Ute Tribal 15-12	CNL & AIT
Ute Tribal 16-03	CNL & AIT
Ute Tribal 14-05	CNL & AIT
Ute Tribal 19-09	CNL & AIT
Ute Tribal 16-08	CNL & AIT
Ute Tribal 19-04	CNL & AIT
Ute Tribal 07-10	CNL & AIT
Ute Tribal 19-03	CNL & AIT
Ute Tribal 30-10	CNL & AIT
Ute Tribal 30-11	CNL & AIT

43 013 31794

TOSS R03W 19

If you need further information, please do not hesitate to call me at 316-665-8500.

Sincerely,

Judy Gates  
Petroleum Geology Technician

FORM 7

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

REPORT OF WATER ENCOUNTERED DURING DRILLING

1. Well name and number: UTE Tribal 19-09

API number: 43-013-31794

2. Well Location: QQ NESE Section 19 Township 5S Range 3W County Duchesne

3. Well operator: Petroglyph Operating Company, Inc.

Address: P.O. Box 1839

Roosevelt, UT 84066

Phone: (801) 722-2531

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	108'	DRY	
108'	1400'	DAMP	
1400'		1/4" STREAM PER MIN	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: 5/31/97

Name & Signature: Lisha Bell

Title: Operation Coordinator

**CONFIDENTIAL**

**COMPLETION REPORT**

9/25/97

*Petroglyph Operating Company, Inc.*

**Operator:** Petroglyph Operating Company, Inc. **Elevation:** KB 6508  
**Lease:** Ute Tribal 19-09 GL 6498  
**API #:** 43-013-31794 **Property:** 50117  
**Location:** 19 - 5 S - 3 W **AFE/EPE Number:** 41235  
**County, St.:** Duchesne UT

**Activity Date Daily Cost Activity Description**

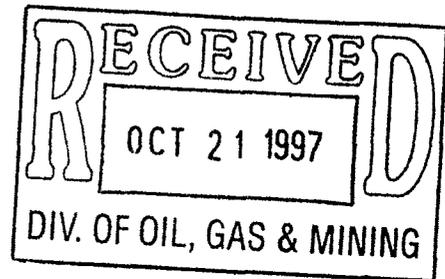
6/13/97 \$1,900.00 WELLBORE:  
6162 RTD  
6167 LTD  
6074 PBTD  
6120 CSA

MIRU Duco Well Serv rig & equip. NU frac head & BOPs. Test 5½" csg to 4500 psi for 15 min. SWIFN.

6/16/97 \$1,400.00 PERFORATIONS:  
4984-4988 Green River C (08.2) 4 SPF 16 shots

Open well. RIH w/ 5½" BVBP & 2-7/8" tbg to ± 5050'. Set BVBP & POOH to ± 5000'. Spot 6 bbls 15% HCL @ C8.2 int from 5000' - 4750'. POOH w/ ret head.

RU Schlumberger & perf C8.2 zone @ 4984-88' w 4 spf (16 holes). RD Wireline. Bkdn C8.2 zone @ 1800 psi. Inj 10 bbls K wtr @ 3.5 bpm @ 1800 psi. SWIFN.



# COMPLETION REPORT

9/25/97

Petroglyph Operating Company, Inc.

**Operator:** Petroglyph Operating Company, Inc.

**Elevation:** KB 6508

**Well:** Ute Tribal 19-09

GL 6498

**County, St.:** Duchesne UT

Activity Date	Daily Cost	Activity Description
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6/17/97	\$53,174.00	<p>PERFORATIONS:</p> <table border="0" style="width: 100%;"> <tr> <td style="padding-left: 20px;">4984-4988</td> <td style="padding-left: 20px;">Green River C (08.2)</td> <td style="padding-left: 20px;">4 SPF</td> <td style="padding-left: 20px;">16 shots</td> </tr> <tr> <td style="padding-left: 20px;">4886-4896</td> <td style="padding-left: 20px;">Green River C (06.1)</td> <td style="padding-left: 20px;">4 SPF</td> <td style="padding-left: 20px;">40 shots</td> </tr> <tr> <td style="padding-left: 20px;">4790-4798</td> <td style="padding-left: 20px;">Green River C (05.2)</td> <td style="padding-left: 20px;">4 SPF</td> <td style="padding-left: 20px;">32 shots</td> </tr> </table> <p>WELLBORE:</p> <table border="0" style="width: 100%;"> <tr> <td style="padding-left: 20px;">6162</td> <td style="padding-left: 20px;">RTD</td> </tr> <tr> <td style="padding-left: 20px;">6167</td> <td style="padding-left: 20px;">LTD</td> </tr> <tr> <td style="padding-left: 20px;">6074</td> <td style="padding-left: 20px;">PBDT</td> </tr> <tr> <td style="padding-left: 20px;">6120</td> <td style="padding-left: 20px;">CSA</td> </tr> </table>	4984-4988	Green River C (08.2)	4 SPF	16 shots	4886-4896	Green River C (06.1)	4 SPF	40 shots	4790-4798	Green River C (05.2)	4 SPF	32 shots	6162	RTD	6167	LTD	6074	PBDT	6120	CSA
4984-4988	Green River C (08.2)	4 SPF	16 shots																			
4886-4896	Green River C (06.1)	4 SPF	40 shots																			
4790-4798	Green River C (05.2)	4 SPF	32 shots																			
6162	RTD																					
6167	LTD																					
6074	PBDT																					
6120	CSA																					

Open well w/ C8.2 zone perf'd & brkdn yesterday. This AM SICP @ 0 psi. RU HES & frac C8.2 zone w/ 6480 gal Boragel 30 w/ 31600# 20/40 sand @ .5 - 10 ppg. MTP @ 2950 psi. ATP @ 2500 psi. MTR @ 25.7 bpm. ATR @ 25 bpm. ISIP @ 2658 psi. 5 min @ 2358 psi. Pfg @ .96.

RU Schlumberger & lub in hole w/ RBP & perf gun. Set RBP @ 4960' & test to 3000 psi. Perf C6.1 zone @ 4886-96' w/ 4 spf (40 holes). Attempt to bkdn w/ K wtr @ 3000 psi failed. Spot HCL @ perms w/ dump bailer & bkdn @ 2800 psi.

