

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  
 2180<sup>1/2</sup> FNL & 660<sup>201</sup> FWL, SW/4 NW/4  
 At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 8.4 MILES SOUTHEAST OF DUCHESNE, UT

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 660'

16. NO. OF ACRES IN LEASE 320

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. 3680'

19. PROPOSED DEPTH 3680'

20. ROTARY OR CABLE TOOLS ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5764' GRADED GROUND

22. APPROX. DATE WORK WILL START\* JUNE, 1997

5. LEASE DESIGNATION AND SERIAL NO.  
 FEE

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO.

9. API WELL NO.  
 FEE #14-05 D4

10. FIELD AND POOL, OR WILDCAT  
 DUCHESNE

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 SEC 14, T4S, R4W

12. COUNTY OR PARISH DUCHESNE

13. STATE UTAH

23. PROPOSED CASING AND CEMENTING PROGRAM

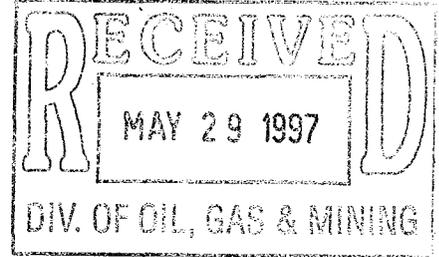
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17"	K-55 13 3/8"	54.5#	60'	70 sx class "G" + 2% CaCl <sub>2</sub> + 1/4 #/ sx celloflake.
12 1/4"	J-55 8 5/8"	24.0#	2250'	

50/50 POZMIX + 2% GEL + 10% SALT TO 400' ABOVE ALL ZONES OF INTEREST (+ 10% EXCESS). LIGHT CMT (11 PPG ±) + LCM TO SURFACE (+ 5% EXCESS).

CONFIDENTIAL

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

p.c.: UTAH DIVISION OF OIL, GAS & MINING  
 BUREAU OF LAND MANAGEMENT



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

24. SIGNED [Signature] TITLE AGENT DATE 5-27-1997

(This space for Federal or State office use)  
 PERMIT NO. 43-013-31895 APPROVAL DATE \_\_\_\_\_

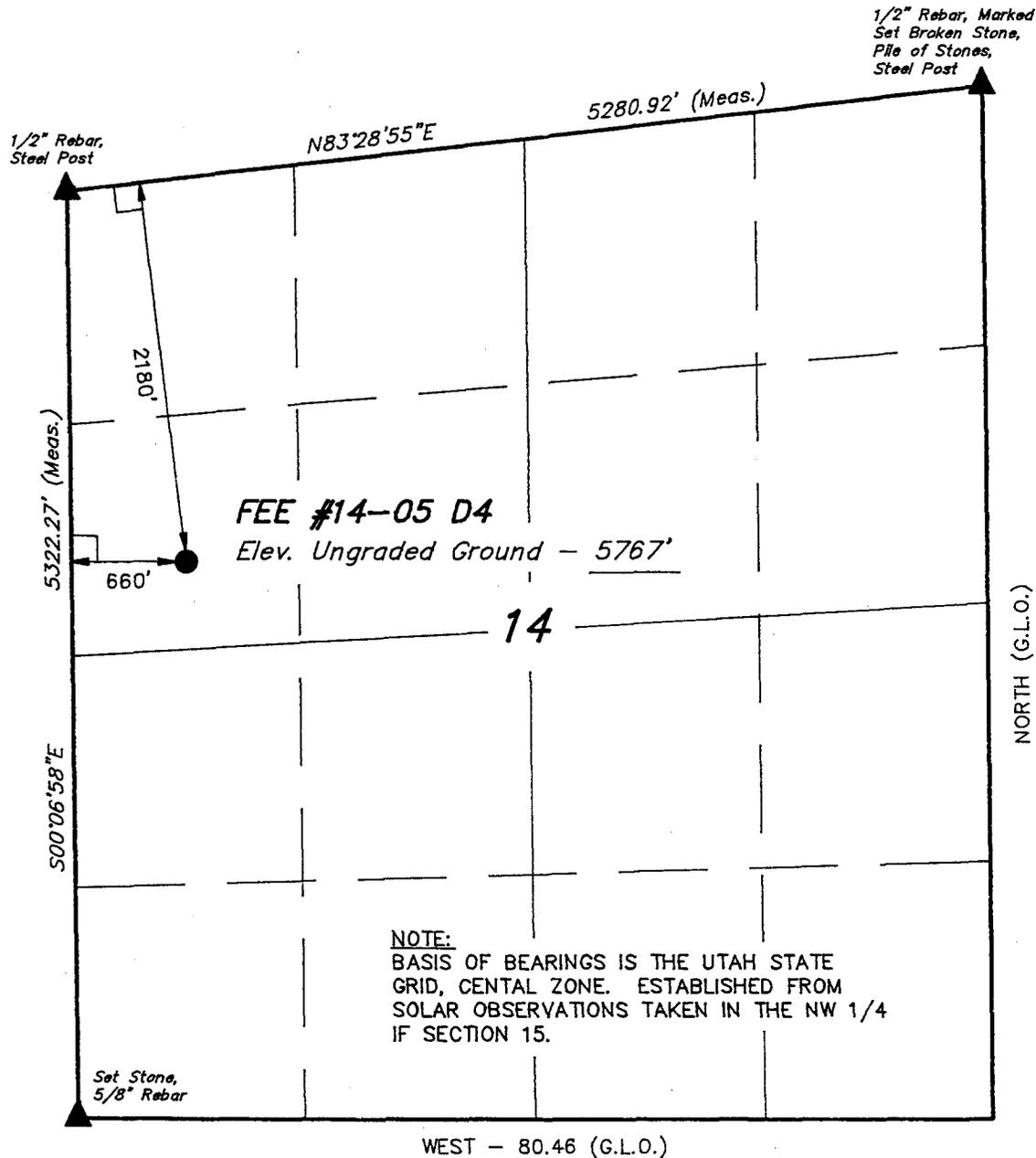
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
 CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY [Signature] TITLE Petroleum Engineer DATE 6/6/97  
 \*See Instructions On Reverse Side

T4S, R4W, U.S.B.&M.

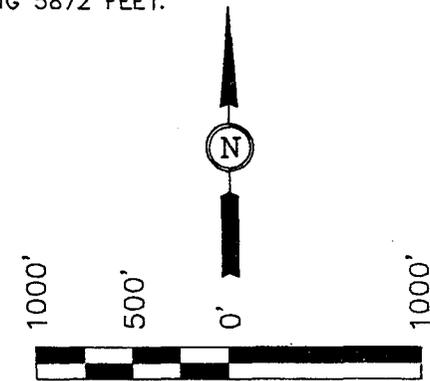
**PETROGLYPH OPERATING CO., INC.**

Well Location, FEE #14-05 D4, located as shown in SW 1/4 NW 1/4 of Section 14, T4S, R4W, U.S.B.&M. Duchesne County, Utah.



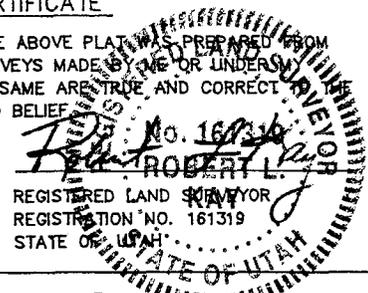
BASIS OF ELEVATION

BENCH MARK M62 (1934) LOCATED NEAR A ROAD INTERSECTION IN THE SE 1/4 OF SECTION 17, T4S, R4W, U.S.B.&M. TAKEN FROM THE DUCHESNE NE 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 5872 FEET.



CERTIFICATE

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



<b>UINTAH ENGINEERING &amp; LAND SURVEYING</b>		
85 SOUTH 200 EAST - VERNAL, UTAH 84078		
(801) 789-1017		
SCALE 1" = 1000'	DATE SURVEYED: 5-14-97	DATE DRAWN: 5-22-97
PARTY D.A. K.H. C.B.T.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE PETROGLYPH OPERATING CO., INC.	

LEGEND:

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

EIGHT POINT PLAN

FEE 14-05 D4  
SW/NW SEC. 14, T4S R4W  
DUCHESNE COUNTY, UTAH

1. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS:

<u>FORMATIONS</u>	<u>DEPTH</u>	<u>SUBSEA</u>
Mahogany Shale	3547	2230
Trona	3375	2402
Saline Formation	2057	3720
Total Depth	3680	2100

Anticipated BHP                      1450 psi

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

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>
17"	0' - 60'	60'	13 3/8	54.5#	K-55	1130 PSI	2730 PSI	853,000#
12 1/4"	60' - 2250'	2250'	8 5/8	24.0#	J-55	1370 PSI	2950 PSI	263,000#

All casing will be new or inspected.

5. MUD PROGRAM

<u>INTERVAL</u>	<u>MUD TYPE</u>
0' - 60'	Air
60' - TD	Air/Mist & Aerated Water

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

EIGHT POINT PLAN  
EEE 14-05 D4  
SW/NW SEC. 14, T4S R4W  
DUCHESNE COUNTY, UTAH

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 Induction Log	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.

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.

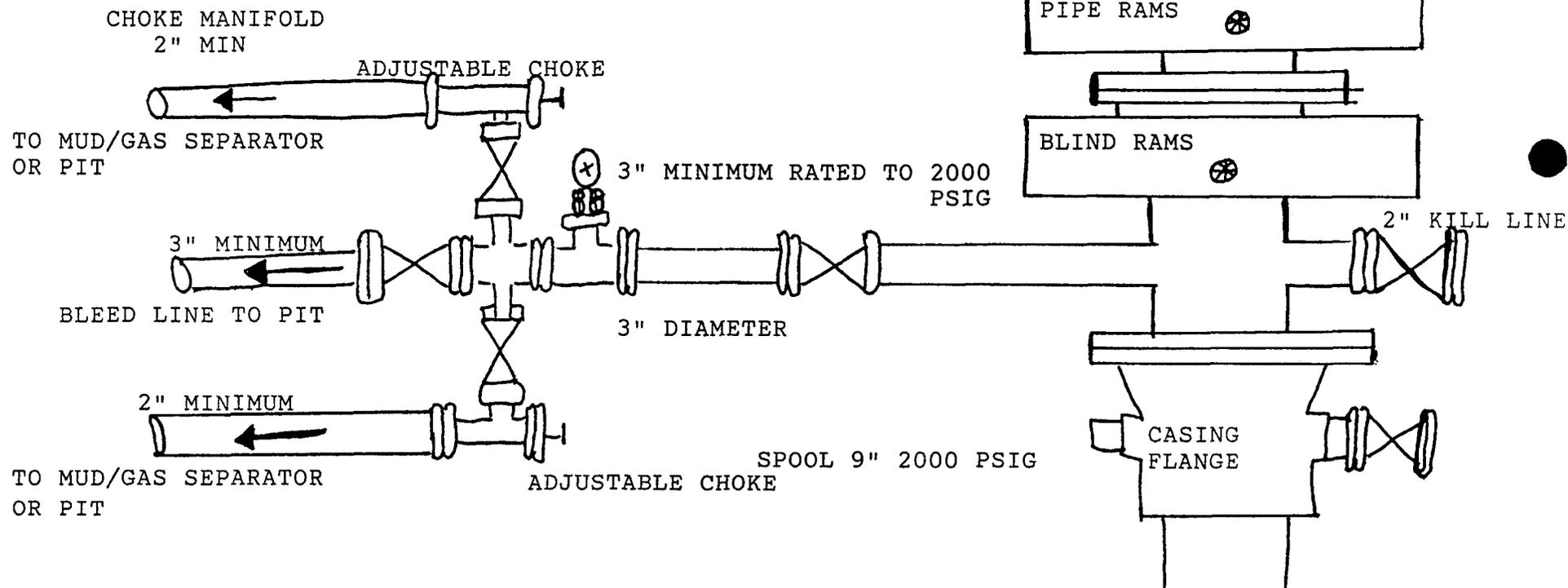
(Attachment: BOP Schematic Diagram)

