

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK
 DRILL DEEPEN

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

2. NAME OF OPERATOR
 PETROGLYPH OPERATING COMPANY, INC.

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

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
 At surface
 548' FNL & 3248' FWL NW/NE
 At proposed prod. zone

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

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 548'
 (Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE
 533.33

17. NO. OF ACRES ASSIGNED TO THIS WELL
 40

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

19. PROPOSED DEPTH
 6131.3' GRVD

20. ROTARY OR CABLE TOOLS
 ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 6261.3' GRADED GROUND

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

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

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

7. UNIT AGREEMENT NAME

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

9. API WELL NO.
 #21-02

10. FIELD AND POOL, OR WILDCAT
 ANTELOPE CREEK 060

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

12. COUNTY OR PARISH
 DUCHESNE

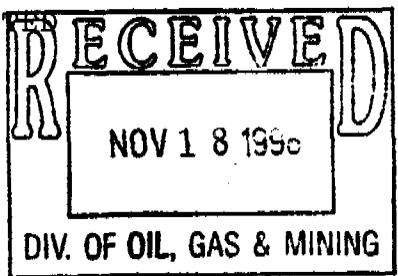
13. STATE
 UTAH

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	8 5/8	24.0#	250'	135 sx class "G" + 2% CaCl ₂ + 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#	6131.3'	

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

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



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

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

(This space for Federal or State office use)
PERMIT NO. 437013 - 31749 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:

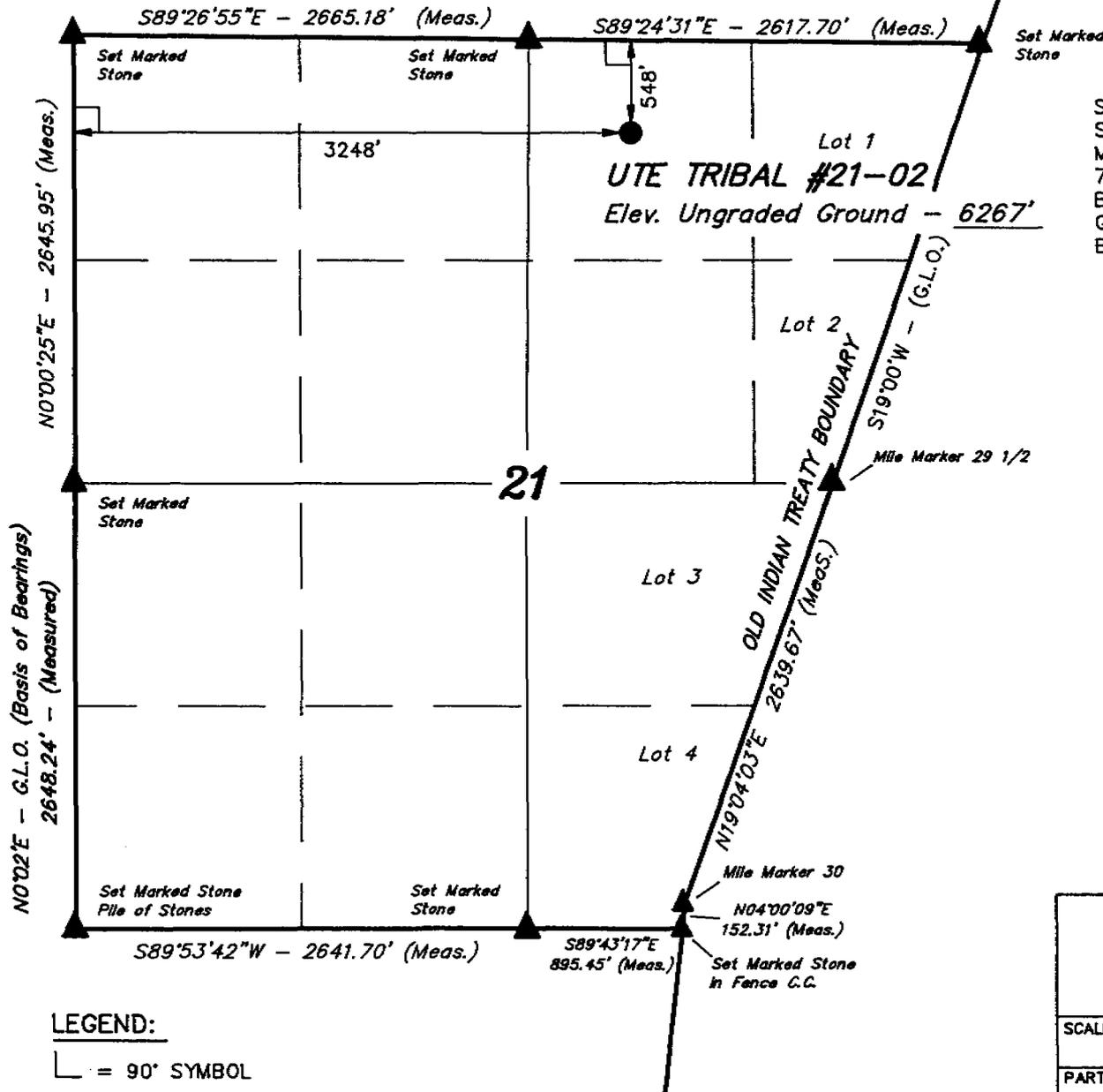
APPROVED BY [Signature] TITLE Petroleum Engineer DATE 12/11/96

*See Instructions On Reverse Side

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

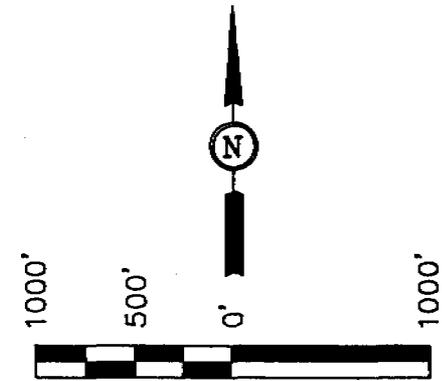
PETROGLYPH OPERATING CO., INC.

Well location, UTE TRIBAL #21-02, located as shown in the NW 1/4 NE 1/4 of Section 21, T5S, R3W, U.S.B.&M. Duchesne County, Utah.



BASIS OF ELEVATION

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



SCALE

CERTIFICATE

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

Robert L. Kay
 REGISTERED LAND SURVEYOR
 REGISTRATION NO. 161319
 STATE OF UTAH

UNTAH ENGINEERING & LAND SURVEYING		
85 SOUTH 200 EAST - VERNAL, UTAH 84078		
(801) 789-1017		
SCALE 1" = 1000'	DATE SURVEYED: 10-15-96	DATE DRAWN: 10-29-96
PARTY B.B. B.H. D.R.B.	REFERENCES G.L.O. PLAT	
WEATHER COLD	FILE PETROGLYPH OPERATING CO., INC.	

LEGEND:

- = 90° SYMBOL
- = PROPOSED WELL HEAD.
- = SECTION CORNERS LOCATED.

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

November 7, 1996

Bureau of Land Management
Vernal District
170 South 500 East
Vernal, Utah 84078

RE: APPLICATION FOR PERMIT TO DRILL
UTE TRIBAL #21-02
NW/NE SEC. 21, T5S, R3W
DUCHESNE COUNTY, UTAH
LEASE NO. BIA 14-20-H62-3516
UTE TRIBAL LANDS

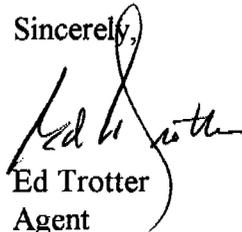
Dear Mr. Forsman:

Enclosed are the original and two (2) copies of the Application for Permit to Drill and associated attachments for the referenced well.

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

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

Sincerely,

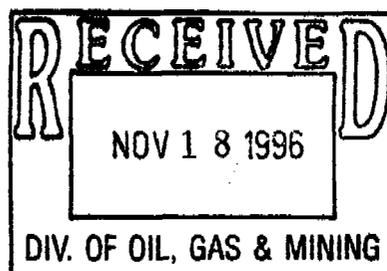


Ed Trotter
Agent

Petroglyph Operating Co., Inc.

Attachments

pc: State Division of Oil, Gas & Mining
Bureau of Indian Affairs, Fort Duchesne, UT
Uintah & Ouray Tribe, Fort Duchesne, UT
file



EIGHT POINT PLAN

UTE TRIBAL #21-02
NW/NE SEC. 21, T5S R3W
DUCHESNE COUNTY, UTAH

1. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS:

FORMATIONS	DEPTH	SUBSEA
Mahogany Shale	2929.3	3342
'X' marker	4526.3	1745
Douglas Creek	4666.3	1605
"B" Limestone	5046.3	1225
B/Castle Peak Limestone	5601.3	670
Basal Carbonate Limestone	6021.3	250
Total Depth	6131.3	140

Anticipated BHP 2600 psi

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

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>	<u>Subsea</u>
Oil/Gas	Douglas Creek	4666.3	1605
Oil/Gas	B/Castle Peak	5601.3	670
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' - 6131.3'	6131.3'	5 1/2	15.5 #	M-50	3650 PSI	4550 PSI	186,000#

All casing will be new or inspected.

EIGHT POINT PLAN

UTE TRIBAL #21-02
NW/NE SEC. 21, T5S R3W
DUCHESNE COUNTY, UTAH

5. MUD PROGRAM

INTERVAL

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

MUD TYPE

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

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

6. VARIANCE REQUESTS:

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

7. EVALUATION PROGRAM:

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

Cores: None Programmed
DST': None Programmed

Completion: To be submitted at a later date.

8. ABNORMAL CONDITIONS:

None anticipated.