RU HES & frac C6.1 zone w/ 250 gal 15% HCL & 9136 gal Boragel 30 w/ 52300# 20/40 sand @ .5 - 10 ppg. MTP @ 2750 psi. ATP @ 2250 psi. MTR @ 32 bpm. ATR @ 30 bpm. ISIP @ 2515 psi. 5 min @ 2332 psi. Pfg @ .94. Lub in well w/ RBP & perf gun. Set RBP @ 4870' & test to 3000 psi.

Perf C5.2 zone @ 4790-98' w/ 4 spf (32 holes). RD Wireline. Bkdn C5.2 perms w/ K wtr @ 3000 psi. RU HES & frac C5.2 zone w/ 250 gal 15% HCL & 7588 gal Boragel 30 w/ 42500# 20/40 sand @ .5 to 10 ppg. MTP @ 2041 psi. ATP @ 1800 psi. MTR @ 22 bpm. ATR @ 21 bpm. ISIP @ 1705 psi. 5 min @ 1483 psi. Pfg @ .78.

Flow C5.2 zone to tank @ 5 min @ ± 60 bph to 0 psi. Well flowed 59 bbls. RIH w/ ret head & tag sand @ 4790'. Clean out to RBP @ 4870'. Rel RBP & POOH. SWIFN.

**STIMULATION TREATMENT:**

**FLUID:**

Fluid Task	Fluid Type	Amount	Unit
frac fluid	Boragel 30	6480	gal

PROPPANT:	Type	Total Lbs:	Ramp Range
1	20/40 sand	31600	.5-10

**PRESSURE/RATE:**

Maximum:	2950 psi	25.7 BPM
Average:	2500 psi	25 BPM

# COMPLETION REPORT

9/25/97

Petroglyph Operating Company, Inc.

**Operator:** Petroglyph Operating Company, Inc.

**Elevation:** KB 6508

**Well:** Ute Tribal 19-09

GL 6498

**County, St.:** Duchesne UT

Activity Date	Daily Cost	Activity Description
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SI PRESSURE:	TP	CP
ISIP:	2658	
5 Min:	2358	

STIMULATION TREATMENT:

FLUID:

Fluid Task	Fluid Type	Amount	Unit
frac fluid	Boragel 30	9136	gal

PROPPANT:	Type	Total Lbs:	Ramp Range
1	20/40 sand	52300	.5-10

PRESSURE/RATE:

Maximum:	2750 psi		32 BPM
Average:	2250 psi		30 BPM

SI PRESSURE:	TP	CP
ISIP:	2515	
5 Min:	2332	

STIMULATION TREATMENT:

FLUID:

Fluid Task	Fluid Type	Amount	Unit
frac fluid	Boragel 30	7588	gal

PROPPANT:	Type	Total Lbs:	Ramp Range
1	20/40 sand	42500	.5-10

PRESSURE/RATE:

Maximum:	2041 psi		22 BPM
Average:	1800 psi		21 BPM

SI PRESSURE:	TP	CP
ISIP:	1705	
5 Min:	1483	

FLUID RECOVERY

ZONE BLF:	1002
ZONE BLFR:	74
ZONE BLFTR:	928
ZONE % REC:	7.4%

# COMPLETION REPORT

9/25/97

Petroglyph Operating Company, Inc.

**Operator:** Petroglyph Operating Company, Inc.

**Elevation:** KB 6508

**Well:** Ute Tribal 19-09

GL 6498

**County, St.:** Duchesne UT

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Activity Date	Daily Cost	Activity Description
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		WELL BLF:	1002
		WELL BLFR:	74
		WELL BLFTR:	928
		WELL % REC:	7.4%

6/18/97

\$2,000.00

PERFORATIONS:

4984-4988	Green River C (08.2)	4 SPF	16 shots
4886-4896	Green River C (06.1)	4 SPF	40 shots
4790-4798	Green River C (05.2)	4 SPF	32 shots

WELLBORE:

6162	RTD
6167	LTD
6074	PBTD
6120	CSA

Open well w/ C5.2 & C6.1 zones exposed. This AM SICP @ 0 psi. RIH w/ ret head & tag sand @ 4800'. Clean out to RBP @ 4870'. Rel RBP & POOH. RIH w/ ret head & tag sand @ 4960'. Clean out to BVBP @ 5040'. POOH to 4930' & swb well. Made 16 runs. IFL @ surf. TWR @ 170 bbls. TOR @ 26 bbls. MOC @ 50%. FFL @ 1900'. SWIFN.

## FLUID RECOVERY

ZONE BLF:	1002
ZONE BLFR:	244
ZONE BLFTR:	758
ZONE % REC:	24.4%
WELL BLF:	1002
WELL BLFR:	244
WELL BLFTR:	758
WELL % REC:	24.4%

# COMPLETION REPORT

9/25/97

Petroglyph Operating Company, Inc.

**Operator:** Petroglyph Operating Company, Inc.

**Elevation:** KB 6508

**Well:** Ute Tribal 19-09

GL 6498

**County, St.:** Duchesne UT

Activity Date	Daily Cost	Activity Description
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6/19/97	\$21,988.00	PERFORATIONS: 4984-4988      Green River C (08.2)                      4 SPF      16 shots 4886-4896      Green River C (06.1)                      4 SPF      40 shots 4790-4798      Green River C (05.2)                      4 SPF      32 shots 4744-4756      Green River C (05)                         4 SPF      48 shots  WELLBORE: 6162             RTD 6167             LTD 6074             PBD 6120             CSA
---------	-------------	---

Open well w/ C8.2, C6.1 & C5.2 zones swbd to 1900' & MOC @ 50% yesterday. This AM. SICP @ 300 psi & SITP @ 250 psi. RU & ck FL. FL @ 600'. Made 1 swb & top 500' oil. RD swb. RIH w/ tbg & tag sand @ 5037'. Clean out to BVBP @ 5040'.

Rel BVBP & POOH to 4775' & reset. Test BVBP to 4500 psi. PU to 4765' & spot 6 bbls 15% HCL @ C5 int & POOH w/ ret head.

RU Schlumberger & perf C5 zone @ 4744-56' w/ 4 spt (48 holes). Bkdn C5 perms @ ± 1400 psi. IR @ 4 bpm @ 1200 psi. RU HES & frac C5 zone w/ 12880 gal Boragel 30 w/ 73900# 20/40 sand @ .5 - 10 ppg. MTP @ 2500 psi. ATP @ 2000 psi. MTR @ 33 bpm. ATR @ 31 bpm. ISIP @ 2243 psi. 5 min @ 2140 psi. Pfg @ .9.

