

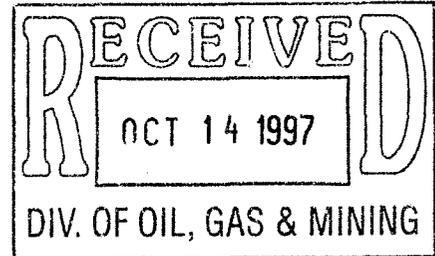


QUATERNARY	Star Point	Chinle	Molas
Alluvium	Wahweap	Shinarump	Manning Canyon
Lake beds	Masuk	Moenkopi	Mississippian
Pleistocene	Colorado	Sinbad	Humbug
Lake beds	Sego	PERMIAN	Brazer
TERTIARY	Buck Tongue	Kaibab	Pilot Shale
Pliocene	Castlegate	Cocorino	Madison
Salt Lake	Mancos	Cutler	Leadville
Oligocene	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 MKR 3890</i>	Dakota	Park City	McCracken
<i>X MKR 4376</i>	Burro Canyon	Rico (Goodridge)	Aneth
<i>Douglas CR 4518</i>	Cedar Mountain	Supai	Simonson Dolomite
<i>B Limestone 4909</i>	Buckhorn	Wolfcamp	Sevy Dolomite
<i>Castle CR 5463</i>	JURASSIC	CARBON I FEROUS	North Point
<i>Wasatch basal Camb 5879</i>	Morrison	Pennsylvanian	SILURIAN
Stone Cabin	Salt Wash	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

October 3, 1997

Utah Division of Oil, Gas, & Mining  
1594 West North Temple  
Box 145801  
Salt Lake City, UT 84114-5801



RE: APPLICATION FOR PERMIT TO DRILL  
UTE TRIBAL #19-01  
NE/NE, SEC. 19, T5S, R3W  
DUCHESNE COUNTY, UTAH  
LEASE NO. BIA 14-20-H62-3514  
UTE TRIBAL LANDS

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,

A handwritten signature in black ink, appearing to read "Ed Trotter". The signature is written in a cursive style with a large loop at the end.

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, UTAH 84066

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*)  
 At surface 1111  
 473' FNL & 706' FEL NE/NE  
 At proposed prod. zone 719

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

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any)  
 473'±

16. NO. OF ACRES IN LEASE  
 640

17. NO. OF ACRES ASSIGNED TO THIS WELL  
 80

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  
 5875.5'

19. PROPOSED DEPTH  
 5875.5'

20. ROTARY OR CABLE TOOLS  
 ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 6230.5' GRADED GROUND

22. APPROX. DATE WORK WILL START\*  
 OCTOBER 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. AP WELL NO.  
 #19-01

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

CONFIDENTIAL

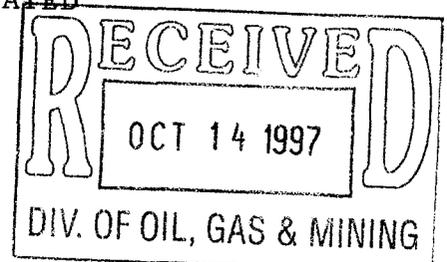
PROPOSED CASING AND CEMENTING PROGRAM

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#	5875.5'	

CONFIDENTIAL

PETROGLYPH OPERATING COMPANY, INC. WILL BE THE DESIGNATED OPERATOR OF THE SUBJECT WELL UNDER BOND #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 10-8-97

(This space for Federal or State office use)

PERMIT NO. 43-013-31964 APPROVAL DATE

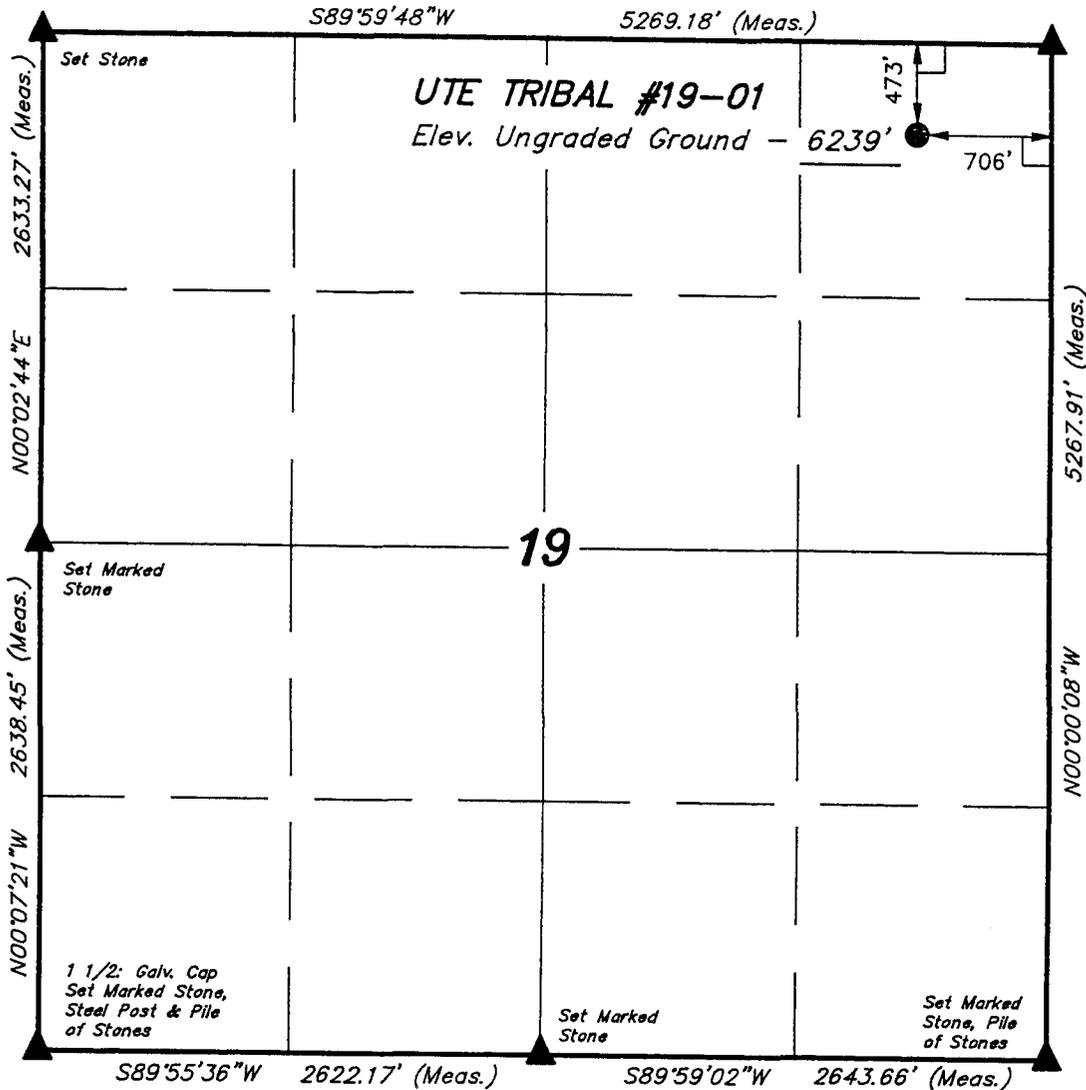
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY [Signature] TITLE Associate Director DATE 10/27/97  
\*See Instructions On Reverse Side

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

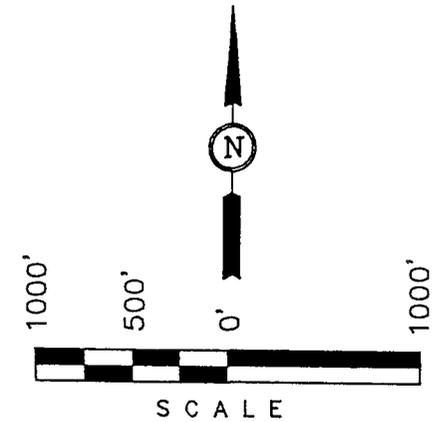
## PETROGLYPH OPERATING CO., INC.

Well Location, UTE TRIBAL #19-01, located as shown in the NE 1/4 NE 1/4 of Section 19, T5S, R3W, U.S.B.&M. Duchesne County, Utah.



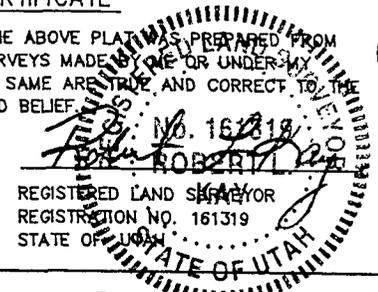
### BASIS OF ELEVATION

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.



### LEGEND:

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

NOTE:  
BASIS OF BEARINGS IS THE WEST LINE OF SECTION 30, T5S, R3W, U.S.B.&M. WHICH IS ASSUMED FROM G.L.O. INFORMATION TO BEAR NORTH.

<b>UINTAH ENGINEERING &amp; LAND SURVEYING</b>		
85 SOUTH 200 EAST - VERNAL, UTAH 84078		
(801) 789-1017		
SCALE 1" = 1000'	DATE SURVEYED: 04-29-97	DATE DRAWN: 07-12-97
PARTY D.A. B.B. D.R.B.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE PETROGLYPH OPERATING CO., INC.	

EIGHT POINT PLAN

UTE TRIBAL #19-01  
NE/NE, SEC. 19, T5S R3W  
DUCHESNE COUNTY, UTAH

1. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS:

FORMATIONS	DEPTH	SUBSEA
Mahogany Shale	2786.5	3454
"X" Marker	4365.5	1875
Douglas Creek	4509.5	1731
"B" Limestone	4895.5	1345
B/Castle Peak Limestone	5460.5	780
Basal Carbonate Limestone	5865.5	375
Total Depth	5875.5	265

Anticipated BHP                      2000 psi

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

Substance	Formation	Depth	Subsea
Oil/Gas	Douglas Creek	4509.5	1731
Oil/Gas	B/Castle Peak	5460.5	780
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	0-5975.5'	5975.5'	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 #19-01  
NE/NE, SEC. 19, T5S R3W  
DUCHESNE COUNTY, UTAH

5. MUD PROGRAM

<u>INTERVAL</u>	<u>MUD TYPE</u>
0' - 250'	Air
250' - 4000'	Air/Mist & Aerated Water
4000' - TD	Air/3% KCL water or KCL substitute
TD	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 #19-01  
NE/NE, 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.