EIGHT POINT PLAN

UTE TRIBAL #21-02
NW/NE SEC. 21, T5S R3W
DUCHESNE COUNTY, UTAH

9. STANDARD REQUIRED EQUIPMENT:

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

10. HAZARDOUS CHEMICALS:

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

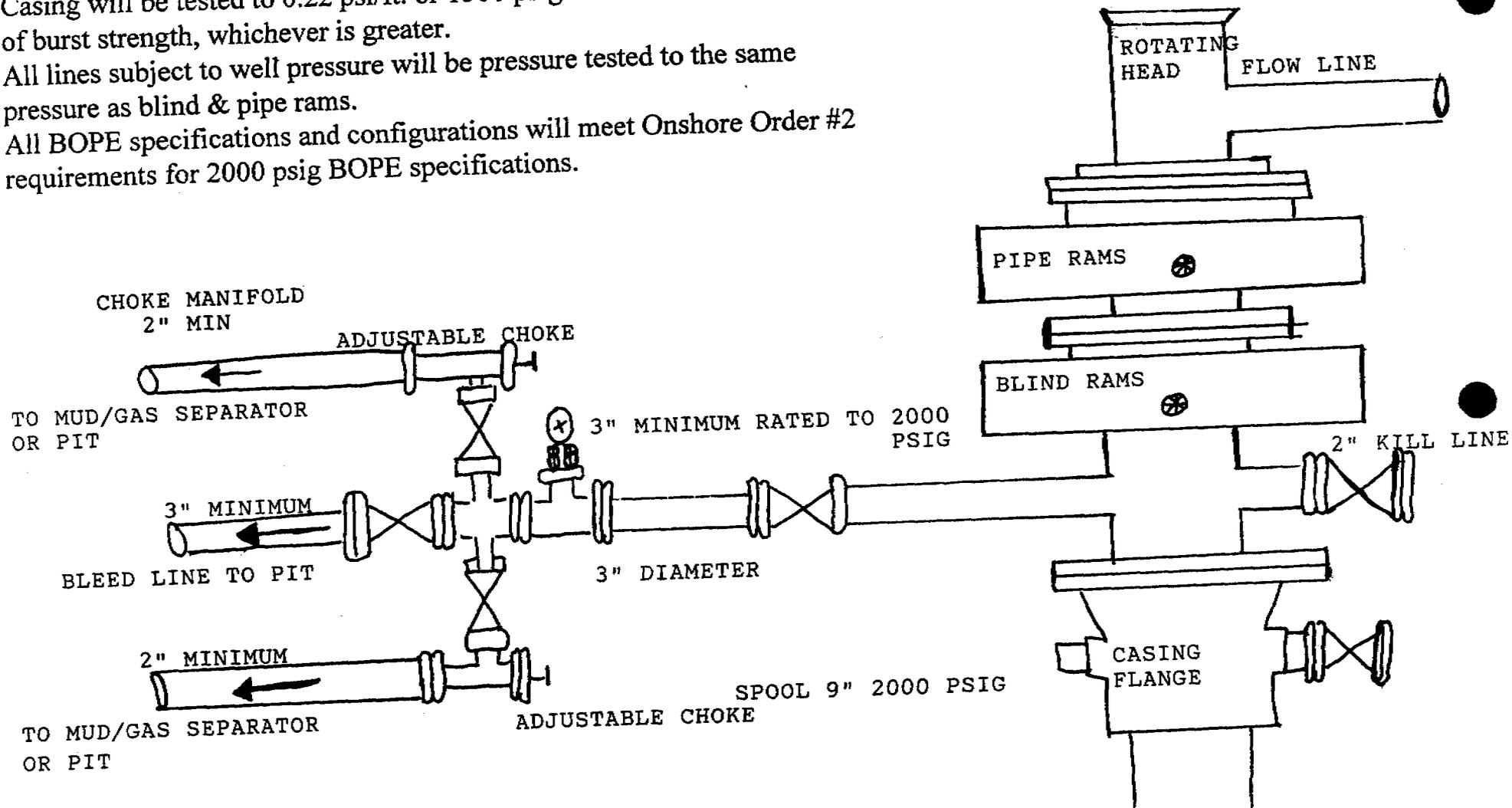
(Attachment: BOP Schematic Diagram)

2000 PSIG DIAGRAM

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

TESTING PROCEDURE:

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



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

Company/Operator: Petroglyph Operating Co., Inc.
Well Name & Number: Ute Tribal #21-02
Lease Number: BIA 14-20-H62-3516
Location: 548' FNL & 3248' FWL NW/NE, Sec. 21, T5S R3W
U.S.B.&M., Duchesne County, Utah
Surface Ownership: Ute Indian Tribe

NOTIFICATION REQUIREMENTS

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

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

THIRTEEN POINT SURFACE USE PROGRAM

1. EXISTING ROADS

- A. See attached Wellsite Plats showing directional reference stakes on location, and attached TOPO Map "B" showing access to location from existing road.
- B. The proposed well site is located approximately 20.2 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 200 feet in length. See attached TOPO Map "B"
- B. The access road has a 30 foot ROW w/18 foot running surface.
- C. Maximum grade on access road will be 8%
- D. No turnouts will be required.
- E. Road drainage crossings shall be of the typical dry creek drainage crossing type.
- F. No culverts, bridges or major cuts & fills will be required.
- G. The access road will be dirt surface.
- H. No gates, cattleguards or fences will be required or encountered.

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

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

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

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

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

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

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

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

- A. Water wells - None
- B. Abandoned wells - None
- C. Temporarily abandoned wells - None.
- D. Disposal wells - None.
- E. Drilling wells - None.
- F. Producing wells - 5*
- G. Shut in wells - None
- H. Injection wells - None

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

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

A. ON WELL PAD

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

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

B. OFF WELL PAD

1. Proposed location of attendant off pad flowlines shall be flagged prior to archaeological clearance.
2. A 4 1/2" OD steel pipeline will be laid approximately 900' from proposed location to a point in the NW/NE of Section 21, T5S, R3W, where it will tie into Petroglyph Operating Co., Inc.'s existing pipeline. Proposed pipeline crosses Ute Tribe lands, thus a Right-of-Way grant will be required. See attached TOPO Map D showing pipeline route.
3. Proposed pipeline will be a 4 1/2" OD steel, welded line laid on the surface.
4. Protective measures and devices for livestock and wildlife will be taken and/or installed where required.

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

The production facilities will be placed on the Southeast Ute Tribal 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 Northwest side of the location. The flare pit will be located downwind of the prevailing wind direction on the Northwest 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 Southeast side and at corner 4.

Access to the well pad will be from the West.

Diversion ditch shall be constructed on the Northwest side of the location below the cut slope, draining to East.

Soil compacted earthen berm(s) shall be placed on the _____ side(s) of the location between the _____

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

The reserve pit and/or pad locations shall be constructed long and narrow for topographic reasons _____

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

FENCING REQUIREMENTS

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

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

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

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

10. PLANS FOR RESTORATION OF SURFACE

A. PRODUCING LOCATION

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

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

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

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

Contact appropriate surface management agency for required seed mixture.

B. DRY HOLE/ABANDONED LOCATION

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

ON BIA Administered lands:

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

11. SURFACE OWNERSHIP

Access road: Ute Indian Tribe
Location: Ute Indian Tribe

12. OTHER INFORMATION

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

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

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

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

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

a Pesticide Use proposal shall be submitted, and given approval, prior to the application of herbicides or other pesticides or possible hazardous chemicals.

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

On BIA administered land:

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

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

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

description of the well (either footage or the quarter-quarter section, the section, township, and range).

Additional Surface Stipulations

N/A No construction or drilling activities shall be conducted between _____ and _____ because of _____

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

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

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

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

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

LESSEE'S OR OPERATOR'S REPRESENTATIVE AND CERTIFICATION

PERMITTING

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

OPERATIONS

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

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

A copy of the approved APD and ROW grant, if applicable, shall be on

location during construction of the location and drilling activities.

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

Certification:

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

11-8-96

Date

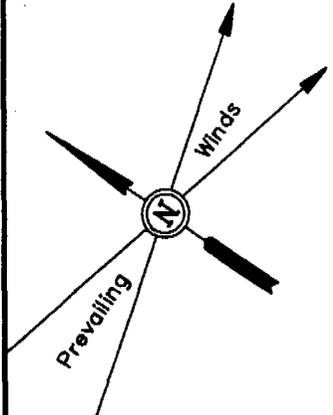
Ed L. Smith

PETROGLYPH OPERATING CO., INC.

LOCATION LAYOUT FOR

UTE TRIBAL #21-02
SECTION 21, T5S, R3W, U.S.B.&M.
548' FNL 3248' FWL

Handwritten signature



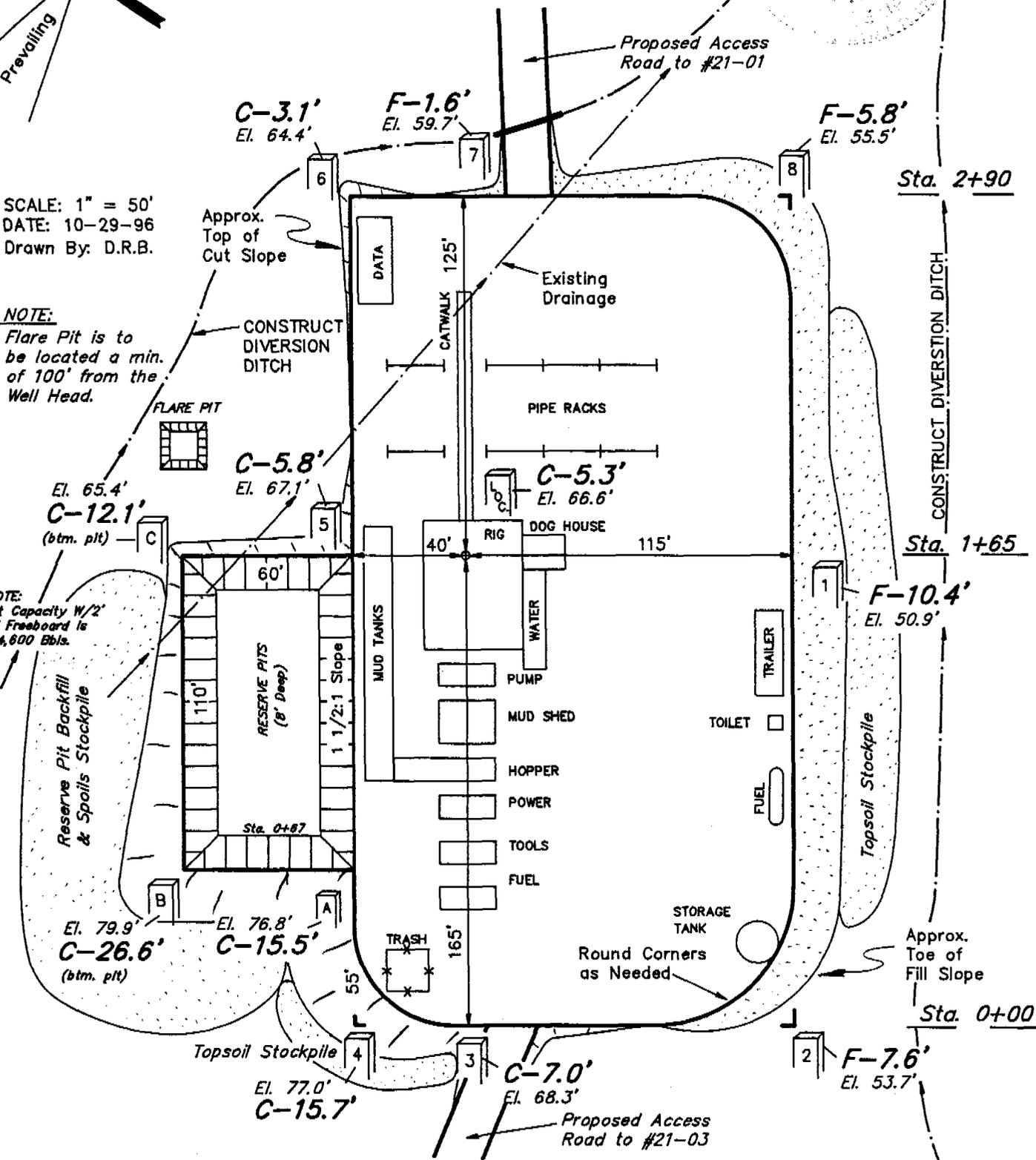
SCALE: 1" = 50'
DATE: 10-29-96
Drawn By: D.R.B.

