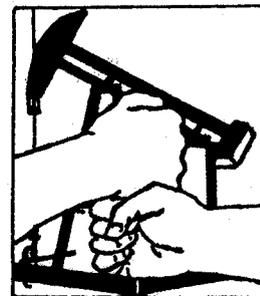


RANKEN ENERGY CORPORATION

417 W. 18th Street, Suite 101
Edmond, Oklahoma 73013-3663
(405) 340-2363 • Fax (405) 340-2365



February 22, 2000

Utah Division of Oil, Gas & Mining
P O Box 145801
Salt Lake City, UT 84114-5801

RE: APD's
Uintah County, Utah

Dear Sir(s):

Enclosed please find six (6) completed APD's, in triplicate, for the wells we are currently wishing to drill on our Fee acreage block. The surface is owned by the DWR and we have also sent a copy to their office in Salt Lake City as well as their Vernal office.

I hope you find everything in order but please do not hesitate to call should you have any questions whatsoever. Thank you for your continued support.

Sincerely,

A handwritten signature in black ink, appearing to read "Randolph L. Coy".

Randolph L. Coy
President

RLC:jr
enc.

(utogm2rc)

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DIVISION OF
OIL, GAS AND MINING

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1A. Type of Work: DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		5. Lease Designation and Serial Number: Fee
B. Type of Well: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER: SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>		6. If Indian, Allottee or Tribe Name:
2. Name of Operator: RANKEN ENERGY CORPORATION		7. Unit Agreement Name:
3. Address and Telephone Number: 417 W. 18th St., Ste. 101 Edmond, OK 73013-3663 405/340-2363		8. Farm or Lease Name:
4. Location of Well (Footages) At Surface: 688' FNL & 528' FWL At Proposed Producing Zone:		9. Well Number: Ranken Energy DWR 4-21
14. Distance in miles and direction from nearest town or post office:		10. Field and Pool, or Wilocat:
15. Distance to nearest property or lease line (feet): 1988'	16. Number of acres in lease: 10903	11. Qtr/Qtr, Section, Township, Range, Meridian: NW/4 NW/4 Section 21-T12S-R23E
17. Number of acres assigned to this well: 40	18. Distance to nearest well, drilling, completed, or applied for, on this lease (feet): 1850'	12. County: Uintah
19. Proposed Depth: 3500'	20. Rotary or cable tools: Rotary	13. State: UTAH
21. Elevations (show whether DF, RT, GR, etc.): 5623' Ground Level		22. Approximate date work will start: April 15, 2000

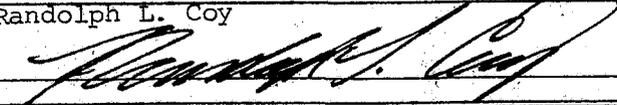
23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOSE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 5/8"	24	300'	To surface
7 7/8"	4 1/2"	10.5	T.D.	Cement top to cover the oil shale.

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.

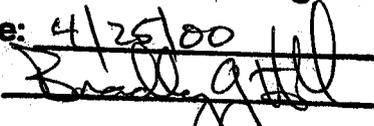
Operator requests permission to drill the subject well. Please see the attached 10 Point & 13 Point Surface Use Plan.