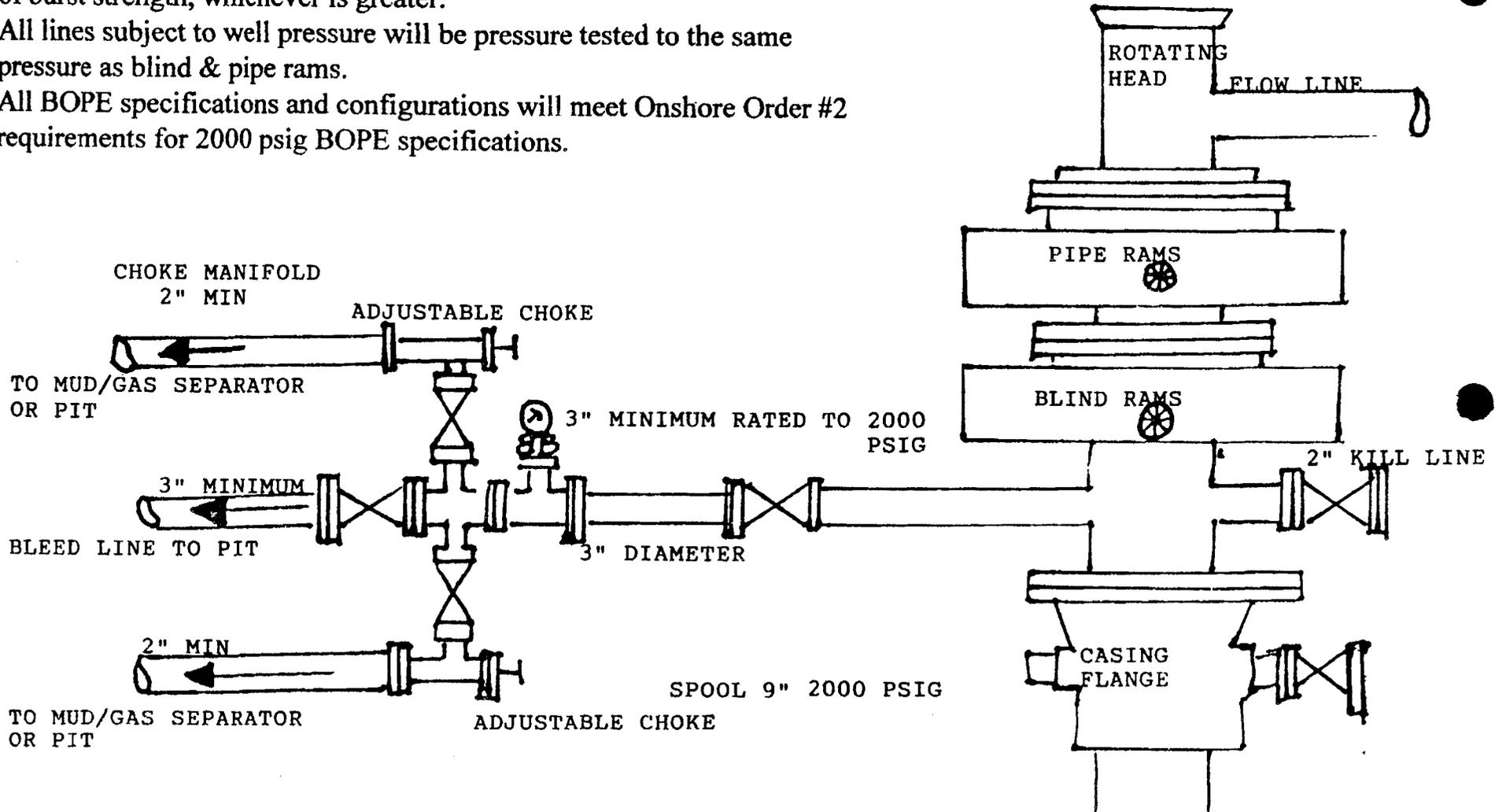
(Attachment: BOP Schematic Diagram)

# 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 & Pipe 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 #19-01  
Lease Number: BIA 14-20-H62-3514  
Location: 473' FNL & 706' FEL NE/NE, 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 19.0 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 0.3 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 - 22\*
- G. Shut in wells - 1\*
- H. Injection wells - 1\*

(\*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 1600' from proposed location to a point in the SW/SE of Section 18, T5S, R3W, where it will tie into Petroglyph Operating Co., Inc.'s existing pipeline. Proposed pipeline crosses Ute Tribe lands, thus a Right-of-Way grant will be required. See attached TOPO Map D showing pipeline route.
3. Proposed pipeline will be a 4 1/2" OD steel, welded line laid on the surface.
4. Protective measures and devices for livestock and wildlife will be taken and/or installed where required.

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

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

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

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

5. LOCATION & TYPE OF WATER SUPPLY

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

6. SOURCE OF CONSTRUCTION MATERIAL

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

7. METHODS OF HANDLING WASTE DISPOSAL

A. METHODS AND LOCATION

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

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

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

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

On BIA administered land:

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

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

To protect the environment:

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

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

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

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

#### 8. ANCILLARY FACILITIES

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

#### 9. WELL SITE LAYOUT

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

The reserve pit will be located on the Southeast side of the location. The flare pit will be located downwind of the prevailing wind direction on the Southeast 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 Southwest corner.

Access to the well pad will be from the North.

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

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

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

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

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

## FENCING REQUIREMENTS

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

- A. 39 inch net wire shall be used with at least one strand of barbed wire on top of the net wire. (barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence).
- B. The net wire shall be no more than 2 inches above the ground. The barbed wire strand shall be 3 inches above the net wire. Total height of the fence shall be at least 42 inches.
- C. Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- D. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any two posts shall be no greater than 16'.
- E. All wire shall be stretched by using a stretching device before it is attached to the corner posts.

The reserve pit fencing will be on the three sides during drilling operations and on the fourth side when the rig moves off the location. Pits will be fenced and maintained until clean-up.

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

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

## 10. PLANS FOR RESTORATION OF SURFACE

### A. PRODUCING LOCATION

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

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

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

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

Contact appropriate surface management agency for required seed mixture.

### B. DRY HOLE/ABANDONED LOCATION

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

#### ON BIA Administered lands:

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

11. SURFACE OWNERSHIP

Access road: Ute Indian Tribe

Location: Ute Indian Tribe

12. OTHER INFORMATION

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

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

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

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

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

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

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

On BIA administered land:

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

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

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

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

Additional Surface Stipulations

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

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

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

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

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

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

LESSEE'S OR OPERATOR'S REPRESENTATIVE AND CERTIFICATION

PERMITTING

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

OPERATIONS

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

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

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

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

Certification:

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

10-8-97

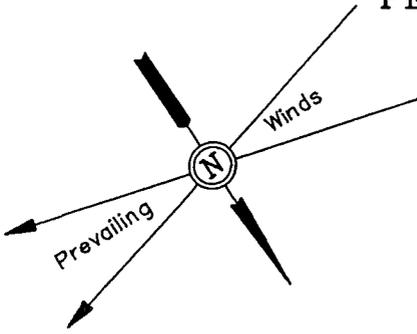
Date



PETROGLYPH OPERATING CO., INC.

LOCATION LAYOUT FOR

UTE TRIBAL #19-01  
SECTION 19, T5S, R3W, U.S.B.&M.  
473' FNL 706' FEL



SCALE: 1" = 50'  
DATE: 07-12-97  
Drawn By: D.R.B.

F-0.5'  
El. 230.0'

F-2.6'  
El. 227.9'

F-8.4'  
El. 222.1'

Sta. 2+90

Proposed Access Road to #19-07

NOTE:

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

FLARE PIT

Topsoil Stockpile

El. 255.6'  
C-33.1'  
(btm. pit)

C-10.8'  
El. 241.3'

C-8.7'  
El. 239.2'

Sta. 1+65

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

10' WIDE BENCH

RESERVE PITS (8' Deep)

El. 249.3'  
C-26.8'  
(btm. pit)

El. 236.2'  
C-5.7'

Reserve Pit Backfill & Spoils Stockpile

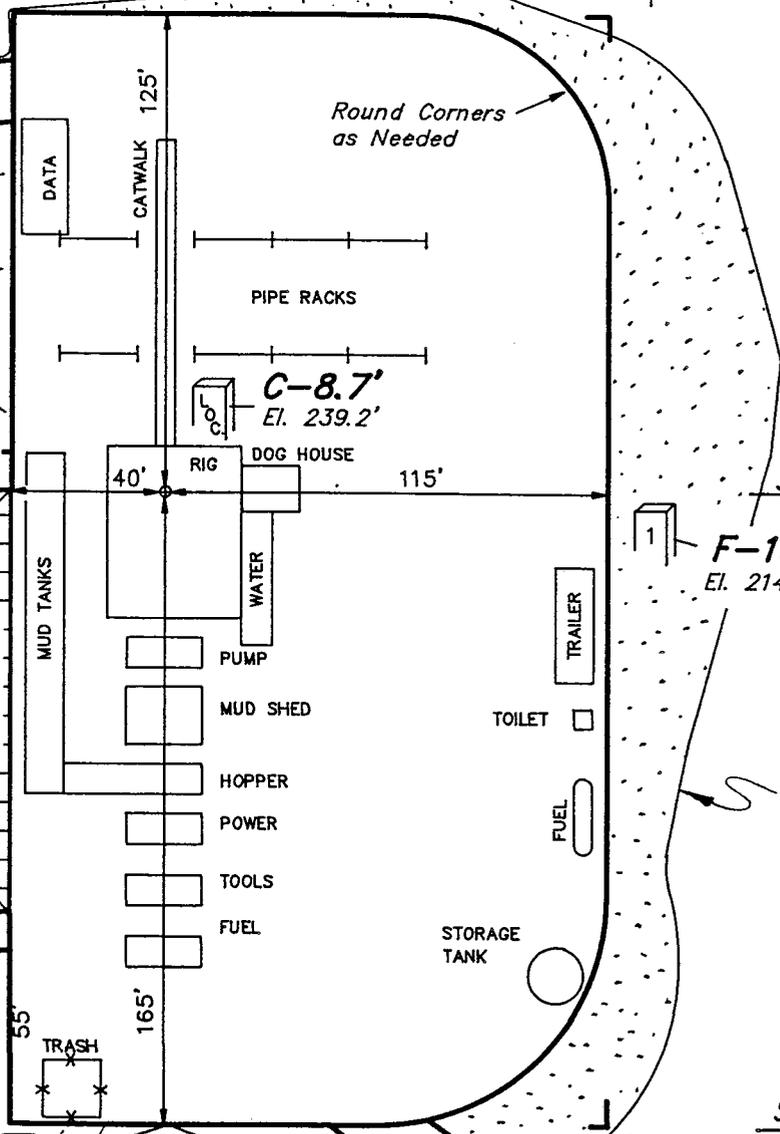
Approx. Top of Cut Slope

El. 238.9'  
C-8.4'

C-0.2'  
El. 230.7'

F-24.6'  
El. 205.9'

Sta. 0+00



Approx. Toe of Fill Slope

Proposed Access Road

Elev. Ungraded Ground at Location Stake = 6239.2'  
Elev. Graded Ground at Location Stake = 6230.5'

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

PETROGLYPH OPERATING CO., INC.