Flow well to tank @ 5 min @ ± 60 bph to 0 psi. Flowed 100 bbls in 1½ hrs. RIH w/ ret head to ± 3700'. Well flowing shows of sand up tbg. RU & circ well clean w K wtr & SWIFN.

BHP = 2064 psi = .43 psi/ft.

**STIMULATION TREATMENT:**

**FLUID:**

Fluid Task	Fluid Type	Amount	Unit
frac fluid	Boragel 30	12880	gal

PROPPANT:	Type	Total Lbs:	Ramp Range
1	20/40 sand	73900	.5-10

**PRESSURE/RATE:**

Maximum:	2500 psi	33 BPM
Average:	2000 psi	31 BPM

SI PRESSURE:	TP	CP
	ISIP:	2243

## COMPLETION REPORT

9/25/97

Petroglyph Operating Company, Inc.

**Operator:** Petroglyph Operating Company, Inc.

**Elevation:** KB 6508

**Well:** Ute Tribal 19-09

GL 6498

**County, St.:** Duchesne UT

Activity Date	Daily Cost	Activity Description
---------------	------------	----------------------

5 Min:

2140

FLUID RECOVERY

ZONE BLF:	530
ZONE BLFR:	120
ZONE BLFTR:	410
ZONE % REC:	22.6%
WELL BLF:	1532
WELL BLFR:	364
WELL BLFTR:	1168
WELL % REC:	23.8%

6/20/97

\$1,800.00

PERFORATIONS:

4984-4988	Green River C (08.2)	4 SPF	16 shots
4886-4896	Green River C (06.1)	4 SPF	40 shots
4790-4798	Green River C (05.2)	4 SPF	32 shots
4744-4756	Green River C (05)	4 SPF	48 shots

WELLBORE:

6162	RTD
6167	LTD
6074	PBTD
6120	CSA

Open well w/ C5 zone frac'd & flowed to 0 psi yesterday. This A.M. SICP @ 0 psi. SITO @ 0 psi. Finish RIH w/ tbg & tag sand @ 4700'. Clean out to BVBP @ ± 4775'. RU & swb well. Made 18 runs. IFL @ surf. Trace of oil on urn #3 & incr to 50% on las fun. TWR @ 170 bbls. TOR @ 15 bbls. FFL @ 2000'. SWIFN.

FLUID RECOVERY

ZONE BLF:	530
ZONE BLFR:	299
ZONE BLFTR:	231
ZONE % REC:	56.4%
WELL BLF:	1532
WELL BLFR:	543
WELL BLFTR:	989
WELL % REC:	35.4%

# COMPLETION REPORT

9/25/97

Petroglyph Operating Company, Inc.

**Operator:** Petroglyph Operating Company, Inc.

**Elevation:** KB 6508

**Well:** Ute Tribal 19-09

GL 6498

**County, St.:** Duchesne UT

Activity Date	Daily Cost	Activity Description
6/23/97	\$1,850.00	PERFORATIONS:
		4984-4988 Green River C (08.2) 4 SPF 16 shots
		4886-4896 Green River C (06.1) 4 SPF 40 shots
		4790-4798 Green River C (05.2) 4 SPF 32 shots
		4744-4756 Green River C (05) 4 SPF 48 shots
		WELLBORE:
		6162 RTD
		6167 LTD
		6074 PBD
		6120 CSA

Open well w/ C5 zone swbd to 2000' & 50% oil last P.M. This A.<. SICP @ 50 psi & SITP @ 10 psi. RU & swb well. Made 9 runs. IFL @ 250'. MOC@ 50%. TWR @ 45 bbls. TOR @ 35 bbls. FFL @ 1500'. RD swb. RIH to RBP & rel. POOH & found no RBP. RIH w/ ret head & found RBP @ 5900'. Latch onto plug & POOH. RIH w/ BHA @ 2-7/8" tbg (82 jts). SWIFN.

BHP = 1903 psi = .40 psi/ft

## FLUID RECOVERY

ZONE BLF:	530
ZONE BLFR:	344
ZONE BLFTR:	186
ZONE % REC:	64.9%
WELL BLF:	1532
WELL BLFR:	588
WELL BLFTR:	944
WELL % REC:	38.4%

## COMPLETION REPORT

9/25/97

Petroglyph Operating Company, Inc.

**Operator:** Petroglyph Operating Company, Inc.

**Elevation:** KB 6508

**Well:** Ute Tribal 19-09

GL 6498

**County, St.:** Duchesne UT

Activity Date	Daily Cost	Activity Description			
6/24/97	\$21,900.00	PERFORATIONS:			
		4984-4988	Green River C (08.2)	4 SPF	16 shots
		4886-4896	Green River C (06.1)	4 SPF	40 shots
		4790-4798	Green River C (05.2)	4 SPF	32 shots
		4744-4756	Green River C (05)	4 SPF	48 shots
		WELLBORE:			
		6162	RTD		
		6167	LTD		
		6074	PBTD		
		6120	CSA		

Open well w/ SICP @ 40 psi, SITP @ 20 psi. Finish RIH w/ prod'n string to ± 5117'. ND BOP's & frachead. NU prod'n head. set B2 TAC w/ 10000# tension & NU tbg flange. RIH w/ pump & rods. Fill tbg w/ 3 bbls K wtr & test w/ pump to 500 psi. Goog pump action. FINAL REPORT.

TWTR @ 944 bbls.

TUBING DETAIL	LENGTH	DEPTH
KB	10.00	
2-7/8" x 6.5# J-55 tbg (149 jts)	4635.85	
B2 TAC	2.86	
2-7/8" x 6.5# J-55 tbg (12 jts)	369.32	
PSN	1.10	
2-7/8" x 6.5# J-55 tbg (1 jt)	27.91	
Mech. SN	.75	
6' perf 2-7/8" Sub	6.10	
2-7/8" tbg (2 jts)	62.58	
2-7/8" B.P.	.85	
EOT		5117.32

ROD DETAIL
1½" x 22' PR w/ liner
7/8" x 8' pony rod (1)
7/8" slick rods (80)
¾" rods (120-4 guided each 4th rod from btm)
2½" x 1-2/4" x 16' 40 Ring PA RHAC

# COMPLETION REPORT

9/25/97

Petroglyph Operating Company, Inc.

