

UTAH OIL AND GAS CONSERVATION COMMISSION

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

DATE FILED **11-4-91**

LAND: FEE & PATENTED STATE LEASE NO. **U-01194-A-STATE** PUBLIC LEASE NO. INDIAN

DRILLING APPROVED: **12-3-91**

SPUDDED IN:

COMPLETED: **1-28-93 LA** PUT TO PRODUCING:

INITIAL PRODUCTION:

GRAVITY A.P.I.

GOR:

PRODUCING ZONES:

TOTAL DEPTH:

WELL ELEVATION:

DATE ABANDONED: **LA'D APD Expired eff 1-28-93**

FIELD: **NATURAL BUTTES**

UNIT:

COUNTY: **UINTAH**

WELL NO. **DUCK BUTTE #13-27** API NO. **43-047-32159**

LOCATION **1960' FSL** FT. FROM (N) (S) LINE, **460' FWL** FT. FROM (E) (W) LINE, **NW SW** 1/4 - 1/4 SEC. **27**

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
<b>9S</b>	<b>21E</b>	<b>27</b>	<b>ENRON OIL &amp; GAS CO.</b>				

# ENRON

## OIL & GAS COMPANY

P.O. BOX 1815, VERNAL, UTAH 84078 (801)789-0790

October 31, 1991

Mr. Ronald J. Firth  
State of Utah  
Division of Oil, Gas & Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

RE: APPLICATION FOR PERMIT TO DRILL  
DUCK BUTTE 13-27  
SECTION 27, T9S, R21E  
UINTAH COUNTY, UTAH  
LEASE NO. U-01194-A- State

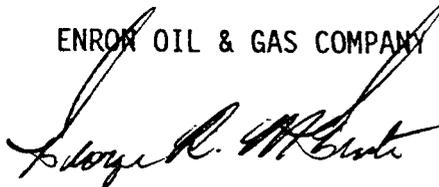
Dear Mr. Forsman:

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

If further information is required regarding this matter, please contact this office.

Sincerely,

ENRON OIL & GAS COMPANY



George R. McBride  
Sr. Production Foreman

### Attachments

cc: D. Weaver/T. Miller  
D. Zlomke  
Suzanne Saldivar - Houston  
File

RECEIVED

NOV 04 1991

DIVISION OF  
OIL GAS & MINING

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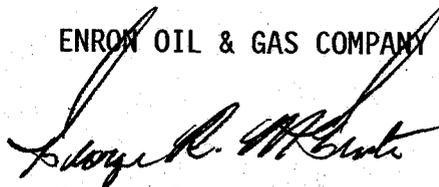
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**CONFIDENTIAL**

Sincerely,

ENRON OIL & GAS COMPANY



George R. McBride  
Sr. Production Foreman

### Attachments

cc: D. Weaver/T. Miller  
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Suzanne Saldivar - Houston  
File

/lw

DB13-27APD

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL DEEPEN OR PLUG BACK

1. TYPE OF WELL: DRILL  DEEPEN  PLUG BACK

2. TYPE OF WELL:  
Oil Well  Gas Well  Other   
Single Zone  Multiple Zone

3. NAME OF OPERATOR: Enron Oil & Gas Company

4. ADDRESS OF OPERATOR: P.O. Box 1815, Vernal, Utah 84078

5. LOCATION OF WELL (Report location clearly and in accordance with any State requirements):  
At surface: NW/4 SW/4 1960' FSL & 460' FWL  
At proposed prod. zone:

6. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE:  
Approx. 14 Miles Southeast of Ouray, Utah

7. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any): 460'

8. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL DRILLING COMPLETE OR APPLIC FOR THIS LEASE, FT.: 1119'+

9. ELEVATIONS (Show whether DF, RT, GR, etc.): 4945'

10. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 5/8"	24.0#	200'	125 sx Class "G" + 2% CaCl2 + 1/2 #/sx celloflake. 50/50 Pozmix + 2% gel + 10% salt to 3500' above all zones of interest (+ 10% excess). Lite cement (11 PPG±) + LCM to 100' above oil shale or fresh water intervals (+ 5% excess).
7 7/8"	5 1/2"	15.5#	4200'	

TECHNICAL REVIEW  
Engr. [Signature] 11/23/91  
Geol. [Signature] 11/21/91  
Surface [Signature] 11/26/91

RECEIVED  
NOV 04 1991

DIVISION OF OIL GAS & MINING

SEE ATTACHMENTS FOR:  
8 Point Plan  
Drilling Program  
BOP Schematic  
Surface Use and Operating Plan  
Location Plat  
Location Layout  
Topographic Maps "A", "B", and "C"

Enron Oil and Gas Company will be the designated operator of the subject well under Nation Wide Bond #8137603.

11. ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, 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.

12. SIGNED: Linda L. Wall TITLE: Sr. Admin. Clerk DATE: 10/31/91

(This space for Federal or State office use)

13. PERMIT NO. 13-047-30159 APPROVAL DATE: \_\_\_\_\_

14. APPROVED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

15. CONDITIONS OF APPROVAL, IF ANY: \_\_\_\_\_  
APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING  
DATE: 12-3-91  
BY: [Signature]  
WELL SPACING: 615-3-2