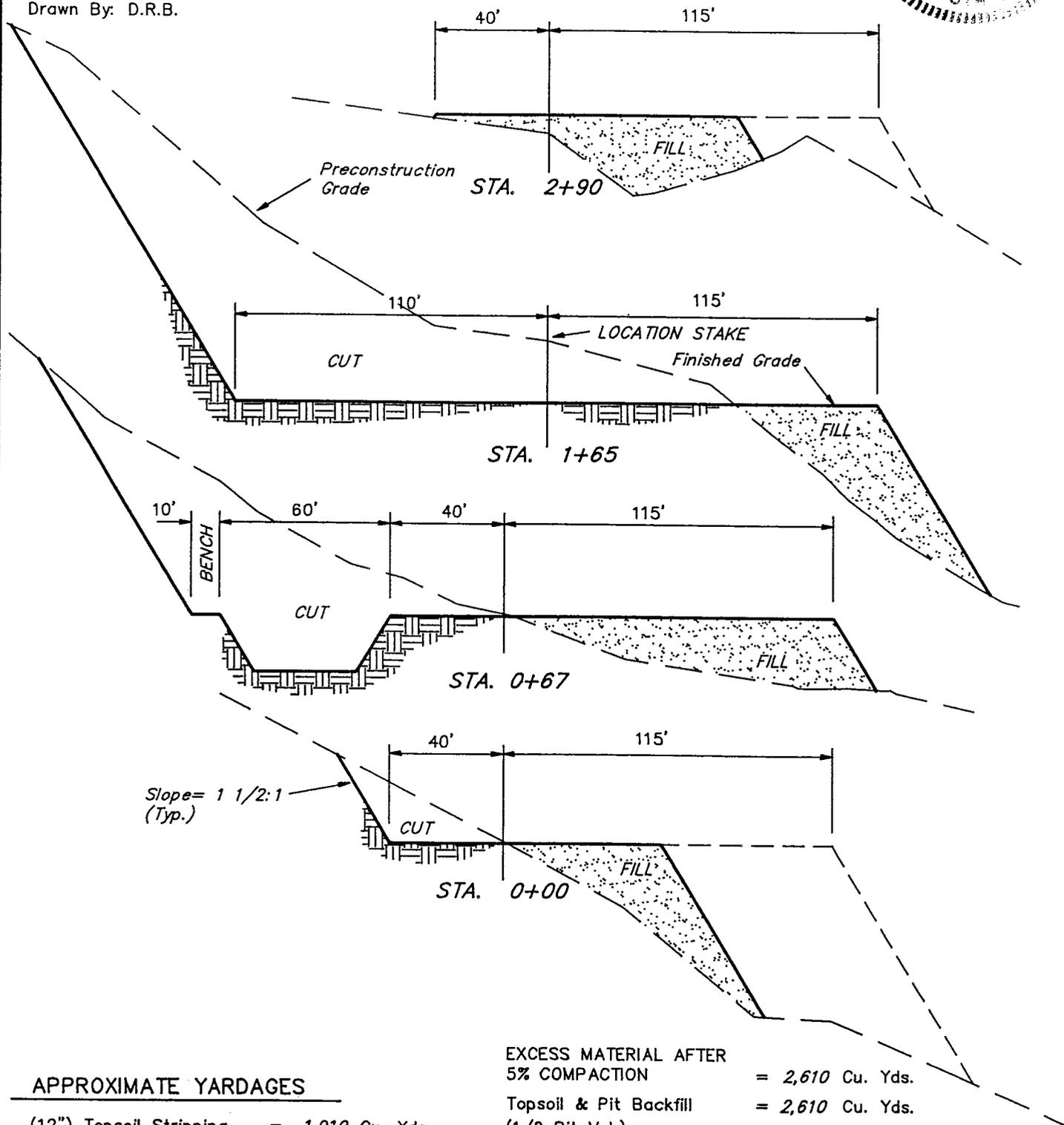
TYPICAL CROSS SECTIONS FOR

UTE TRIBAL #19-01  
SECTION 19, T5S, R3W, U.S.B.&M.  
473' FNL 706' FEL



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

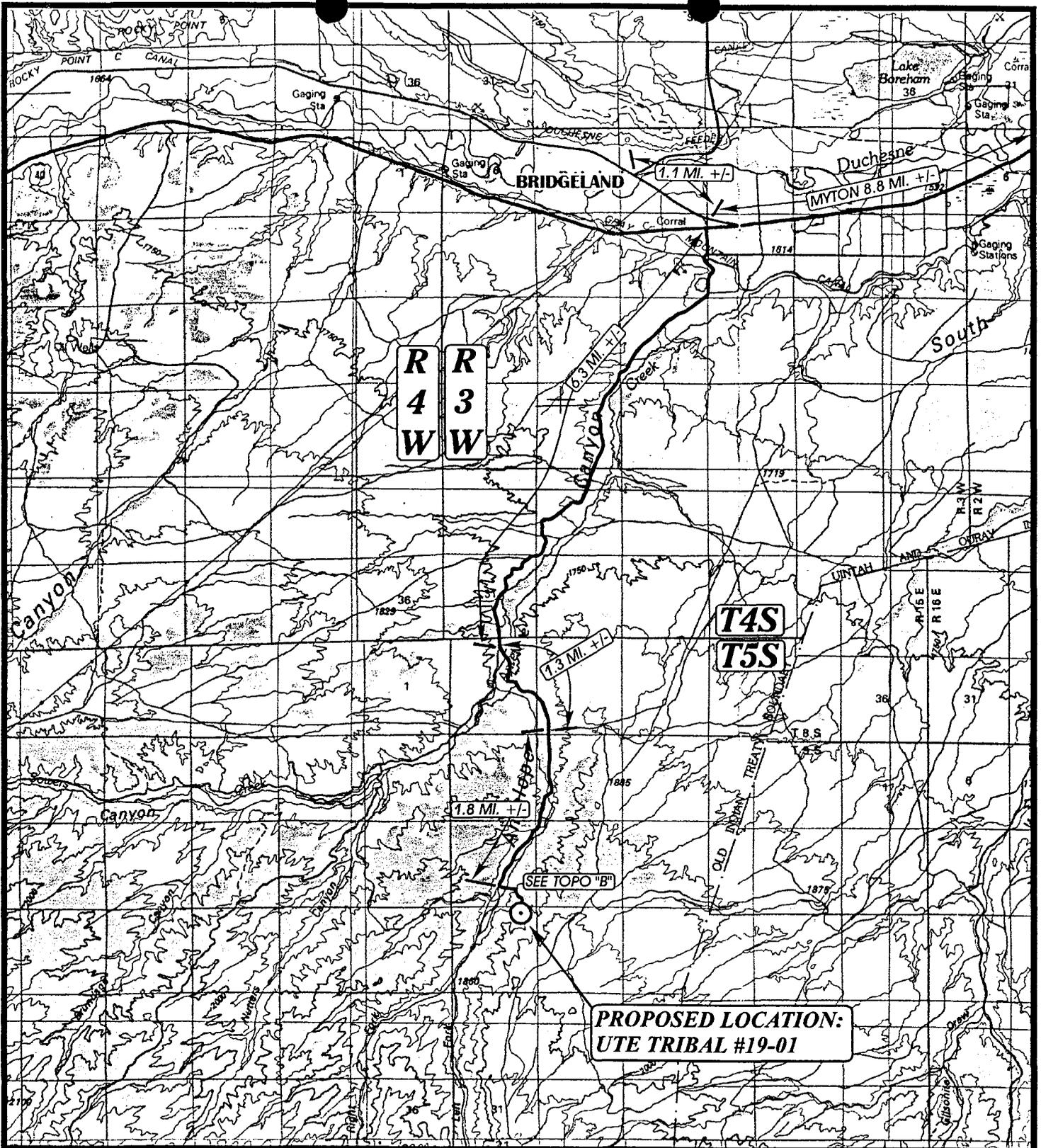
DATE: 07-12-97  
Drawn By: D.R.B.



APPROXIMATE YARDAGES

(12") Topsoil Stripping	= 1,910 Cu. Yds.
Remaining Location	= 11,160 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 13,070 CU.YDS.</b>
<b>FILL</b>	<b>= 9,940 CU.YDS.</b>

EXCESS MATERIAL AFTER 5% COMPACTION	= 2,610 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 2,610 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	= 0 Cu. Yds.



**PROPOSED LOCATION:  
UTE TRIBAL #19-01**

**LEGEND:**

⊙ PROPOSED LOCATION

**PETROGLYPH OPERATING CO., INC.**

**UTE TRIBAL #19-01  
SECTION 19, T5S, R3W, U.S.B.&M.  
473' FNL 706' FEL**



**Uintah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(801) 789-1017 \* FAX (801) 789-1813  
Email: uels@easilink.com