## 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: Fee 14-05 D4  
Lease Number: Fee  
Location: 2180' FNL & 660' FWL, SW/NW, Sec. 14, T4S R4W  
U.S.B.&M., Duchesne County, Utah  
Surface Ownership: Fee

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 8.4 miles southeast of Duchesne, Utah - See attached TOPO Map "A".
- C. Refer to attached Topographic Map "A" showing labeled access route to location.
- D. Existing roads will be maintained and repaired as necessary. No off lease Right-of-Way will be required.

### 2. PLANNED ACCESS ROAD

- A. The access road will be approximately 0.8 miles in length. See attached TOPO Map "B".
- B. The access road has a 30 foot ROW w/18 foot running surface.
- C. Maximum grade on access road will be 8%
- D. No turnouts will be required.
- E. Road drainage crossings shall be of the typical dry creek drainage crossing type.
- F. No culverts, bridges or major cuts & fills will be required.
- G. The access road will be dirt surface.
- H. No gates, cattleguards or fences will be required or encountered.

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

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

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

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

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

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

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

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

- A. Water wells - None
- B. Abandoned wells - None
- C. Temporarily abandoned wells - None.
- D. Disposal wells - 1\*
- E. Drilling wells - None.
- F. Producing wells -None
- G. Shut in wells - 2\*
- H. Injection wells - None

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

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

A. ON WELL PAD

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

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

**B. OFF WELL PAD**

1. Proposed location of attendant off pad flowlines shall be flagged prior to archaeological clearance.
2. A 4 1/2" OD steel above ground production pipeline will be laid approximately 4100' from proposed location to a point in the SW/NE of Section 15, T4S, R4W, where it will tie into Petroglyph Operating Co., Inc.'s existing pipeline.  
See attached TOPO Map D showing pipeline route.
3. Proposed pipeline will be a 4 1/2" OD steel, welded line laid on the surface.
4. Protective measures and devices for livestock and wildlife will be taken and/or installed where required.

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

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

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

5. LOCATION & TYPE OF WATER SUPPLY

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

6. SOURCE OF CONSTRUCTION MATERIAL

- A. All construction material for this location and access road will be of native borrow and soil accumulated during the construction of location.
- B. All construction material will come from State 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 State of Utah 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 state of Utah with a chemical analysis of the fluids in that pit no later than 90 days after the well completion to determine the method for final reclamation of the reserve pit. If the elemental concentrations shown by the chemical analysis exceeds the requirements described by part II, Standards of Quality for Waters of the State, Wastewater Disposal Regulations, State of Utah Division of Health, the contents and liner will be removed and disposed of at an authorized disposal site.

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

     Storage tanks will be used if drill sites are located on tribal irrigable land, flood plains, or on lands under crop production. After first production, produced waste water will be confined to a

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

#### 8. ANCILLARY FACILITIES

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

#### 9. WELL SITE LAYOUT

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

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

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

The stockpiled topsoil will be stored on the North side.

Access to the well pad will be from the North.

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

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

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

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

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

## FENCING REQUIREMENTS

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

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

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

Each existing fence to be crossed by the access road shall be braced and tied off before cutting so as to prevent slacking of the wire. The opening shall be closed temporarily as necessary during construction to prevent the escape of livestock, and upon completion of construction the fence shall be repaired to STATE OF UTAH 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 State land, or any fence between State land and private land, the operator will contact the STATE OF UTAH, 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 the State of Utah will attach the appropriate surface rehabilitation conditions of approval.

#### ON STATE OF UTAH 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 State of Utah at the time

of abandonment.

11. SURFACE OWNERSHIP

Access road: Fee

Location: Fee

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 State of Utah, or the appropriate County Extension Office. On State of Utah 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 State Lands after the conclusion of drilling operations or at any other time without State of Utah authorization. However, if State of Utah authorization is obtained, it is only a temporary measure to allow time to make arrangements for permanent storage on commercial facilities.

On STATE OF UTAH 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 State of Utah 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 State of Utah Forester.

If the surface rights and mineral rights have been severed, an approved right-of-way will be obtained from the surface owner before the operator begins any construction activities.

All roads constructed by operators will have appropriate signs. Signs will be neat and of sound construction. They will state: (a) who owns the land, (b) the name of the operator, (c) that firearms are prohibited (d) that permits must be obtained from the State of Utah before cutting firewood or other timber products, and (e) only authorized personnel permitted.

All well site locations on State land 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 STATE OF UTAH 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.

5-27-97

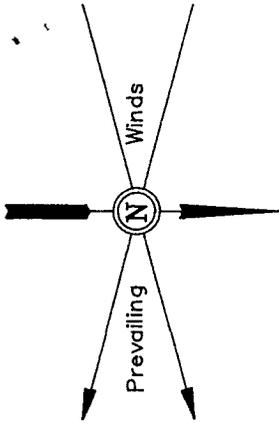
Date



# PETROGLYPH OPERATING CO., INC.

LOCATION LAYOUT FOR

FEE #14-05 D4  
SECTION 14, T4S, R4W, U.S.B.&M.  
2180' FNL 660' FWL



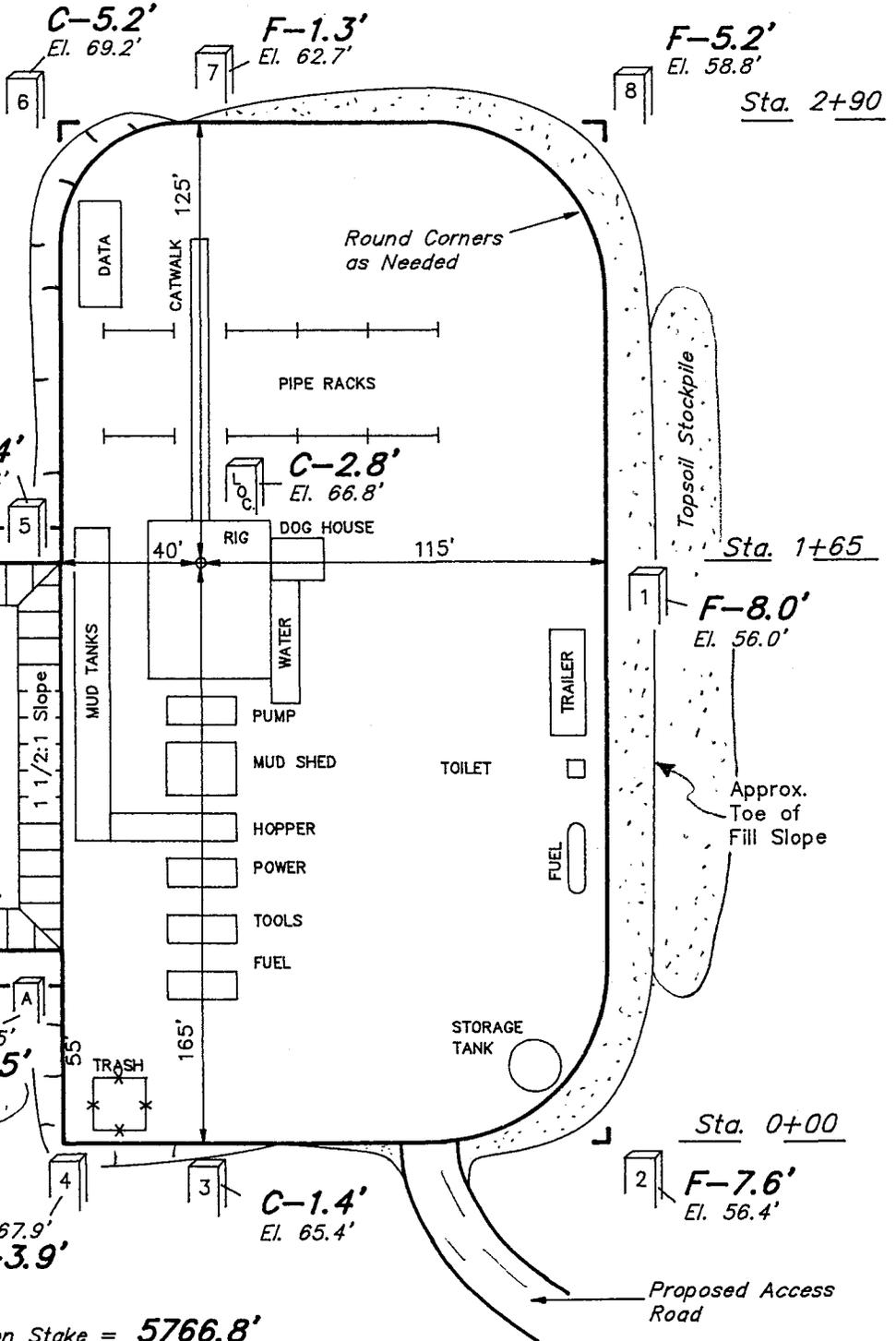
SCALE: 1" = 50'  
DATE: 5-22-97  
Drawn By: C.B.T.

**NOTE:**

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

FLARE PIT

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



Elev. Ungraded Ground at Location Stake = 5766.8'

Elev. Graded Ground at Location Stake = 5764.0'

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

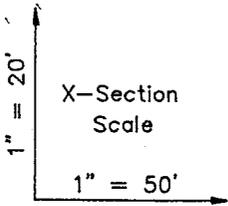
PETROGLYPH OPERATING CO., INC.