\*See Instructions On Reverse Side

**ENRON OIL & GAS CO.**

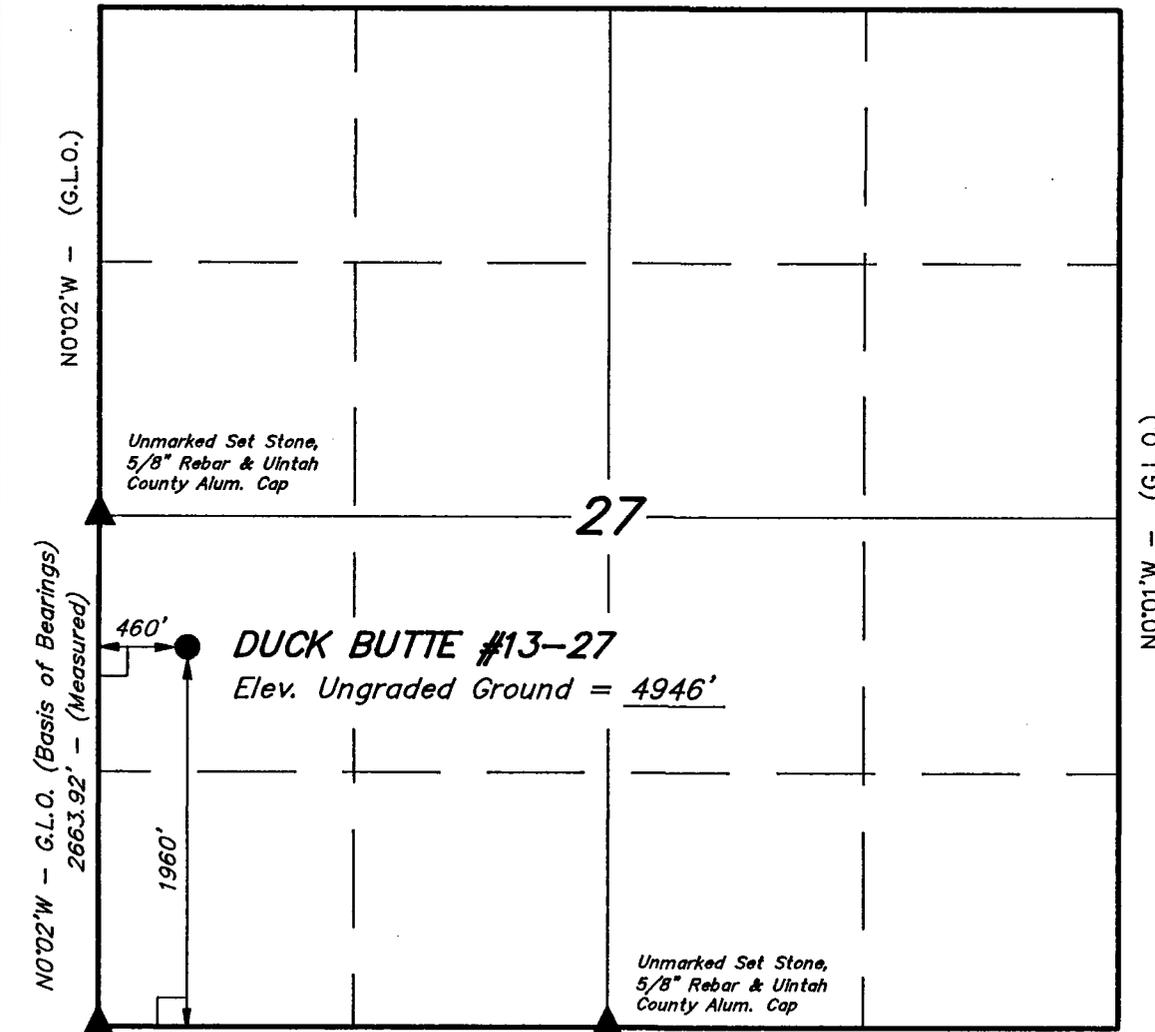
**T9S, R21E, S.L.B.&M.**

Well location, DUCK BUTTE #13-27, located as shown in the NW 1/4 SW 1/4 of Section 27, T9S, R21E, S.L.B.&M. Uintah County, Utah.

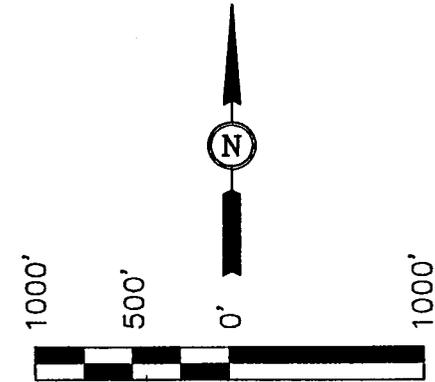
N89°59'W - 80.06 (G.L.O.)

**BASIS OF ELEVATION**

BENCH MARK 25EAM (1964) LOCATED IN THE NW 1/4 OF SECTION 27, T9S, R21E, S.L.B.&M. TAKEN FROM THE OURAY SE QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4961 FEET.



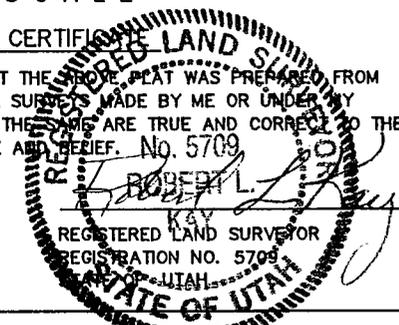
N0°01'W - (G.L.O.)



SCALE

**CERTIFICATE OF LAND SURVEY**

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. No. 5709



Large Marked Set Stone, Set 5/8" Rebar & Uintah County, Alum. Cap S89°39'51"E - 2642.07' (Meas.)

WEST - 40.00 (G.L.O.)

**UINTAH ENGINEERING & LAND SURVEYING**  
 P. O. BOX 1758 - 86 SOUTH - 200 EAST  
 VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 10-9-91
PARTY G.S. B.B. R.E.H.	REFERENCES G.L.O. PLAT
WEATHER HOT	FILE ENRON OIL & GAS CO.

▲ = SECTION CORNERS LOCATED.

EIGHT POINT PLAN

DUCK BUTTE 13-27

SECTION 27, T9S, R21E

UINTAH COUNTY, UTAH

1. & 2. ESTIMATED TOPS & ANTICIPATED OIL, GAS & WATER ZONES:

FORMATIONS	DEPTH	TYPE ZONES	MAXIMUM PRESSURE
Uinta	Surface		
Green River			
Oil Shale	1,496'		
"H" Marker	3,102'		
"J" Marker	3,774'		
"J" Sand	3,822'		
Upper "K" Sand	4,028	Oil	2,100 PSI
Lower "K" Sand	4,044	Oil	2,100 PSI
EST. TD	4,210'		

All depths are based on estimated KB elevation 4,959'. Maximum pressure estimates are based on bottom hole pressures measured on offset or near vicinity wells to the subject well.

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' -200'	200'	8 5/8"	24.0#	J-55 ST&C	1370 PSI	2950 PSI	244,000#
7 7/8"	0' -4210'	4210'	5 1/2"	15.5#	J-55 LT&C	4040 PSI	4810 PSI	217,000#

All casing to be used will be new or inspected.

EIGHT POINT PLAN

DUCK BUTTE 13-27

PAGE NO. 2

5. MUD PROGRAM:

<u>INTERVAL</u>	<u>MUD TYPE</u>	<u>MUD WEIGHT</u>	<u>WATER LOSS</u>
0' - 200'	Air		
200' - 4000'	Air/Water	8.4	NC
4000' - TD	Air/3% KCl water	8.5	NC

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

6. EVALUATION PROGRAM:

Logs: Dual Laterolog/GR/Caliper From base of surface casing to TD.  
FDC-CNL/GR/ TD to 3000'±.

Cores: None Programmed.

DST' : None Programmed.

Completion: To be submitted at a later date.

7. ABNORMAL CONDITIONS:

None anticipated.

8. STANDARD REQUIRED EQUIPMENT:

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

Attachment: BOP Schematic Diagram

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

Company/Operator: Enron Oil & Gas Company  
Well Name & Number: Duck Butte 13-27  
Lease Number: U-01194-A-State  
Location: 1960' FSL & 460' FWL NW/SW Sec. 27 T. 9S R. 21E  
Surface Ownership: State

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 14 miles southeast of Ouray, 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 0.2 mile 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 5%.
- D. No turn outs 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 crossing 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.

A Right-of-Way will be required on portion of road that crosses BLM Administered Surface.

As operator Enron Oil & Gas Company 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 - Fifteen - See attached TOPO Map "C" for location of producing wells.
- G. Shut in wells - None
- H. Injection wells - None

4. LOCATION OF EXISTING/AND OR PROPOSED FACILITIES

A. ON WELL PAD

- 1. Tank batteries - None
- 2. Production facilities will be set on location if well is successfully completed for production. Facilities will consist of well head & valves, heater treater, two oil tanks, one water tank and a pumping unit if well does not flow.  
See attached facility diagram.
- 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. All facilities will be kept on location, thus no right-of-way grants will be required.
- 2. See facility diagram.
- 3. NA
- 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 content 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 south side of 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 colors is Carlsbad Canyon. If at any time the facilities located on public land and authorized by the terms of the lease are no longer included in the lease (due to a contraction in the unit or other lease or unit boundary change), State will process a change in authorization to the appropriate rental or other financial obligation as determined by the authorized officer.

**5. LOCATION & TYPE OF WATER SUPPLY**

- A. Water supply will be from Ouray Brine Plant at Ouray, Utah, and/or Target Trucking Inc.s' water source in the SW/SW Sec. 35, T9S, R22E, Uintah County, Utah (State water right #49-1501).
- B. Water will be hauled by Target Trucking Inc.
- 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 days 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 dispose 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 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 administered land:

The reserve pit will be constructed so as not to leak, break, or allow discharge.