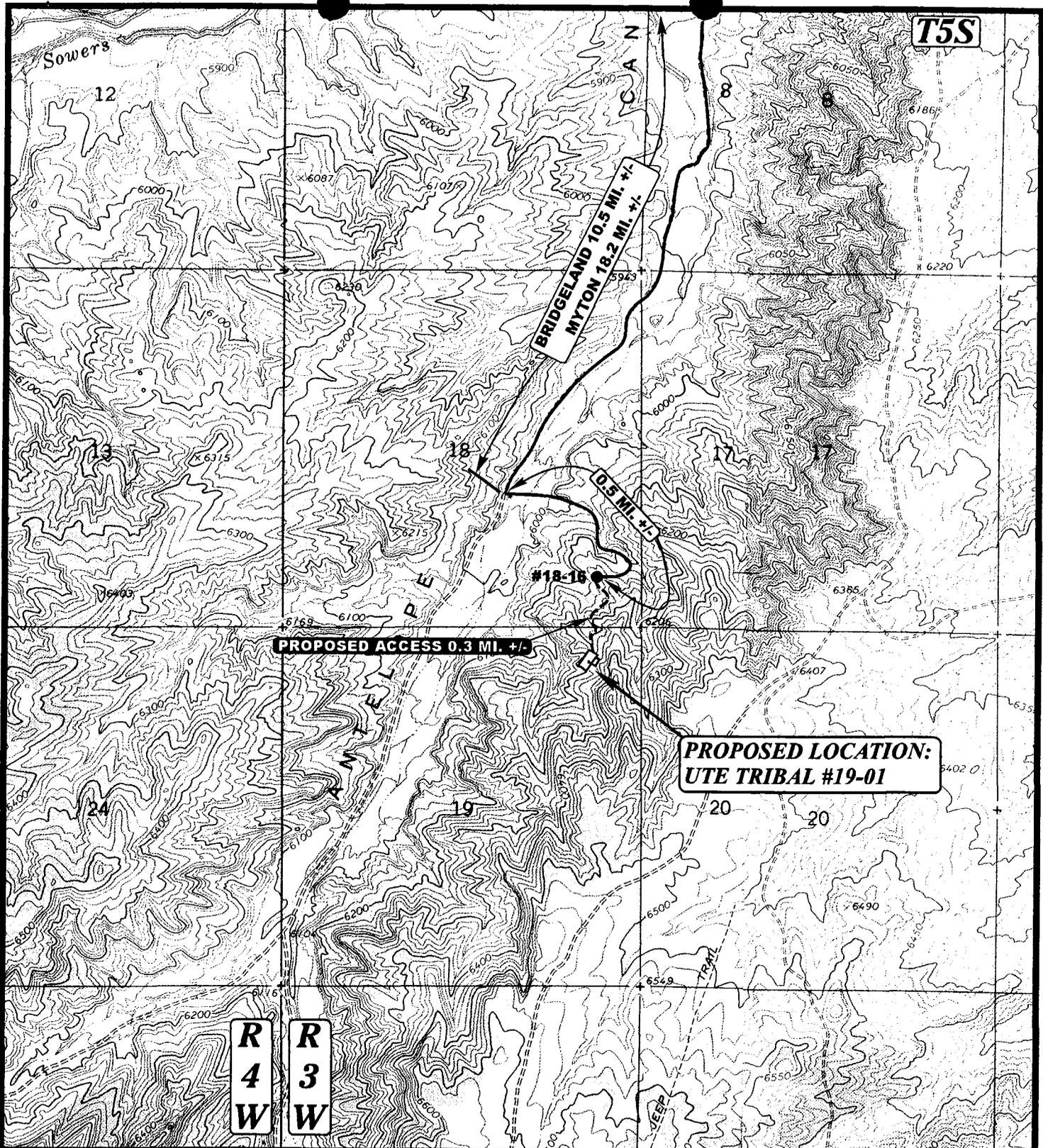


**TOPOGRAPHIC  
MAP**

**6 25 97**  
MONTH DAY YEAR

SCALE: 1 : 100,000 | DRAWN BY: D.COX | REVISED: 00-00-00





**LEGEND:**

- PROPOSED ACCESS ROAD
- EXISTING ROAD

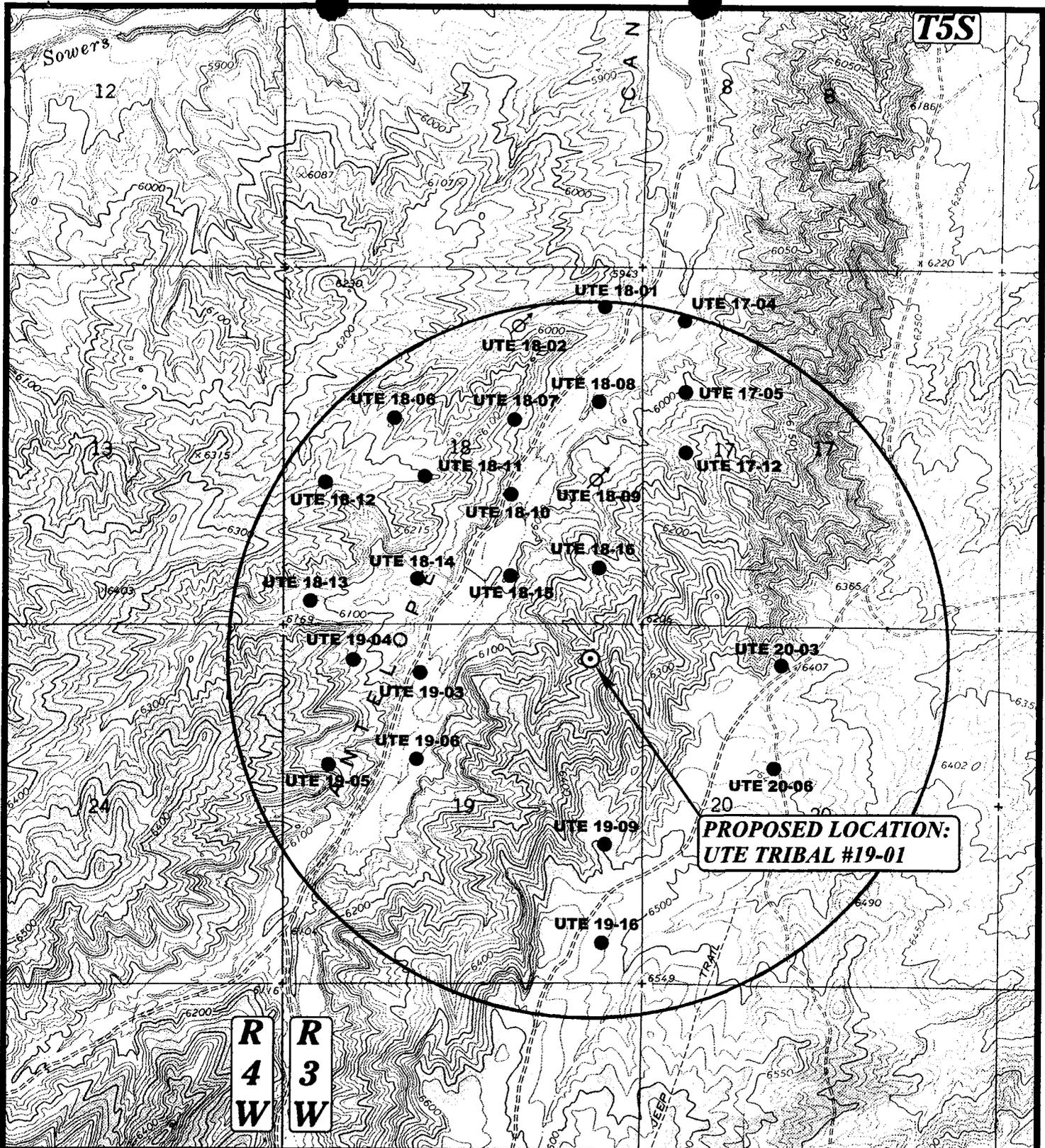
**PETROGLYPH OPERATING CO., INC.**

**UTE TRIBAL #19-01**  
**SECTION 19, T5S, R3W, U.S.B.&M.**  
**473' FNL 706' FEL**

**UeIs** Uintah Engineering & Land Surveying  
 85 South 200 East Vernal, Utah 84078  
 (801) 789-1017 \* FAX (801) 789-1813  
 Email: uels@easlink.com



<b>TOPOGRAPHIC</b>	<b>6</b>	<b>25</b>	<b>97</b>	<b>B</b> TOPO
<b>MAP</b>	MONTH	DAY	YEAR	
SCALE: 1" = 2000'		DRAWN BY: D.COX		REVISED: 00-00-00



**LEGEND:**

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

**PETROGLYPH OPERATING CO., INC.**

**UTE TRIBAL #19-01**  
**SECTION 19, T5S, R3W, U.S.B.&M.**  
**473' FNL 706' FEL**



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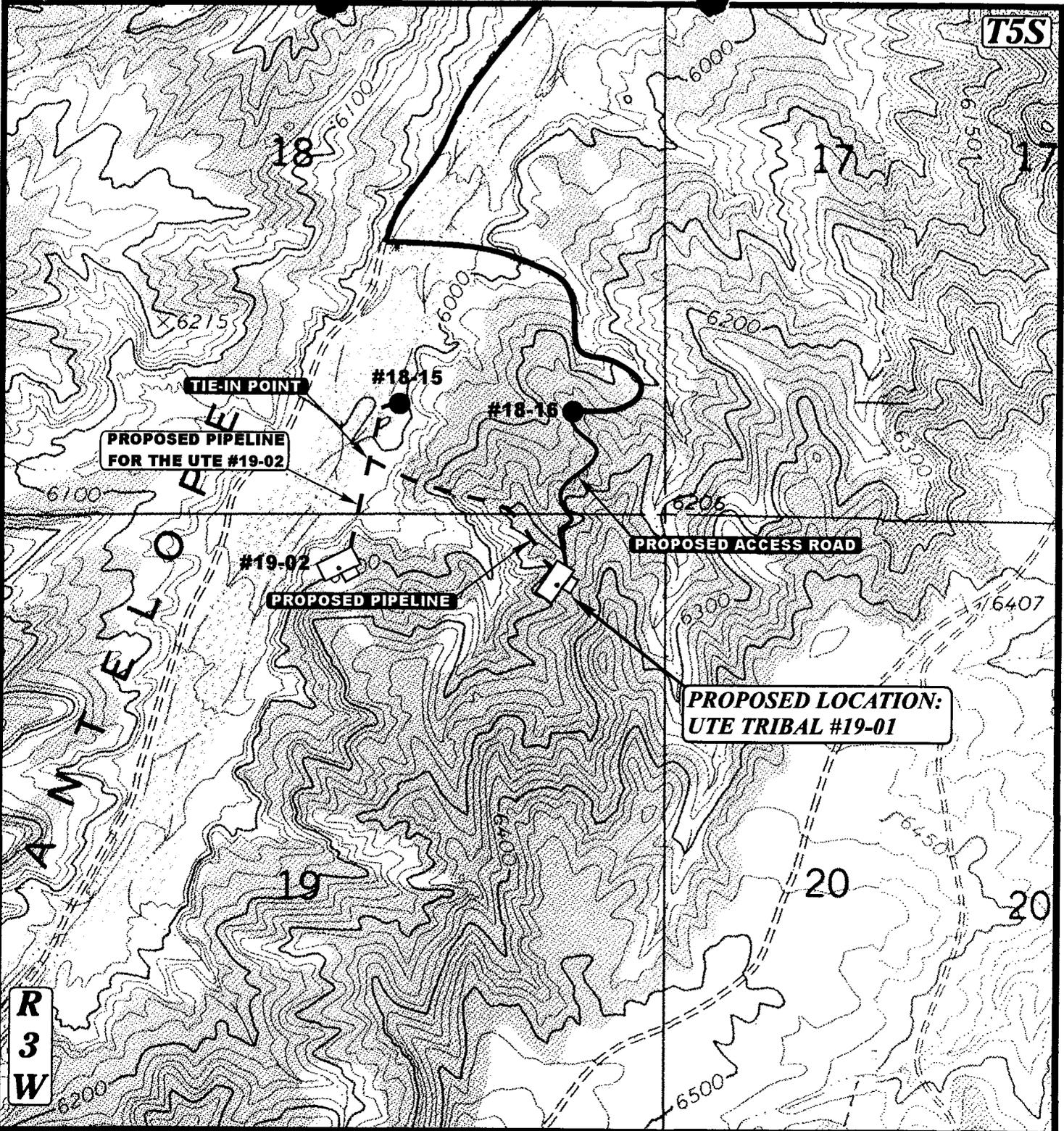
**TOPOGRAPHIC**  
**MAP**

<b>6</b>	<b>25</b>	<b>97</b>
MONTH	DAY	YEAR

SCALE: 1" = 2000' | DRAWN BY: D.COX | REVISED: 00-00-00



T5S



**APPROXIMATE TOTAL PIPELINE DISTANCE = 1600' +/-**

**LEGEND:**

- EXISTING PIPELINE
- - - - PROPOSED PIPELINE
- PROPOSED ACCESS



**PETROGLYPH OPERATING CO., INC.**

**UTE TRIBAL #19-01**  
**SECTION 19, T5S, R3W, U.S.B.&M.**  
**473' FNL 706' FEL**



**Uintah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (801) 789-1017 \* FAX (801) 789-1813  
 Email: uels@easilink.com

**TOPOGRAPHIC**  
**MAP**

<b>6</b>	<b>25</b>	<b>97</b>
MONTH	DAY	YEAR

SCALE: 1" = 1000' DRAWN BY: D.COX REVISED: 00-00-00



WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 10/14/97

API NO. ASSIGNED: 43-013-31964

WELL NAME: UTE TRIBAL 19-1  
 OPERATOR: PETROGLYPH OPERATING (N3800)

PROPOSED LOCATION:  
 NENE 19 - T05S - R03W  
 SURFACE: 0473-FNL-0706-FEL  
 BOTTOM: 0473-FNL-0706-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 4556)  
 Potash (Y/N)  
 Oil shale (Y/N)  
 Water permit  
 (Number H3-10152)  
 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: \_\_\_\_\_