TYPICAL CROSS SECTIONS FOR

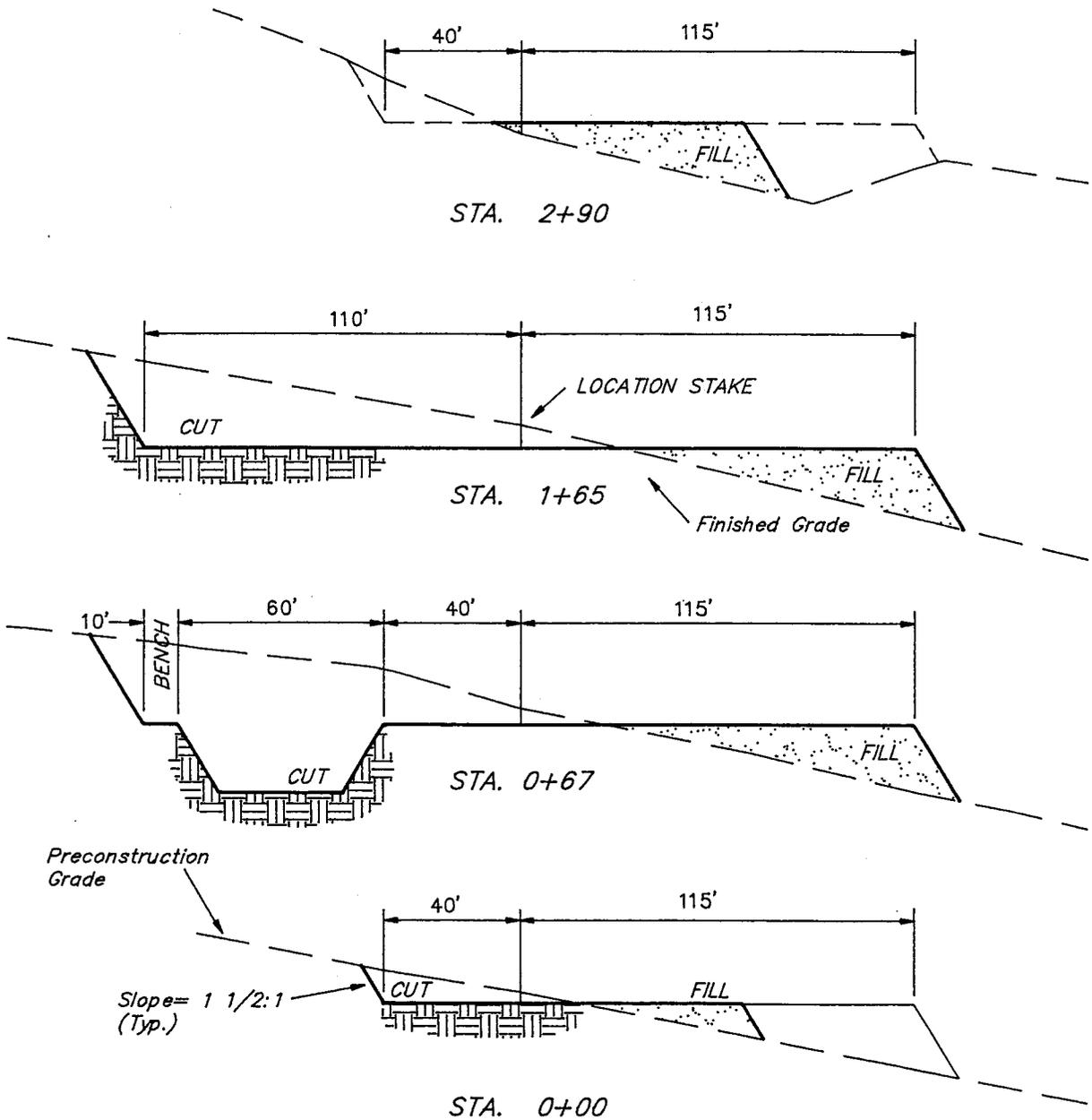
FEE #14-05 D4

SECTION 14, T4S, R4W, U.S.B.&M.

2180' FNL 660' FWL



DATE: 97  
Drawn By: C.B.T.

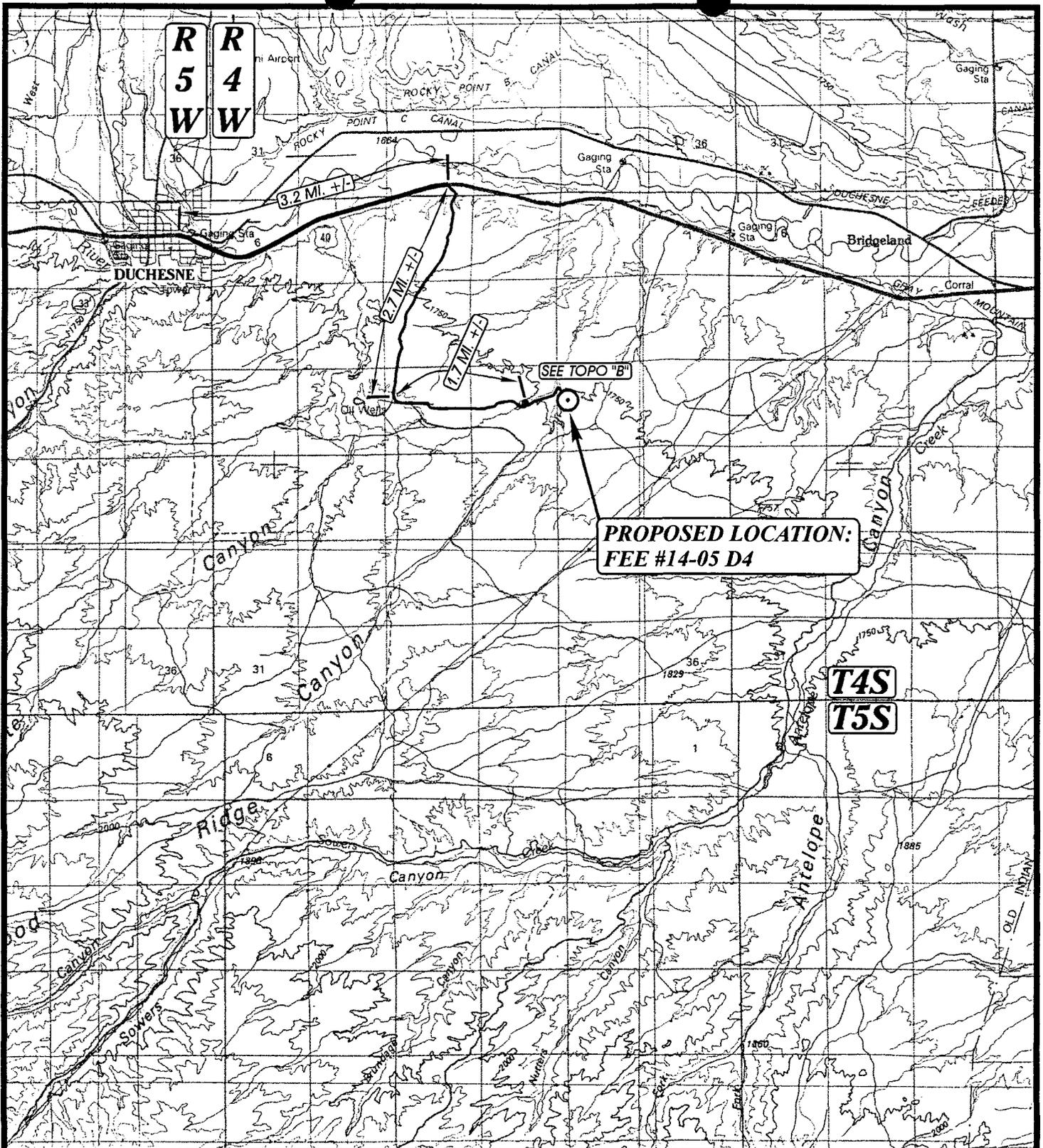


APPROXIMATE YARDAGES

(6") Topsoil Stripping	=	960 Cu. Yds.
Remaining Location	=	6,020 Cu. Yds.
<b>TOTAL CUT</b>	=	<b>6,980 CU.YDS.</b>
<b>FILL</b>	=	<b>5,050 CU.YDS.</b>

EXCESS MATERIAL AFTER 5% COMPACTION	=	1,660 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	1,660 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	=	0 Cu. Yds.

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86 So. 200 East \* Vernal, Utah 84078 \* (801) 789-1017



**LEGEND:**

○ PROPOSED LOCATION

**PETROGLYPH OPERATING CO., INC.**

FEE #14-05 D4

SECTION 14, T4S, R4W, U.S.B.&M.