The reserve pit shall not be lined.

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 approve 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 north side of location.  
The flare pit will be located downwind of the prevailing wind direction on the north side of 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 south corner.  
Access to the well pad will be from the west.

- NA Diversion ditch(es) shall be construct on the \_\_\_\_\_ side of the location (above/below) the cut slope, draining to the \_\_\_\_\_  
NA Soil compacted earthen berm(s) shall be placed on the \_\_\_\_\_ side(s) of the location between the \_\_\_\_\_  
NA The drainage(s) shall be diverted around the side(s) of the well pad location.  
NA The reserve pit and/or pad locations shall be constructed long and narrow for topographic reasons \_\_\_\_\_  
NA THE \_\_\_\_\_ corner of the well pad will be rounded off to avoid the \_\_\_\_\_.

## 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 eight 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 is be 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 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 State, 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 90 days from the date of well completion. Before any dirt work takes place, the reserve pit will be completely dry and all cans, barrels, pipe, etc., 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 State will attach the appropriate surface rehabilitation conditions of approval.

11. SURFACE OWNERSHIP

Access road: \_\_\_\_\_ State \_\_\_\_\_  
Location: \_\_\_\_\_ State \_\_\_\_\_

12. OTHER INFORMATION

- A. Enron Oil & Gas Company 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 may be required.

Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guideline 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 Enron Oil & Gas Company 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, or the appropriate County Extension Office. On State 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.

**Additional Surface Stipulations**

NA No construction or drilling activities shall be conducted between \_\_\_\_\_ and \_\_\_\_\_ because of \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

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

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

NA No cottonwood trees will be removed or damaged.

NA Pond will be constructed according to State specifications approximately \_\_\_\_\_ ft. \_\_\_\_\_ of the location, as flagged on onsite.

**LESSEE'S OR OPERATORS REPRESENTATIVE AND CERTIFICATION**

Enron Oil and Gas Company  
P.O. Box 1815  
Vernal, Utah 84078  
George McBride  
Telephone: (801) 789-0790

Enron Oil and Gas Company  
P.O. Box 250  
Big Piney, Wyoming  
Jim Schaefer  
Telephone: (307) 276-3331

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. Enron Oil & Gas Company 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 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 here in will be performed by ENRON OIL & GAS COMPANY and its contractors and sub-contractors in conformity with this Plan and the terms and conditions under which it is approved.

10/31/91  
DATE

  
GEORGE R. MCBRIDE  
SR. PRODUCTION FOREMAN

**ENRON**  
Oil & Gas Company  
**DRILLING PROGRAM**

Date: October 16, 1991

REVISION NO. & DATE: \_\_\_\_\_

PROSPECT: DUCK BUTTE LEASE: \_\_\_\_\_

WELL NUMBER: Duck Butte 13-27

WELL CLASSIFICATION: DW-OIL ANTICIPATED PRODUCTION: OIL X GAS \_\_\_\_\_ OTHER \_\_\_\_\_

LOCATION CALL: 460' FWL & 1960' FSL (NW SW)  
Section 27, T9S, R21E  
Uintah County, Utah

ELEVATION: 4945' GL, 4959' KB (estimate)

DIRECTION LIMITATIONS: Maximum deviation for the hole will be 6° w/no more than a 1°/100' dogleg severity. See page number 4 for distance between surveys.

TYPE RIG: Land Rotary APPROVED DEPTH: 4200' PERMIT DEPTH: 4200'

CONDUCTOR NEEDED? No If yes, size & how set: \_\_\_\_\_

HOLE SIZE	CASING SIZE	DEPTH	CEMENT PROGRAM
12 1/4"	8-5/8"	200'	Cement w/125 sx Class "G" cement + 2% CaCl <sub>2</sub> + 1/4#/sx celloflake. Circulate gelled water ahead of slurry.
7-7/8"	5 1/2"	4200'	Cover interval from TD to 3500'± w/50/50 Pozmix + 2% gel + 10% salt. Volume to be calculated from caliper log annular volume to 3500'± plus 10% excess.  Cover interval from 3500'± to surface with Lite cement plus specified additives. Volume to be calculated from caliper log annular volume from 3500'± to applicable upper depth plus 5% excess.  Circulate casing 1 hr minimum before cementing. Reciprocate casing during cementing. Pump 20 bbls fresh water ahead of slurry.

CRITERIA FOR DETERMINING CASING SEAT FOR CRITICAL STRINGS: WOC overnight before cutting off surface casing to weld on head.

DRILLING PROGRAM

WELL NAME: Duck Butte 13-27

CENTRALIZERS (DEPTH & TYPE):

Surface - One 5-10' above shoe & top of first, second & fourth joint.

Production - One at middle of shoe joint, every other collar to 100'+ above K-1 Sand.

STAGE COLLARS, BASKETS, OTHER SPECIAL EQUIPMENT:

Surface - Guide shoe.

Production - Differential fill float shoe and differential fill float collar with top plug. Marker joint or magnetic marker at 4000'.

PUMPING RATES/SPECIAL INSTRUCTIONS: Circulate casing a minimum of 1 hour or prior to cementing. Reciprocate casing during cementing and displacement, but stop reciprocation 10 bbls prior to end of displacement.

LOGGING PROGRAM: DLL/GR/Caliper from TD to base of surface casing.

FDC-CNL/GR from TD to 3000'+. Possible MSCT at specified depths. Possible Dipmeter across K-1 Sand.

CORES: None are anticipated.

SAMPLES: Collect 30' samples from below surface casing to 3700'+. Collect 10' samples from 3700'+ to TD.

FORMATION TESTS: None anticipated.

MUD LOGGING: (Includes services & depth): From 2000' KB+ to TD.

DETECTION & CONTROL EQUIPMENT: 10" 900 Series (3000 psig) BOP with blind and pipe rams. 10" 900 Series Annular Preventor. 10" rotating head. Test manifold and BOP's to 3000 psig, annular preventor to 1500 psig, surface casing to 1500 psig after nipple up using certified pressure testing service company.

WELL NAME: Duck Butte 13-27

COMPLETION PROGRAM: To be submitted at a later date.

OTHER SERVICES: None are anticipated.

**FORMATION TOPS & DEPTHS (tentative)**

FORMATION NAME & TYPE      ESTIMATED DEPTH (EL)      DATUM      THICKNESS & REMARKS

See attached Prognosis.

X-MAS TREE:    10" 3000# weld on casing head, 6" 5000# x 10" 3000# tubing  
spool, 2-1/16" 3000# master valves.