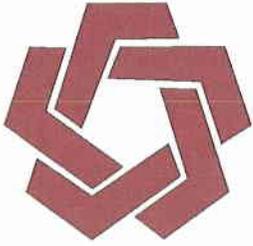
\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



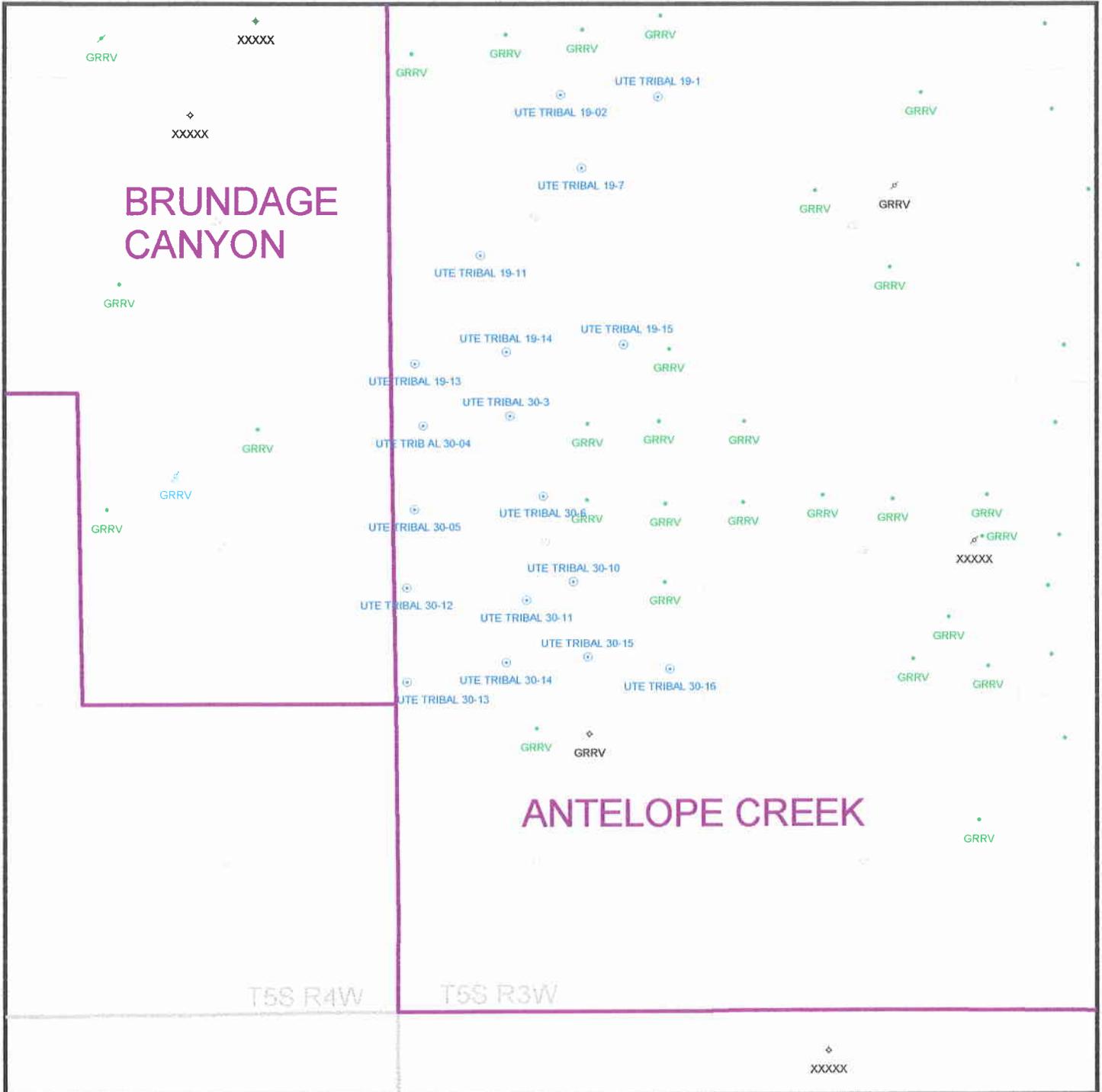
DIVISION OF OIL, GAS & MINING

OPERATOR: PETROGLYPH OPERATING (N3800)

FIELD: ANTELOPE CREEK (060)

SEC. TWP, RNG: 19 & 30, T5S, R3W

COUNTY: DUCHESNE UAC: R649-2-3 & R649-3-3



DATE PREPARED:  
17-OCT-1997



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)

October 27, 1997

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

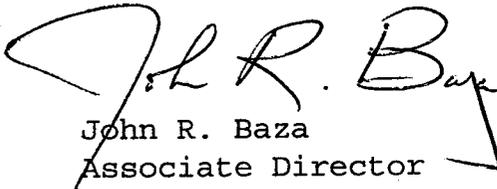
Re: Ute Tribal 19-01 Well, 473' FNL, 706' FEL, NE NE, Sec. 19,  
T. 5 S., R. 3 W., Duchesne County, Utah

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 43-013-31964.

Sincerely,

  
John R. Baza  
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 19-01  
API Number: 43-013-31964  
Lease: 14-20-H62-3514  
Location: NE NE 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 Jim Thompson at (801)538-5336.

Notify the Division prior to commencing operations to plug and abandon the well. Contact John R. Baza (801)538-5334.

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, UTAH 84066

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

At surface

473' FNL & 706' FEL NE/NE

At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

19.0 MILES SOUTHWEST OF MYTON, UTAH

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.

(Also to nearest drig. unit line, if any)  
473' ±

16. NO. OF ACRES IN LEASE

640

17. NO. OF ACRES ASSIGNED TO THIS WELL

80

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

19. PROPOSED DEPTH

5875.5'

20. ROTARY OR CABLE TOOLS

ROTARY

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

6230.5' GRADED GROUND

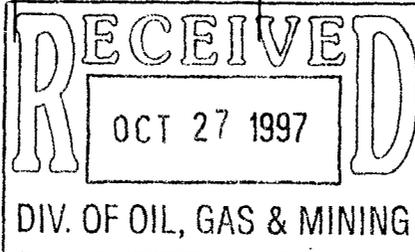
22. APPROX. DATE WORK WILL START\*

OCTOBER 1997

23. PROPOSED CASING AND CEMENTING PROGRAM

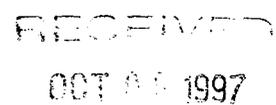
SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	8 5/8	24.0#	250'	135 sx class "G" + 2% CaCl <sub>2</sub> + 1/4 #/sx celloflake.
7 7/8	5 1/2	15.5#	5875.5'	

50/50 POZMIX + 2% GEL + 10% SALT TO 400' ABOVE ALL ZONE 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 #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

TITLE AGENT FOR PETROGLYPH

DATE

10-8-97

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY

Assistant Field Manager  
Mineral Resources

TITLE

DATE

OCT 23 1997

\*See Instructions On Reverse Side

UNITED STATES GOVERNMENT  
memorandum

September 26, 1997

DATE:

REPLY TO: Superintendent, Uintah & Ouray Agency  
ATTN OF:

RECEIVED

OCT 02 1997

SUBJECT: Concurrence letter for Petroglyph Oper. Co. all in T5S.R3W  
UteTribal 30-03 NENW, Sec 30 UteTribal 30-06 SENW, Sec. 30 UteTribal 19-11, NESW, Sec 19  
UteTribal 19-02, NWNE, Sec. 19 Ute Tribal 19-13, SWSE, Sec.19 UteTribal 19-14, SESW, Sec. 19  
UteTribal 19-01, NENE, Sec. 19 Ute Tribal 19-07, SWNE, Sec.19 UteTribal 19-15, SWSE, Sec. 19  
TO: Bureau of Land Management, Vernal District Office  
ATTENTION: Minerals and Mining Division

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

Based on available information received on September 26, 1997, we cleared the proposed location in the following area of environmental impact.

YES \_\_\_ NO X Listed threatened or endangered species  
YES \_\_\_ NO X Critical wildlife habitat  
YES \_\_\_ NO X Archeological or cultural resources  
YES \_\_\_ NO \_\_\_ Air quality aspects (to be used only if project is in or adjacent to a Class I area.)

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

1. The Ute Tribe Energy & Minerals Department is to be notified 48 hours prior to construction as a Tribal Technician is to monitor construction.
2. 75 foot corridor rights of way shall be granted with the following:
  - A. Buried pipelines shall be buried minimum of 3 feet below soil surface
  - B. Access roads shall be limited to ~~22~~ feet wide.
  - C. Surface pipelines shall be limited to 13 feet wide.
  - D. Buried pipelines shall be limited to 15 feet wide, and construction will be monitored by Tribal Technician.
3. Pipelines adjacent to access roads shall be buried within 1.5 feet from the outside edge of the barrow ditch. Additional pipelines shall be parallel to each other, as safety requirements will allow.
4. Petroglyph Operating Company will assure the UteTribe that any/all contractors and any sub-contractors has acquired a Tribal Business License and have an access permit prior to construction.
5. All vehicular traffic, personnel movement, construction and restoration operations should be confined to the area examined, as referenced in report and to the existing roadways and/or evaluated access routes.
6. All personnel should refrain from collecting artifacts and from disturbing any significant cultural resources in the area.
7. The personnel from the Ute Tribe Energy and Minerals Department should be consulted should cultural remains from sub-surface deposits be exposed or identified during construction.
8. All mitigative stipulations contained in the Bureau of Indian Affairs site specific Environmental Analysis (EA) will be strictly adhered.
9. Upon completion of Application for Right-of-way the Ute Tribe Energy and Minerals Department will be notified by Petroglyph Operating Company, so that a Tribal Technician can verify Affidavit of Completions.

CONDITIONS OF APPROVAL  
APPLICATION FOR PERMIT TO DRILL

Company/Operator: Petroglyph Operating Company

Well Name & Number: Ute Tribal 19-01

API Number: 43-013-31694

Lease Number: 14-20-H62-3514

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

**NOTIFICATION REQUIREMENTS**

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

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

## CONDITIONS OF APPROVAL FOR NOTICE TO DRILL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

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

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

### A. DRILLING PROGRAM

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

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

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

2. Pressure Control Equipment

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

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

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

3. Casing Program and Auxiliary Equipment

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

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

As a minimum, the usable water and oil shale resources shall be isolated and/or protected by having a cement top for the production casing at least 200 ft. above the top of the usable water zone identified at  $\pm 245$  ft. or by setting the surface casing at  $\pm 295$  ft.. If gilsonite is encountered while drilling, it shall be isolated and/or protected via the cementing program.

4. Mud Program and Circulating Medium

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

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

5. Coring, Logging and Testing Program

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

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

A cement bond log (CBL) will be run from the production casing shoe to **TOP OF CEMENT** if the surface casing is set at  $\pm 295$  ft. or it will be run to **SURFACE** if the surface casing is set at  $\pm 250$  ft. and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

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

6. Notifications of Operations

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

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

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

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

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

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

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

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

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

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

7. Other Information

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

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

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

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

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

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

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

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

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

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

Wayne Bankert (801) 789-4170  
Petroleum Engineer

Ed Forsman (801) 789-7077  
Petroleum Engineer

Jerry Kenczka (801) 789-1190  
Petroleum Engineer

BLM FAX Machine (801) 781-4410

## SURFACE USE PROGRAM

The Surface Use Conditions of Approval all come from the Bureau of Indian Affairs Concurrence Memorandum and Site Specific Environmental Analysis.