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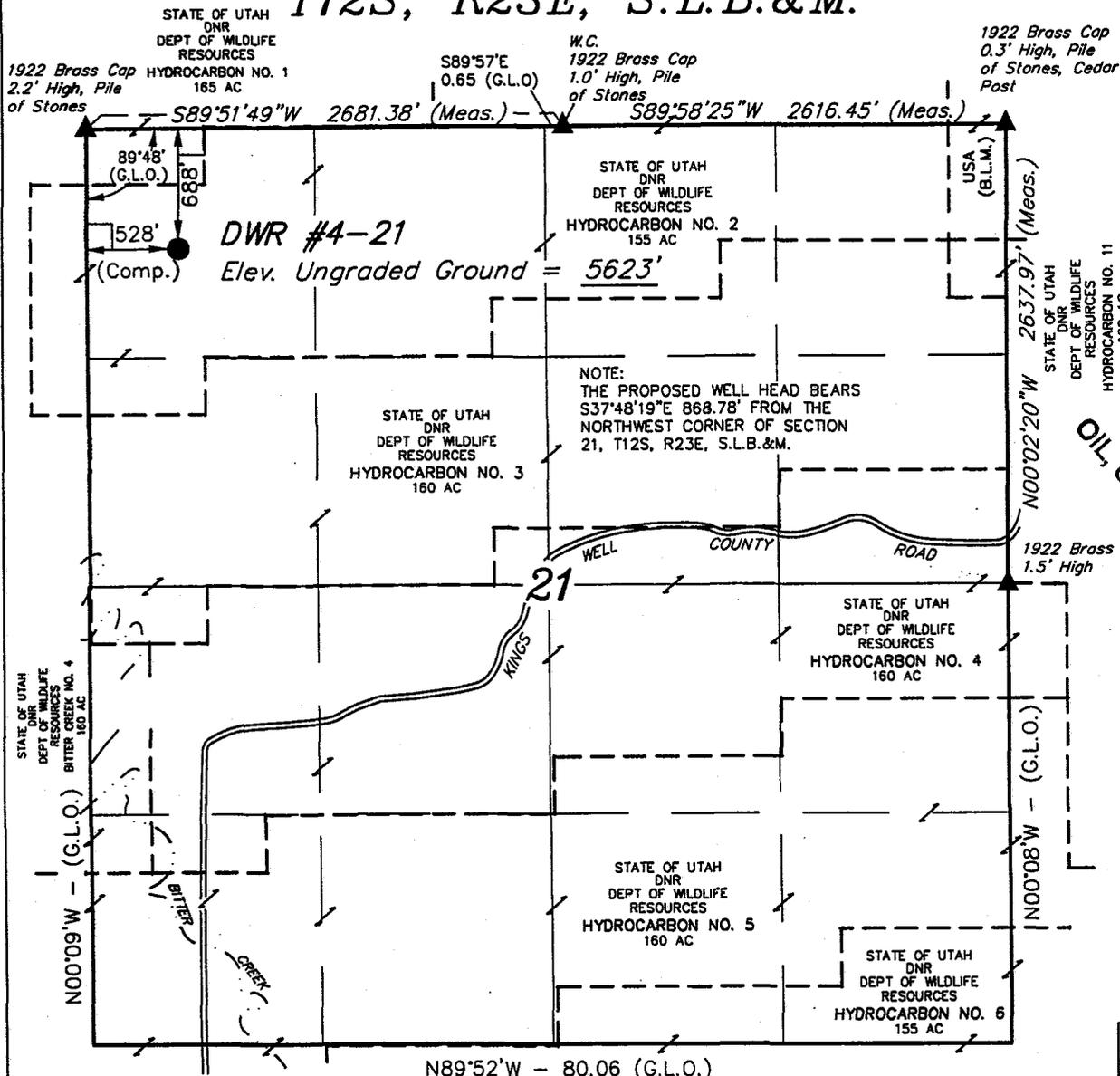
24. Randolph L. Coy
Name & Signature:  Title: President Date: 2/21/00

(This space for State use only)
API Number Assigned: 43047-33486

Approval:

Approved by the
Utah Division of
Oil, Gas and Mining
Date: 4/25/00
By: 

T12S, R23E, S.L.B.&M.



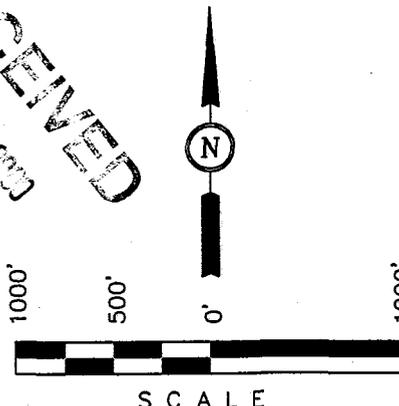
RANKEN ENERGY CORP.

Well location, DWR #4-21, located as shown in the NW 1/4 NW 1/4 of Section 21, T12S, R23E, S.L.B.&M. Uintah County, Utah.

BASIS OF ELEVATION

SPOT ELEVATION LOCATED AT THE SOUTHEAST CORNER OF SECTION 16, T12S, R23E, S.L.B.&M. TAKEN FROM THE ARCHY BENCH SE. QUADRANGLE, UTAH, UTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5994 FEET.

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OIL GAS AND MINING



CERTIFICATE

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



LEGEND:

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

NOTE:
BASIS OF BEARINGS IS THE EAST LINE OF THE NE 1/4 OF SECTION 16, T12S, R23E, S.L.B.&M. WHICH IS ASSUMED FROM G.L.O. INFORMATION TO BEAR N00°08'W.

LATITUDE = 39°45'52"
LONGITUDE = 109°21'18"

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST - VERNAL, UTAH 84078
(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 01-20-00	DATE DRAWN: 02-07-00
PARTY D.K. L.J. D.R.B.	REFERENCES G.L.O. PLAT	
WEATHER COLD	FILE RANKEN ENERGY CORP.	