**MUD PROGRAM**

DEPTH INTERVAL	MUD WEIGHT	VIS	Chlorides (ppm)	OIL	WATER LOSS (cc)	TYPE OF MUD
0' to 200'						Air
200' to 3500'	8.4				NC	Fresh water
3500' to TD	8.5		12,000		NC	3½ KCl water

WELL NAME: Duck Butte 13-27

DRILLING HAZARDS & SPECIAL INSTRUCTIONS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**CASING & TUBING PROGRAM**

SIZE	INTERVAL		LENGTH	WEIGHT			MINIMUM SAFETY FACTOR		
	FROM	TO		#/FT.	GRADE	THREAD	COLLAPSE (psig)	BURST (psig)	TENSILE (psig)
8-5/8"	0'	200'	200'	24.0#	J-55	ST&C	1370	2950	244,000
5-1/2"	0'	4200'	4200'	15.5#	J-55	LT&C	4040	4810	217,000

**SURVEY SCHEDULE**

DEPTH	DISTANCE BETWEEN SURVEYS	MAXIMUM DEVIATIONS FROM VERTICAL	MAXIMUM CHANGE DEGREES/100'
0' to 200'	200'	1 degree	1 degree
200' to TD	500' (or as needed)	6 degrees	1 degree

PREPARED BY: *Jim R. Schaefer*  
 Jim R. Schaefer, Sr. Production Engineer

APPROVED BY: *Dennis J. Brabec*  
 Dennis J. Brabec, Drilling Superintendent

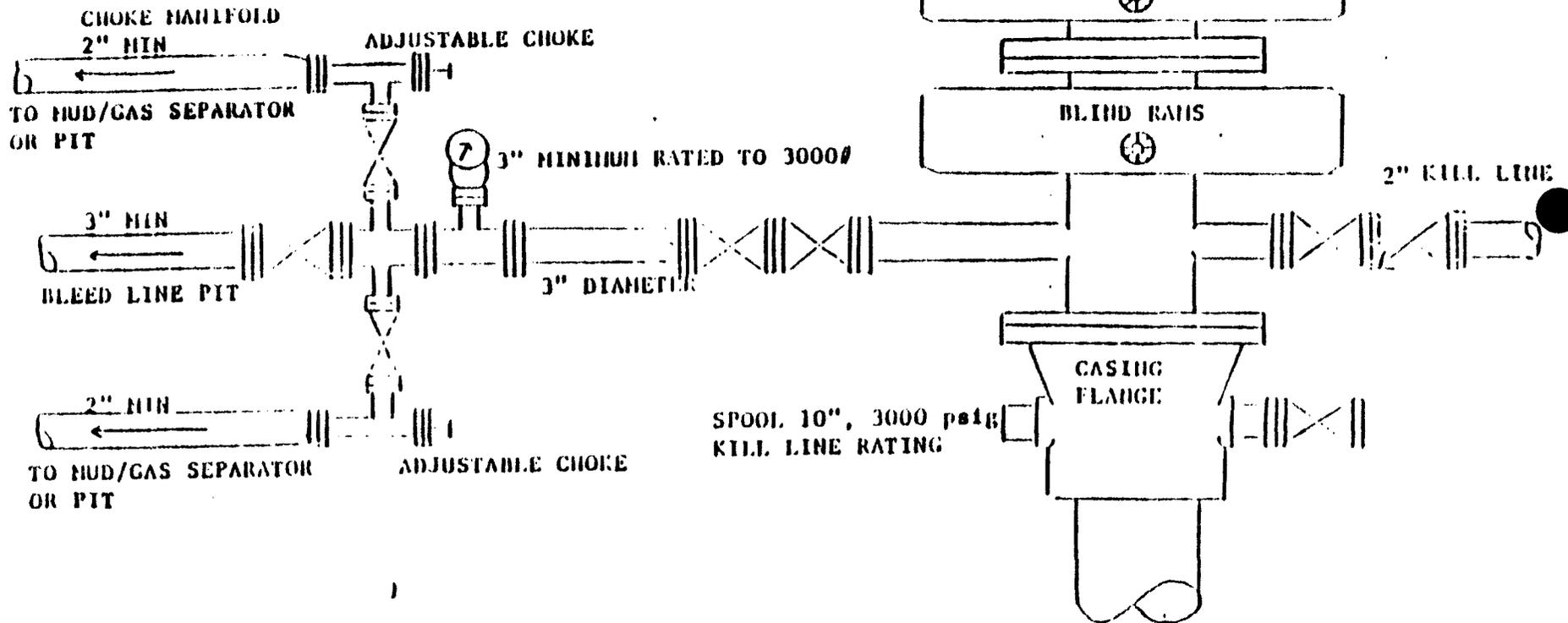
APPROVED BY: *Darrell E. Tomke*  
 Darrell E. Tomke, District Manager

BOP DIAGRAM

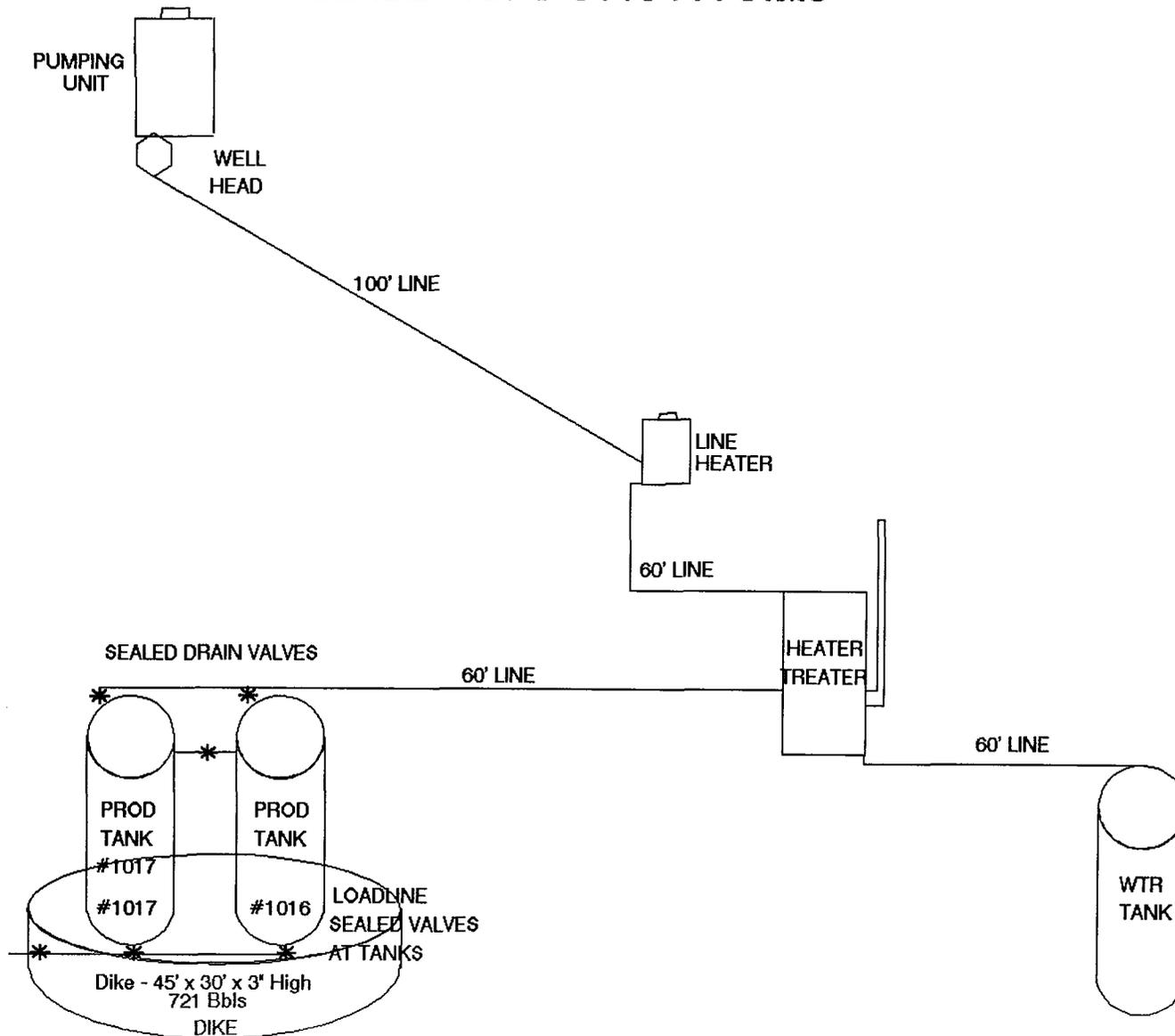
ANNULAR PREVENTOR AND BOTH RAMS ARE 900 SERIES.  
 CASING FLANGE IS 10" 900 SERIES.  
 BOPE 9" 3000#