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

Seventy-five (75) foot wide Rights-Of-Way (ROWs) corridor shall be granted for the following:

Access roads which shall have constructed travel width limited to 22 feet within a 30 foot allocation of the ROW, except as granted for sharp curves or intersections.

Surface pipelines shall be limited to 13 feet of the ROW. The pipeline will be constructed to lay on the soil surface, and the ROW for the pipeline will not be bladed or cleared of vegetation.

Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the ROW. Where pipelines cross country between stations, they shall be welded in place at wellsites or on roads and then pulled into place with suitable equipment. Traffic will be restricted along these areas so that the pipeline ROW will not be used as an access road.

Buried pipelines shall be buried a minimum of 3 feet below the soil surface within an area of disturbance limited to 15 feet wide, and construction will be monitored by a Tribal Technician.

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

After construction of the buried pipeline is completed the disturbed area of the right-of-way shall be contoured to blend into the natural landscape and it shall be reseeded with desirable vegetation as recommended by the BIA. Between September 15 and November 1 of the year following pipeline construction all disturbed areas shall be reseeded with perennial vegetation according to BIA, or Ute Tribe specifications.

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

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

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

The Ute Tribe Energy & Mineral Department shall be consulted if cultural remains from subsurface deposits are exposed or identified during construction.

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

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

Reserve pits shall be lined with impervious synthetic liners. Prior to backfilling the reserve pit all fluids will be pumped from the pit into trucks and hauled to approved disposal sites. When the reserve pits are backfilled the cuttings and mud, etc. left in them to be buried will be buried a minimum of three feet below the surface of the soil.

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

Firewood shall be stockpiled at convenient locations near the wellsite and along the access road.

Upon completion of the project approved under this Application for Permit to Drill and Right-of-way, the Ute Tribe Energy & Minerals Resources Department will be notified by Petroglyph Operating Company so that a Tribal Technician can verify Affidavit of Completion's.

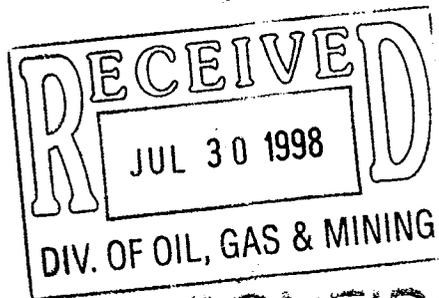


Petroglyph Operating Company, Inc.  
A wholly owned subsidiary of  
Petroglyph Energy, Inc.

P.O. Box 1839  
Hutchinson, KS 67504-1839

316 665-8500  
316 665-8577 fax

CONFIDENTIAL



CONFIDENTIAL

July 27, 1998

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

Ms. Dyson:

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

Well Name

Log

- ✓ Ute Tribal 07-11 High Resolution Induction & Spectral Density Dual Spaced Neutron
- ✓ Ute Tribal 07-13 CNLD & AIT
- ✓ Ute Tribal 16-12 CNLD & AIT
- ✓ Ute Tribal 18-05 CNLD & AIT
- 43-013-31964 ✓ Ute Tribal 19-01 CNLD & AIT
- sec 19 T055 ✓ Ute Tribal 19-02 CNLD & AIT
- R03W ✓ Ute Tribal 19-07 CNLD & AIT
- ✓ Ute Tribal 19-14 High Resolution Induction & Spectral Density Dual Spaced Neutron
- ✓ Ute Tribal 30-06 CNLD & AIT
- ✓ Ute Tribal 30-08 CNLD & AIT

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

Sincerely,

Brooke Kirmer  
Geology Technician

ENTITY ACTION FORM - FORM 6

OPERATOR Petroglyph Operating Company, Inc.  
 ADDRESS P. O. Box 607  
Roosevelt, UT 84066

OPERATOR ACCT. NO. N3800

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
B	12084	→	43-013-31964	Ute Tribal 19-01	NENE	19	T5S	R3W	Duchesne	5/11/98	
WELL 1 COMMENTS: <b>CONFIDENTIAL</b> <span style="float: right;"><i>Entity added 5-20-98. See</i></span> Ute Tribal 19-01 will tie into tank battery at Ute Tribal 18-15											
WELL 2 COMMENTS:											
WELL 3 COMMENTS:											
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

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

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

(3/89)

*Deanna Bell*  
 Signature Deanna Bell

Operations Coordinator 5/20/98  
 Title Date

Phone No. (435) 722-2531

SUBMIT IN DUPLICATE  
(See other instructions on  
reverse side)

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

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 19-01

10. FIELD AND POOL, OR WILDCAT  
Antelope Creek

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

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 (435) 722-2531

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface 473' FNL 706' FEL

At top prod. interval reported below

At total depth 6026' RTD

14. PERMIT NO.  
43-013-31964

DATE ISSUED  
10/27/97

12. County or Parish  
Duchesne

13. State  
Utah

15. DATE SPUDDED 5/11/98

16. DATE T.D. REACHED  
5/17/98

17. DATE COMPLETED (Ready to prod.)  
6/9/98

18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\*  
6241' KB

19. ELEV. CASINGHEAD  
6231' GGL

20. TOTAL DEPTH, MD & TVD  
6026' TD

21. PLUG BACK T.D., MD & TVD  
5959' PBTD

22. IF MULTIPLE COMPL., HOW MANY\*  
5

23. INTERVALS DRILLED BY  
ROTARY TOOLS  
CABLE TOOLS

24. PRODUCING INTERVAL(S) OF THIS COMPLETION -- TOP, BOTTOM, NAME (MD AND TVD)\*  
Green River B6.2, B6.3, C4, C6.1, E2.2

25. WAS DIRECTIONAL SURVEY MADE  
No

26. TYPE ELECTRIC AND OTHER LOGS RUN  
Gamma Ray to surface, Density-Compensated Neutron Porosity, AIT (normal suite)

27. WAS WELL CORED  
No

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"	24.0	319'	12-1/4"	150 SXS Class H, 2% CaCl <sub>2</sub> , .25#/sk cellophane flake	
5-1/2"	15.5	6003'	7-7/8"	100 sxs Highfill, 360 sxs Thixotropic	

29. LINER RECORD

SIZE	TOP	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2-7/8"	5635'	

31. PERFORATION RECORD (Interval, size and number)

CONFIDENTIAL

E2.2 5538-44' (24 holes) B6.2 4079-83' (16 holes)  
C6.1 4727-31' (16 holes) B5 4035-39' (16 holes)  
C6.1 4716-20' (16 holes)  
C4 4554-59' (20 holes)  
B6.3 4102-05' (12 holes)

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5538-44'	5867 gals Delta Frac 25, 10000# 20/40 prop, 11000# 16/30 prop
4716-20' & 4727-31'	7772 gals Delta Frac 25, 12500# 20/40 prop, 19000# 16/30 prop
4554-59'	5700 gals Delta Frac 25, 10000# 20/40 prop, 11000# 16/30 prop
4079-83' & 4102-05'	8941 gals Delta Frac 25, 15500# 20/40 prop, 23400# 16/30 prop
4035-39'	8016 gals Delta Frac 25, 12500# 20/40 prop, 19000# 16/30 prop

33. PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump)	WELL STATUS (Producing or shut-in)					
6/13/98	2 1/2" x 1-3/4" x 16' 40 ring PA pump	producing					
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N FOR TEST PERIOD	OIL - BBL.	GAS - MCF.	WATER - BBL.	GAS-OIL RATIO
6/19/98	24			28	0	25	
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED	OIL - BBL.	GAS - MCF.	WATER - BBL.	OIL GRAVITY - API (CORR.)	
	1300	24 HR. RATE					

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

TEST WITNESSED BY  
Dave Schreiner

35. LIST OF ATTACHMENTS  
None

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

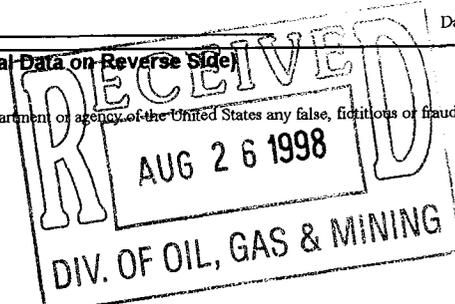
Signed Chama Bell

Title Operations Coordinator

Date 8/24/98

\*(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.



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	MEAS. DEPTH	TOP TRUE VERT. DEPTH
Ute Tribal 19-01	3890	CONFIDENTIAL				
B Marker	4376	CONFIDENTIAL				
X Marker	4518	CONFIDENTIAL				
Douglas Creek	4909	CONFIDENTIAL				
B Limestone	5463	CONFIDENTIAL				
Castle Peak	5879	CONFIDENTIAL				
Basal Carbonate						



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

43-013,31964  
RECEIVED  
MAR 11 1999  
DIV. OF OIL, GAS & MIN.

MAR 9 1999

Ref: 8P-W-GW

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Ms. Deanna Bell  
Operations Coordinator  
Petroglyph Operating Company, Inc.  
4116 W. 3000 S  
P. O. Box 607  
Roosevelt, UT 84066

RE: UIC PERMIT MODIFICATION  
Conversion of Additional Well to  
Antelope Creek Waterflood  
EPA Area Permit UT2736-00000  
Duchesne County, Utah

Dear Ms. Bell:

Your request of January 22, 1999, 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 #UT2736-00000 is hereby granted.

<u>NAME</u>	<u>LOCATION</u>	<u>EPA WELL PERMIT NO.</u>
<del>Ute Tribal #19-01</del>	<del>NE NE Section 19, T 5 S - R 3 W Duchesne County, UT</del>	#UT2736-04502

This additional well is within the boundary of the existing area permit for the Antelope Creek Waterflood (UT2736-00000), and this addition is made by according to the terms and conditions of that permit. Unless specifically mentioned in this Permit Modification, conversion is being made under the provisions of 40 CFR Part 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. No corrective action is required.

- (2) **Maximum injection pressure (Pmax)** - the permittee shall limit the maximum surface injection pressure (Pmax) to 1804 psig. Permit provisions have been made that allows the operator to request an increase or decrease in the injection pressure.

The calculations for the fracture gradient was estimated from instantaneous shut-in pressures (ISIP's) observed during fracturing treatments performed on individually fractured zones within the four (4) initial wells establishing the Antelope Creek Field Area Permit. Based on this information, and within the Statement of Basis of the original Area Permit, an initial maximum injection pressure, using 0.88 psi/ft fracture gradient (Fg) has been established for this area permit and wells. This Fg is acceptable to the Environmental Protection Agency (EPA) and a theoretical maximum allowable surface injection pressure (Pmax), for this well, may be calculated as shown below:

$$P_{max} = [Fg - 0.433 (Sg)] d$$

Where: Pmax = Maximum surface injection pressure at wellhead

d = 4035' shallowest perforations after conversion

Sg = Specific gravity of injected water

$$P_{max} = [0.88 - .433 (1.00)] 4035$$

$$P_{max} = 1804 \text{ psig}$$

Until such time as the permittee demonstrates that a fracture gradient other than 0.88 psi/ft applies to the disposal zones of this newly converted well, the maximum allowable wellhead injection pressure (Pmax) for this well will be 1804 psig. The Director will specify in writing, to the permittee, any increase or decrease to the injection pressure based upon the test results and/or other parameters reflecting actual injection operations, pursuant to Part II, Section C. 5. of the original permit.