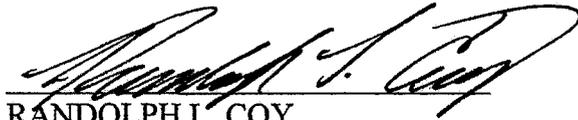
SELF-CERTIFICATION STATEMENT

Please be advised that Ranken Energy Corporation are considered to be the Operator of the following well.

Ranken Energy DWR 4-21
NE/4 NW/4, Section 21-T12S-R23E
Lease Fee
Uintah County, Utah

Ranken Energy Corporation is responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

Bond N 6258 provides state-wide bond coverage on all Fee and State Lands.



RANDOLPH L. COY

President

Ranken Energy Corporation
417 West 18th Street, Suite 101
Edmond, OK 73013-3663

405/340-2363
405/340-2365, fax
exp65@swbell.net, e-mail

(135671)
jc

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DIVISION OF
OIL, GAS AND MINING

RANKEN ENERGY CORPORATION

13 POINT SURFACE USE PLAN

FOR WELL

RANKEN ENERGY - DWR 4-21

LOCATED IN

NW/4, NW/4

SECTION 21-T12S-R23E, U.S.B&M.

UINTAH COUNTY, UTAH

LEASE NUMBER: FEE

SURFACE OWNERSHIP:

**STATE OF UTAH
DIVISION OF WILDLIFE RESOURCES**

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**DIVISION OF
OIL, GAS AND MINING**

1. Existing Roads

To reach the Ranken Energy Corporation well DWR 4-21, in Section 21-T12S-R23E, from Bonanza, Utah:

Starting in Bonanza, Utah, proceed south on the paved road for 4 miles. Turn south (left) on the Book Cliffs road (dirt road). Proceed south 3.9 miles to the Greeks Corrals. Turn west (right) at the fork in the road. Proceed 8.3 miles to the Asphalt Wash sign. Stay to the south (left) of the sign. Proceed .7 miles to the Rainbow sign. Stay to the west (right) of the sign. This is also called the Kings Well road. Turn south (left). Proceed 1.7 miles. Turn west (right). Proceed 4.0 miles. The proposed access road will start at this point.

All existing roads to the proposed location are State or County Class D roads.

Please see the attached map for additional details.

2. Planned access road

The proposed location will require approximately 1584 feet of new road construction on DWR ground.

The road will be built to the following standards:

- A) Approximate length 1584 Ft.
- B) Right of Way width 30 Ft.
- C) Running surface 18 Ft.
- D) Surfacing material Native soil
- E) Maximum grade 5%
- F) Fence crossing None

- G) Culvert None
- H) Turnouts None
- I) Major cuts and fills None
- J) Road flagged Yes
- K) Access road surface ownership

1584'..... State of Utah, Division of Wildlife Resources

- L) All new construction on lease Yes
- M) Pipe line crossing None

Please see the attached location plat for additional details.

Right of way's will be required for the access road. A right-of-way application for both the location and road has been made to the Division of Wildlife Resources.

3. Location of existing wells

The following wells are located within a one mile radius of the location site:

- A) Producing well: Ranken Energy - DWR 15-16
- B) Water well None
- C) Abandoned well None
- D) Temp. abandoned well None
- E) Disposal well None
- F) Drilling/Permitted well None
- G) Shut-in wells None
- H) Injection well None
- I) Monitoring or observation well None

Please see the attached map for additional details.

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4. **Location of tank batteries, production facilities, and production gathering service lines.**

All production facilities are to be contained within the proposed location site. Please see the attached plat plan for a typical gas well separator installation and well-site piping.

All permanent (on site for more than six months or longer) structures constructed or installed will be painted a **Juniper Green** or **Desert Tan** color. Facilities required to comply with O.S.H.A. (Occupational Safety and Health Act) will be excluded.

All tanks will be surrounded by a dike of sufficient capacity to contain the storage capacity of the largest tank in the battery. The integrity of the dike will be maintained.

If the well is capable of economic production, a surface gas line will be required.

A proposed line will be constructed from the subject well and will tie into Ranken's Meter (CDP) at their DWR 5-28 wellsite.

Approximately 1584' of 2" or 4" gathering line would be constructed on DWR lands.

Please see the attached location diagrams and map for pipeline location. The Operator proposes to bury the line under the surface. The Operator will install the line on DWR lands only. The route would be approximately the same length.

A gas check meter run will be located within 500' of the well head. The gas line will be buried or anchored down from the well head to the meter. Meter runs will be housed and/or fenced.