NOTE:

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



NOTE:
Pit Capacity W/2' of Freeboard is ±4,800 Ebls.



Elev. Ungraded Ground at Location Stake = 6266.6'
Elev. Graded Ground at Location Stake = 6261.3'

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

PETROGLYPH OPERATING CO., INC.

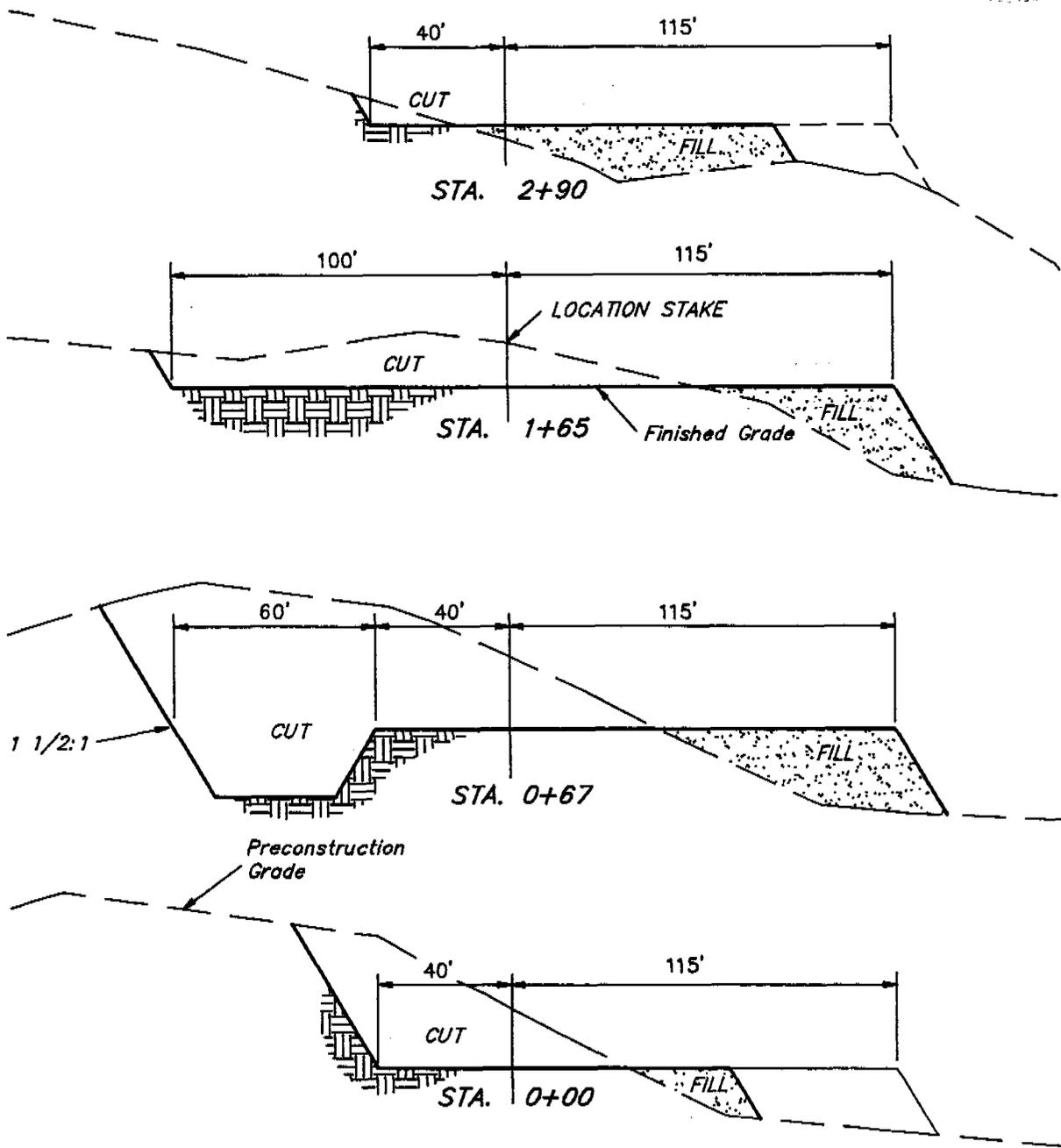
TYPICAL CROSS SECTIONS FOR

UTE TRIBAL #21-02
SECTION 21, T5S, R3W, U.S.B.&M.
548' FNL 3248' FWL



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

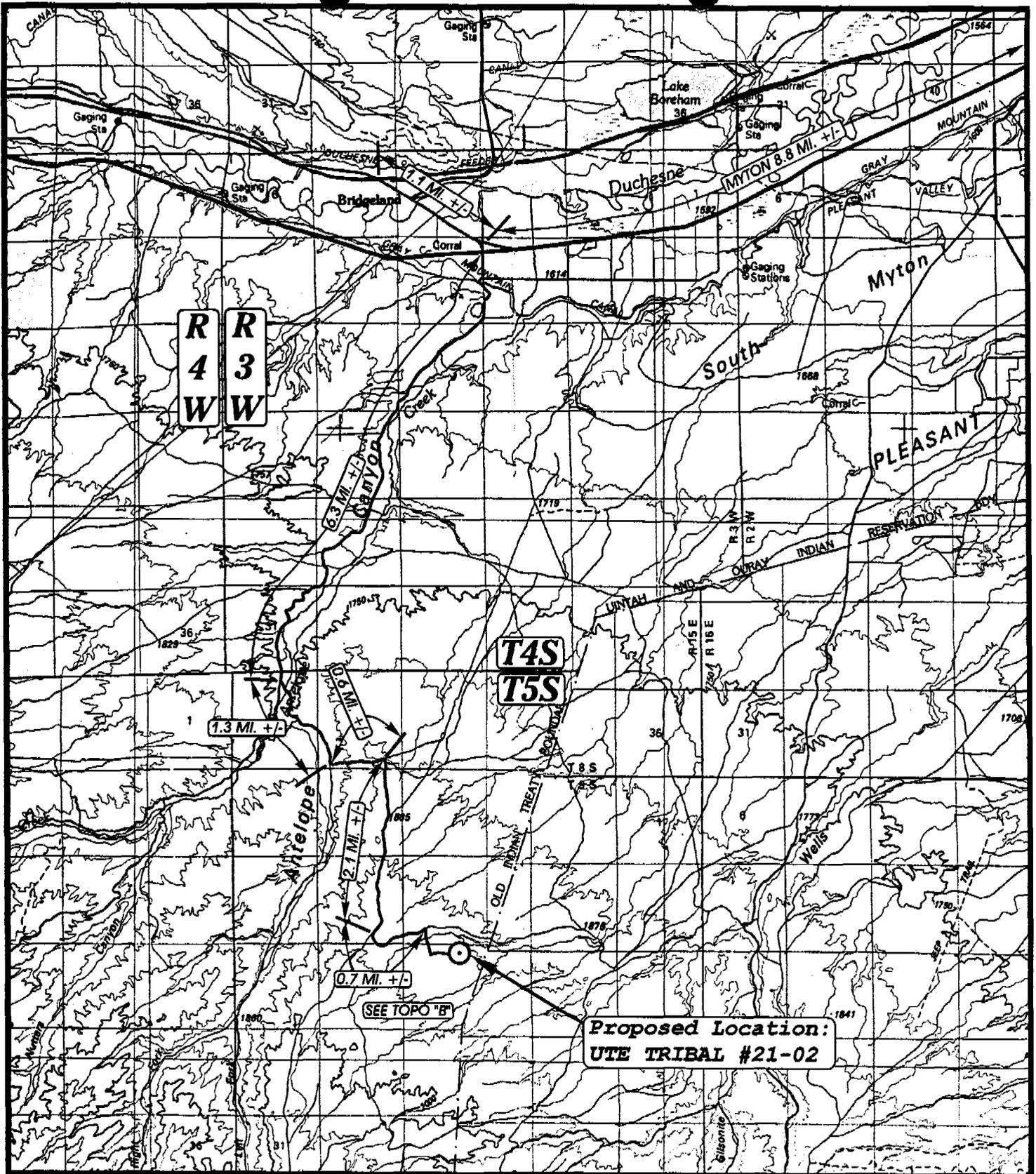
DATE: 10-29-96
Drawn By: D.R.B.