---

**Operator:** Petroglyph Operating Company, Inc.  
**Well:** Ute Tribal 19-09  
**County, St.:** Duchesne UT

**Elevation:** KB 6508  
GL 6498

---

Activity Date	Daily Cost	Activity Description
<b>Cumulative Cost:</b>	<b>\$106,012.00</b>	
<b>Days Since Start:</b>	<b>12</b>	

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

5. LEASE DESIGNATION AND SERIAL NO.  
14-20-H62-3514

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

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

8. FARM OR LEASE NAME

9. WELL NO.  
Ute Tribal 19-09

10. FIELD AND POOL, OR WILDCAT  
Antelope Creek

11. SEC., T., R., M., OR BLOCK AND  
SURVEY OR AREA  
NESE Sec. 19-T5S-R3W

12. County or Parish  
Duchesne

13. State  
Utah

WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

1.a. TYPE OF WELL: Oil Well  Gas Well  Dry  Other

b. TYPE OF COMPLETION:  
New Well  Workover  Deepen  Plug Back  Diff. Reserv.  Other

2. NAME OF OPERATOR  
Petroglyph Operating Company, Inc.

3. ADDRESS OF OPERATOR  
P.O. Box 607, Roosevelt, UT 84066 (801) 722-2531

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface 2032' FSL 551' FEL

At top prod. interval reported below

At total depth 6162' RTD

**CONFIDENTIAL**

14. PERMIT NO.  
43-013-31794

DATE ISSUED  
2/12/97

15. DATE SPUDDED 5/24/97 16. DATE T.D. REACHED 6/1/97 17. DATE COMPLETED (Ready to prod.) 6/24/97 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* 6498' GL 19. ELEV. CASINGHEAD 6498'

20. TOTAL DEPTH, MD & TVD 6162' RTD 21. PLUG BACK T.D., MD & TVD 6074' 22. IF MULTIPLE COMPL., HOW MANY\* 4 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 10-22-97 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#	265'	12-1/4"	150 sxs Type 5	
5-1/2"	15-5#	6120'	7-7/8"	98 sxs Highfill	
				340 sxs Thixotropic	

29. LINER RECORD				30. TUBING RECORD			
SIZE	TOP	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2-7/8"	5930'	

31. PERFORATION RECORD (Interval, size and number)	32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
	DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
C8.2 4984-88' (16 shots)	4984-88'	6480 gal Boragel, 31600# 20/40 prop
C6.1 4886-96' (40 shots)	4886-96'	250 gal 15% HCl & 9136 gal Boragel, 52300# 20/40 prop
C5.2 4790-98' (32 shots)	4790-98'	7588 gal Boragel, 42500# 20/40 prop, 250 gal 15% HCl
C5 4744-56' (48 shots)	4744-56'	12880 gal Boragel, 73900# 20/40 prop

**CONFIDENTIAL**

33. PRODUCTION							
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump)				WELL STATUS (Producing or shut-in)	
8/14/97		2 1/2" x 1-3/4" x 16' 40 ring RHAC pump				producing	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N FOR TEST PERIOD	OIL - BBL.	GAS - MCF.	WATER - BBL.	GAS-OIL RATIO
8/22/97	24			94	90	7	
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24 HR. RATE	OIL - BBL.	GAS - MCF.	WATER - BBL.	OIL GRAVITY - API (CORR.)	
	875						

**CONFIDENTIAL**

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) PERIOD EXPIRED ON 7-31-98 TEST WITNESSED BY Dave Schreiner

35. LIST OF ATTACHMENTS

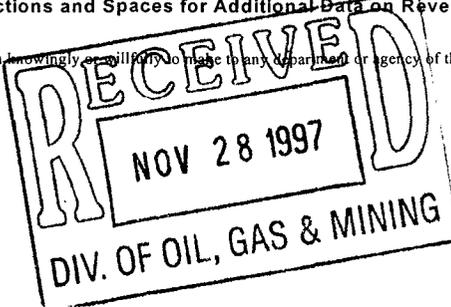
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

Signed Deanna Beel Title Operations Coordinator

Date 11-25-97

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

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly or 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.



**CONFIDENTIAL**

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
B Marker	4070		<b>CONFIDENTIAL</b>			
X Marker	4554					
Y Marker	4589					
Douglas Creek	4687					
B Limestone	5076					
Castle Peak	5626					
Basal Carbonate	6055					

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT" for such proposals

*SUBMIT IN TRIPLICATE*

1. Type of Well  
 Oil Well     Gas Well     Other

2. Name of Operator  
**Petroglyph Operating Company, Inc.**

3. Address and Telephone No.  
**P.O. Box 1839, Hutchinson, KS 67504-1839; (316) 665-8500**

4. Location of Well (Footage, Sec., T., R., or Survey Description)  
**2032' FSL 551' FEL  
NESE Sec. 19-T5S-R3W**

5. Lease Designation and Serial No.  
**14-20-H62-3514**

6. If Indian, Allottee or Tribe Name  
**Ute Indian Tribe**

7. If Unit or CA, Agreement Designation  
**14-20-H62-4650**

8. Well Name and No.  
**Ute Tribal 19-09**

9. API Well No.  
**43-013-31794**

10. Field and Pool, or Exploratory Area  
**Antelope Creek**

11. County or Parish, State  
**Duchesne County, UT**

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> CONVERT TO INJECTOR
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Dispose Water

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

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Petroglyph Operating Company, Inc. has submitted an application for a UIC permit to convert the Ute Tribal 19-09 from a producing well to an injection well under the EPA Area Permit #UT2736-00000 within the Antelope Creek Waterflood Project Area in Duchesne County, Utah.