The gas meter will be calibrated and the tank strapped in place prior to any deliveries. All measurement facilities will conform to API (American Petroleum Institute) and AGA (American Gas Association) standards for gas and liquid hydrocarbon measurement.

5. **Location and type of water supply**

Water for drilling and cementing the subject well will be trucked or piped from Bitter Creek in Sec. 28-T12S-R23E. Permit # T72132. A second location may be used. It would be Evacuation Creek permit #49-1595. The Evacuation Creek distribution point is in Sec. 7-T11S-R25E. Water for completion will come from the same supply or Vernal City.

Water may be used from two existing test wells next to Bitter Creek. The wells are adjacent to the water take out point. Water quality tests will have to be performed before the water can be used.

Source of construction materials

All construction material for this location site and access road shall be borrowed material accumulated during construction of the location site and access road. Additional road gravels or pit lining material will be obtained from private sources.

7. **Methods for handling waste disposal**

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A) Pit construction and liners:

The reserve pit will be approximately 10 feet deep and most of the depth shall be below the surface of the existing ground. Please see the attached plat for details.

The reserve pit will be lined, if necessary.

The reserve pit will not be used to store water for drilling. A semi-closed system will be used to drill the well. All fresh water for drilling will come from a frac tank placed on location and from the rig tank. The pit will be used to hold non-flammable materials such as cuttings, salt, drilling fluids, chemicals, produced from fluids, etc.

B) Produced fluids:

Produced water will be confined to the reserve pit, or if deemed necessary, a storage tank for a period not to exceed 90 days after initial production. Produced water will be trucked to a State of Utah approved disposal pit or well.

C) Garbage:

A trash cage fabricated from expanded metal will be used to hold trash on location and will be removed to an authorized land fill location.

D) Sewage:

A portable chemical toilet will be supplied for human waste. The

human waste facilities will be permitted through Uintah County Health Department and disposal of human waste will conform with the county permit.

E) Site clean-up:

After the rig is moved off the location, the well site area will be cleaned and all refuse removed.

8. Ancillary facilities

There are no ancillary facilities planned at this time and none are foreseen for the future.

9. Well-site layout and location

The proposed location has been staked at 688' FNL & 528' FWL.

Well-site layout

Location dimensions are as follows:

- A) Pad length 300 ft.
- B) Pad width 150 ft.
- C) Pit depth 10 ft.
- D) Pit length 100 ft.
- E) Pit width 50 ft.
- F) Max cut 0.0 ft.
- G) Max fill 6.5 ft.
- H) Total cut yds. 7810 cu yds
- I) Pit location southwest side
- J) Top soil location: northeast side
- K) Access road location: southwest end
- L) Flare pit corner C

Please see the attached location diagram for additional details.

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

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OIL, GAS AND MINING

- A) Thirty-nine inch net wire shall be used with at least one strand of 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 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 feet.
- E) All wire shall be stretched by using a stretching device before it is attached to the corner posts.

10. Plans for restoration of the surface

Prior to construction of the location, the top 6 inches of soil material will be stripped off the location and the pit area. The topsoil removed and piled will amount to approximately 1000 cubic yards of material. **Topsoil will be stock-piled in one distinct pile.** Placement of the topsoil is noted on the attached location plat. **The topsoil pile from the location will be seeded as soon as the soil is stock piled** with the seed mix listed. When all drilling and completion activities have been completed and the pit back-filled, the topsoil from the pit area will be spread on the pit area. **The**

pit area will be seeded when the soil has been spread. The unused portion of the location (the area outside the dead men) will be recontoured.

The dirt contractor will be provided with an approved copy of the surface use plan prior to construction activities.

Changes to the drainage during the construction activities shall be restored to its original line of flow or as near as possible when the pit is back-filled.

All disturbed areas will be recontoured to the approximate natural contours. Prior to back-filling the pit, the fences around the reserve pit will be removed.

The reserve pit will be reclaimed within 90 days of well completion. If the reserve pit has not dried sufficiently to allow back-filling, an extension on the time requirement for back-filling the pit will be requested. Once reclamation activities have begun, they shall be completed within 30 days.

After the reserve pit has been reclaimed, no depressions in the soil covering the reserve pit will be allowed. The objective is to keep seasonal rainfall and runoff from seeping into the soil used to cover the reserve pit. Diversion ditches and water bars will be used to divert runoff as needed.

When restoration activities have been completed, the location site and new access road cuts and shoulders shall be reseeded. Prior to reseeding, all disturbed areas will be scarified and left with a rough surface.

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- A) **Seeding Dates:** Seed will be spread when the top soil is stock piled and when reclamation work is performed.