APPROXIMATE YARDAGES

(12") Topsoil Stripping	= 1,910 Cu. Yds.
Remaining Location	= 8,290 Cu. Yds.
TOTAL CUT	= 10,200 CU.YDS.
FILL	= 5,690 CU.YDS.

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



UELS

**TOPOGRAPHIC
MAP "A"**

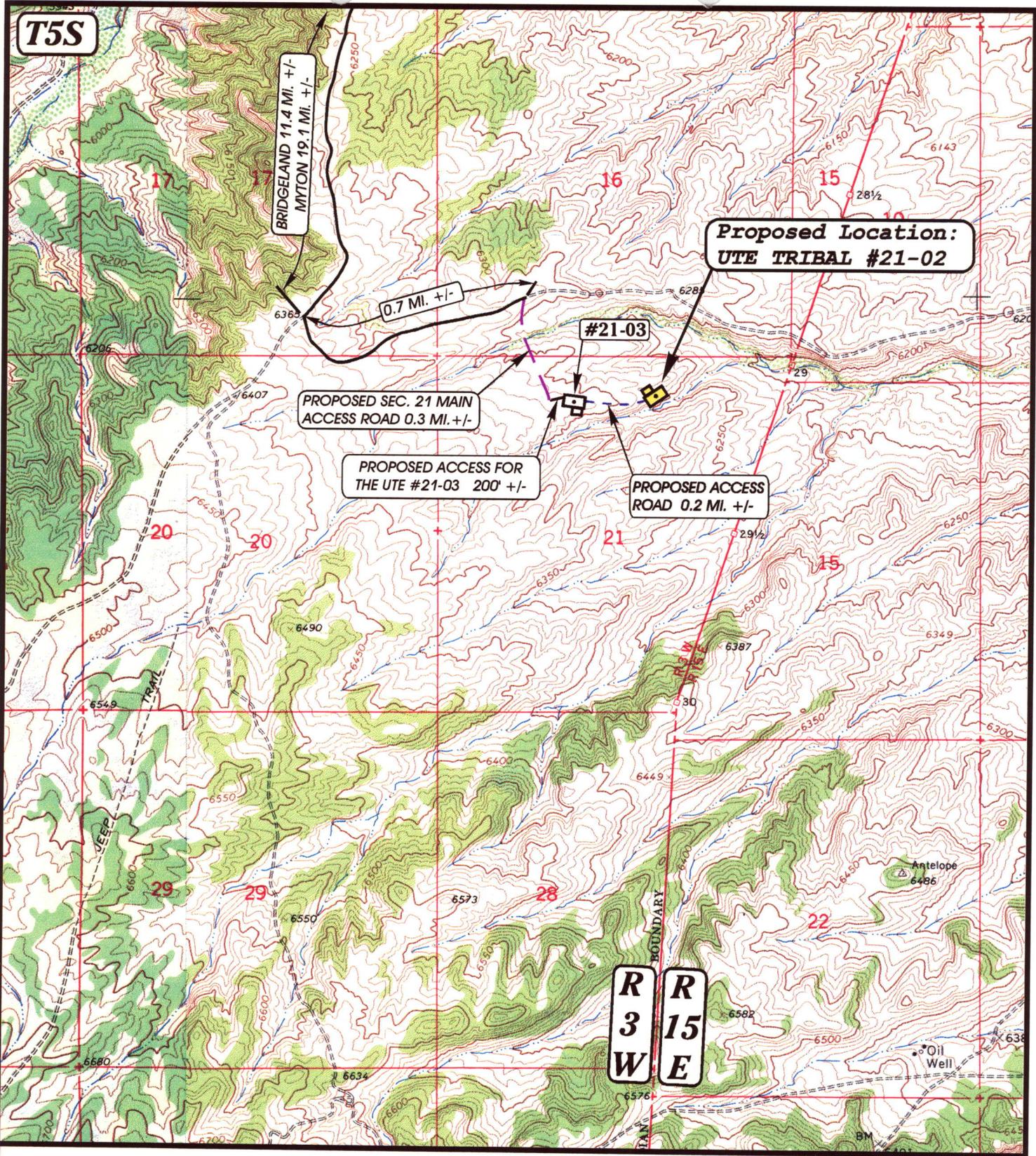
DATE: 10-29-96
Drawn by: JLG

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PETROGLYPH OPERATING CO., INC.

UTE TRIBAL #21-02
SECTION 21, T5S, R3W, U.S.B.&M.
548' FNL 3248' FWL



UELS

**TOPOGRAPHIC
MAP "B"**

DATE: 10-29-96
Drawn by: D. COX

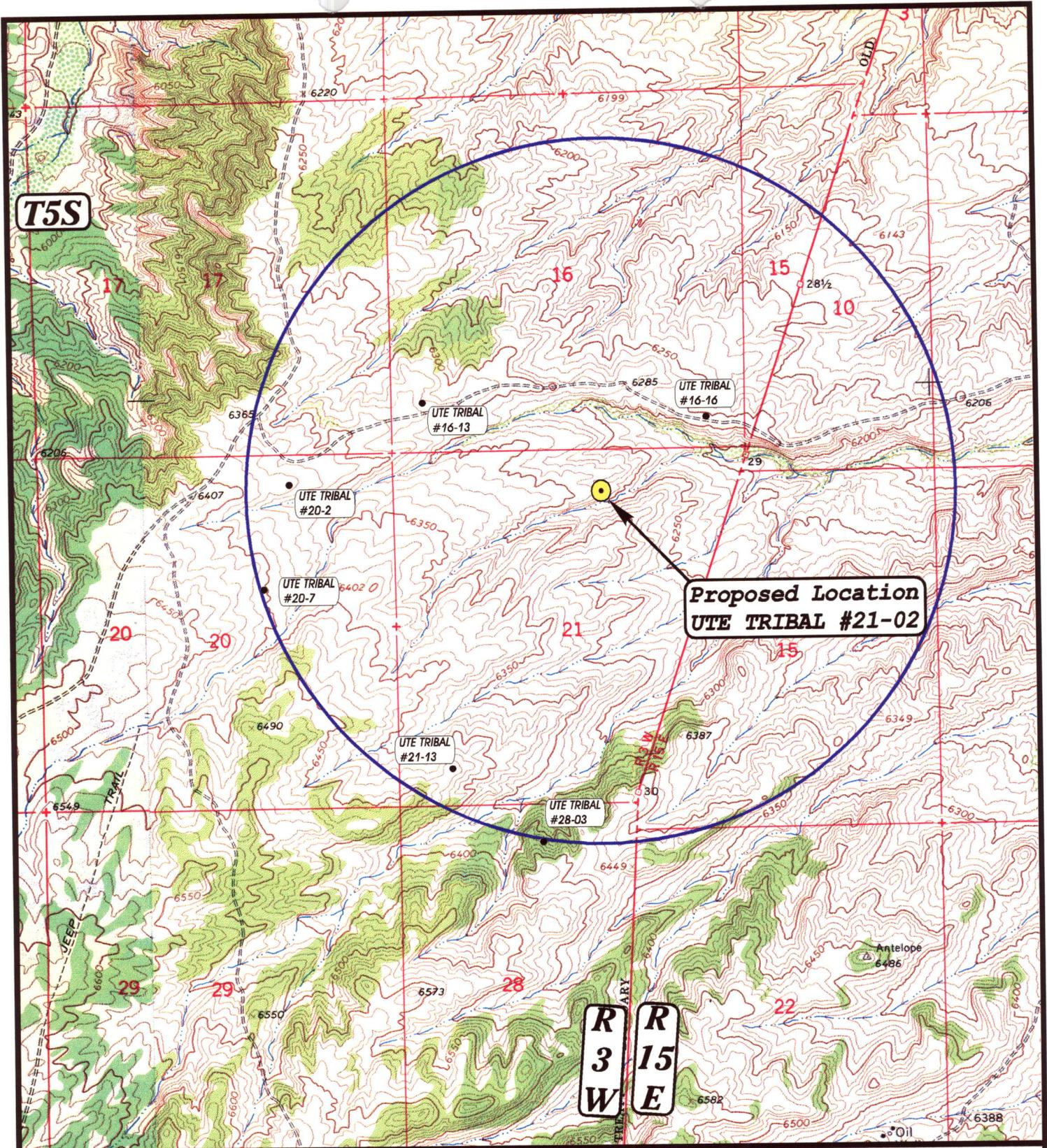
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PETROGLYPH OPERATING CO., INC.

UTE TRIBAL #21-02
SECTION 21, T5S, R3W, U.S.B.&M.
548' FNL 3248' FWL

SCALE: 1" = 2000'



**Proposed Location
UTE TRIBAL #21-02**

LEGEND:

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

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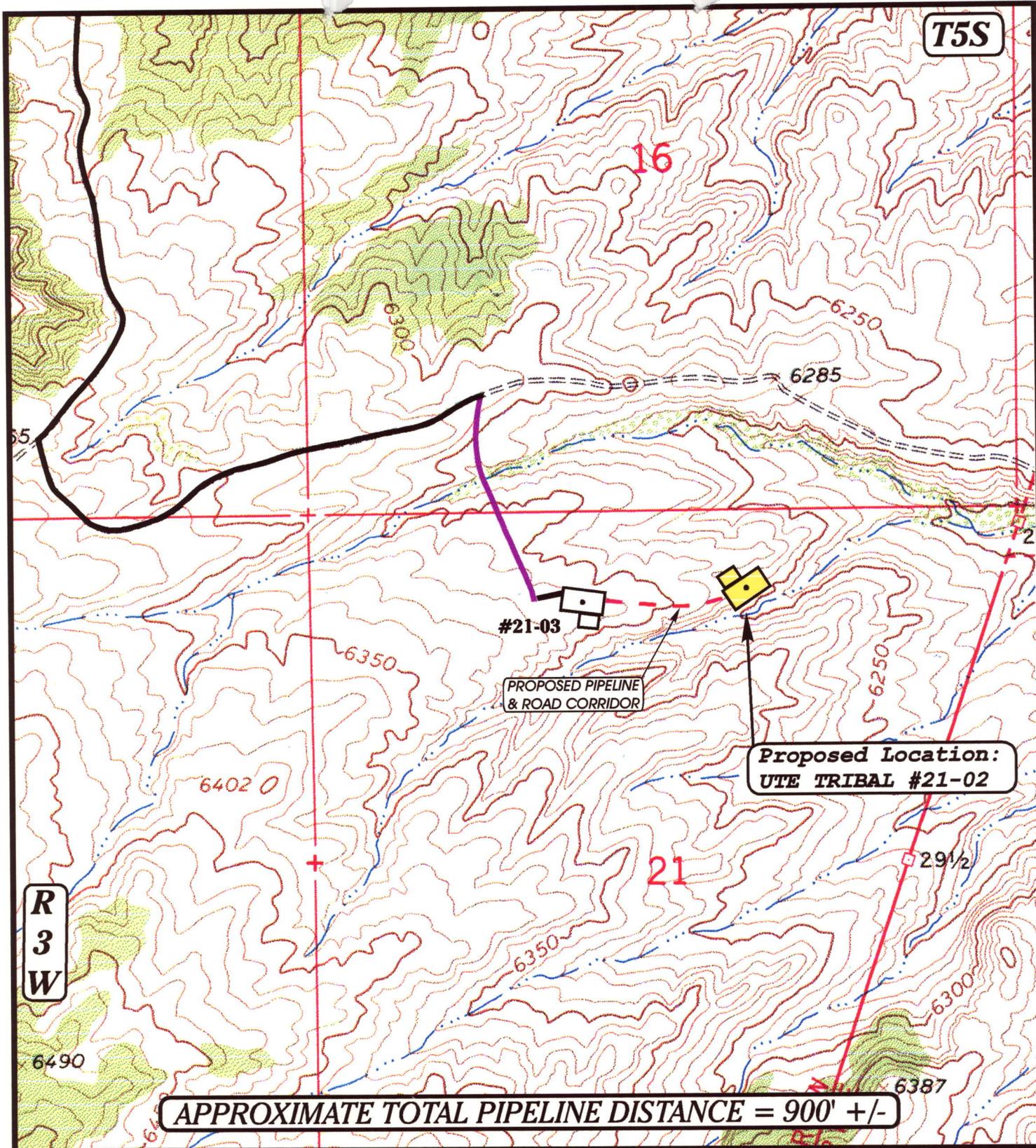
SCALE: 1" = 2000'

PETROGLYPH OPERATING CO., INC.

**UTE TRIBAL #21-02
SECTION 21, T5S, R3W, U.S.B.&M.
TOPOGRAPHIC
MAP "C"**

DATE: 10-29-96 Drawn by: D.COX

T5S



APPROXIMATE TOTAL PIPELINE DISTANCE = 900' +/-

**TOPOGRAPHIC
MAP "D"**

PETROGLYPH OPERATING CO., INC.

UTE TRIBAL #21-02
SECTION 21, T5S, R3W, U.S.B.&M.

DATE: 10-29-96
Drawn by: D.COX



--- Proposed Pipeline & Road Corridor



SCALE: 1" = 1000'

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

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/18/96

API NO. ASSIGNED: 43-013-31749

WELL NAME: UTE TRIBAL 21-02
OPERATOR: PETROGLYPH OPERATING CO (N3800)

PROPOSED LOCATION:
NWNE 21 - T05S - R03W
SURFACE: 0548-FNL-3248-FWL
BOTTOM: 0548-FNL-3248-FWL
DUCHESNE COUNTY 157 990
ANTELOPE CREEK FIELD (060)

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

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

PROPOSED PRODUCING FORMATION: GRRV

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Federal State Fee
(Number Bo 4556)
- Potash (Y/N)
- Oil shale (Y/N)
- Water permit
(Number 43-1015A)
- RDCC Review (Y/N)
(Date: _____)

LOCATION AND SITING:

- R649-2-3. Unit: _____
- R649-3-2. General.
- R649-3-3. Exception.
- Drilling Unit.
Board Cause no: _____
Date: _____

COMMENTS: _____

STIPULATIONS: _____

STATE OF UTAH, DIV OF OIL, GAS & MINERALS

Operator: PETROGLYPH OPERATING	Well Name: UTE TRIBAL 21-02
Project ID: 43-013-31749	Location: SEC. 21 - T5S - R3W

Design Parameters:

Mud weight (8.90 ppg) : 0.462 psi/ft
 Shut in surface pressure : 2532 psi
 Internal gradient (burst) : 0.050 psi/ft
 Annular gradient (burst) : 0.000 psi/ft
 Tensile load is determined using air weight
 Service rating is "Sweet"

Design Factors:

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

Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost
1	6,131	5.500	15.50	M-50	ST&C	6,131	4.890

	Collapse Load (psi)	Strgth (psi)	S.F.	Burst Load (psi)	Min Int Strgth (psi)	Yield S.F.	Tension Load (kips)	Strgth (kips)	S.F.
1	2835	3650	1.287	2835	4550	1.60	95.03	186	1.96 J

Prepared by : MATTHEWS, Salt Lake City, Utah
 Date : 12-11-1996
 Remarks :

GREEN RIVER

Minimum segment length for the 6,131 foot well is 1,500 feet.
 SICP is based on the ideal gas law, a gas gravity of 0.69, and a mean gas temperature of 88°F (Surface 74°F , BHT 160°F & temp. gradient 1.400°/100 ft.)
 String type: Production
 The mud gradient and bottom hole pressures (for burst) are 0.462 psi/ft and 2,835 psi, respectively.

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



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

Michael O. Leavitt
Governor

Ted Stewart
Executive Director

James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

December 11, 1996

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

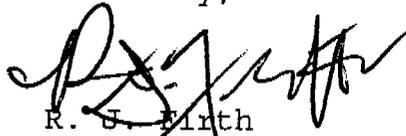
Re: Ute Tribal 21-02 Well, 548' FNL, 3248' FWL, NW NE, Sec. 21,
T. 5 S., R. 3 W., Duchesne County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-013-31749.

Sincerely,


R. S. Birch
Associate Director

lwp

Enclosures

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



Operator: Petroglyph Operating Company, Inc.
Well Name & Number: Ute Tribal 21-02
API Number: 43-013-31749
Lease: 14-20-H62-3516
Location: NW NE Sec. 21 T. 5 S. R. 3 W.

Conditions of Approval

1. General

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

2. Notification Requirements

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

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

3. Reporting Requirements

All required reports, forms and submittals shall be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK
 DRILL DEEPEN

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

2. NAME OF OPERATOR
 PETROGLYPH OPERATING COMPANY, INC.

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

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface: 548' FNL & 3248' FWL NW/NE NOV 13 1996
 At proposed prod. zone

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

16. NO. OF ACRES IN LEASE
 533.33

17. NO. OF ACRES ASSIGNED TO THIS WELL
 40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
 6131.3'

20. ROTARY OR CABLE TOOLS
 ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 6261.3' GRADED GROUND

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

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

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

7. UNIT AGREEMENT NAME

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

9. API WELL NO.
 #21-02

10. FIELD AND POOL, OR WILDCAT
 ANTELOPE CREEK

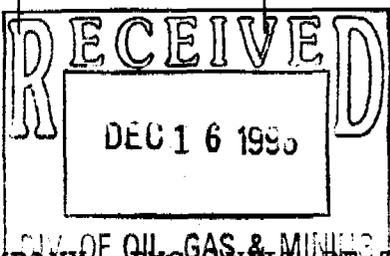
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 Sec. 21, T5S, R3W

12. COUNTY OR PARISH
 DUCHESNE

13. STATE
 UTAH

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	8 5/8	24.0#	250'	175 sx class "G" + 2% CaCl ₂ + 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#	6131.3'	



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

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

CONDITIONS OF APPROVAL ATTACHED NOTICE OF APPROVAL

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 Ed L. Roth TITLE AGENT FOR PETROGLYPH DATE 11-8-96

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

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

APPROVED BY [Signature] TITLE Assistant Field Manager Mineral Resources DATE DEC 11 1996

UT08074032

*See Instructions On Reverse Side

UNITED STATES GOVERNMENT
memorandum

DATE: NOV 27 1996

REPLY TO
ATTN OF:

Superintendent, Uintah & Ouray Agency

SUBJECT:

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

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

RECEIVED

NOV 27 1996

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

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

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

YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	Listed threatened or endangered species
YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	Critical wildlife habitat
YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	Archaeological or cultural resources
YES <input type="checkbox"/>	NO <input type="checkbox"/>	Air quality aspects (to be used only if project is in or adjacent to a Class I area of attainment)
YES <input type="checkbox"/>	NO <input type="checkbox"/>	Other (if necessary)

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

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

Charles H. Cameron

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

CONDITIONS OF APPROVAL
APPLICATION FOR PERMIT TO DRILL

Company/Operator: Petroglyph Operating Company

Well Name & Number: Ute Tribal 21-02

API Number: 43-013-31749

Lease Number: 14-20-H62-3516

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

NOTIFICATION REQUIREMENTS

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

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

CONDITIONS OF APPROVAL FOR NOTICE TO DRILL

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

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

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

A. DRILLING PROGRAM

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

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

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

2. Pressure Control Equipment

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

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

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

3. Casing Program and Auxiliary Equipment

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

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

As a minimum, the usable water and oil shale resources shall be isolated and/or protected by having a cement top for the production casing at least 200 ft. above the top of the usable water zone identified at ± 286 ft. or by setting the surface casing at ± 336 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 ± 336 ft. or it will be run to **SURFACE** if the surface casing is set at ± 250 ft. and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

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

6. Notifications of Operations

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

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

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

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

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

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

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

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

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

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

7. Other Information

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

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

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

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

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

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

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

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

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

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

Wayne Bankert (801) 789-4170
Petroleum Engineer

Ed Forsman (801) 789-7077
Petroleum Engineer

Jerry Kenczka (801) 789-1190
Petroleum Engineer

BLM FAX Machine (801) 781-4410

EPA'S LIST OF NONEXEMPT EXPLORATION AND PRODUCTION WASTES

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

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

SURFACE CONDITIONS OF APPROVAL

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

Concurrence Letter:

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

Environmental Analysis Mitigation Stipulations:

VEGETATION/LANDSCAPE

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

SOILS/ RANGE/ WATERSHEDS

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

2. PIPELINES

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

A. SURFACE PIPELINES

The pipeline will be constructed to lay on the soil surface, and the right-of-way for the pipeline will not be bladed or cleared of vegetation. Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the right-of-way. Where pipelines cross country between stations, they shall be welded in place at wellsites or on roads and then pulled into place with suitable equipment. Traffic will be restricted along these areas so that the pipeline right-of-way will not be used as an access road.