TESTING PROCEDURES:

1. BOPE's will be tested with a professional tester to conform to Onshore Order #2 with retest every 14 days.
2. Blind & Pipe rams will be tested to rated working pressure, 3000 psig.
3. Annular preventor will be tested to 50% of working pressure, 1500 psig. Will test every 30 days.
4. Casing will be tested to 0.22 psi/ft or 1500 psig. Not to exceed 70% of burst strength, whichever is greater. In this case *1500* psig.
5. They will be tested every 14 days.
6. There are two hydraulic controls, one remote on the rig floor and the other at the accumulator.
7. All lines subject to well pressure will be pressure tested to the same pressure as blind & pipe rams.
8. Hydraulic accumulator system should be 80 gals.
9. All BOPE specifications and configurations will meet Onshore Order #2 requirements for 3000 psig BOPE specifications.



DUCK BUTTE 13-27  
SECTION 27, T9S, R21E  
UINTAH COUNTY UTAH  
LEASE NO. U-01194-A-State

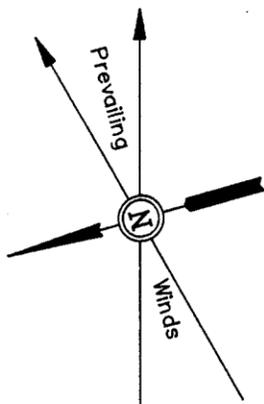


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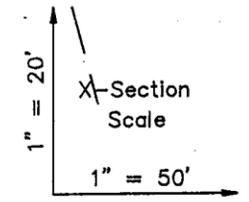
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ENRON OIL & GAS CO.  
 LOCATION LAYOUT FOR  
 DUCK BUTTE #13-27  
 SECTION 27, T9S, R21E, S.L.B.&M.

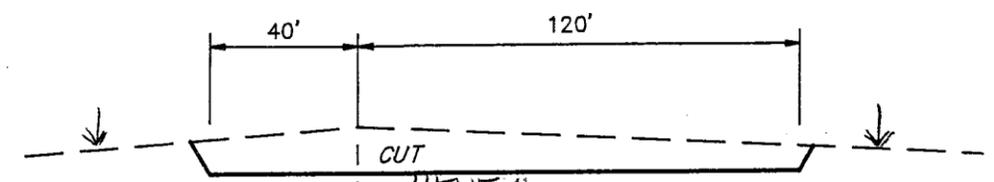
DIVISION OF  
 OIL GAS & MINING



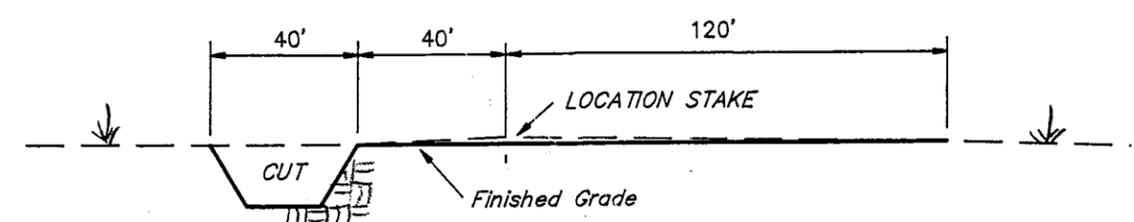
SCALE: 1" = 50'  
 DATE: 10-9-91  
 Drawn By: R.E.H.



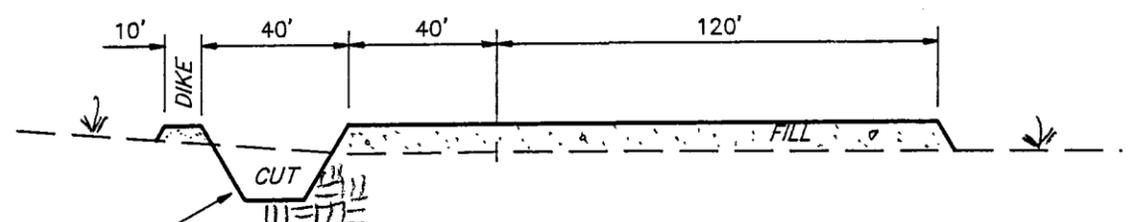
TYP. LOCATION LAYOUT  
 TYP. CROSS SECTIONS