The seed mix and quantity required will be provided by the Division of Wildlife Resources.

- B) **Seed Mix:** At such time as the well is plugged and abandoned, the Operator will submit a surface reclamation plan to the surface management agency for prescribed seed mixture and reseeding requirements.

11. Surface ownership:

Access road: **DWR**

Location: **State of Utah Division of Wildlife Resources**

Pipeline: **DWR**

12. Other information

- A) **Vegetation:**

The vegetation coverage is slight. The majority of the existing vegetation consists of sagebrush. Rabbit brush, bitter brush and Indian rice grass are also found on the location.

- B) **Dwellings:**

There are no dwellings or other facilities within a one mile radius of the location.

- C) **Archeology and Paleontology:**

The location has been surveyed with copies enclosed.

If, during operations, any archaeological or historical sites, or any objects of antiquity (subject to the antiquities act of June 8, 1906) are discovered, all operations which would effect such sites will be suspended and the discovery reported promptly to the surface management agency.

- D) **Water:**

The nearest water is the Bitter Creek 1 mile west of the location.

- E) **Chemicals:**

No pesticides, herbicides or other possible hazardous chemicals will be used without the Division of Wildlife Resources approval.

- F) **Notification:**

The Division of Wildlife Resources and the Division of Oil, Gas and Mining will be notified as follows:

- a) **Location construction**

At least forty-eight (48) hours prior to construction of location and access roads.

- b) **Location completion**

Prior to moving on the drilling rig.

- c) **Spud notice**

At least twenty-four (24) hours prior to spudding the well.

- d) **Casing string and cementing**

At least twenty-four (24) hours prior to running casing and cementing all casing strings.

- e) **BOP and related equipment tests**

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- At least twenty-four (24) hours prior to initial pressure tests.
- f) **First production notice**
 Within five (5) business days after the new well begins, or production resumes after well has been off production for more than ninety (90) days.
- g) **Completion and work over**
 At least twenty-four (24) hours prior to moving on location.

Division of Wildlife Resources
 (434)789-3103

Division of Oil, Gas and Mining
 (801)538-5340 or (435)722-3417

H) Flare pit:

The flare pit will be located in corner C of the reserve pit outside the pit fence and 85 feet from the bore hole on the west side of location. All fluids will be removed from the pit within forty-eight (48) hours of occurrence.

13. **Leases or Operator's representative and certification**

A) Representative

William A. Ryan

Rocky Mountain Consulting
 350 South 800 East
 Vernal, UT 84078

Office: (435)789-0968
 Fax: (435)789-0970
 Cellular: (435)828-0968

All lease operations will be conducted in such a manner that full

compliance is made with all applicable laws and regulations. The Operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

This drilling permit will be valid for a period of one year from the date of approval. After permit termination, a new application will be filed for approval for any future operations.

B) Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill-site and access route, that I am familiar with the conditions which presently exist, that the statements made in this plan are, to the best of my knowledge and belief, true and correct, and that the work associated with the operation herein will be performed by **Ranken Energy Corporation** and its contractors and subcontractors in conformity with this plan and terms and conditions with this plan and the terms and conditions under which it is approved.

Date: _____

William A. Ryan, Agent
 Rocky Mountain Consulting

Onsite Date: _____

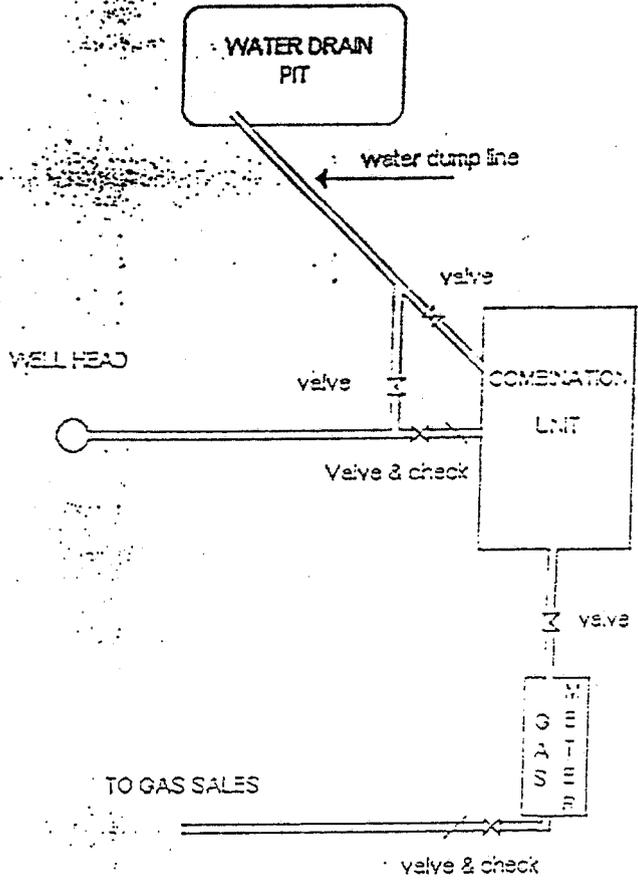
(utah adps:dwr 4-21)