2180' FNL 660' FWL

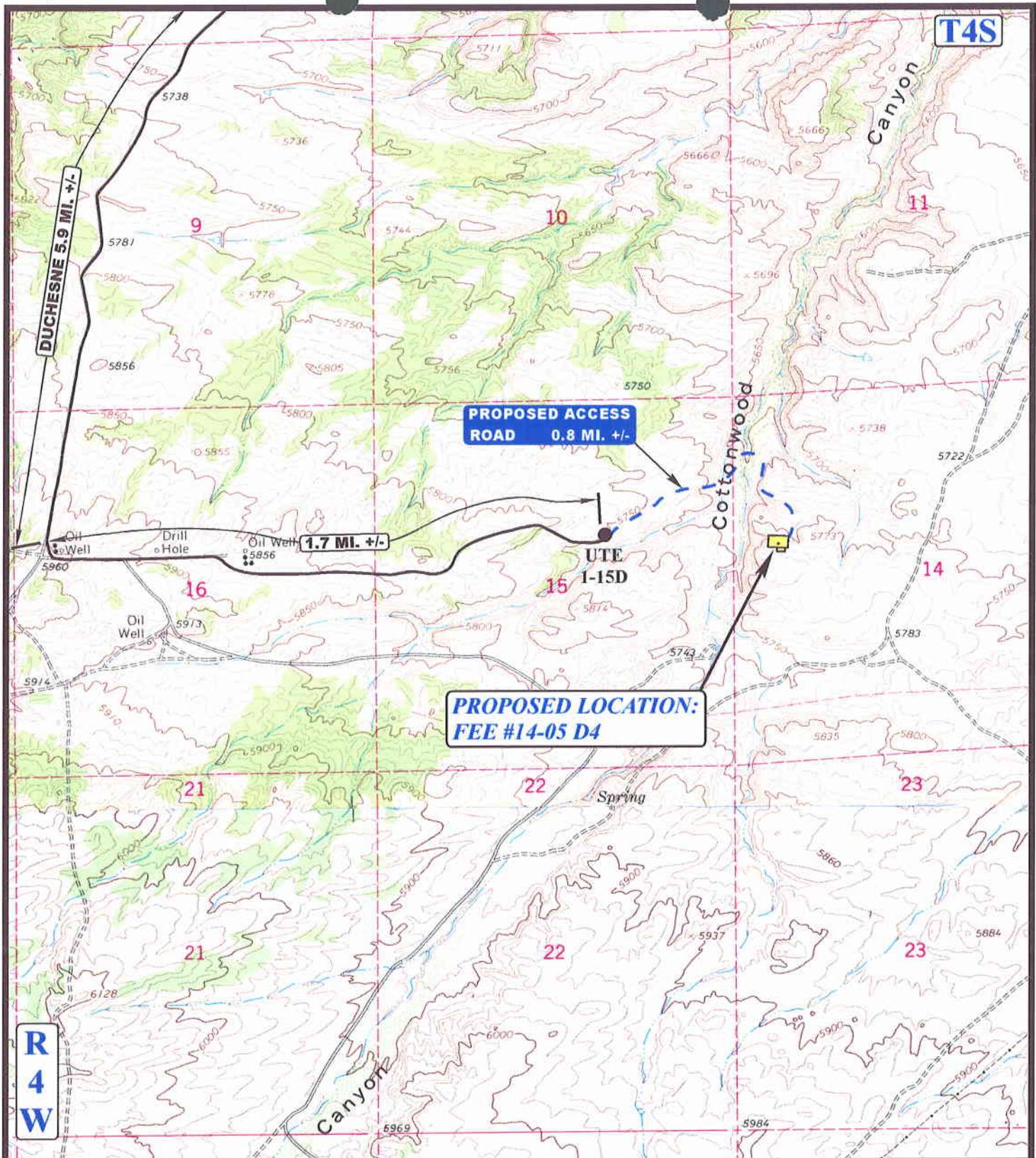


**Uintah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (801) 789-1017 \* FAX (801) 789-1018  
 Email: uels@easilink.com



**TOPOGRAPHIC** 5 22 97  
 MAP MONTH DAY YEAR  
 SCALE: 1 : 100,000 DRAWN BY: D.COX REVISED: 00-00-00





**LEGEND:**

- PROPOSED ACCESS ROAD
- EXISTING ROAD

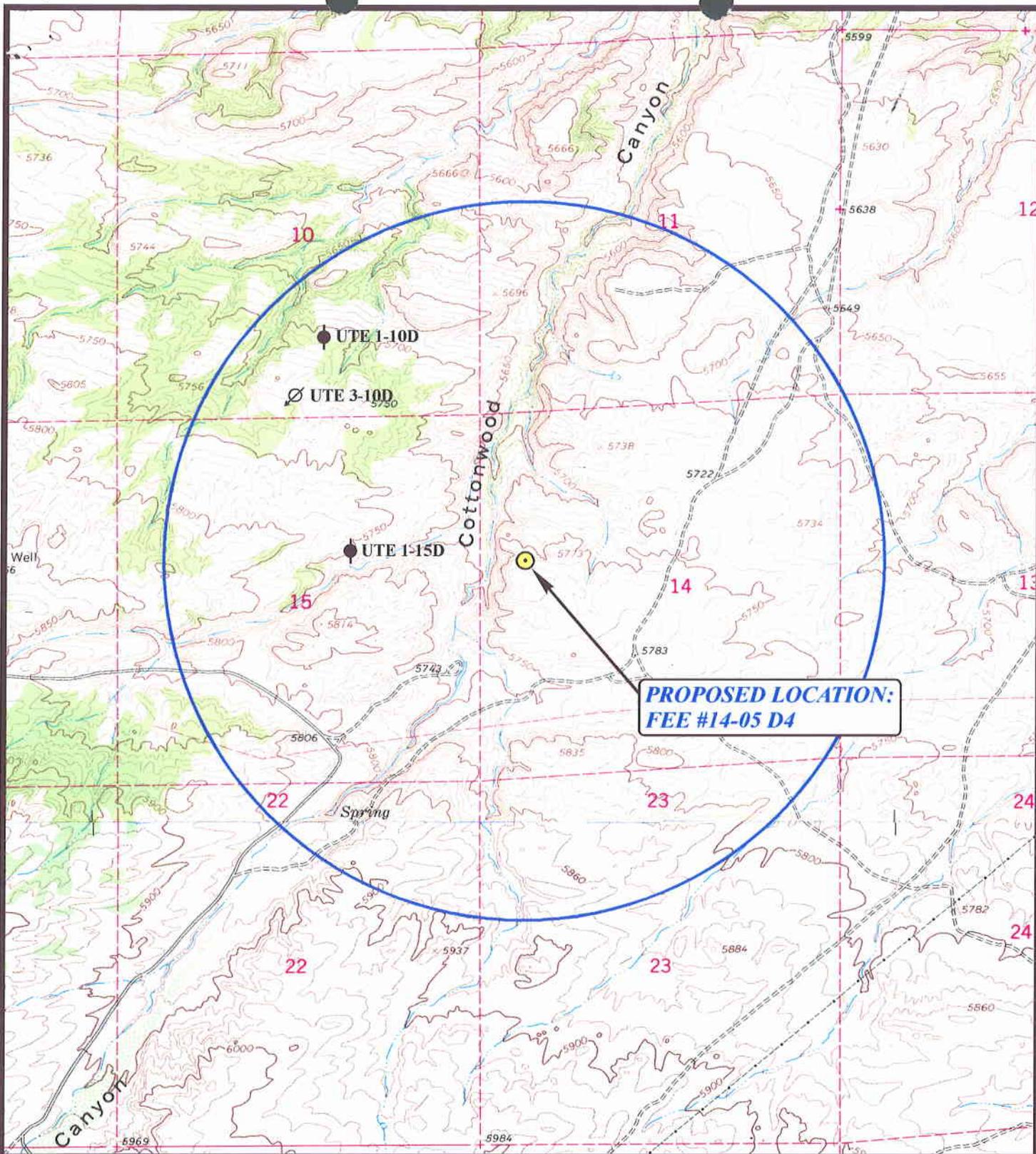
**U E L S**  
**Uintah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (801) 789-1017 \* FAX (801) 789-1018  
 Email: uels@easilink.com

**PETROGLYPH OPERATING CO., INC.**

**FEE #14-05 D4**  
**SECTION 14, T4S, R4W, U.S.B.&M.**  
**2180' FNL 660' FWL**

**TOPOGRAPHIC** **5 22 97**  
**MAP** MONTH DAY YEAR  
 SCALE: 1" = 2000' DRAWN BY: D.COX REVISED: 00-00-00





**PROPOSED LOCATION:  
FEE #14-05 D4**

**LEGEND:**

- DISPOSAL WELLS
- PRODUCING WELLS
- ⦿ SHUT IN WELLS
- ⊙ WATER WELLS
- ⦿ ABANDONED WELLS
- ⦿ TEMPORARILY ABANDONED



**PETROGLYPH OPERATING CO., INC.**

**FEE #14-05 D4  
SECTION 14, T4S, R4W, U.S.B.&M.  
2180' FNL 660' FWL**



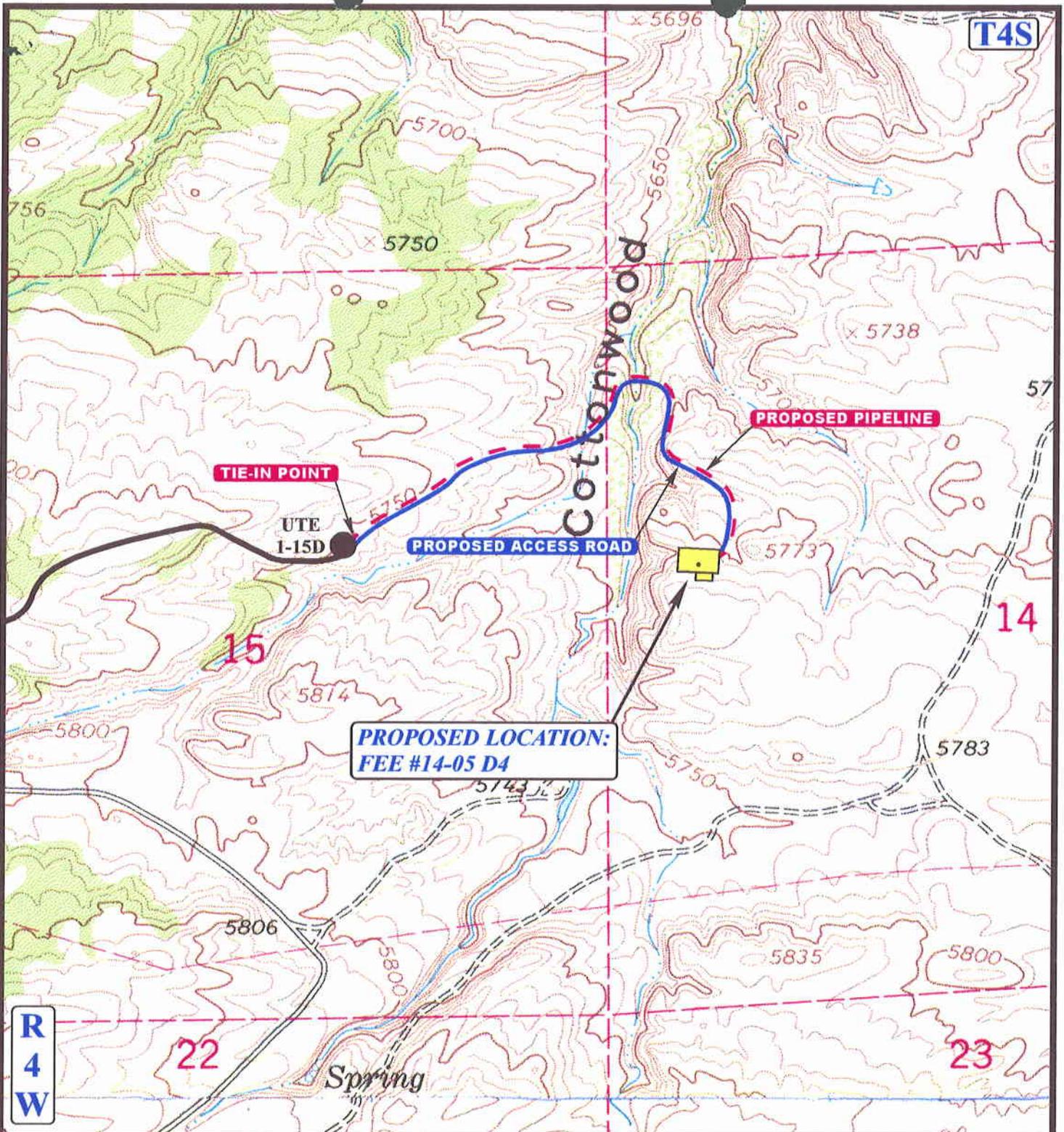
**Utah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(801) 789-1017 \* FAX (801) 789-1018  
Email: [uels@easilink.com](mailto:uels@easilink.com)