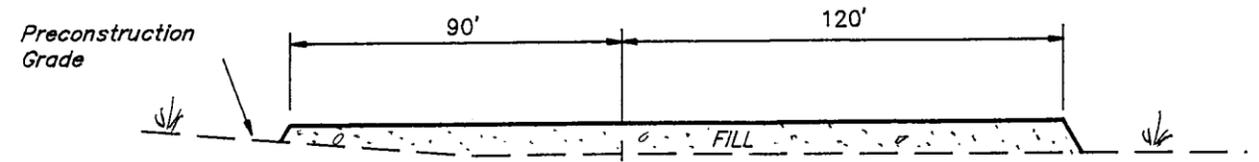
STA. 3+25



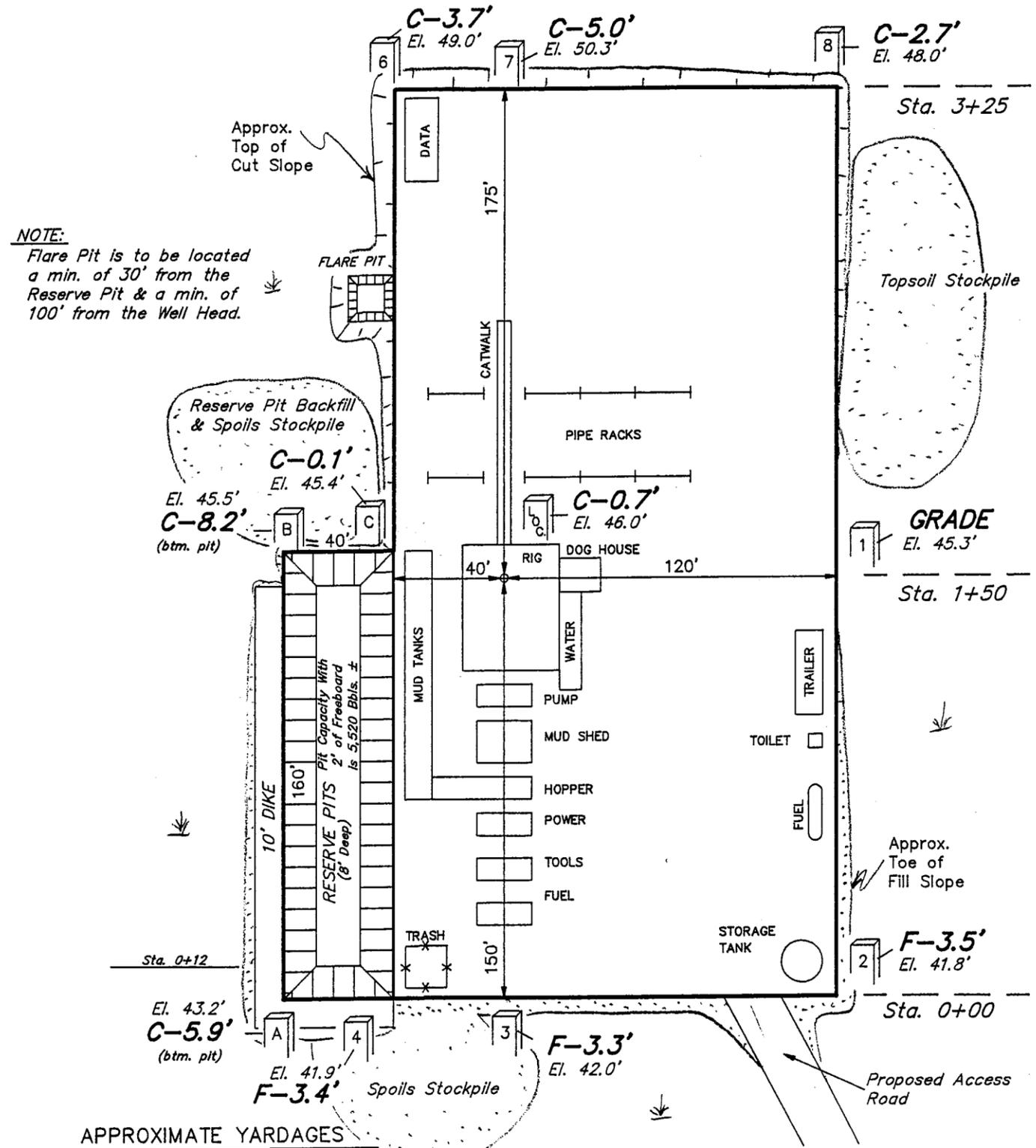
STA. 1+50



STA. 0+12



STA. 0+00



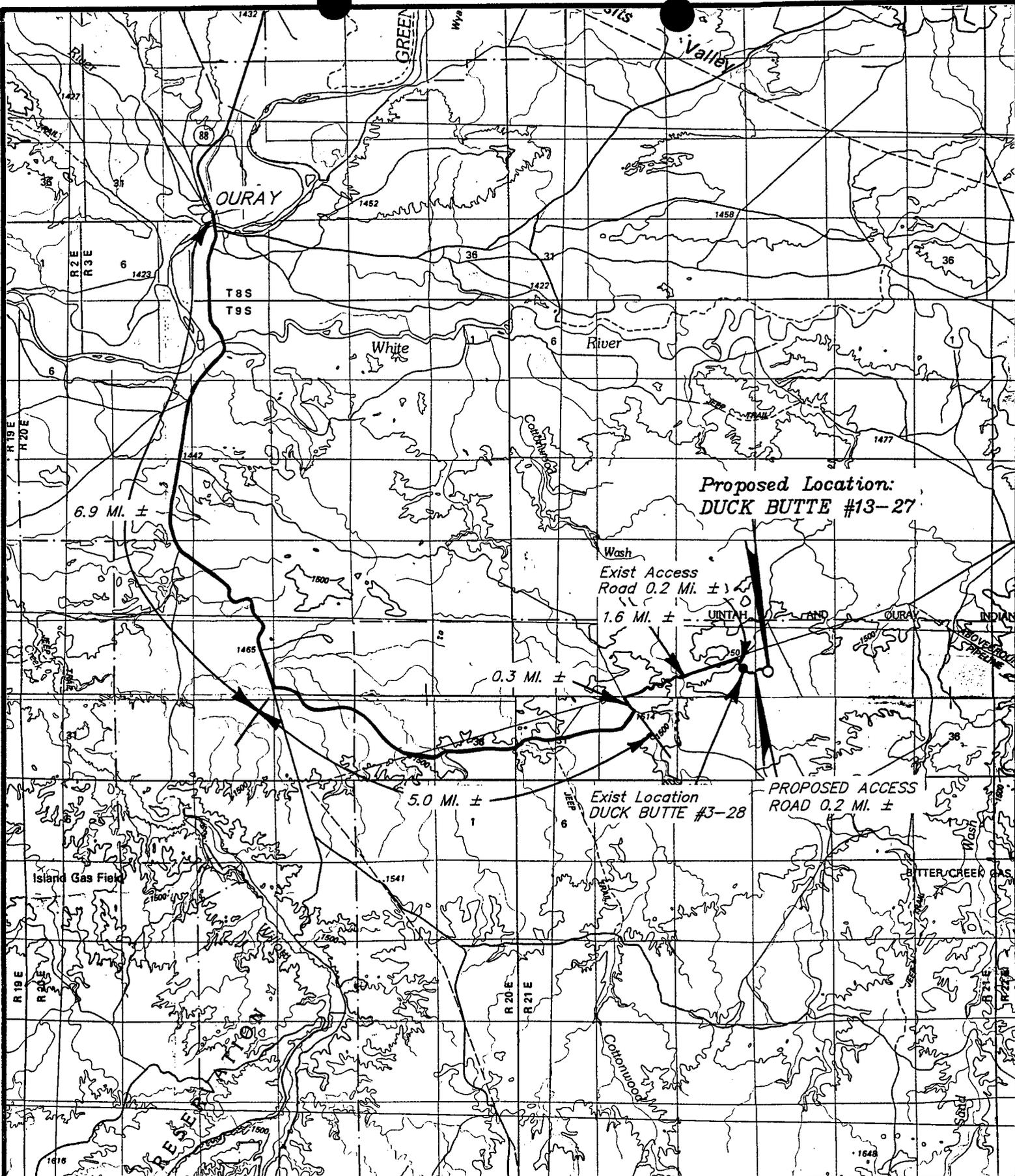
**NOTE:**  
 Flare Pit is to be located  
 a min. of 30' from the  
 Reserve Pit & a min. of  
 100' from the Well Head.

APPROXIMATE YARDAGES

(6") Topsoil Stripping	= 1,100 Cu. Yds.	EXCESS MATERIAL AFTER 5% COMPACTION	= 1,720 Cu. Yds.
Remaining Location	= 2,790 Cu. Yds.	Topsoil & Pit Backfill (1/2 Pit Vol.)	= 1,720 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 3,890 CU.YDS.</b>	EXCESS UNBALANCE (After Rehabilitation)	= 0 Cu. Yds.
<b>FILL</b>	<b>= 2,060 CU.YDS.</b>		

Elev. Ungraded Ground at Location Stake = **4946.0'**  
 Elev. Graded Ground at Location Stake = **4945.3'**