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Ranken Energy
Typical
Gas Well



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Ten Point Plan

Ranken Energy Corporation

Ranken Energy DWR 4-21

Surface Location: NW/4 NW/4 Section 21-T12S-R23E

1. Surface Formation:

Green River

2. Estimated Formation Tops and Datum:

<u>Formation</u>	<u>Depth</u>	<u>Datum</u>
Green River	Surface	+5623', G.L.
Oil Shale	700'	+4923'
Wasatch	2308'	+3315'
T.D.	3500'	+2123'

3. Producing Formation Depth:

Formation objective includes the Wasatch and their sub-members.

Offset Well Information: Producing from a Wasatch sand found at 2000'.

Offset well: Ranken Energy - DWR 15-16

4. Proposed Casing:

<u>Hole Size</u>	<u>Casing Size</u>	<u>Grade Weight/Ft.</u>	<u>Setting & Thread</u>	<u>Casing Depth</u>	<u>New/Used</u>
12 1/4	8 5/8	24	J-55/STC	300	New
7 7/8	4 1/2	10.5	J-55/LTC	T.D.	New

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Cementing Program:

<u>Casing Size</u>	<u>Cement Type</u>	<u>Cement Amount</u>	<u>Cement Yield</u>	<u>Cement Weight</u>
8 5/8	Prem. Plus 2% Calcium Chloride .25 lb/sx Flocele	207 sx +/-	1.20 cu. ft/sx	15.6 lbs./gal
4 1/2	2% Bentonite, .25 lb/sx Flocele, .3% CFR-3, .5% Halad-9, 2% Micro-Bond, .2% Super CBL	670 sx +/-	1.24 cu. ft/sx	14.50 lbs/gal

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5. BOP and Pressure Containment Data:

The anticipated bottom hole pressure will be less than 3000 psi.

A 3000-psi WP BOP system as described in the BOP and Pressure Containment Data (attached) will be installed and maintained from the 8 5/8" surface casing. The BOP system including the casing will be pressure tested to the minimum standards set forth in "On Shore Order #2". The BOP will be mechanically checked daily during the drilling operation.

6. Mud Program:

<u>Interval</u>	<u>Mud weight lbs./gal.</u>	<u>Viscosity Sec./Ot.</u>	<u>Fluid Loss M1/30 Mins.</u>	<u>Mud Type</u>
0-300	Air/Clean Wtr ---	---	No control	Water/gel
300-1800	Clear Water ---	---	No control	Water/gel
1800-T.D.	8.4 - 8.6	30	8 - 10	Water/gel

7. Auxiliary Equipment:

Upper Kelly cock, full opening stabbing valve, 2 1/2" choke manifold and pit level indicator.

8. Testing, Coring, Sampling and Logging:

- a) Test: None are anticipated.
- b) Coring: There is the possibility of sidewall coring.
- c) Sampling: Every 10' from 1900' to T.D.
- d) Logging:

Type	Interval
DLL/SFL W/GR and SP	T.D. to Surface Casing
FDC/CNL W/GR and CAL	T.D. to Surface Casing

9. Abnormalities (including sour gas):

No abnormal pressures, temperatures or other hazards are anticipated. Oil and gas shows are anticipated in the Wasatch formation. Other wells drilled in the area have not encountered over pressured zones or H₂S.