**TOPOGRAPHIC  
MAP**

**5 22 97**  
MONTH DAY YEAR

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





**APPROXIMATE TOTAL PIPELINE DISTANCE = 4100' +/-**

**LEGEND:**

- EXISTING PIPELINE
- PROPOSED PIPELINE
- PROPOSED ACCESS

**PETROGLYPH OPERATING CO., INC.**

**FEE #14-05 D4**  
**SECTION 14, T4S, R4W, U.S.B.&M.**  
**2180' FNL 660' FWL**



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 85 South 200 East Vernal, Utah 84078  
 (801) 789-1017 \* FAX (801) 789-1018  
 Email: [uels@easilink.com](mailto:uels@easilink.com)



**TOPOGRAPHIC** **5 22 97**  
**MAP** MONTH DAY YEAR  
 SCALE: 1" = 1000' DRAWN BY: D.COX REVISED: 00-00-00

**D**  
**TOPO**

Form 3160-5  
(June 1990)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

**SUBMIT IN TRIPLICATE**

1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	5. Lease Designation and Serial No. <b>FEE</b>
2. Name of Operator <b>Petroglyph Operating Company, Inc.</b>	6. If Indian, Allottee or Tribe Name
3. Address and Telephone No. <b>P.O. Box 1839, Hutchinson, KS 67504-1839; (316) 665-8500</b>	7. If Unit or CA, Agreement Designation
4. Location of Well (Footage, Sec., T., R., or Survey Description) <b>2180' FNL &amp; 660' FWL SWNW Sec. 14-T4S-R4W</b>	8. Well Name and No. <b>Fee 14-05D4</b>
	9. API Well No.
	10. Field and Pool, or Exploratory Area <b>Duchesne</b>
	11. County or Parish, State <b>Duchesne County, UT</b>

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

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

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

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

Petroglyph Operating Company, Inc. would like to notify you by subsequent report that the above referenced well bond number is B6692.

Surface casing will be 8-5/8" J55 24# and set @ ± 250'. Production casing will be 5-1/2" J55 15.5# and set @ ± 2450'. All cement will be ran to surface.

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

Signed Deanna Ball Title Operations Coordinator Date 6/4/97

(This space for Federal or State official use)

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

Conditions of Approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter in its jurisdiction.

\*See Instruction on Reverse Side

# PETROGLYPH OPERATING COMPANY, INC.

P. O. Box 1839  
Hutchinson, Kansas 67504-1839  
Tele: (316) 665-8500  
Fax: (316) 665-8577

P. O. Drawer 607  
Roosevelt, Utah 84066  
Tele: (801) 722-2531  
Fax: (801) 722-9145

## TELECOPIER TRANSMITTAL SHEET

### PRIVILEGED AND CONFIDENTIAL

This facsimile contains privileged and confidential information intended only for the use of the individual or entity named below. If the reader of the facsimile is not the intended recipient, or the employee or agent responsible for delivering it to the intended recipient, you are hereby on notice that you are in possession of confidential and privileged information. Any dissemination, distribution, or copying of this facsimile is strictly prohibited. If you have received this facsimile in error, please immediately notify the sender by telephone (collect) and return the original to the sender at the above address via the U.S. Postal Service.

This transmission consists of 4 page(s), including this cover sheet. Please deliver to recipient immediately!

TO: Jon Baza COMPANY: \_\_\_\_\_  
FROM: Deanna Bell COMPANY: \_\_\_\_\_  
FAX NUMBER: \_\_\_\_\_ DATE: 6/4/97  
MESSAGE:



**PETROGLYPH OPERATING COMPANY, INC.**

P. O. Box 1839  
Hutchinson, Kansas 67504-1839  
Tele: (316) 665-8500  
Fax: (316) 665-8577

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This transmission consists of 2 page(s), including this cover sheet. Please deliver to recipient immediately!

TO: Jon Baza COMPANY: \_\_\_\_\_

FROM: Deanna Bell COMPANY: \_\_\_\_\_

FAX NUMBER: \_\_\_\_\_ DATE: \_\_\_\_\_

MESSAGE: Affidavit 14-05

*Please deliver to Jon ASAP. Thank you.*

WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 05/29/97

API NO. ASSIGNED: 43-013-31885
--------------------------------

WELL NAME: FEE 14-05 D4  
OPERATOR: PETROGLYPH OPERATING (N3800)

PROPOSED LOCATION:  
NWSW 14 - T04S - R04W  
SURFACE: 2180-FNL-0660-FWL  
BOTTOM: 2180-FNL-0660-FLW  
DUCHESNE COUNTY  
UNDESIGNATED FIELD (002)

INSPECT LOCATION BY: 06/10/97

TECH REVIEW	Initials	Date
Engineering	SLB	6/6/97
Geology		
Surface		

LEASE TYPE: FEE  
LEASE NUMBER: FEE

PROPOSED PRODUCING FORMATION: GRRV

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Federal[] State[] Fee[]  
(Number \_\_\_\_\_)
- Potash (Y/N)
- Oil shale (Y/N)
- Water permit  
(Number 43-10152)
- RDCC Review (Y/N)  
(Date: \_\_\_\_\_)

LOCATION AND SITING:

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

COMMENTS: Casing program OK (sundry notice 6/4/97, see notes for Fee #15-12D4 well). Casing stip. needed. BOP OK. Surface agreement affidavit faxed to DDCM 6/6/97.

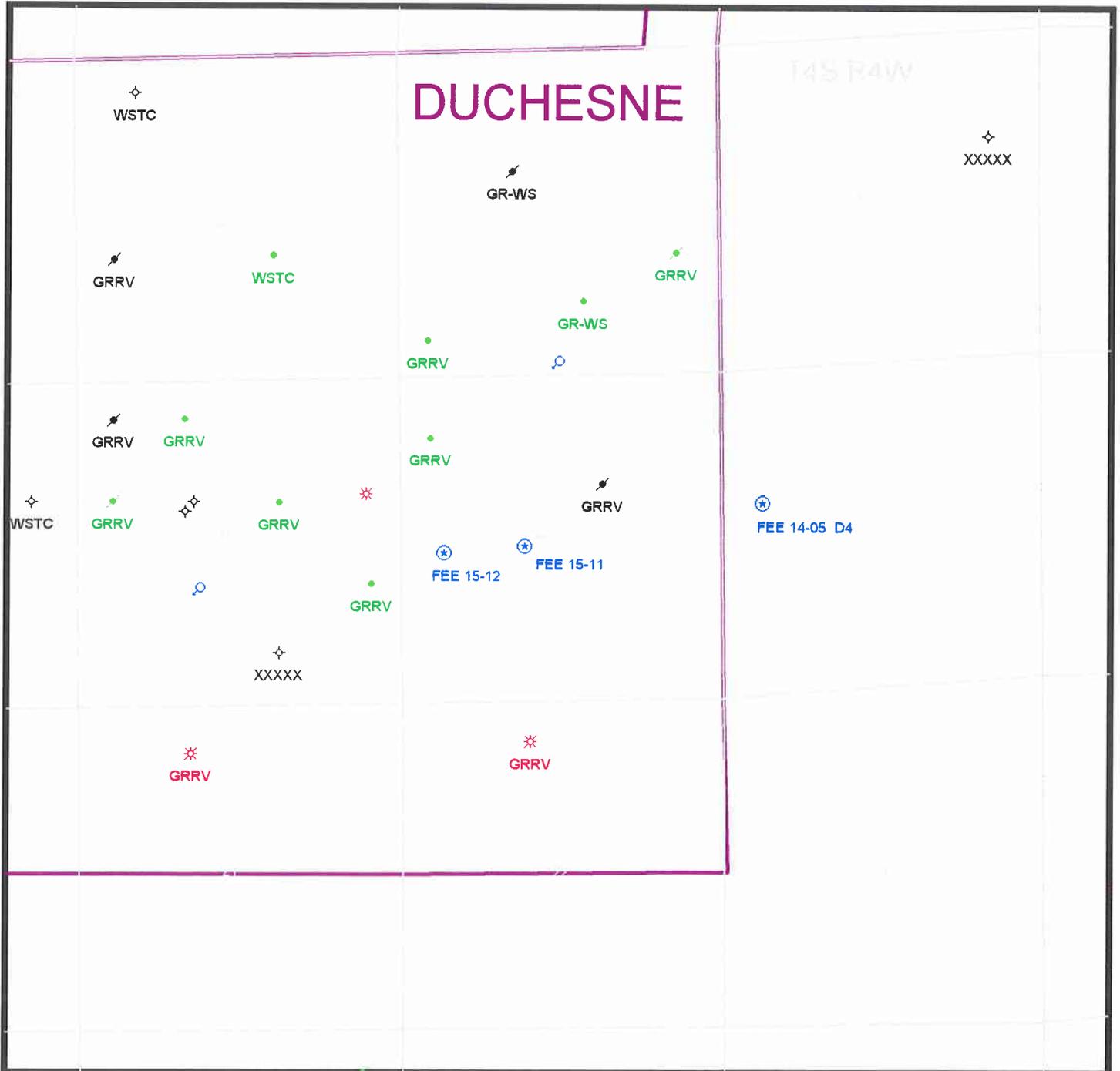
- STIPULATIONS:
1. Statement of basis.
  2. The operator shall utilize the modified casing program as specified on the submitted sundry notice dated June 4, 1997.
  3. The cement volumes for the 5 1/2" casing shall be determined from actual hole conditions and the setting depth of the casing in order to place cement from the pipe setting depth back to surface.
  4. See attached conditions of approval.

OPERATOR: PETROGLYPH (N3800)

FIELD: UNDESIGNATED (002) & DUCHESNE (090)

SEC, TWP, RNG: 14, 15, T4S, R4W

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



PREPARED:  
DATE: 29-MAY-97

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

Operator Name: Petroglyph Operating Company

Name & Number: Fee 14-05 D4

API Number: 43-013-31885

Location: 1/4, 1/4 SWNW Sec. 14 T. 4S R. 4W

**Geology/Ground Water:**

The base of moderately saline water is at a depth of approximately 1300 feet in the area of the proposed well. Fresh water aquifers may be encountered from very near surface to 1300 feet. Water flows have been encountered at depths of 35 feet and 150 feet in the vicinity of this well. The Ute Tribal # 4 SWD is located in sec. 15, T. 4 S., R. 4 W.. The injection interval is at approximately 1800 feet. When the proposed well is drilled a correlation should be made with the SWD to assure that adequate cement is circulated to cover this interval. The proposed casing and cement program should adequately isolate any water encountered if the cement program is implemented properly.