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

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:

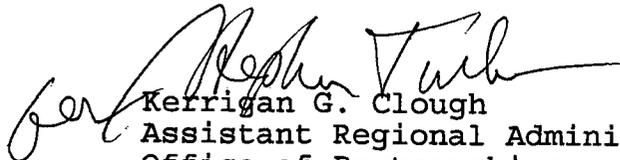
- (1) All conversion is complete and the permittee has submitted a completed Well Rework Record (EPA Form 7520-12).
- (2) The pore pressure has been determined.
- (3) The well has successfully completed and passed a mechanical integrity test, with pressure chart; EPA form enclosed.

Please be aware that Petroglyph will not have authorization to begin injection into the Ute Tribal #19-01 until the items listed above have been 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 Mr. Williams 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

cc: Mr. Ronald Wopsock, Chairman  
Ute Indian Tribe

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

MAY 3 1999

Ref: 8P-W-GW

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Mrs. Deanna Bell, Operations Coordinator  
Petroglyph Operating Company, Inc.  
4116 West 3000 South Ioka Lane  
P.O. Box 607  
Roosevelt, UT 84066

Re: AUTHORIZATION TO COMMENCE INJECTION  
Ute Tribal #19-01 (UT04502)  
EPA AREA PERMIT UT2736-00000  
Antelope Creek Waterflood  
Duchesne County, Utah

Dear Mrs. Bell

Thank you for submitting information pertaining to Ute Tribal #19-01 to the Environmental Protection Agency (EPA) Region VIII Groundwater 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,
2. Successfully run Mechanical Integrity Test (MIT) with pressure chart,
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 #19-01 under the conditions of UIC Permit UT2736-04502. The Director has determined that the **maximum surface injection pressure for the Ute Tribal #19-01 shall not exceed 1804 psig.**





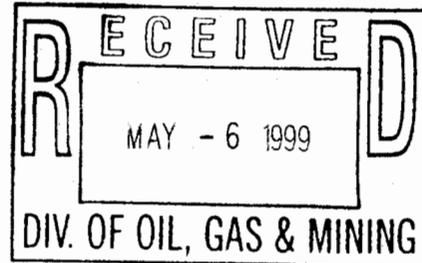
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

MAY 3 1999

Ref: 8P-W-GW

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED



Mrs. Deanna Bell, Operations Coordinator  
Petroglyph Operating Company, Inc.  
4116 West 3000 South Ioka Lane  
P.O. Box 607  
Roosevelt, UT 84066

Re: AUTHORIZATION TO COMMENCE INJECTION

**[REDACTED]**  
EPA AREA PERMIT UT2736-00000  
Antelope Creek Waterflood  
Duchesne County, Utah

4301331964  
50 3W19

Dear Mrs. Bell

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Please be reminded that it is the responsibility of the permittee to be aware of, and to comply with, all conditions of the permit. Effective upon receipt of this letter, EPA administration of this well is transferred to Mr. John Carson, Compliance Officer in the Office of Enforcement, Compliance, and Environmental Justice Technical Enforcement Program, who is your point of contact for routine compliance matters and reports.

Please send all reporting forms and other required correspondence to Mr. Carson at the address listed below, referencing EPA WELL ID: UT04502 on all reports and correspondence.

Mr. John Carson,  
Technical Enforcement Program, Mail Code 8ENF-T  
U.S. Environmental Protection Agency  
999 18th Street, Suite 500  
Denver, Colorado, USA, 80202-2466

If you have any questions concerning this authorization or the permit, please contact Mr. Dan Jackson of my staff at 303.312.6155 or Mr. Carson at 303.312.6203.

Sincerely,



D. Edwin Hogle  
Director, Groundwater Program  
Office of Partnerships and  
Regulatory Assistance

cc: Mr. Ronald Wopsock, Chairman  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Ms. Elaine Willie, Environmental Director  
Ute Indian Tribe

Mr. Norman Cambridge  
BIA - Uintah & Ouray Agency

Mr. Gil Hunt  
State of Utah Natural Resources  
Division of Oil, Gas, and Mining

Mr. Jerry Kenczka  
BLM - Vernal District Office



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

MAY 3 1999

Ref: 8P-W-GW

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Mrs. Deanna Bell, Operations Coordinator  
Petroglyph Operating Company, Inc.  
4116 West 3000 South Ioka Lane  
P.O. Box 607  
Roosevelt, UT 84066

Re: AUTHORIZATION TO COMMENCE INJECTION  
Ute Tribal #19-01 (UT04502)  
EPA AREA PERMIT UT2736-00000  
Antelope Creek Waterflood  
Duchesne County, Utah

Dear Mrs. Bell

Thank you for submitting information pertaining to Ute Tribal #19-01 to the Environmental Protection Agency (EPA) Region VIII Groundwater 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,
2. Successfully run Mechanical Integrity Test (MIT) with pressure chart,
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 #19-01 under the conditions of UIC Permit UT2736-04502. The Director has determined that the maximum surface injection pressure for the Ute Tribal #19-01 shall not exceed 1804 psig.

WF/MS/SF  
5/3/99

RECEIVED MAY 3 6 1999



Printed on Recycled Paper

Please be reminded that it is the responsibility of the permittee to be aware of, and to comply with, all conditions of the permit. Effective upon receipt of this letter, EPA administration of this well is transferred to Mr. John Carson, Compliance Officer in the Office of Enforcement, Compliance, and Environmental Justice Technical Enforcement Program, who is your point of contact for routine compliance matters and reports.

Please send all reporting forms and other required correspondence to Mr. Carson at the address listed below, referencing EPA WELL ID: UT04502 on all reports and correspondence.

Mr. John Carson,  
 Technical Enforcement Program, Mail Code 8ENF-T  
 U.S. Environmental Protection Agency  
 999 18th Street, Suite 500  
 Denver, Colorado, USA, 80202-2466

If you have any questions concerning this authorization or the permit, please contact Mr. Dan Jackson of my staff at 303.312.6155 or Mr. Carson at 303.312.6203.

Sincerely,



D. Edwin Hogle  
 Director, Groundwater Program  
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 Division of Oil, Gas, and Mining

Mr. Jerry Kenczka  
 BLM - Vernal District Office

MAY 28 1999

**Mechanical Integrity Test**  
**Casing or Annulus Pressure Test for Well UT2736-04502**

U.S. Environmental Protection Agency  
 Underground Injection Control Program, UIC Implementation Section, 8WM-DW  
 999 18th Street, Suite 500, Denver, CO 80202-2466  
 This form was printed on 06/10/1996.

EPA Witness: \_\_\_\_\_ Date 4/5/99

Test conducted by: CHAD STEVENSON & CLIFF ATWOOD

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

UTE TRIBAL 19-01	as of
ANTELOPE CREEK	
Petroglyph Operating Company, Inc.,	NENE Sec 19- TSS-R3W Hutchinson, KS Op ID PTG01
Last MIT: No record / /	
Max Allowed Press    psig	199    Max Reported Press    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?     NO     YES    \_\_\_\_\_ BFD

Initial casing/tubing annulus pressure 1160 psig  
 Does the annulus pressure build back up?     Yes     No

TUBING PRESSURE			
Initial	psig	psig	psig
End of Test	psig	psig	psig
CASING/TUBING ANNULUS PRESSURE			
Time	Test #1	Test #2	Test #3
0 min	1160 psig	psig	psig
5	1160		
10	1160		
15 min	1160		
20	1160		
25	1160		
30 min	1160		
24 HRS	1085		
<b>Result (circle)</b>	Pass    Fail	Pass    Fail	Pass    Fail

*Maanna Bell*

4/5/99

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 19-01**

9. API Well No.  
**43-013-31964**

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 607, Roosevelt, UT 84066 (435) 722-2531**

4. Location of Well (Footage, Sec., T., R., or Survey Description)  
**473' FNL 706' FEL  
NENE Sec. 19-T5S-R3W**

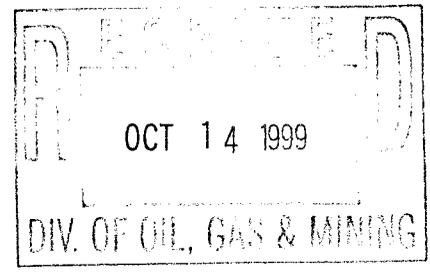
12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Other <u>Commence Injection</u>	<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.)\*

Further to BLM & EPA approval (Permit #UT2736-04502), enclosed are copies of the MIT and Job Summary. Injection commenced on 5/7/1999.



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

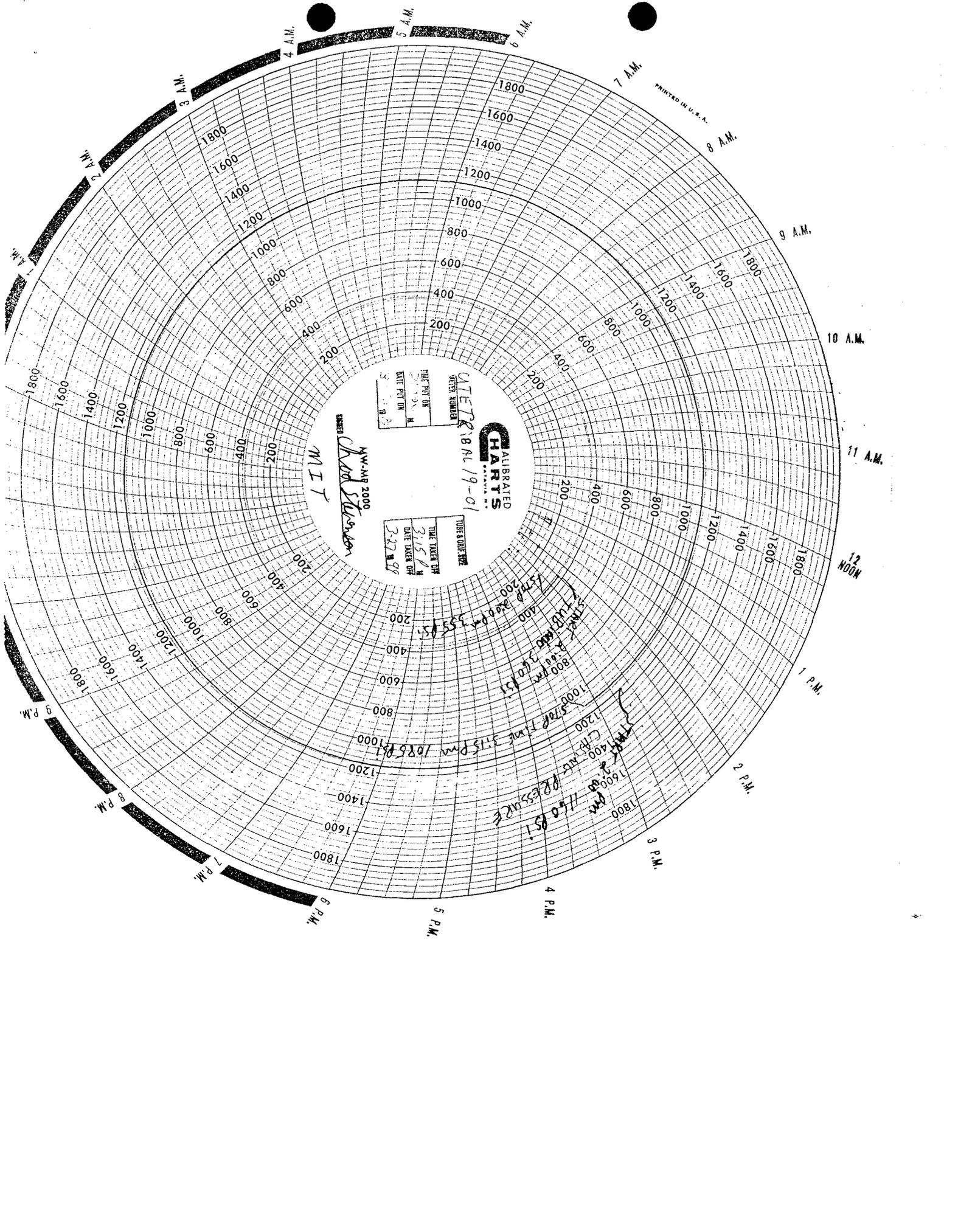
Signed [Signature] Title Production Analyst Date 10/12/1999

(This space for Federal or State official use)

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

Conditions of Approval, if any:

PRINTED IN U.S.A.