UINTAH ENGINEERING & LAND SURVEYING  
 85 So. 200 East Vernal, Utah



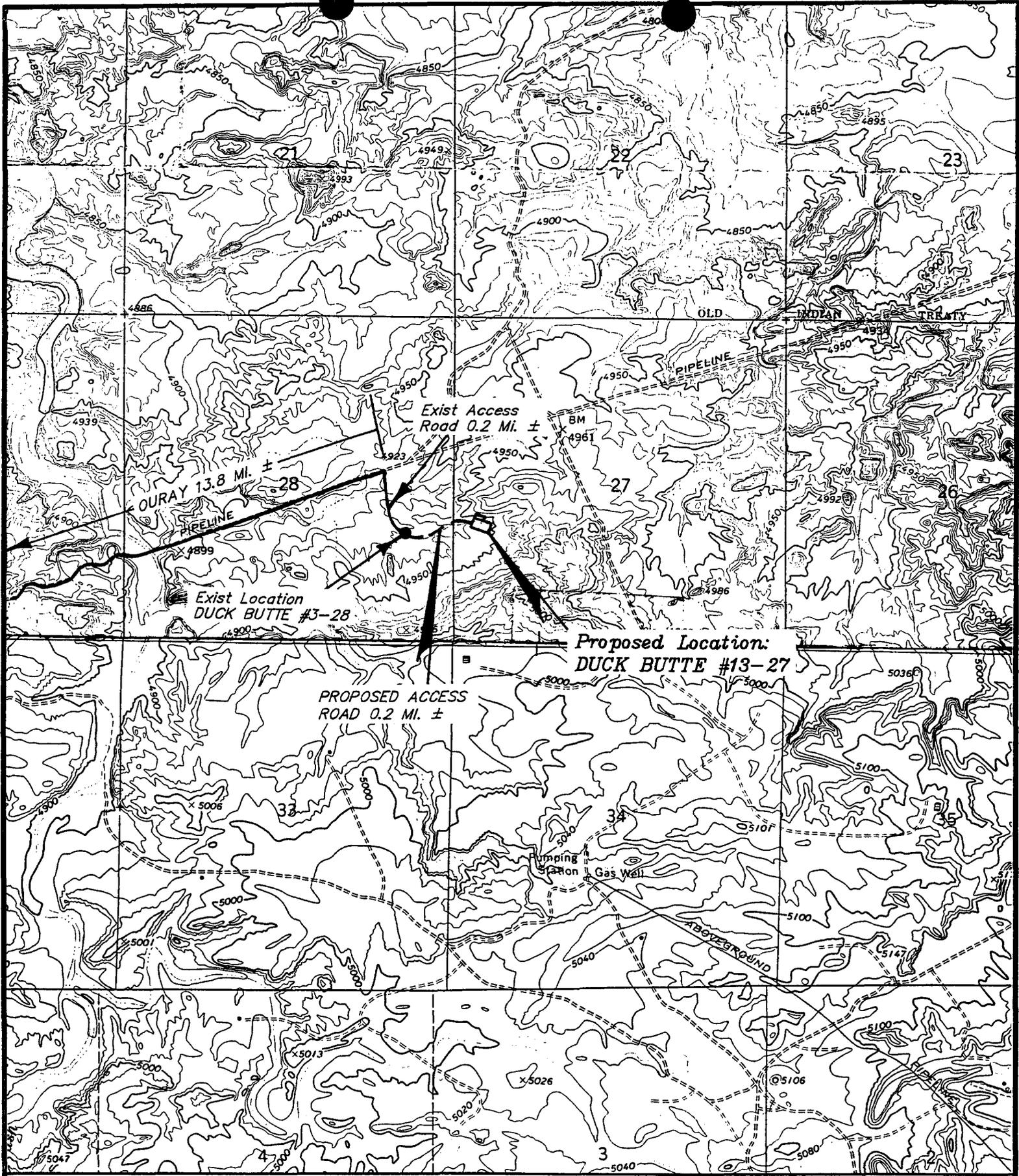
TOPOGRAPHIC  
MAP "A"

DATE 10-9-91 R.E.H.



**ENRON OIL & GAS CO.**

DUCK BUTTE #13-27  
SECTION 27, T9S, R21E, S.L.B.&M.



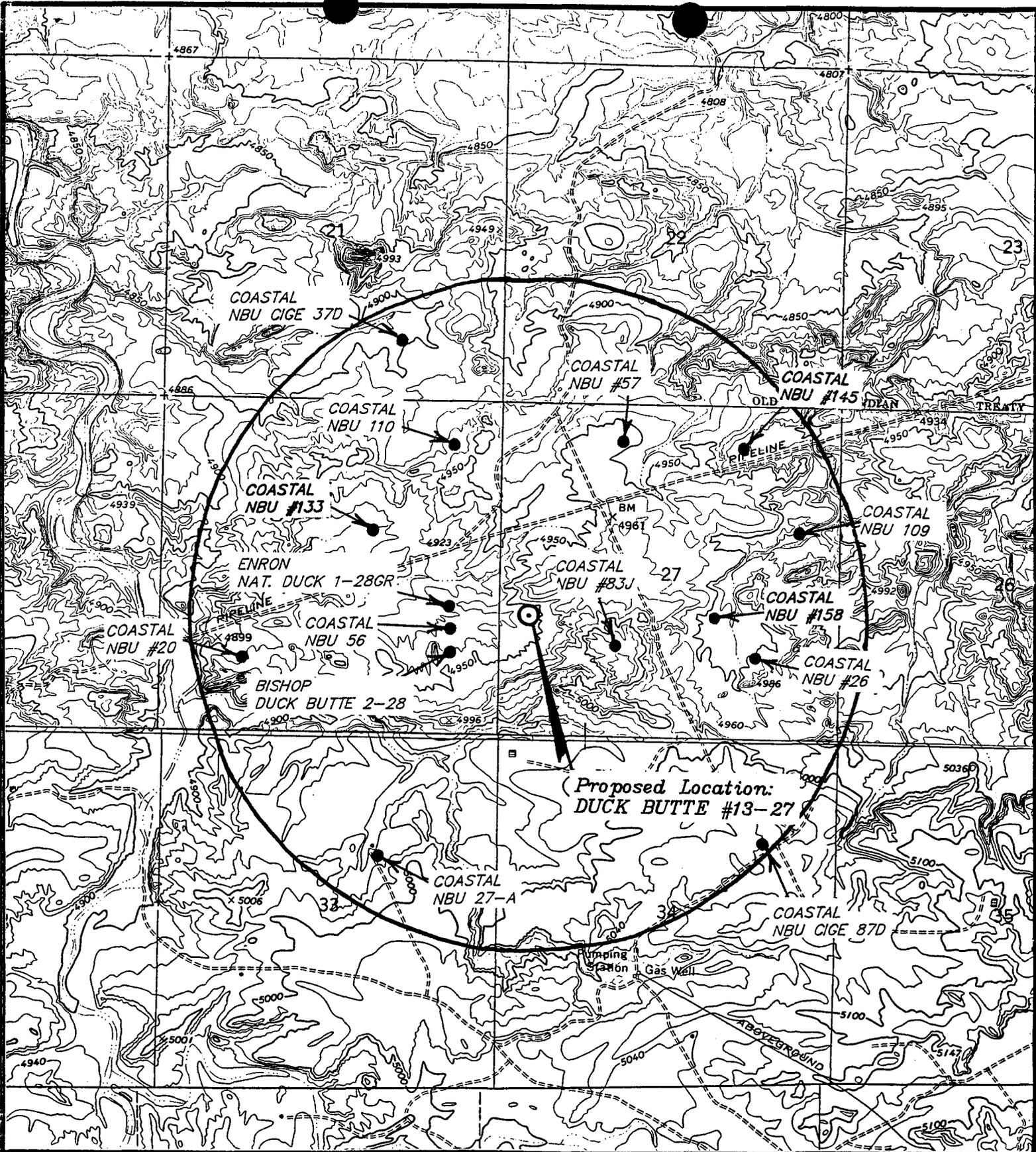
TOPOGRAPHIC  
MAP "B"

SCALE: 1" = 2000'  
DATE 10-9-91 R.E.H.



**ENRON OIL & GAS CO.**

DUCK BUTTE #13-27  
SECTION 27, T9S, R21E, S.L.B.&M.



**LEGEND:**

- = Water Wells
- ◐ = Abandoned Wells
- ◑ = Temporarily Abandoned Wells
- ◒ = Disposal Wells
- = Drilling Wells
- = Producing Wells
- ◐ = Shut-in Wells



**COASTAL OIL & GAS CORP.**

DUCK BUTTE #13-27  
SECTION 27, T9S, R21E, S.L.B.&M.