10. Drilling Schedule:

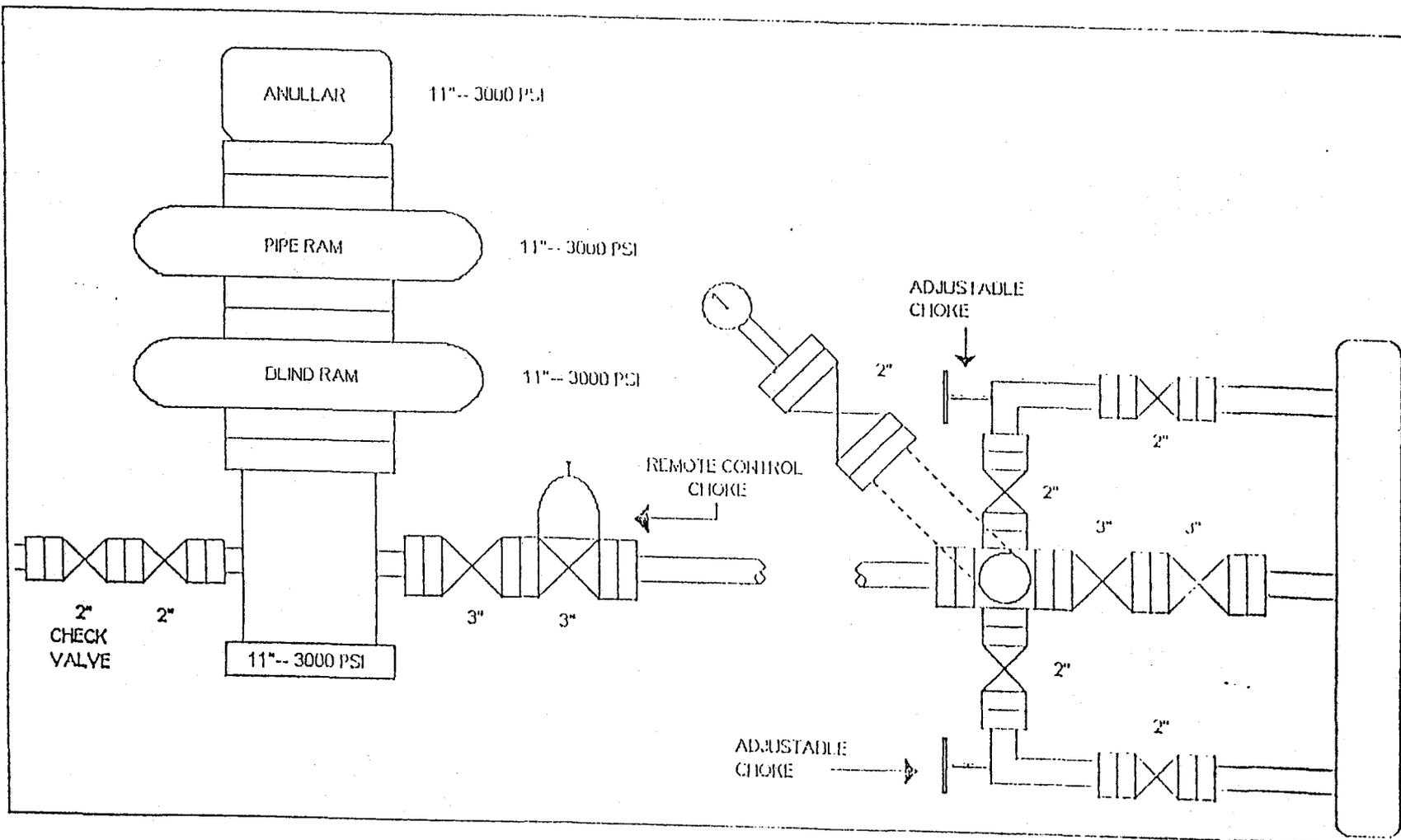
The anticipated starting date is April 15, 2000. Duration of operations expected to be 20 days.

(utah adps:dwr 4-21)

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RANKEN ENERGY CORP.

LOCATION LAYOUT FOR

DWR #4-21

SECTION 21, T12S, R23E, S.L.B.&M.

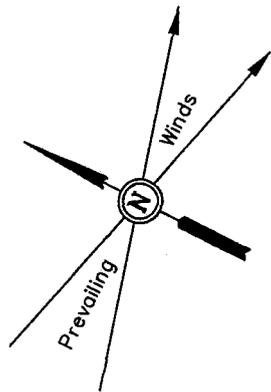
688' FNL 528' FWL

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OIL, GAS AND MINING

Sta. 3+25



SCALE: 1" = 50'
DATE: 02-07-00
Drawn By: D.R.B.