Reviewer: D. Jarvis

Date: 6-6-97

**Surface:**

Clinton Moon's only concern with this proposed location is that the access road will cross adjacent wash, and he wanted a culvert or something to prevent washouts. Vince Quinn stated that they would prefer building a low-water crossing with a concrete base to prevent erosion and washout. Moon seemed to be happy with the cement crossing solution. No surface or live water was observed on visit; however, the adjacent wash will have live water during stormy weather.

Reviewer: Dennis L. Ingram

Date: June 5, 1997.

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

1. A 12 Mil or heavy liner be used to line reserve pit.

APD evaluation  
Casing & cementing program  
Petroglyph Operating Co. Inc.  
Fee 15-12D4 well

### I. Casing program

Production string: 5 1/2", 15.5#, J-55 set at 2450'.

Mud wt: (air drilled)

Max. antic. BHP: 1450 psi

Burst str. of casing = 4810 psi      Burst SF =  $\frac{4810}{1450} = 3.32$

OK

Collapse str. of casing = 4040 psi

Collapse SF =  $\frac{4040}{1450} = 2.79$

Wt. of pipe =  $(15.5)(2450) = 37,975 \#$

OK

St. str. (assume STC) = 202,000 #

Tension SF =  $\frac{202,000}{37,975} = 5.32$

OK

### II. Cement program

Vol. & height between 5 1/2" casing - 7 7/8" hole: 0.3466 cu. ft. / sk.  
(100% excess)

Cement vol. =  $(2450)(0.3466) = 849 \text{ cu. ft.}$

No volumes or yields specified in the APD.

ON-SITE PREDRILL EVALUATION

Division of Oil, Gas and Mining

OPERATOR: Petroglyph Operating Inc.

WELL NAME & NUMBER: FEE #14-05 D4

API NUMBER: 43-013-31885

LEASE: FEE FIELD/UNIT: Duchesne

LOCATION: 1/4, 1/4 SW/NW Sec: 14 TWP: 4S RNG: 4W 2180 FNL 660 FWL

LEGAL WELL SITING: 460 F SEC. LINE; 460 F 1/4, 1/4 LINE; 920 F ANOTHER WELL.

GPS COORD (UTM): 12 558696E; 4442820N

SURFACE OWNER: Phillip Moon, Allen Moon, Clinton Moon, Lamont Moon.

PARTICIPANTS

Vince Quinn (Petroglyph Operating); Ed Trotter (Petroglyph);  
Clinton Moon (Landowner); Dennis L. Ingram (DOGM)

REGIONAL/LOCAL SETTING & TOPOGRAPHY

Located on the northern end of a north/south bench with ground  
dipping gradually toward the north. A north/south wash is located  
just west of proposed well site but appeared dry on visit. However,  
this wash does drain a large area and probably has substantial  
erosion capabilities.

SURFACE USE PLAN

CURRENT SURFACE USE: Domestic grazing; wildlife use.

PROPOSED SURFACE DISTURBANCE: 215'x 290' plus 0.8 miles access road  
from Ute #1-15D location.

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: Four wells in  
Section 15, T4S, R4W, completed in the Green River, Duchesne Field.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: Tanks and treating  
equipment shall be located on well site. A 4 1/2" OD steel gas line  
shall be laid above ground, approximately 4100' in length to SW/NE,  
section 15, T4S, R4W.

SOURCE OF CONSTRUCTION MATERIAL: Native cut and fill from well site.

ANCILLARY FACILITIES: No

WASTE MANAGEMENT PLAN:

To be submitted to DOGM. Part 7 of the surface use plan.

ENVIRONMENTAL PARAMETERS

AFFECTED FLOODPLAIN AND/OR WETLANDS: N/A

FLORA/FAUNA: Sagebrush, prickly-pear cactus, shadscale, bunch grass; antelope, deer, elk, rabbits, coyote, raptures, small birds and mammals.

SOIL TYPE AND CHARACTERISTICS: Light Brown sandy loam

SURFACE FORMATION & CHARACTERISTICS: South Flank of Uinta Formation

EROSION/SEDIMENTATION/STABILITY: No active erosion, minor Sedimentation, no stability problems on well site.

PALEONTOLOGICAL POTENTIAL: None observed.

RESERVE PIT

CHARACTERISTICS: 60'x 110' x 8' deep with prevailing winds from reserve pit toward drilling rig.

LINER REQUIREMENTS (Site Ranking Form attached): 42 points.

SURFACE RESTORATION/RECLAMATION PLAN

See attached.

SURFACE AGREEMENT: Yes.

CULTURAL RESOURCES/ARCHAEOLOGY: None done, was waiver signed?

OTHER OBSERVATIONS/COMMENTS

Electric sheep fence just north west of location overlooking wash.

ATTACHMENTS:

Photos of proposed well site in predrill status.

Dennis L. Ingram  
DOGM REPRESENTATIVE

6/2/97, 11:00 am  
DATE/TIME

**Evaluation Ranking Criteria and Ranking Score  
For Reserve and Onsite Pit Liner Requirements**

<u>Site-Specific Factors</u>	<u>Ranking</u>	<u>Site Ranking</u>
Distance to Groundwater (feet)		
>200	0	
100 to 200	5	
75 to 100	10	
25 to 75	15	
<25 or recharge area	20	<u>10</u>
Distance to Surf. Water (feet)		
>1000	0	
300 to 1000	2	
200 to 300	10	
100 to 200	15	
< 100	20	<u>2</u>
Distance to Nearest Municipal Well (feet)		
>5280	0	
1320 to 5280	5	
500 to 1320	10	
<500	15	<u>0</u>
Distance to Other Wells (feet)		
>1320	0	
300 to 1320	10	
<300	20	<u>0</u>
Native Soil Type		
Low permeability	0	
Mod. permeability	10	
High permeability	20	<u>10</u>
Fluid Type		
Air/mist	0	
Fresh Water	5	
TDS >5000 and <10000	15	
TDS >10000 or Oil Base	20	
Mud Fluid containing high levels of hazardous constituents		<u>5</u>
Drill Cuttings		
Normal Rock	0	
Salt or detrimental	10	<u>0</u>
Annual Precipitation (inches)		
<10	0	
10 to 20	5	
>20	10	<u>0</u>
Affected Populations		
<10	0	
10 to 30	6	
30 to 50	8	
>50	10	<u>0</u>
Presence of Nearby Utility		
Conduits		
Not Present	0	
Unknown	10	
Present	15	<u>15</u>
<b>Final Score (Level II Sensitivity)</b>		<u><b>42 points</b></u>



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

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
James W. Carter  
Division Director

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

**CONDITIONS OF APPROVAL**

Well Name and Number: Fee 14-05D4  
API Number: 43-013-31885  
Operator: Petroglyph Operating Company Inc.  
Type of Approval Requested: APD approval  
Reference Document: APD dated 5/27/97

Approval Conditions:

1. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis dated June 6, 1997 (copy attached).
2. The operator shall utilize the modified casing program as specified on the submitted sundry notice dated June 4, 1997.
3. The cement volumes for the 5-1/2" casing shall be determined from actual hole conditions and the setting depth of the casing in order to place cement from the pipe setting depth back to the surface.
4. The presence of cement and a good quality bond surrounding the 5-1/2" casing shall be determined by means of a cement bond log. If such conditions cannot be shown, the operator shall obtain Division approval of a remedial plan for cementing the 5-1/2" casing.
5. The operator shall correlate the depth interval in this well with the injection zone in the Duchesne Ute Tribal #4 injection well located in Section 16, Township 4 South, Range 4 West. The operator shall furthermore ensure that the 5-1/2" casing is cemented in place with an appropriate weight and grade of cement which can achieve at least 500 psi compressive strength across the aforementioned injection zone.

  
John R. Baza, Petroleum Engineer

6/6/97  
Date



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

Michael O. Leavitt  
Governor  
Ted Stewart  
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James W. Carter  
Division Director

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

June 6, 1997

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

Re: Fee 14-05 D4 Well, 2180' FNL, 660' FWL, SW NW, Sec. 14,  
T. 4 S., R. 4 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 43-013-31885.

Sincerely,

A handwritten signature in cursive script that reads "Lowell P. Braxton".

Lowell P. Braxton  
Deputy Director

lwp

Enclosures

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

Operator: Petroglyph Operating Company, Inc.  
Well Name & Number: Fee 14-05 D4  
API Number: 43-013-31885  
Lease: Fee  
Location: SW NW Sec. 14 T. 4 S. R. 4 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 John R. Baza (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.

4. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis dated June 6, 1997 (copy attached).

5. The operator shall utilize the modified casing program as specified on the submitted sundry notice dated June 4, 1997.

6. The cement volumes for the 5½" casing shall be determined from actual hole conditions and the setting depth of the casing in order to place cement from the pipe setting depth back to the surface.
7. The presence of cement and a good quality bond surrounding the 5½" casing shall be determined by means of a cement bond log. If such conditions cannot be shown, the operator shall obtain Division approval of a remedial plan for cementing the 5½" casing.
8. The operator shall correlate the depth interval in this well with the injection zone in the Duchesne Ute Tribal #4 injection well located in Section 16, Township 4 South, Range 4 West. The operator shall furthermore ensure that the 5½" casing is cemented in place with an appropriate weight and grade of cement which can achieve at least 500 psi compressive strength across the aforementioned injection zone.

OPERATOR PETROGLYPH OPERATING CO

OPERATOR ACCT. NO. N 3800

ADDRESS \_\_\_\_\_

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99999	12260	4301331885	FEE 14-05 D4	NWSW	14	4S	4W	DUCHESNE	6-7-97	
WELL 1 COMMENTS: *PRODUCES INTO ITS OWN TANK BATTERY AS PER OPERATOR. ENTITY ADDED 11-14-97.											
WELL 2 COMMENTS:											
WELL 3 COMMENTS:											
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

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

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

  
L. CORDOVA (DOGM)  
 Signature  
ADMIN. ANALYST                      11-14-97  
 Title    Date  
 Phone No. (     ) \_\_\_\_\_

DIVISION OF OIL, GAS AND MINING

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SPUDDING INFORMATION

Name of Company: PETROGLYPH OPERATING

Well Name: FEE 14-05D4

Api No. 43-013-31885

Section: 14 Township: 4S Range: 4W County: DUCHESNE

Drilling Contractor UNION

Rig # 7

SPUDDED:

Date 6/7/97

Time \_\_\_\_\_

How ROTARY

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

Reported by K. STRINGHAM

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

Date: 6/10/97 Signed: JLT

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING  
DRILLING INSPECTION FORM

OPERATOR: PETROGLYPH OPERATING CO. COMPANY REP: KENT STRINGHAM

WELL NAME 14-05D4 API NO 43-013-31885

QTR/QTR: SW/NW SECTION: 14 TWP: 4S RANGE: 4W

CONTRACTOR: UNION DRILLING CO. RIG NUMBER: 7

INSPECTOR: DAVID HACKFORD TIME: 1:30 PM DATE: 6/12/97

SPUD DATE: DRY: \_\_\_\_\_ ROTARY: \_\_\_\_\_ PROJECTED T.D. 3680'

OPERATIONS AT TIME OF VISIT: CIRCULATE DRILL PIPE 10 STANDS  
OFF BOTTOM. WAIT ON NEW AIR BOOSTER.