MIT  
M-AMP 2000  
Charles Stevenson

ITEM NUMBER	19-01
TIME TAKEN	3:15 PM
DATE TAKEN	3-27-54

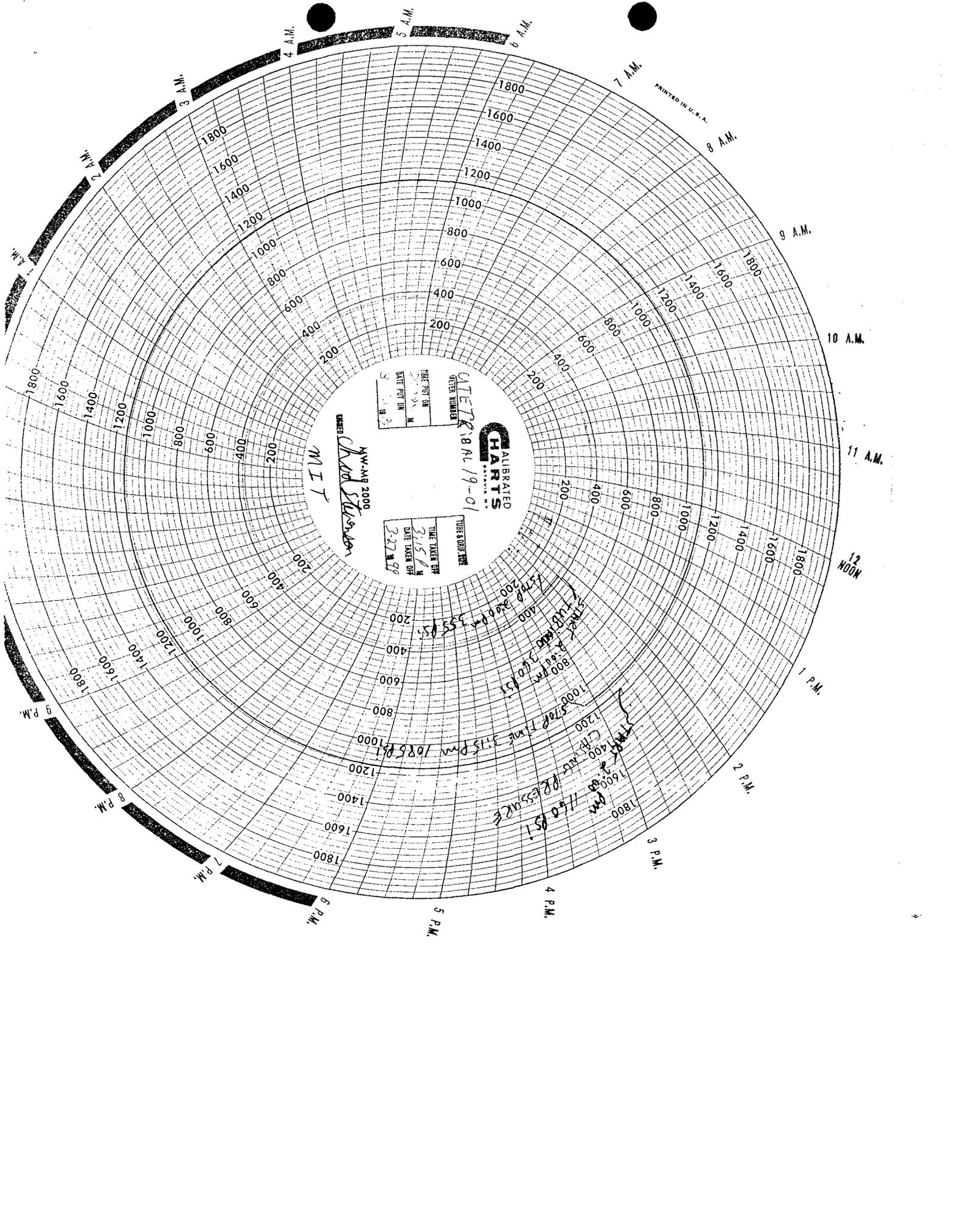
ITEM NUMBER	19-01
TIME TAKEN	3:15 PM
DATE TAKEN	3-27-54

ALIBRATED  
CHARTS  
SERIAL NO. 19-01

5700 3000 PM 355 PSI  
5700 3000 PM 300 PSI  
5700 3000 PM 300 PSI

5700 3000 PM 315 PSI  
5700 3000 PM 1085 PSI  
5700 3000 PM 1150 PSI

5700 3000 PM 1490 PSI  
5700 3000 PM 1750 PSI  
5700 3000 PM 1750 PSI



# WORKOVER REPORT

10/12/99

Petroglyph Operating Co., Inc.

<b>Operator:</b>	Petroglyph Operating Company, Inc.	<b>Elevation:</b>	0
<b>Lease:</b>	Ute Tribal, 19-01		0
<b>API #:</b>	43-013-31694	<b>Property:</b>	13230
<b>Location:</b>	19 - 5 S - 3 W	<b>AFE/EPE Number:</b>	
<b>County, St.:</b>	Duchesne UT	<b>Event Type:</b>	convert to injector

**Activity Date    Daily Cost    Activity Description**

3/25/9            \$2,338.0

7 AM pump tbg vol to determine if stnd valve @ "F" nipple no psi. RIH w/ sinker & stack out @ Nipple depth. Pump 15 bbls treated wtr & press up 300 psi. NU to annular & pump 62 bbls wtr w/ 1 bbl cortron scale inhibitor. Press to 1700 psi. PU on tbg determine pkr to be set. Press te 2500 psi w/ 0 loss in 15 min. RIH w/ retrieving tool on sinker & retrieve free stnd valve @ 500' Tool became wedged & w/ much difficulty freed tool & POOH. Press test annular to 1200 psi w in 15 min. NU surface valve & clean well head. RD rig & rack equipment. MO @ 2 PM. Total f pumped is 470 bbls. Final report.

Tbg valve 2-3/8" gated  
Tbg flange 12 hole 2-7/8" x 3M w/ R45 ring gasket  
Pkr 5-1/2" Hydro I from Arrow Completion Sys.

TUBING DETAIL

	Lengt	Dept
KB	10.0	10.0
2-7/8" x 2-3/8" 8 rnd x/ over	.2	10.2
125 jts tbg	3971.5	3981.7
pkc top to central element	3.0	3984.7
pkc central element to end	4.4	3989.2
tbg sub 2-3/8" x 8 rnd	4.0	3993.2
2-3/8" x 1.90" F nipple	.8	3994.1
EOT		3994.1

3/24/9            \$2,975.0

7 AM vent tbg & csg continue single in 81 jts 2-3/8" tbg. Break & re-dope each connection. N tbg & flush w/ 20 bbls hot wtr. Drop free standing valve. Strip off BOP. MU tbg flange. Pump dn tbg which did not press up. RU sinker & RIH finding standing valve @ +/- 2100'. POOH & fi stuck in jt #65. Retrieve valve & drop dn remaining 60 jts. Pump dn tbg to displace valve to btt press. RIH w/ sinker & find valve @ 1400'. POOH & find valve stuck in jt # 105. Retrieve stnd Finish POOH w/ 20 jts. Drift first 24 jts from derrick. Finish RIH w/ remaining tbg. Drop stnd v fall while MU tbg flange. Attempt to displace valve to F nipple w/ 26 bbls wtr. Would not press PM SWIFN.

3/23/9            \$2,470.0

7 AM vent csg. NU pump line to tbg & attempt to load hole & circ. Pump 180 bbls hot treated climbed to 450 # but well would not come around. Finish ND well head. RISE 5-1/2" TAC @ 3 strip on BO. Single dn 2-7/8" tbg & LD TAC & BHA. X/ over to 2-3/8" tbg equipment. MU 5-1/ packer w/ 2-3/8" tbg sub & 2-7/8" x 1.90" "F" nipple. Single in on 44 jts 2-3/8" tbg break & re connection w/ Teflon base compound. 5:30 PM SWIFN.

# WORKOVER REPORT

10/12/99

Petroglyph Operating Co., Inc.

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<b>Operator:</b> Petroglyph Operating Company, Inc.	<b>Elevation:</b> 0
<b>Well:</b> Ute Tribal 19-01	0
<b>County, St.:</b> Duchesne UT	

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Activity Date	Daily Cost	Activity Description
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3/22/9	\$3,289.0	
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7 AM bleed off tbg & csg. LD surface equipment & jar pump off seat. Close ratigan & attempt @ 1000 psi, could not move fluid. LD rod & re-install plsh'd rod & stuffing box. Try to flush w/ working rods w/ out success. RU to annular & pump 55 bbls hot wtr dn annular. Attempt to lo complete motions to make up rod dn hole. Rod string weight still light. Install stripper table & P 7/8" rods & 84 3/4" rods. Rods dragging 3000# over string weight. RU pump lines. W/ hot oil 15 bbls wtr @ 260 deg. W/ rig pump. Follow w/ 30 bbls @ 170 deg @ 3 BPM. Rods freed up. tbg & flush w/ 10 bbls @ .5 BPM @ 800 psi then 20 bbls @ 3 BPM 0 PSI. Single dn 60 3/4" ro pump. RIH w/ rods from derrick. Clean rods w/ 20 bbls hot wtr. Single dn 7/8" & 3/4" rods. N surface flow & control equipment & load on float. X/ over to tbg equipment. 5:30 PM SWIFN.

3/19/9	\$1,736.0	
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12 PM road rig & equipment to location. MIRU. Spot in equipment. Return well to production t over weekend. 4:30 PM SDFN.

**Cumulative Cost:** \$12,808.00

**Days Since Start:** 7