B. BURIED PIPELINES

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

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

WILDLIFE/VEGETATION/ THREATENED & ENDANGERED SPECIES

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

CULTURAL RESOURCES

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

UTE TRIBAL REGULATIONS

See the concurrence letter.

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: PETROGLYPH OPERATING

Well Name: UTE TRIBAL 21-02

Api No. 43-013-31749

Section 21 Township 5S Range 3W County DUCHESNE

Drilling Contractor UNION

Rig # 12

SPUDDED:

Date 1/2/97

Time _____

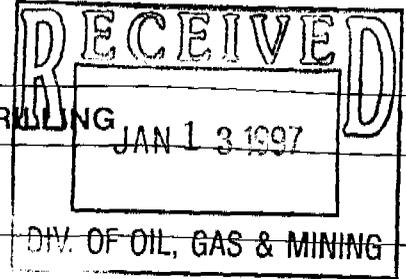
How ROTARY

Drilling will commence _____

Reported by D. INGRAM

Telephone # _____

Date: 1/2/97 Signed: FRM



REPORT OF WATER ENCOUNTERED DURING DRILLING

1. Well name and number: Ute Tribal 21-02

API number: 43-013-31749

2. Well Location: QQ NWNE Section 21 Township 5S Range 3W County Duchesne

3. Well operator: Petroglyph Operating Company, Inc.

Address: P.O. Box 607

Roosevelt, UT 84066

Phone: (801) 722-2531

4. Drilling contractor: Union Drilling

Address: P.O. Drawer 40

Buckhannon, WV 26201

Phone: (304) 472-4610

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

DEPTH		VOLUME (FLOW RATE OR HEAD)	QUALITY (FRESH OR SALTY)
FROM	TO		
	994	2"	SALT

6. Formation tops:

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

I hereby certify that this report is true and complete to the best of my knowledge.

Date: 1-6-97

Name & Signature: Deanna Bell Deanna Bell

Title: Operations Coordinator

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1. TYPE OF WELL: OIL WELL GAS WELL DRY Other _____

2. TYPE OF COMPLETION: NEW WELL WORK OVER DEEP-EN PLUG BACK DIFF. RENVR. Other _____

3. NAME OF OPERATOR
Petroglyph Operating Company, Inc.

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

5. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)
At surface 548' FNL & 3248' FWL, NW NE
At top prod. interval reported below
At total depth 6142" RID

14. PERMIT NO. 43-013-31749 DATE ISSUED _____

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

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

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

9. FARM OR LEASE NAME
Ute Tribal

10. WELL NO.
21-02

11. FIELD AND POOL, OR WILDCAT
Antelope Creek

12. SEC. T. R., M., OR BLOCK AND SURVEY OR AREA
Sec 21-T3W-R3W

13. COUNTY OR PARISH
Duchesne

14. STATE
Utah

15. DATE SPUDDED 1-2-97 16. DATE T.D. REACHED 1-8-97 17. DATE COMPL. (Ready to prod.) 2-20-97 18. ELEVATIONS (OF. RKB, RT, GR, ETC.)* 6261'

19. TOTAL DEPTH, MD & TVD 6142' 20. PLUG BACK T.D., MD & TVD 6058' 21. IF MULTIPLE COMPL. HOW MANY* _____ 22. INTERVALS DRILLED BY _____ ROTARY TOOLS _____ CABLE TOOLS _____

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

25. TYPE ELECTRIC AND OTHER LOGS RUN
CNL, AIT 4-29-97
26. WAS WELL CORED _____

27. 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#	280	12-1/4	150 sx G Neat + 2 % CaCl2	
5-1/2	15.5#	6103	7-7/8	95 sx Prem Lite +	
				350 sx Class G	

28. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

29. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8	5689	

30. PERFORATION RECORD (Interval, size and number)

5519-23	(17 shots)
5509-15	(25 shots)
5150-60	(41 shots)
4694-4702	(33 shots)

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5509-23	7581 gal fluid; 24700# prop
4694-4702	8096 gal fluid; 33100# prop

32. PRODUCTION

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

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
3-9-97	24			83	0	6	

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
	550					

33. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)
sold; used for fuel

34. LIST OF ATTACHMENTS

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

SIGNED Jenna S Balsuc TITLE Production Analyst DATE 3-20-97

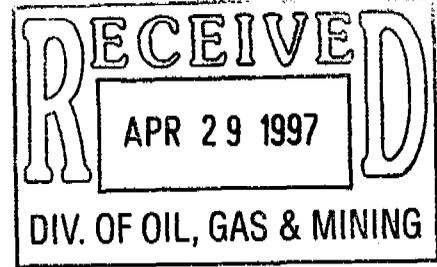
RECEIVED
MAR 24 1997
CONFIDENTIAL

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

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

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	TOP	
				NAME	MEAS. DEPTH
					TRUE VERT. DEPTH
X Marker	4517'				
Douglas Creek	4660'				
B Limestone	5038'				
Castle Peak	5618'				
Basal Carbonate	6024'				



April 23, 1997

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

CONFIDENTIAL

Ms. Dyson:

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

<u>Well Name</u>	<u>Log</u>
Ute Tribal 18-15	CNL, AIT
Ute Tribal 21-02	CNL, AIT 430/3 31749 53 3w 21
Ute Tribal 21-05	CNL, AIT
Ute Tribal 21-07	CNL, AIT
Ute Tribal 21-10	CNL, AIT
Ute Tribal 21-15	CNL, 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,

April Menzies
Petroleum Engineering/Geology Technician

0505 030W Sec. 21
430/331 749



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

DEC 27 2004

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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

Mr. Matt Corser
District Engineer
Petroglyph Operating Company, Inc.
4116 W 3000 South Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

RE: Additional Well to Antelope Creek Area Permit
UIC Permit No. UT20736-00000
Well ID: UT20736-06477
Ute Tribal No. 21-02, Duchesne County, Utah

Dear Mr. Corser:

The Petroglyph Operating Company, Inc. (Petroglyph) request to convert a former Green River Formation oil well, the Ute Tribal No. 21-02, to an enhanced recovery injection well in the Antelope Creek Waterflood Area Permit is hereby authorized. The proposed injection well is within the exterior boundary of the Uintah & Ouray Indian Reservation, and the addition is being made under the authority of 40 CFR §144.33 (c) and the terms of Antelope Creek Waterflood Area Permit UT20736-00000. Unless specifically mentioned in the enclosed Authorization For An Additional Well, all terms and conditions of the original Area Permit will apply to the conversion, operation, monitoring, and plugging of the Ute Tribal No. 21-02.

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

EPA analysis of the Ute Tribal No. 21-02 CBL/GR indicates that adequate cement was placed in the well. The CBL confirms that the cement meets or exceeds minimum requirements needed to demonstrate injection zone isolation (at least 15' of continuous 80% bond or greater bond) through the confining zone interval from 4015' to 4033'. EPA has determined that the



cement in this well provides an effective barrier to significant upward movement of fluids through vertical channels adjacent to the wellbore, and further demonstration of Part II Mechanical Integrity is not required.

The initial Maximum Allowable Injection Pressure (MAIP) for the Ute Tribal No. 21-02 is **1900 psig**. Although a MAIP of 2235 psig may be calculated using submitted averaged fracture treatment data, pursuant to Part II. Section C. Condition No. 4 of Area Permit UT20736-00000, the initial surface injection pressure shall not exceed 1900 psig. However Part II.C.4 also provides the opportunity for the permittee to request an increase or decrease in the initial MAIP based upon results of a step rate test that demonstrates the formation breakdown pressure will not be exceeded.

Please be aware that Petroglyph does not have authorization to begin injection into the Ute Tribal 21-02 until all Prior to Commencing Injection requirements listed above have been submitted and evaluated by the EPA, and Petroglyph has received written authorization from the EPA to begin injection.

If you have any questions, please call Mr. Dan Jackson at (303) 312-6155 or 1.800.227.8917 (Ext. 6155). Please submit the required data to **ATTENTION: DAN JACKSON**, at the letterhead address, citing **MAIL CODE: 8P-W-GW** very prominently.

Sincerely,

Carol J. Campbell for

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

encl: Authorization For Conversion of An Additional Well
EPA Form No. 7520-12 (Well Rework Record)
Schematic Diagram: Conversion of Ute Tribal #21-02
Guidance No. 37: Mechanical Integrity External

cc: without enclosures

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

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

cc: with enclosures;

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

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

Ed Forsman
Sr. Petroleum Engineer
BLM - Vernal District
170 South 500 East
Vernal, UT 84078

Nathan Wiser, 8ENF-UFO



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8

999 18TH STREET - SUITE 300

DENVER, CO 80202-2466

Phone 800-227-8917

<http://www.epa.gov/region08>

AUTHORIZATION FOR ADDITIONAL WELL

ANTELOPE CREEK WATERFLOOD AREA PERMIT NO: UT20736-00000

The Environmental Protection Agency (EPA) authorizes the inclusion of an additional enhanced recovery injection well to the Antelope Creek Waterflood Area Permit No. UT20736-00000, as authorized by 40 CFR §144.33 (c). The additional well is described as:

Well Name:	<u>Ute Tribal 21-02</u>
EPA Well ID Number:	<u>UT20736-06477</u>
Surface Location:	3248' FWL & 548' FNL NWNE Sec. 21 - T5S - R3W Duchesne County, Utah.

This well is subject to all provisions of the original Antelope Creek Waterflood Area Permit No. UT20736-00000, and subsequent Modifications, unless specifically detailed below:

UNDERGROUND SOURCE OF DRINKING WATER (USDW):

The base of the USDWs in the Ute Tribal 21-02 occurs within the Uinta Formation at approximately 1250' below ground level. The source for the location of the base of the USDWs is the STATE OF UTAH PUBLICATION NO. 2., BASE OF MODERATELY SALINE GROUND WATER IN THE UINTA BASIN, UTAH. Surface casing was set at 279' KB and cemented to the surface.