14. I hereby certify that the foregoing is true and correct  
 Signed Mark Smith Title Operations Coordinator Date 2-28-00

(This space for Federal or State official use)

Approved by \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

Conditions of Approval, if any:

Title 18 U.S.C. Section 1001, makes 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 in its jurisdiction.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT" for such proposals

**SUBMIT IN TRIPLICATE**

5. Lease Designation and Serial No.	14-20-H62-3514
6. If Indian, Allottee or Tribe Name	Ute Indian Tribe
7. If Unit or CA, Agreement Designation	14-20-H62-4650
8. Well Name and No.	Ute Tribal 19-09
9. API Well No.	43-013-31794
10. Field and Pool, or Exploratory Area	Antelope Creek
11. County or Parish, State	Duchesne County, UT

1. Type of Well  
 Oil Well     Gas Well     Other

2. Name of Operator  
**Petroglyph Operating Company, Inc.**

3. Address and Telephone No.  
**P.O. Box 1839, Hutchinson, KS 67504-1839; (316) 665-8500**

4. Location of Well (Footage, Sec., T., R., or Survey Description)  
**2032' FSL 551' FEL  
NESE Sec. 19-T5S-R3W**

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> CONVERT TO INJECTOR
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Dispose Water

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

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Petroglyph Operating Company, Inc. has submitted an application for a UIC permit to convert the Ute Tribal 19-09 from a producing well to an injection well under the EPA Area Permit #UT2736-00000 within the Antelope Creek Waterflood Project Area in Duchesne County, Utah.

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

RECEIVED  
MAR 02 1990  
DIVISION OF  
OIL, GAS AND MINING

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

Signed W. Carlo Smith Title Operations Coordinator Date 2-28-00

(This space for Federal or State official use)

Approved by \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

Conditions of Approval, if any:

Title 18 U.S.C. Section 1001, makes 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 in its jurisdiction.

AFTER CONVERSION

WELL HISTORY:

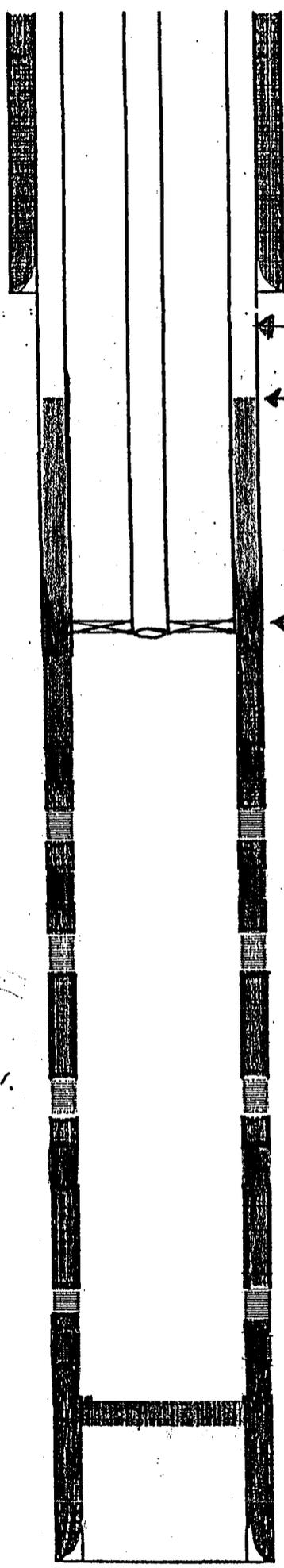
05-25-97 SAIDED WELL  
08-14-97 FIRST PRODUCTIONS

06-19-97 C-5 ZONE  
PERFS. 4744 TO 4756'  
4SPF  
FRAC'ED, ISIP 2243psi.

06-17-97 C-5.2 ZONE  
PERFS. 4790 TO 4798  
4SPF  
FRAC'ED, ISIP 1705psi.

06-17-97 C-6.1 ZONE  
PERFS. 4886 TO 4896'  
4SPF  
FRAC'ED, ISIP 2575psi.

06-16-97 C-8.2 ZONE  
PERFS. 4984 TO 4988'  
4SPF  
FRAC'ED, ISIP 2658psi.



GL: 6498'  
KB: 6508'

← Surface Hole Size 13 1/4"

8 5/8" 24# Surface Csg @  
266' KB Cmt'd w/ 150 sxs

← Hole Size: 7 7/8" Bit.

← Cement Tops:  
1st Stage: 1975'

5 1/2" 15.5# CSG @ 6120'  
CMT'd w/ 438 Sxs. 1st. Stage

← 146 Jts. of 2 3/8" 4.7#  
TUBING SET ON PACKER  
AT, 4670'

RECEIVED  
MAR 02 2000  
DIVISION OF  
OIL, GAS AND MINING

PBTD @ 6074'  
TD @ 6162' KB

(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal # 19-09

2032' FSL AND 551' FEL  
NE SE SEC. 19-55-3W

Antelope Creek Field

Duchesne Co, Utah

LEASE # 14-20-A62-3514

API# 43-013-31794



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 500
DENVER, CO 80202-2466

JUN 29 2000

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Accepted by the
Oil, Gas and Mining
FOR RECORD ONLY

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: Add Additional Well to Area Permit
Antelope Creek Waterflood
EPA Area Permit No. UT2736-00000
Duchesne County, Utah

Dear Mr. Safford:

Your request of February 24, 2000, that the following
production well be converted to a Class II enhanced oil recovery
well and added to the Antelope Creek Waterflood, as authorized
under EPA Area Permit No. UT2736-00000, is hereby granted.

Table with 3 columns: NAME, LOCATION, EPA WELL PERMIT NO.
Row 1: Ute Tribal #19-09, NE SE Section 19 T 5 S - R 3 W Duchesne County, UT, UT2736-04536

This additional well is within the boundary of the existing
Area Permit for the Antelope Creek Waterflood (UT2736-00000), and
this addition is made according to the terms and conditions of
that Permit. Unless specifically mentioned in this
authorization, conversion is being made under the provisions of
40 CFR §144.33 and the terms and conditions of the original
Permit. The proposed well location, well schematic, conversion
procedures with/schematic, plugging and abandonment plan
with/schematic, and Cement Bond Log (CBL), submitted by your
office, have been reviewed and approved as follows:

- (1) The conversion plan for this production well has been
reviewed, and found satisfactory. EPA analysis of the
CBL for this well identified a minimum interval of
continuous 80% cement bond above, across, and below the
Green River confining zone (3,946' to 4,070'), pursuant
to Region 8 Ground Water Section Guidance No. 34 Cement
Bond Logging Techniques and Interpretation. Therefore,
it is determined that cement in this well provides an
effective barrier to upward movement of fluids through
vertical channels

adjacent to the wellbore (Part II MI) pursuant to 40 CFR § 146.8 (2). Well construction is considered adequate to protect USDWs and no corrective action is required.