WELL SIGN: N MUD WEIGHT 8.3 LBS/GAL BOPE: Y

BLOOIE LINE: Y FLARE PIT: N H2S POTENTIAL: N

ENVIRONMENTAL:

RESERVE PIT: Y FENCED: Y LINED: Y PLASTIC: Y

RUBBER: N BENTONITE: N SANITATION: Y

BOPE TEST RECORDED IN THE RIG DAILY TOUR BOOK: Y

REMARKS:

SURVEY AT 1625' WAS 2 DEGREES. AT 1410' WAS 1 3/4 DEGREES.  
NIPILED UP WITH DOUBLE GATE AND ROTATING HEAD. 298' OF 8 5/8"  
SURFACE PIPE SET AND CEMENTED. DRILLING OPERATIONS WILL  
PROBABLY RESUME TOMORROW WHEN NEW AIR COMPRESSOR BOOSTER  
ARRIVES ON LOCATION AND IS HOOKED UP.

(4)

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING  
WORKOVER AND COMPLETION RECORD

OPERATOR: PETROGLYPH OPERATING COMPANY REP: GENE SERALE

WELL NAME: FEE #14-05D4 API NO: 43-013-31885

SECTION: 14 TWP: 4S RANGE: 4W COUNTY: DUCHESNE

TYPE OF WELL: OIL: YES GAS: \_\_\_\_\_ WATER INJECTION: \_\_\_\_\_

STATUS PRIOR TO WORKOVER: DRILL HOLE

INSPECTOR: DENNIS L. INGRAM TIME: 1:20 PM DATE: 10/6/97

REASON FOR WORKOVER:

CHANGE OF LIFT SYSTEM: \_\_\_\_\_ PUMP CHANGE: \_\_\_\_\_ PARTED RODS: YES

CASING OR LINER REPAIR: \_\_\_\_\_ ACIDIZE: \_\_\_\_\_ RECOMPLETION: \_\_\_\_\_

TUBING CHANGE: \_\_\_\_\_ WELLBORE CLEANOUT: \_\_\_\_\_ WELL DEEPENED: \_\_\_\_\_

ENHANCED RECOVERY: \_\_\_\_\_ THIEF ZONE: \_\_\_\_\_ CHANGE ZONE: \_\_\_\_\_

ENVIRONMENTAL/DISPOSITION OF FLUIDS USED: PIT TANK & 400 BBL.  
UPRIGHT

PIT: LINED N UNLINED N FRAC TANK (1) BOPE: NO H2S PRESENT: N

OPERATIONS AT THE TIME OF INSPECTION: UNSEAT PUMP.

BETTES RIG #1 ON WELL.

REMARKS:

LEON (THE TOOLPUSHER) SAYS THEY WILL LAY DOWN RODS AND REPLACE  
WITH WEIGHED RODS. HE CLAIMS THE FRYOR OIL IS TOO THICK TO  
PUMP, AND THEY HAVE ONLY BEEN ABLE TO FLOW WELL SINCE COMPLETION

# **PETROGLYPH** Operating Company, Inc.

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



June 13, 1997

**CONFIDENTIAL**

Mr. John Baza  
Division of Oil Gas and Mining  
State of Utah  
1594 West North Temple  
Suite 1210  
Salt Lake City, Utah 84180  
Phone: 801-538-5277  
Fax: 801-359-3940

**RE: Response to request to exemption to placement of cement top at surface listed in permit to drill for Fee 14-05D4**

Fee 14-05D4  
2180 FNL 600 FWL  
SW NW Section 14  
T4S R4W  
Duchesne County, Utah  
API # 43-013-31885

Dear Mr. Baza,

This letter will confirm our conversation today regarding the cement top on the above mentioned well. It is my understanding that should Petroglyph encounter hole problems which would not enable us to obtain a good quality cement job over the shallow ammonia water and gas sands from 1200 to 1600' by attempting to bring cement to surface, Petroglyph is authorized to bring the cement top to 1200' from surface.

Hole conditions which would not enable us to perform a cement job successfully to surface would include lost circulation or low bottom hole pressure in the Friar sands from 2400' to 3500' in the Fee 14-05D4 well. The Fee 14-05D4 well is now at 1900' and will drill into the Friar sands tonight and Saturday June 14, 1997.

Page 2 of 2  
Fee 14-05D4  
June 13, 1997  
Cement Top Exemption Request

As per our June 11, 1997 letter, 200 feet above the geological equivalent sub sea depth of the Friar injection zones in the Friar #4 injection well in Section 16, T4S R4W is at a depth of 1570' from surface in the Fee 14-05D4 well. Therefore our plan is to bring Thixotropic cement from the casing shoe at approximately 2400', to 1570' in the Fee 14-05D4 well. This will place 3500 psi compressive strength cement across the Friar injection zones in the Fee 14-05D4 well. We then plan to spot Hi Fill cement from 1570' to 1200' to protect the shallowe ammonia water zones at approximately 1300' in the Fee 14-05D4 well.

Sincerely Yours,



Ralph L. Nelms  
Manager of Utah Operations

cc: Mr. Bob Christensen  
Mr. Ken Smith  
Mr. Vince Guinn  
Mr. Gene Searle  
Mr. Deanna Bell

APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING

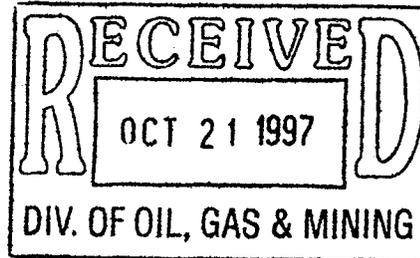
DATE: 6/16/97  
BY: [Signature]

# PETROGLYPH Operating Company, Inc.

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

October 15, 1997

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



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Ms. Dyson:

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

<u>Well Name</u>	<u>Log</u>
Ute Tribal 19-06	CNL & AIT
Ute Tribal 16-07	CNL & AIT
Ute Tribal 19-05	CNL & AIT
Ute Tribal 18-11	CNL & AIT
Ute Tribal 15-12	CNL & AIT
Ute Tribal 16-03	CNL & AIT
Ute Tribal 14-05	CNL & AIT 43 013 31885 7045 ROAD 14
Ute Tribal 19-09	CNL & AIT
Ute Tribal 16-08	CNL & AIT
Ute Tribal 19-04	CNL & AIT
Ute Tribal 07-10	CNL & AIT
Ute Tribal 19-03	CNL & AIT
Ute Tribal 30-10	CNL & AIT
Ute Tribal 30-11	CNL & AIT

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

Sincerely,

Judy Gates  
Petroleum Geology Technician

COMPLETION REPORT

9/25/97

Petroglyph Operating Company, Inc.

<b>Operator:</b> Petroglyph Operating Company, Inc.	<b>Elevation:</b> KB 5777
<b>Lease:</b> Fee 14-05D4	GL 5767
<b>API #:</b> 43-013-31885	<b>Property:</b> 55032
<b>Location:</b> 14 - 4 S - 4 W	<b>AFE/EPE Number:</b> 41375
<b>County, St.:</b> Duchesne UT	

**Activity Date      Daily Cost      Activity Description**

7/11/97              \$3,292.00      PERFORATIONS:  
2568

MIRU Betts Well Service Rig #1. NU Prod'n head & BOPs. RU pump & lines. Test 5½" csg to 2000 psi. PU & RIH w/ 4-3/4" bit & 6 3-1/8" DC. Tag @ 2496'. Drill out 3' cmt, baffle collar ±45' cmt & triplex shoe. Did not drill out into open hole as was expected. Keep drilling cmt to 2698' (140' below shoe). Cont to RIH to 5745' & circulate clean. Circulating oil & gas to tank. POOH to 2465' & SWIFN.

7/14/97              \$1,864.00

Open well w/ cmt drilled out & well circ clean yesterday to 2745'. This a.m., SICP @ 300 psi. SITP @ 250 psi. Circ hole to kill well. Large amt of oil @ surf. POOH & LD drill collars. RIH w/ 4-3/4" bit to 2500'. Shut dwn & circ well to control. Finish RIH & tag fill @ 3238'. Clean hole w/ prod'n wtr. Circ hole w/ 4 times hole volume & POOH w/ bit. Load hole w/ prod'n wtr & SWIFN.

7/15/97              \$2,463.00

Open well SICP @ 250 psi. RU HLS & attempt to run downhole video to inspect for fractures in openhole. Could not get into well due to oil @ surf. Open well & flowed to pit ±20 bblsoil.

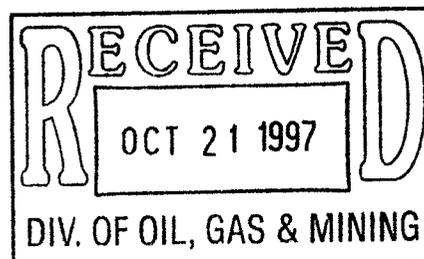
RD HLS. RU stripping head. Pumped 10 bbls prod'n wtr dwn csg to control well. Open BOPs & RIH w/ tbg to ±300'. Circ well clean. Finish RIH to 2366'. Pumped 130 bbls clean wtr dwn tbg & up annulus.

RU HLS & run video dwn tbg. Still have too much oil flowing up tbg to see w/ camera. RD HLS. Circ dwn tbg & up annulus w/ 390 bbls wtr. RU HLS & run video dwn tbg to ±2100'. Camera covered w/ oil. Still too much oil in tbg. SWIFN

7/16/97              \$10,309.00

Open well. SICP @ 250 psi. SITP @ 250 psi. Bleed off csg to tank. Flowing oil ±20 bbls. RU & pump dwn tbg & up annulus w/ 130 bbls K wtr. RU HLS & RIH w/ video while pumping dwn tbg w/ hot K wtr @ ±.25 bpm. Got camera to ±2600' where we were unable to see due to what appears to be unclean wtr. POOH & up video. Circ hole w/ K wtr. POOH w/ tbg. RIH w/ 5½" BVBP & set @ 2481' & test to 500. Circ hole & POOH w/ ret head.

RU Schlumberger & run CBL from 2481 to top of cmt @ 1100'. RD wireline. RIH w/ 10 stands tbg & SWIFN. Wind blowing too hard to run tbg.