WATER ANALYSES:

Produced Green River Formation Water: **3,042 mg/l TDS**
Additional Water Source: **689 mg/l TDS** (Johnson Water District)
Additional Water Source: **9003 mg/l TDS** (From Ground Water Wells in Section 8 at approximately 500-600' deep)

Blended Injectate: 3,922 mg/l TDS

CONFINING ZONE:

In the Antelope Creek Field area, the Confining Zone for the Green River waterflood is identified as a unit of slightly silty black impervious shale that directly overlies the top of the "B"

Marker of the upper Green River Formation. Above the Confining Zone in the upper Green River Formation, additional impermeable lacustrine shales provide further protection for any overlying USDW. In the Ute Tribal No. 21-02 well, the impervious black shale Confining Zone is approximately eighteen (18) feet thick and it occurs between the depths of 4015' to 4033'.

EPA analysis of the Ute Tribal No. 21-02 CBL/GR indicates that adequate cement was placed in the well. The CBL confirms that the cement meets or exceeds minimum requirements needed to demonstrate zone isolation (at least 15' of continuous 80% bond, or better) through the Green River Formation confining zone. The CBL for this well shows 18' of 80% bond or greater bond through the interval from 4015' to 4033'. EPA has determined that the cement in this well provides an effective barrier to significant upward movement of fluids through vertical channels adjacent to the wellbore pursuant to 40 CFR 146.8 (a) (2). Therefore further testing for Part II (External) Mechanical Integrity is not required at this time.

INJECTION ZONE:

The Antelope Creek Waterflood Final Area Permit, Effective July 12, 1994, authorized injection into the Green River Formation. The operator proposes to inject water into multiple lenticular sands which are distributed throughout the Green River Formation. These sands are individually separated by shale which act as isolation barriers (secondary confining zones) for the waterflood.

The gross correlative Green River Formation enhanced injection recovery interval for the Ute Tribal No. 21-02 is from the base of the confining zone at 4033' to the top of the Basal Carbonate Formation at 6025'.

Lithologically, the gross authorized enhanced recovery injection interval is fluvial and lacustrine shale, fluvial and lacustrine sandstone, lacustrine marlstone and limestone. The Uinta and Green River Formations are predominantly non-lacustrine fluvial shale and sandstone deposited on the basin margins, whereas lacustrine deposition predominates in the central basin area for these two formations.

WELL CONSTRUCTION: Ute Tribal No. 21-02.

SURFACE CASING: 8-5/8" casing is set at 279' in a 12-1/4" hole, using 150 sacks of Class "G" cement circulated to the surface. The base of the USDW is approximately 1251' from ground level.

LONGSTRING CASING: 5-1/2" casing is set at 6045' ground level (GL) in a 7-7/8" hole, and cemented with 445 sacks of Premium Lite II mixed with 50/50 Pozmix.

The operator identifies the top of cement at 2464' KB. EPA analysis of the CBL/GR shows 18' of 80% bond or greater bond through the interval from 4015' to 4033' and the shallowest interval of 80% cement bond is from 2942' to 3058' in the Green River Formation.

CONSTRUCTION REQUIREMENTS:

Tubing and Packer:

(Condition 3)

For injection purposes, the Ute Tribal 21-02 will be equipped with 2-3/8" tubing with a packer to be set at a depth no higher than 100' above the top perforation, i.e., 4614'.

Formation Testing and Logging

(Condition 6)

- (a) Upon conversion of the Ute Tribal 21-02 and prior to injection, the operator is required to determine and submit to the EPA the injection zone **fluid pore pressure** (static bottom hole pressure).

CORRECTIVE ACTION:

As of October 2004, the following one (1) active Green River injection well is within or proximate to the one-quarter (1/4) mile radius around the Ute Tribal No. 21-02. No Corrective Action is required.

Green River Injection Well: **Ute Tribal No. 21-03:** **NE NW Sec. 21-T5S-R3W**

The owner/operator is required to inspect the surface of this location for fluid leaks on a monthly basis. **Observation of surface leakage may be considered as noncompliance with the Permit**, injection operations shall be suspended immediately, and shall stay suspended until the noncompliance has been resolved and written approval to resume injection has been received from the Director.

PART II. C. WELL OPERATION

PRIOR TO COMMENCING INJECTION (ADDITIONAL WELLS)

(Condition 2)

This document is being issued without authority to inject. Prior to beginning injection, the operator is required to submit the following information for EPA review and written approval:

- A successful **mechanical integrity test (MIT)** demonstrating Part I Internal MI,
- **Pore pressure calculation** of the proposed injection zone, and
- completed EPA Form No. 7520-12 (**Well Rework Record**, enclosed).

Please be advised that all tests must be conducted following current EPA Guidelines. Deviations from those Guidelines, without written approval of the Director, may result in denial of the survey/test.

INJECTION INTERVAL

(Condition 4)

Injection is limited to the gross Green River Formation "B" marker at 4033' to the top of the Basal Carbonate Member of the Green River Formation, estimated to be 6025' KB in this well .

INJECTION PRESSURE LIMITATION

(Condition 5)

The initial Maximum Allowable Injection Pressure (MAIP) for the Ute Tribal No. 21-02 is **1900 psig**. Although a MAIP of 2235 psig may be calculated using submitted averaged fracture treatment data (below), pursuant to Part II. Section C. Condition No. 4 of Area Permit UT20736-00000, the initial surface injection pressure shall not exceed 1900 psig. However Part II.C.4 also provides the opportunity for the permittee to request an increase or decrease in the initial MAIP based upon results of a step rate test that demonstrates the formation breakdown pressure will not be exceeded.

$$\begin{aligned} \text{MIP} &= [\text{FG} - (0.433)(\text{SG})] * \text{D} \\ \text{FG} &= 0.92 \text{ psi/ft} - \text{Average value of two (2) submitted fracture treatment data} \\ \text{SG} &= 1.025 \\ \text{D} &= 4694' \text{ (top perforation)} \\ \text{MIP} &= [0.92 - (0.433)(1.025)] * 4694' \\ \text{MIP} &= 2235 \text{ psig} \end{aligned}$$

DEMONSTRATION OF FINANCIAL RESPONSIBILITY:

(Condition 1)

The applicant has chosen to demonstrate financial responsibility via a **Surety Bond** that has been reviewed and approved by the EPA.

REPORTING OF NONCOMPLIANCE:

(Condition 10)

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

Twenty-Four Hour Noncompliance Reporting:

(Condition 11)

The operator shall report to the Director any noncompliance which may endanger health or environment. Information shall be provided, either orally or by leaving a message, within twenty-four (24) hours from the time the operator becomes aware of the circumstances by telephoning 1.800.227-8917 and asking for the EPA Region 8 UIC Program Compliance and Enforcement Director, or by contacting the Region 8 Emergency Operations Center at 303.293.1788 if calling from outside EPA Region 8. The following information shall be included in the verbal report:

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

Oil Spill and Chemical Release Reporting:

(Condition 12)

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

Other Noncompliance:

(Condition 13)

The operator shall report all other instances of noncompliance not otherwise reported at the time monitoring reports are submitted. The reports shall contain the information listed in Part III. 10. c. ii. of this Permit.

Other Information:

Where the operator becomes aware that he failed to submit any relevant facts in the Permit application, or submitted incorrect information in a Permit application, or in any report to the Director, the operator shall submit such correct facts or information within two (2) weeks of the time such information became known to him.

APPENDIX C.

PLUGGING AND ABANDONMENT:

The Plugging and Abandonment (P&A) Plan (Application Attachment Q-2) submitted by the applicant has been reviewed by the EPA. The P&A Plan is consistent with EPA requirements to protect all USDWs. The permittee shall place 9.2 ppg plugging gel or bentonite mud between all cement plugs.

PLUG NO. 1: Set a cast iron bridge plug (CIBP) at 4650'. Set a minimum 50' Class. "G" cement plug on top of the CIBP.

PLUG NO. 2: Set a minimum 100' cement plug inside of the 5-1/2" casing from at least 2898' to at least 3090' over a water zone.

PLUG NO. 3: Set a cement plug on the inside of the 5-1/2" casing, from at least 50' above to at least 50' below surface casing.

PLUG NO. 4: Set a cement plug, on the backside of the 5-1/2" casing, from surface to a depth of at least 50'.

(See attached Schematic.)

Cut off 8-5/8" and 5-1/2" casing at least 4' below ground level and set P&A marker, submit Sundry Notices and all necessary data to the Ute Tribe, the BLM and DOGM as required.

This **AUTHORIZATION FOR ADDITIONAL WELL** is effective upon signature.

Date: DEC 27 2004


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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

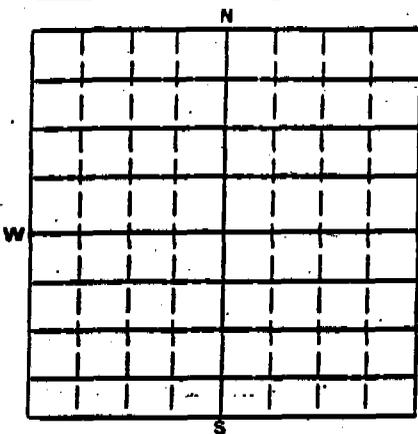


WELL REWORK RECORD

NAME AND ADDRESS OF PERMITTEE

NAME AND ADDRESS OF CONTRACTOR

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT - 640 ACRES



STATE

COUNTY

PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

1/4 of 1/4 of 1/4 of 1/4 of Section Township Range

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location ____ ft. from (N/S) ____ Line of quarter section
and ____ ft. from (E/W) ____ Line of quarter section

WELL ACTIVITY

- Brine Disposal
- Enhanced Recovery
- Hydrocarbon Storage

Lease Name

Total Depth Before Rework

Total Depth After Rework

Date Rework Commenced

Date Rework Completed

TYPE OF PERMIT

- Individual
 - Area
- Number of Wells ____

Well Number

WELL CASING RECORD - BEFORE REWORK

Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	

WELL CASING RECORD - AFTER REWORK (Indicate Additions and Changes Only)

Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	

DESCRIBE REWORK OPERATIONS IN DETAIL
USE ADDITIONAL SHEETS IF NECESSARY

WIRE LINE LOGS, LIST EACH TYPE

Log Types

Logged Intervals

CERTIFICATION

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

Ute Tribal 21-02
Proposed Wellbore Diagram

Well History:

1/2/1997 Spud Well

Unitz Pm. Surface to 1610'

Top of Green River formation
at 1610'. No USDW found in
the Green River formation. →

Confining Zone 4015-4033 -

GL: 6261.3
KB: 6271.3

Surface Hole Size 12 1/4"

8 5/8" 24# Surface CSG @
279' KB cmt'd w/150 sxs

Tubing: 2 3/8" 4.7#
J-55

Hole Size 7 7/8" bit
- 1252' Base (490lb)

Cement top @ 2464' KB

5 1/2" 15.5# K-55 CSG

- 3974-4088 80% Bond Cement

Injection Packer @ 4614'

Perfs:

C04 4694 to 4702'

D3 5150 to 5160'

D10 5509 to 5515'

D10 5519 to 5523'

- 6025' Basal Carbonate

PBTD @ 6058'

TD @ 6138' KB *in Basal Carbonate*

Petroglyph Operating Co., Inc.
Ute Tribal #21-02 (3248' FWL & 548' FNL) NW NE Section 21-T5S-R3W Antelope Creek Field Duchesne Co. Utah
API #43-013-31749 ; LEASE #14-20-H62-3516

(Not to Scale)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 300

DENVER, COLORADO 80202-2466

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

FROM: Tom Pike, Chief
UIC Direct Implementation Section

TO: All Section Staff
Montana Operations Office

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

A demonstration of MI is a two part process:

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

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

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

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

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

test is conducted consistent with current EPA guidance, and that the test will provide meaningful results.

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

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

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

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

Mechanical Integrity Test

Casing or Annulus Pressure Mechanical Integrity Test

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

EPA Witness: _____ Date: ____/____/____
 Test conducted by: _____
 Others present: _____

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

Is this a regularly scheduled test? Yes No

Initial test for permit? Yes No

Test after well rework? Yes No

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

Pre-test casing/tubing annulus pressure: _____ psig

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

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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

JAN 25 2005

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Matt Corser
District Engineer
Petroglyph Operating Company, Inc.
4116 W 3000 South Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

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

RECEIVED
JAN 27 2005
DIV. OF OIL, GAS & MINING

RE: **AUTHORIZATION TO INJECT**
Ute Tribal No. 21-02
EPA Well ID: UT20736-06477
EPA UIC Area Permit No. UT20736-00000

Dear Mr. Corser:

Thank you for submitting information pertaining to the newly constructed or converted Ute Tribal No. 21-02 enhanced recovery injection well to the Region 8 Ground Water Program office of the Environmental Protection Agency (EPA). The "Prior To Commencing Injection" requirements of Authorization for Additional Well UT20736-06477, for the Ute Tribal No. 21-02 injection well, required well owner and operator Petroglyph Operating Company, Inc. to submit the following information to the Director:

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

All required information has been submitted, and has been reviewed and approved by the EPA. Therefore, effective upon your receipt of this letter, Administrative approval hereby is granted for injection into the Ute Tribal No. 21-02 enhanced recovery injection well under the



conditions of Authorization for Additional Well UT20736-06477 and EPA UIC Area Permit UT20736-00000 and relevant modifications as issued.

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

Technical Enforcement Program - UIC
U.S. EPA Region 8, Mail Code 8ENF-UFO
999 18th Street, Suite 300
Denver, Colorado 80202-2466

The Director has determined that the maximum allowable surface injection pressure (MAIP) for the Ute Tribal No. 21-02 shall not exceed 2235 psig. Please be reminded that it is the responsibility of the owner/operator to be aware of, and to comply with, all conditions of Authorization for Additional Well UT20736-06477 and EPA UIC Area Permit UT20736-00000 and relevant modifications as issued.

If you have any questions regarding this Authorization, please call Dan Jackson of my staff at (303) 312-6155. For questions regarding notification, testing, monitoring, reporting or other Permit requirements, the UIC Technical Enforcement Program may be reached by calling (800) 227-8917.

Sincerely,



Sandra A. Stavnes
Director
Ground Water Program

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

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

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

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

Ed Forsman
Sr. Petroleum Engineer
BLM - Vernal District
170 South 500 East
Vernal, UT 84078

Nathan Wiser, 8ENF-UFO

RECEIVED
 JAN 31 2005
 DIV. OF OIL, GAS & MINING

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Injection</u>		5. LEASE DESIGNATION AND SERIAL NUMBER: <u>1420HG23516</u>
2. NAME OF OPERATOR: <u>Petroglyph Operating Co.</u>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <u>Ute Indian Tribe</u>
3. ADDRESS OF OPERATOR: <u>P.O. Box 607 CITY Roosevelt STATE UT ZIP 84066</u>		7. UNIT or CA AGREEMENT NAME: <u>1420HG24650</u>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <u>548 FNL 3248 FWL</u> QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <u>NWNE Sec 21, T35, R3W</u>		8. WELL NAME and NUMBER: <u>Ute Tribal 21-02</u>
PHONE NUMBER: <u>435-722-2531</u>		9. API NUMBER: <u>49 43-013-31752</u>
COUNTY: <u>Duchesne</u>		10. FIELD AND POOL, OR WILDCAT: <u>Antelope Creek</u>
STATE: <u>UTAH</u>		

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: <u>1-8-05</u>	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input checked="" type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input checked="" type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

This well was converted to a water injection well to support the ongoing secondary waterflood currently active in Antelope Creek. The rods and tubing have been pulled from this well. The injection string consists of 2-3/8", 4.6#, J55 EOE tubing. The packer is installed at 4628' KB. Packer fluid has been circulated on the backside and a successful MIT test performed and submitted to the EPA.

NAME (PLEASE PRINT) Callie Duncan TITLE Production Asst.
 SIGNATURE Callie Duncan DATE 01-28-05

(This space for State Use only)

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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

JAN 25 2006

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Matt Corser
District Engineer
Petroglyph Operating Company, Inc.
4116 W 3000 South Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

RE: **AUTHORIZATION TO INJECT**
Ute Tribal No. 21-02
EPA Well ID: UT20736-06477
EPA UIC Area Permit No. UT20736-00000

Dear Mr. Corser:

Thank you for submitting information pertaining to the newly constructed or converted Ute Tribal No. 21-02 enhanced recovery injection well to the Region 8 Ground Water Program office of the Environmental Protection Agency (EPA). The "Prior To Commencing Injection" requirements of Authorization for Additional Well UT20736-06477, for the Ute Tribal No. 21-02 injection well, required well owner and operator Petroglyph Operating Company, Inc. to submit the following information to the Director:

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

All required information has been submitted, and has been reviewed and approved by the EPA. Therefore, effective upon your receipt of this letter, Administrative approval hereby is granted for injection into the Ute Tribal No. 21-02 enhanced recovery injection well under the



conditions of Authorization for Additional Well UT20736-06477 and EPA UIC Area Permit UT20736-00000 and relevant modifications as issued.

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

Technical Enforcement Program - UIC
U.S. EPA Region 8, Mail Code 8ENF-UFO
999 18th Street, Suite 300
Denver, Colorado 80202-2466

The Director has determined that the maximum allowable surface injection pressure (MAIP) for the Ute Tribal No. 21-02 shall not exceed 2235 psig. Please be reminded that it is the responsibility of the owner/operator to be aware of, and to comply with, all conditions of Authorization for Additional Well UT20736-06477 and EPA UIC Area Permit UT20736-00000 and relevant modifications as issued.

If you have any questions regarding this Authorization, please call Dan Jackson of my staff at (303) 312-6155. For questions regarding notification, testing, monitoring, reporting or other Permit requirements, the UIC Technical Enforcement Program may be reached by calling (800) 227-8917.

Sincerely,



Sandra A. Stavnes
Director
Ground Water Program

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

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

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

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

Ed Forsman
Sr. Petroleum Engineer
BLM - Vernal District
170 South 500 East
Vernal, UT 84078

Nathan Wiser, 8ENF-UFO

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: 14-20-H62-3516	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
7. UNIT or CA AGREEMENT NAME: ANTELOPE CREEK	
8. WELL NAME and NUMBER: UTE TRIBAL 21-02	
9. API NUMBER: 43013317490000	
9. FIELD and POOL or WILDCAT: ANTELOPE CREEK	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0548 FNL 3248 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 21 Township: 05.0S Range: 03.0W Meridian: U	
COUNTY: DUCHESNE	
STATE: UTAH	

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input checked="" type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 6/17/2014	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Please see attached.

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

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

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

SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER 14-20-H62-3516
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Ute Indian Tribe
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Injection Well</u>		7. UNIT or CA AGREEMENT NAME 14-20-H62-4650
2. NAME OF OPERATOR Petroglyph Operating Company Inc.		8. WELL NAME and NUMBER Ute Tribal 21-02
3. ADDRESS OF OPERATOR: P.O. Box 607 CITY <u>Roosevelt</u> STATE <u>UT</u> ZIP <u>84066</u>		9. API NUMBER 4301331749
4. LOCATION OF WELL FOOTAGES AT SURFACE: <u>548' FNL, 3248' FWL</u> QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <u>NWNE 21 5S 3W U</u>		10. FIELD AND POOL, OR WILDCAT: Antelope Creek COUNTY: <u>Duchesne</u> STATE: <u>UTAH</u>

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <hr/>	<input checked="" type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION (START/RESUME) <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUT-OFF <input type="checkbox"/> OTHER: _____
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: <u>6/17/2014</u>			

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

On 6/17/2014 Petroglyph Operating rigged up a coiled tubing unit on the well referenced above to acidize the well and improve the well's injection rates. The targeted treatment interval was 4,692'-5,523'. We ran in hole through the injection tubing, established an injection rate and slowly pulled back as we spotted acid over the referenced interval. We spotted 1,050 Gal of 15% Hcl, ran back in to the bottom of the interval and repeated spotting 701 Gal of Chlorine Dioxide, and ran back in again spotting in 1,050 Gal of 15% Hcl. The treatment was then flushed out into the formation with 2,793 Gallons of fresh water and the well was returned to injection.

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

(This space for State use only)