- (2) **Maximum injection pressure (MIP)** - please reference the Final Area Permit UT2736-00000, Part II. Section C.5.(b) "the maximum surface injection pressure (MIP) shall not exceed 1900 psig". **Until such time that a step-rate injectivity test (SRT) has been performed and approved by the EPA, the initial maximum surface injection pressure (MIP) for the Ute Tribal #19-09 shall not exceed 1900 psig.**

**Final Area Permit (UT2736-00000), has provisions whereby the permittee may request an increase, or decrease, in the maximum surface injection pressure.**

- (3) **The plugging and abandonment plan and schematic, submitted by your office, has been reviewed, revised and approved.**

**Underground Sources of Drinking Water (USDWs).** The base of the USDWs in the Ute Tribal #19-09 is approximately 1,288 feet below ground level and is located within the Uinta Formation. The source for this USDW information is formation water analyses submitted by the operator for twenty-two (22) wells within the initial AOR, and from Publication No. 92 (1987), prepared jointly by the USGS and the Utah Division of Oil, Gas, and Mining.

**Injection Interval:** Fluid injection shall be limited to the gross zones within the Green River Formation between the approximate depths of 4,070 feet (Top of "B" Marker) and 6,055 feet (Basal Carbonate Zone). The injection (perforated) zones from 4,744 feet to 4,988 within this portion of the Green River Formation, are comprised of porous and permeable lenticular calcareous sandstones interbedded with low permeability carbonates and calcareous shales. The lenticular sandstones vary in thickness from 1 to 30 feet and are individually separated by shale which act as isolation barriers (confining zones) for the waterflood.

**Confining Zone:** The overall confining zone above the top injection interval, is identified in this well from 3,946' to 4,070', and is overlain by impermeable Upper Green River Formation calcareous sandy lacustrine shales and continuous beds of microcrystalline dolomite.

**Prior to commencing injection into this well, permittee must fulfill Permit condition PART II, C. 2. and have submitted to the EPA for review and approval, the following:**

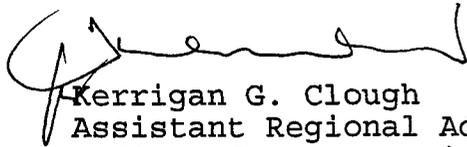
- (1) All conversion is complete and the permittee has submitted a completed Well Rework Record (EPA Form 7520-12); and
- (2) the pore pressure has been determined; and
- (3) the well has successfully completed and passed Part I of the mechanical integrity test (MIT), with pressure chart; EPA form enclosed with current MIT Guidance .

Please be aware that Petroglyph does not have authorization to begin injection into the Ute Tribal #19-09 until the items listed above have been reviewed and approved by the EPA and Petroglyph has received written authorization to begin injection from the EPA.

All other provisions and conditions of the Permit remain as originally issued July 12, 1994, and revised April 30, 1998.

If you have any questions, please contact Mr. Chuck Williams at 303.312.6625. Also, please direct the above requirements to the Ground Water Program Director at the above letterhead address, citing MAIL CODE 8P-W-GW. Thank you for your continued cooperation.

Sincerely,



Kerrigan G. Clough  
Assistant Regional Administrator  
Office of Partnerships and  
Regulatory Assistance

Enclosure: Mechanical Integrity Test Form (MIT)  
Current MIT Guidance No. 37

cc: Mr. Roland McCook, Chairman  
Uintah & Ouray Business Committee

Ms. Elaine Willie, Environmental Director  
Ute Indian Tribe

Norman Cambridge  
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka  
BLM - Vernal District Office

Mr. Gilbert Hunt  
State of Utah Natural Resources  
Division of Oil, Gas & Mining



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

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

AUG - 9 1995

SUBJECT: GROUND WATER SECTION GUIDANCE NO. 37  
Demonstrating Part II (external) Mechanical Integrity  
for a Class II injection well permit.

FROM: Tom Pike, Chief *Tom Pike*  
UIC Direct Implementation Section

TO: All Section Staff  
Montana Operations Office

During the review for a Class II injection well permit, consideration must be given to the mechanical integrity (MI) of the well. MI demonstrates that the well is in sound condition and that the well is constructed in a manner that prevents injected fluids from entering any formation other than the authorized injection formation.

A demonstration of MI is a two part process:

PART I - INTERNAL MECHANICAL INTEGRITY is an assurance that there are no significant leaks in the casing/tubing/packer system.

PART II - EXTERNAL MECHANICAL INTEGRITY demonstrates that after fluid is injected into the formation, the injected fluids will not migrate out of the authorized injection interval through vertical channels adjacent to the wellbore.

A Class II injection well may demonstrate Part II MI by showing that injected fluids remain within the authorized injection interval. This may be accomplished as follows:

- 1) Cement bond log showing 80% bond through the an appropriate interval (Section Guidance 34),
- 2) Radioactive tracer survey conducted according to a EPA-approved procedure, or
- 3) Temperature survey conducted according to a EPA-approved procedure (Section Guidance 38).

For each test option above, the operator of the injection well should submit a plan for conducting the test. The plan will then be approved (or modified and approved) by EPA. EPA's pre-approval of the testing method will assure the operator that the test is conducted consistent with current EPA guidance, and that the test will provide meaningful results.

Part II MI may be demonstrated either before or after issuing the Final Permit. However, if Part II is to be demonstrated after the Final Permit is issued, a provision in the permit will require the demonstration of Part II MI. The well will also be required to pass Part II MI prior to granting authorization to inject.

Radioactive tracer surveys and temperature surveys require that the well be allowed to inject fluids as part of the procedure. In these cases, a well that has shown no other demonstration of Part II MI will be allowed to inject only that volume of fluid that is necessary to conduct the appropriate test.

After the results of the test proves that the well has passed Part II MI, the well will be given authorization to begin full injection operations.

If any of the tests show a lack of Part II MI, the well will be repaired and retested, or plugged (See Headquarters Guidance #76).

# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

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

EPA Witness: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Test conducted by: \_\_\_\_\_

Others present: \_\_\_\_\_

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

Is this a regularly scheduled test?  Yes  No

Initial test for permit?  Yes  No

Test after well rework?  Yes  No

Well injecting during test?  Yes  No If Yes, rate: \_\_\_\_\_ bpd

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

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

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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8  
999 18<sup>TH</sup> STREET - SUITE 300  
DENVER, CO 80202-2466

NOV 14 2000

Ref: 8P-W-GW

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

RECEIVED NOV 20 2000

Mr. Micheal Safford  
Operations Coordinator  
Petroglyph Operating Company, Inc.  
P.O. Box 607  
Roosevelt, UT 84066

Re: AUTHORIZATION TO COMMENCE INJECTION  
Ute Tribal #19-09 (UT04536)  
Antelope Creek Field  
EPA AREA PERMIT UT2736-00000  
Duchesne County, Utah

Dear Mr. Safford:

Thank you for submitting information pertaining to Ute Tribal #19-09 to the Environmental Protection Agency (EPA) Region VIII Ground Water Program. Requirements of UIC Area Permit UT2736-00000 Part II Sections (C)(2) "Prior To Commencing Injection" required submittal of the following information:

1. Well Rework Record (EPA Form 7520-12) with after conversion well schematic; and
2. a successfully run Mechanical Integrity Test (MIT) with pressure chart; and
3. injection zone fluid pore pressure survey.

All required information has been submitted, and has been reviewed and approved by the EPA. Petroglyph has complied with all pertinent conditions of UIC Area Permit UT2736-00000 Part II Section (C)(2). Therefore, effective upon your receipt of this letter, Administrative approval hereby is granted for injection into the Ute Tribal #19-09 under the conditions of UIC Area Permit UT2736-00000. The Director has determined that the maximum surface injection pressure for the Ute Tribal #19-09 shall not exceed 1900 psig.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8  
999 18<sup>TH</sup> STREET - SUITE 500  
DENVER, CO 80202-2466

JUN 29 2000

Ref: 8P-W-GW

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Mr. Micheal Safford  
Operations Coordinator  
Petroglyph Operating Company, Inc.  
P.O. Box 607  
Roosevelt, UT 84066

RE: Add Additional Well to Area Permit  
Antelope Creek Waterflood  
EPA Area Permit No. UT2736-00000  
Duchesne County, Utah

Dear Mr. Safford:

Your request of February 24, 2000, that the following production well be converted to a Class II enhanced oil recovery well and added to the Antelope Creek Waterflood, as authorized under EPA Area Permit No. UT2736-00000, is hereby granted.

NAME	LOCATION	EPA WELL PERMIT NO.
<u>Ute Tribal #19-09</u>	NE SE Section 19 T 5 S - R 3 W Duchesne County, UT	<u>UT2736-04536</u>

This additional well is within the boundary of the existing Area Permit for the Antelope Creek Waterflood (UT2736-00000), and this addition is made according to the terms and conditions of that Permit. Unless specifically mentioned in this authorization, conversion is being made under the provisions of 40 CFR §144.33 and the terms and conditions of the original Permit. The proposed well location, well schematic, conversion procedures with/schematic, plugging and abandonment plan with/schematic, and Cement Bond Log (CBL), submitted by your office, have been reviewed and approved as follows:

- (1) The **conversion** plan for this production well has been reviewed, and found satisfactory. EPA analysis of the CBL for this well identified a minimum interval of continuous 80% cement bond above, across, and below the Green River confining zone (3,946' to 4,070'), pursuant to Region 8 **Ground Water Section Guidance No. 34** Cement Bond Logging Techniques and Interpretation. Therefore, it is determined that cement in this well provides an effective barrier to upward movement of fluids through vertical channels

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adjacent to the wellbore (Part II MI) pursuant to 40 CFR § 146.8 (2). Well construction is considered adequate to protect USDWs and no corrective action is required.

- (2) **Maximum injection pressure (MIP)** - please reference the Final Area Permit UT2736-00000, Part II. Section C.5.(b) "the maximum surface injection pressure (MIP) shall not exceed 1900 psig". Until such time that a step-rate injectivity test (SRT) has been performed and approved by the EPA, the initial maximum surface injection pressure (MIP) for the Ute Tribal #19-09 shall not exceed 1900 psig.

Final Area Permit (UT2736-00000), has provisions whereby the permittee may request an increase, or decrease, in the maximum surface injection pressure.

- (3) The **plugging and abandonment plan and schematic**, submitted by your office, has been reviewed, revised and approved.

**Underground Sources of Drinking Water (USDWs).** The base of the USDWs in the Ute Tribal #19-09 is approximately 1,288 feet below ground level and is located within the Uinta Formation. The source for this USDW information is formation water analyses submitted by the operator for twenty-two (22) wells within the initial AOR, and from Publication No. 92 (1987), prepared jointly by the USGS and the Utah Division of Oil, Gas, and Mining.

**Injection Interval:** Fluid injection shall be limited to the gross zones within the Green River Formation between the approximate depths of 4,070 feet (Top of "B" Marker) and 6,055 feet (Basal Carbonate Zone). The injection (perforated) zones from 4,744 feet to 4,988 within this portion of the Green River Formation, are comprised of porous and permeable lenticular calcareous sandstones interbedded with low permeability carbonates and calcareous shales. The lenticular sandstones vary in thickness from 1 to 30 feet and are individually separated by shale which act as isolation barriers (confining zones) for the waterflood.

**Confining Zone:** The overall confining zone above the top injection interval, is identified in this well from 3,946' to 4,070', and is overlain by impermeable Upper Green River Formation calcareous sandy lacustrine shales and continuous beds of microcrystalline dolomite.

**Prior to commencing injection into this well,** permittee must fulfill Permit condition PART II, C. 2. and have submitted to the EPA for review and approval, the following:

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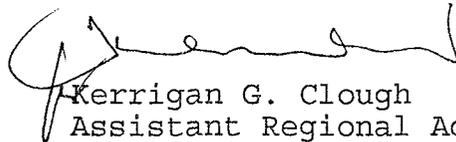
- (1) All conversion is complete and the permittee has submitted a completed Well Rework Record (EPA Form 7520-12); and
- (2) the pore pressure has been determined; and
- (3) the well has successfully completed and passed Part I of the mechanical integrity test (MIT), with pressure chart; EPA form enclosed with current MIT Guidance .