# COMPLETION REPORT

9/25/97

Petroglyph Operating Company, Inc.

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

**Elevation:** KB 5777

**Well:** Fee 14-05D4

GL 5767

**County, St.:** Duchesne UT

Activity Date	Daily Cost	Activity Description
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7/17/97	\$1,330.00	
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Open well w/ BVBP set @ 2481'. SICP @ 0 psi. RIH to VBVP @ 2481'. Rel POOH w/ BVBP. RIH w/ tbg to 2400' & kill well. Finish RIH to TD @ 3235'. POOH to 3005'. RU & attempt to swab well. Made 4 runs & had trouble getting swab dwn tbg due to oil. Could not get sinker bars dwn. TWR @ 15 bbls. FFL @ 200'. SWIFN.

7/18/97	\$515.00	
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Open well. SICP @ 300 psi. SITP @ 230 psi. Attempt to flow test well. Oil too thick to flow up flowline w/ ±130 psi. Top @ 3 bbls. Abort flow test & SWIFN.

7/21/97	\$12,817.00	WELLBORE:
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Open well SICP @ 375 psi. SITP @ 300 psi. Attempt to pump dwn annulus to circ well. Would not circ @ 600 psi pumping into formation. Attempt to pump dwn tbg @ 1500 psi. Not moving oil. Bleed off to tank.

RU hot oil unit to csg & start pumping wtr @ ±260°F. Caught circ. Circ clean w/ prod'n wtr. POOH w. tbg. RIH w/ BHA. Circ well clean w/ well flowing. ND BOPs. Set B2 TAC w/ 4000# tension. Install WH flange.

RU pump & rods after flushing w 10 bbls wtr & 20 bbls condensate. RIH to 3/4 way. Well flowing. Circ well clean Finish RIH w/ rods. Flush rods w/ 10 bbls condensate & 10 bbls prod'n wtr. seat & space out pump. Load & test tbg to 500 psi w/ pump. Well ready for prod'n. SWIFN. Will RD service rig in a.m. FINAL REPORT.

TUBING DETAIL	LENGTH	DEPTH
KBTH	10.00	
2-7/8" 6.5# J-55 tbg (78 jts)	2439.16	2449.16
5½ x 15.5 B2 Anchor * 25000 shear pins	2.66	
2-7/8" 6.5# J-55 tbg (9 jts)	281.54	2733.36
2-7/8 PSN	1.20	
2-7/8" 6/5# J-55 tbg (1 jt)	31.56	
Notch Collar	.50	
EOT		2766.62

ROD DETAIL
7/8" x 2'
1½ x 22 w/ liner
7/8" x 2' pony rod
7/8" x 6' pony rod
7/8" x 8' pony rod
3/4" slick rods Norris Grade D (108)
2½ x 1½ x 12 40 ring PA

# COMPLETION REPORT

9/25/97

*Petroglyph Operating Company, Inc.*

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

**Elevation:** KB 5777  
GL 5767

**Well:** Fee 14-05D4

**County, St.:** Duchesne UT

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<b>Activity Date</b>	<b>Daily Cost</b>	<b>Activity Description</b>
<b>Cumulative Cost:</b>	<b>\$32,590.00</b>	
<b>Days Since Start:</b>	<b>11</b>	

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NO.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

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

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

7. UNIT AGREEMENT NAME

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

8. FARM OR LEASE NAME

2. NAME OF OPERATOR  
PETROGLYPH OPERATING COMPANY, INC.

9. WELL NO.  
FEB 14-05D4

3. ADDRESS OF OPERATOR  
P.O. BOX 607, ROOSEVELT, UT 84066 (435) 722-2531

10. FIELD AND POOL, OR WILDCAT  
Duchesne

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface 2180' FNL 660' FWL

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11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  
SWNW Sec. 14-T4S-R4W

At top prod. interval reported below

At total depth 3235' RTD

14. PERMIT NO. 43-013-31885 DATE ISSUED 6/6/97 12. County or Parish Duchesne 13. State Utah

15. DATE SPUDDED 6/9/97 16. DATE T.D. REACHED 6/14/97 17. DATE COMPLETED (Ready to prod.) 7/21/97 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* 19. ELEV. CASINGHEAD 5767' GL

20. TOTAL DEPTH, MD & TVD 3235' RTD 21. PLUG BACK T.D., MD & TVD 3235' 22. IF MULTIPLE COMPL., HOW MANY\* none 23. INTERVALS DRILLED BY ROTARY TOOLS CABLE TOOLS

24. PRODUCING INTERVAL(S) OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)\* 2559-3169' GIRRV 25. WAS DIRECTIONAL SURVEY MADE

26. TYPE ELECTRIC AND OTHER LOGS RUN Spectral Density, Dual Spaced Neutron w/ Gamma Ray, EMI 10-22-97 HIGH RESOLUTION INDUCTION 27. WAS WELL CORED

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8"	24	268'	12-1/4"	155 sxs Type 5	
5-1/2"	15.5	2559'	7-7/8"	30 sxs Highfill & 150 sxs Thixotropic	

29. LINER RECORD

SIZE	TOP	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number)  
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none (open hole)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.  
DEPTH INTERVAL (MD) AMOUNT AND KIND OF MATERIAL USED

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33. PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump)	WELL STATUS (Producing or shut-in)					
8/16/97	2-1/2" x 1-1/2" x 12 40 ring RHAC pump	producing					
DATE OF TEST 8/23/97	HOURS TESTED 24	CHOKER SIZE	PROD'N FOR TEST PERIOD	OIL - BBL. 13	GAS - MCF. 0	WATER - BBL. 0	GAS-OIL RATIO
FLOW. TUBING PRESS.	CASING PRESSURE 50	CALCULATED 24 HR. RATE	OIL - BBL.	GAS - MCF.	WATER - BBL.	OIL GRAVITY - API (CORR.)	

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

35. LIST OF ATTACHMENTS

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

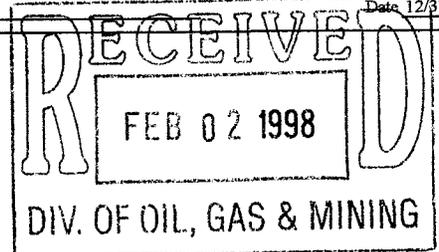
Signed Deanna Bell

Title Operations Coordinator

Date 12/31/97

See Spaces for Additional Data on Reverse Side

CONFIDENTIAL  
PERIOD  
EXPIRED  
ON 8-21-98



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

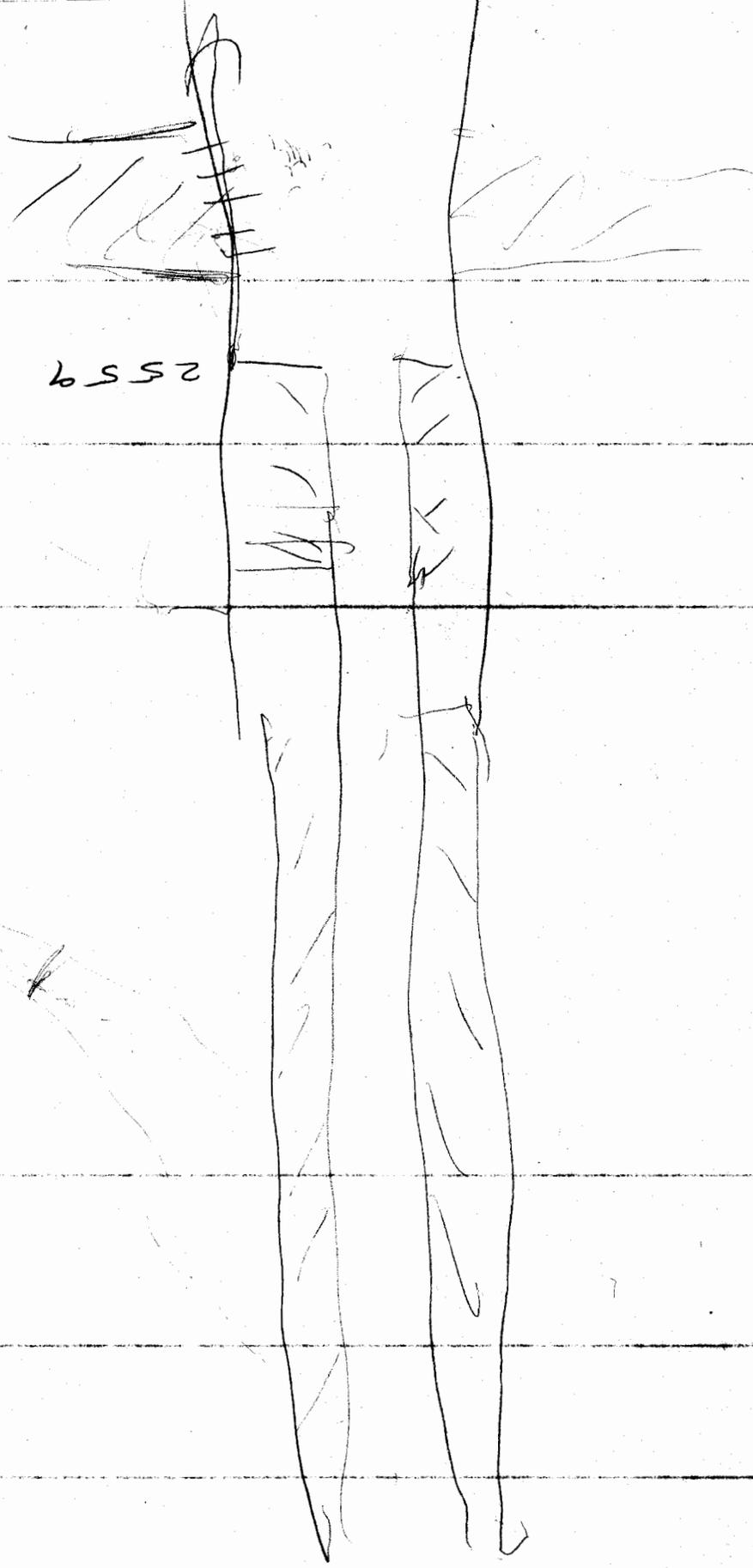
38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH	TOP TRUE VERT. DEPTH
NONE OPEN HOLE						

THIS IS A SUMMARY OF THE INFORMATION CONTAINED IN THE ORIGINAL REPORT AND IS NOT A SUBSTITUTE FOR THE ORIGINAL REPORT. THE ORIGINAL REPORT SHOULD BE REFERRED TO FOR A COMPLETE AND DETAILED ACCOUNT OF THE INVESTIGATION.

REPORT NO. 2559

DATE: 10/10/59



NAME

AREA DATA (MOR ADST)

DATE

PROJECT NO.