TO P O M A P " C "

DATE: 10-14-91 R.E.H.

DRILLING LOCATION ASSESSMENT

State of Utah  
Division of Oil, Gas and Mining

OPERATOR: ENRON OIL AND GAS CO. WELL NAME: DUCK BUTTE 13-27  
SECTION: 27 TWP: 9S RNG: 21E LOC: 1960 FSL 460 FWL  
QTR/QTR NW/SW COUNTY: Uintah FIELD: WILDCAT???  
SURFACE OWNER: STATE OF UTAH  
SPACING: 460 F SECTION LINE 460 F QTR/QTR LINE 920 F ANOTHER WELL  
INSPECTOR: BRAD HILL DATE AND TIME: 11/21/91 11:00

PARTICIPANTS: Ed Trotter-ENRON

REGIONAL SETTING/TOPOGRAPHY: South central Uinta Basin. The location lies in a flat area between low hills. Two shallow drainages cut the NW & SE corners of the location.

LAND USE:

CURRENT SURFACE USE: None

PROPOSED SURFACE DISTURBANCE: A rectangular pad will be constructed with dimensions of 325'X 160' with a 160'X 40' extension for the reserve pit. A .2 mile access road will be constructed from the Duck Butte 3-28 location. Approximately 1/2 of the access road is on BLM lands in section 28.

AFFECTED FLOODPLAINS AND/OR WETLANDS: None

FLORA/FAUNA: Curly grass, Shadscale, Short Saltbush, Greasewood, Rabbit Brush, Russian thistle, Prickly Pear/Deer, Antelope, Rabbits, Horses

ENVIRONMENTAL PARAMETERS

SURFACE GEOLOGY

SOIL TYPE AND CHARACTERISTICS: Sandy-clay soil

SURFACE FORMATION & CHARACTERISTICS: Uinta Formation

EROSION/SEDIMENTATION/STABILITY: No active erosion or sedimentation at present. Location should be stable.

PALEONTOLOGICAL POTENTIAL: None observed.

SUBSURFACE GEOLOGY

OBJECTIVES/DEPTHS: Upper K sand-4028', Lower K sand-4044'  
(GREEN RIVER)

ABNORMAL PRESSURES-HIGH AND LOW: None anticipated.

CULTURAL RESOURCES/ARCHAEOLOGY: Done by Grand River Institute.

CONSTRUCTION MATERIALS: Onsite materials will be used for construction.

SITE RECLAMATION: To be reclaimed as per State Lands instructions.

RESERVE PIT

CHARACTERISTICS: A 160'X 40'X 8' reserve pit will be constructed adjacent to the pad.

LINING: The pit is to be inspected after construction to determine if a liner is needed.

MUD PROGRAM: 0-200'-Air; 200-4000'-Air/Water; 400'-TD-Air/3% KCl water.

DRILLING WATER SUPPLY: Ouray Brine Plant

STIPULATIONS FOR APD APPROVAL

Reserve pit is to be evaluated prior to the introduction of fluids.

All drainages are to be diverted around the pad.

ATTACHMENTS

Photographs will be placed on file.

OPERATOR Enron Oil & Gas Co N-040-1 DATE 11-7-91

WELL NAME Duck Bitter 13-07

SEC NW 1/4 T 9S R 01E COUNTY Mintah

43-047-30159  
API NUMBER

State (3)  
TYPE OF LEASE

**CONFIDENTIAL**

CHECK OFF:

PLAT.

BOND

NEAREST WELL

LEASE

FIELD

POTASH OR OIL SHALE

PROCESSING COMMENTS:

Water Permit 49-1501 target ducking  
Permit 11-7-91 Biology when 11-01-91  
Oil shale

APPROVAL LETTER:

SPACING:

R615-2-3

N/A  
UNIT

R615-3-2

N/A  
CAUSE NO. & DATE

R615-3-3

STIPULATIONS:

- Oil shale  
cc: St. Vonds
- Well CANNOT be produced as <sup>CRP</sup> GAS well  
due to prior Oil & Gas Board spacing for GELV  
gas. (Cause 197-1)
- all drainage are to be diverted around location.
- Reserve pit is to be evaluated prior to the introduction  
of fluids.



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter  
Governor

Dee C. Hansen  
Executive Director

Dianne R. Nielson, Ph.D.  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340

December 3, 1991

Enron Oil and Gas Company  
P.O. Box 1815  
Vernal, Utah 84078

Gentlemen:

Re: Duck Butte 13-27 Well, 1960 feet from the south line, 460 feet from the west line, NW 1/4 SW 1/4, Section 27, Township 9 South, Range 21 East, Uintah County, Utah

Pursuant to Utah Admin. R. 615-3-2 and Utah Admin. R. 615-3-4, approval to drill the referenced well is hereby granted.

In addition, the following specific actions are necessary to fully comply with this approval:

1. Compliance with the requirements of Utah Admin. R. 615-1 et seq., Oil and Gas General Rules.
2. If Enron desires to complete and produce this well as a Green River formation gas well, prior approval is necessary in accordance with the Board of Oil, Gas and Mining order in Cause No. 197-1.
3. All drainages are to be diverted around the location.
4. Reserve pit is to be evaluated prior to the introduction of fluids.
5. Notification within 24 hours after drilling operations commence.
6. Submittal of Entity Action Form, Form 6, within five working days following commencement of drilling operations and whenever a change in operations or interests necessitates an entity status change.
7. Submittal of the Report of Water Encountered During Drilling, Form 7.

Page 2  
Enron Oil and Gas Company  
Duck Butte 13-27 Well  
December 3, 1991

8. Prompt notification prior to commencing operations, if necessary, to plug and abandon the well. Notify Frank R. Matthews, Petroleum Engineer, (Office) (801)538-5340, (Home) (801)476-8613, or R.J. Firth, Associate Director, (Home) (801)571-6068.
9. Compliance with the requirements of Utah Admin. R. 615-3-20, Gas Flaring or Venting, if the well is completed for production.

Prior to commencement of the proposed drilling operations, plans for facilities for disposal of sanitary wastes at the drill site should be submitted to the local health department. These drilling operations and any subsequent well operations should be conducted in accordance with applicable state and local health department regulations. A list of local health departments and copies of applicable regulations are available from the Department of Environmental Quality, Division of Drinking Water/Sanitation, telephone (801)538-6159.

This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date. The API number assigned to this well is 43-047-32159.

Sincerely,



R.J. Firth  
Associate Director, Oil and Gas

ldc  
Enclosures  
cc: Bureau of Land Management  
State Lands and Forestry  
J.L. Thompson  
WO11



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Norman H. Bangarter  
Governor

Dee C. Hansen  
Executive Director

Dianne R. Nielson, Ph.D.  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340

January 28, 1993

Enron Oil and Gas Company  
P.O. Box 1815  
Vernal, Utah 84078

Gentlemen:

Re: Duck Butte #13-27 Well, Sec. 27, T. 9S, R. 21E, Uintah County, Utah  
API No. 43-047-32159

Due to excessive time delay in commencing drilling operations, approval to drill the subject well is hereby rescinded, effective immediately.

Please note that a new Application for Permit to Drill must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division of Oil, Gas and Mining immediately.

Sincerely,

Don Staley  
Administrative Supervisor  
Oil and Gas

DME/lde  
cc: R.J. Firth  
Well file  
WOI219