Please be aware that Petroglyph does not have authorization to begin injection into the Ute Tribal #19-09 until the items listed above have been reviewed and approved by the EPA and Petroglyph has received written authorization to begin injection from the EPA.

All other provisions and conditions of the Permit remain as originally issued July 12, 1994, and revised April 30, 1998.

If you have any questions, please contact Mr. Chuck Williams at 303.312.6625. Also, please direct the above requirements to the Ground Water Program Director at the above letterhead address, citing MAIL CODE 8P-W-GW. Thank you for your continued cooperation.

Sincerely,



Kerrigan G. Clough  
Assistant Regional Administrator  
Office of Partnerships and  
Regulatory Assistance

Enclosure: Mechanical Integrity Test Form (MIT)  
Current MIT Guidance No. 37

cc: Mr. Roland McCook, Chairman  
Uintah & Ouray Business Committee

Ms. Elaine Willie, Environmental Director  
Ute Indian Tribe

Norman Cambridge  
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka  
BLM - Vernal District Office

Mr. Gilbert Hunt  
State of Utah Natural Resources  
Division of Oil, Gas & Mining

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

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

AUG - 9 1995

SUBJECT: GROUND WATER SECTION GUIDANCE NO. 37  
Demonstrating Part II (external) Mechanical Integrity  
for a Class II injection well permit.

FROM: Tom Pike, Chief *Tom Pike*  
UIC Direct Implementation Section

TO: All Section Staff  
Montana Operations Office

During the review for a Class II injection well permit, consideration must be given to the mechanical integrity (MI) of the well. MI demonstrates that the well is in sound condition and that the well is constructed in a manner that prevents injected fluids from entering any formation other than the authorized injection formation.

A demonstration of MI is a two part process:

PART I - INTERNAL MECHANICAL INTEGRITY is an assurance that there are no significant leaks in the casing/tubing/packer system.

PART II - EXTERNAL MECHANICAL INTEGRITY demonstrates that after fluid is injected into the formation, the injected fluids will not migrate out of the authorized injection interval through vertical channels adjacent to the wellbore.

A Class II injection well may demonstrate Part II MI by showing that injected fluids remain within the authorized injection interval. This may be accomplished as follows:

- 1) Cement bond log showing 80% bond through the an appropriate interval (Section Guidance 34),
- 2) Radioactive tracer survey conducted according to a EPA-approved procedure, or
- 3) Temperature survey conducted according to a EPA-approved procedure (Section Guidance 38).

For each test option above, the operator of the injection well should submit a plan for conducting the test. The plan will then be approved (or modified and approved) by EPA. EPA's pre-approval of the testing method will assure the operator that the test is conducted consistent with current EPA guidance, and that the test will provide meaningful results.

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Part II MI may be demonstrated either before or after issuing the Final Permit. However, if Part II is to be demonstrated after the Final Permit is issued, a provision in the permit will require the demonstration of Part II MI. The well will also be required to pass Part II MI prior to granting authorization to inject.

Radioactive tracer surveys and temperature surveys require that the well be allowed to inject fluids as part of the procedure. In these cases, a well that has shown no other demonstration of Part II MI will be allowed to inject only that volume of fluid that is necessary to conduct the appropriate test.

After the results of the test proves that the well has passed Part II MI, the well will be given authorization to begin full injection operations.

If any of the tests show a lack of Part II MI, the well will be repaired and retested, or plugged (See Headquarters Guidance #76).

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<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> 14-20-H62-3514	
<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>7. UNIT or CA AGREEMENT NAME:</b> ANTELOPE CREEK	
<b>8. WELL NAME and NUMBER:</b> UTE TRIBAL 19-09	
<b>9. API NUMBER:</b> 43013317940000	
<b>9. FIELD and POOL or WILDCAT:</b> ANTELOPE CREEK	
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2032 FSL 0551 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESE Section: 19 Township: 05.0S Range: 03.0W Meridian: U	
<b>COUNTY:</b> DUCHESNE	
<b>STATE:</b> UTAH	

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input checked="" type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 6/10/2014	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Please see attached.

**Accepted by the  
 Utah Division of  
 Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 July 23, 2014

<b>NAME (PLEASE PRINT)</b> Rodrigo Jurado	<b>PHONE NUMBER</b> 435 722-5302	<b>TITLE</b> Regulatory & Compliance Spc
<b>SIGNATURE</b> N/A	<b>DATE</b> 6/30/2014	

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

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>14-20-H62-3514</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 <b>OIL WELL</b> <input type="checkbox"/> <b>GAS WELL</b> <input type="checkbox"/> <b>OTHER</b> <u>Injection Well</u>		7. UNIT or CA AGREEMENT NAME: <b>14-20-H62-4650</b>
2. NAME OF OPERATOR <b>Petroglyph Operating Company Inc.</b>		8. WELL NAME and NUMBER: <b>Ute Tribal 19-09</b>
3. ADDRESS OF OPERATOR <b>P.O. Box 607</b> CITY <b>Roosevelt</b> STATE <b>UT</b> ZIP <b>84066</b>		9. API NUMBER: <b>4301331794</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>2032' FSL, 551' FEL</b>		10. FIELD AND POOL, OR WILDCAT: <b>Antelope Creek</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NESE 19 5S 3W U</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"/> <b>NOTICE OF INTENT</b> (Submit in Duplicate)  Approximate date work will start:  _____	<input checked="" 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"/> <b>SUBSEQUENT REPORT</b> (Submit Original Form Only)  Date of work completion: <b>6/10/2014</b>	<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 type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

On 6/10/2014 Petroglyph Operating rigged up a coiled tubing unit on the well referenced above to acidize the well and improve the well's injection rates. The targeted treatment interval was 4,735'-4,988'. We ran in hole through the injection tubing, established an injection rate and slowly pulled back as we spotted acid over the referenced interval. We spotted 2,138 Gal of 15% Hcl, ran back in to the bottom of the interval and repeated spotting 1,428 Gal of Chlorine Dioxide, and ran back in again spotting in 2,142 Gal of 15% Hcl. The treatment was then flushed out into the formation with 4,074 Gallons of fresh water and the well was returned to injection.

NAME (PLEASE PRINT) <u>Rodrigo Jurado</u>	TITLE <u>Regulatory Compliance Specialist</u>
SIGNATURE	DATE <u>6/30/2014</u>

(This space for State use only)