C-7.1'
El. 30.0'

C-8.0'
El. 30.9' Topsoil Stockpile

C-7.3'
El. 30.2'

Round Corners
as Needed

Approx.
Top of
Cut Slope



Existing Wash
BANK

CATWALK

PIPE RACKS

FLARE PIT C-4.4'
El. 35.4'
El. 27.3'
C-22.5'
(btm. pit)

C-0.5'
El. 23.4'

Sta. 1+50

F-1.5'
El. 21.4'

Pit Capacity With
2' of Freeboard
is 4,800 Bbls. ±

RESERVE PITS
(10' Deep)

RIG DOG HOUSE

Sta. 0+66

CONSTRUCT
DIVERSION
DITCH

El. 27.9'
C-15.0'
(btm. pit)
El. 19.9'
F-3.0'
Reserve Pit Backfill
& Spoils Stockpile

MUD TANKS

PUMP
MUD SHED
HOPPER
POWER
TOOLS
FUEL

TRAILER
TOILET
FUEL
STORAGE TANK

Approx.
Toe of
Fill Slope

Sta. 0+00

CONSTRUCT
DIVERSION
DITCH

F-6.8'
El. 16.1'

F-7.2'
El. 15.7'

F-6.1'
El. 16.8'

Proposed Access
Road

Elev. Ungraded Ground at Location Stake = 5623.4'

Elev. Graded Ground at Location Stake = 5622.9'

RANKEN ENERGY CORP.

TYPICAL CROSS SECTIONS FOR

DWR #4-21

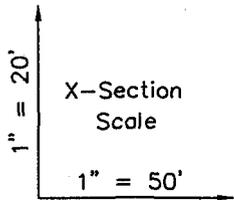
SECTION 21, T12S, R23E, S.L.B.&M.

688' FNL 528' FWL

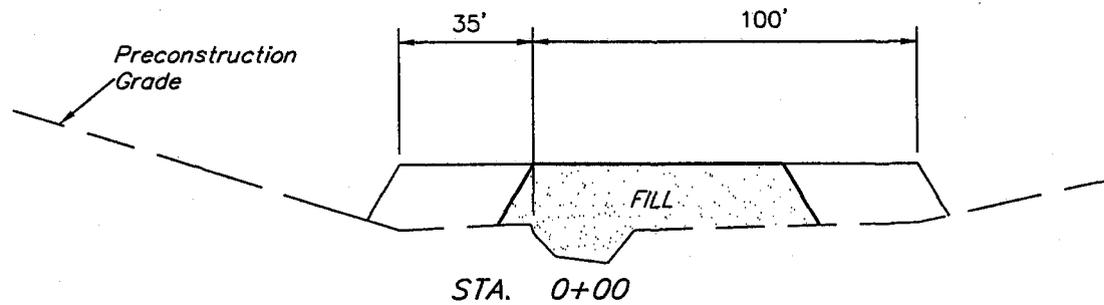
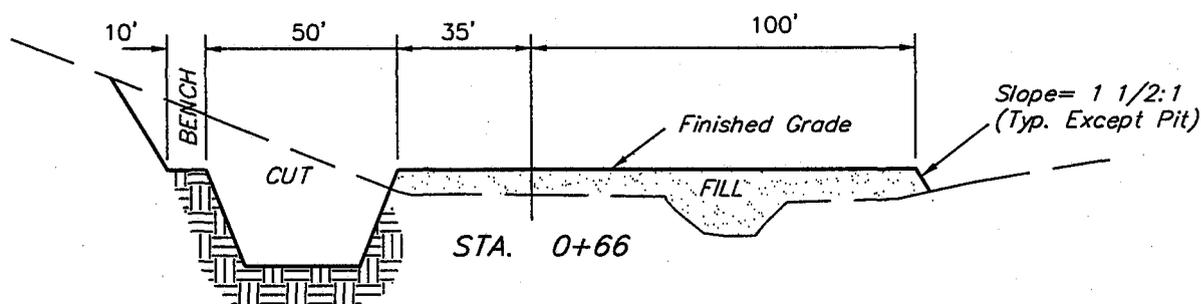
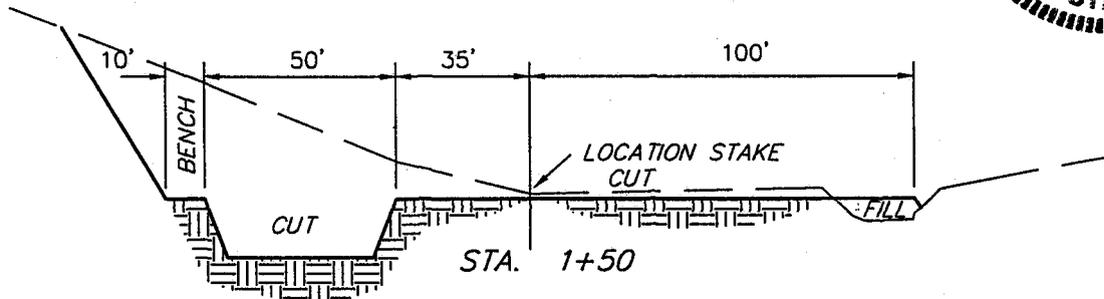
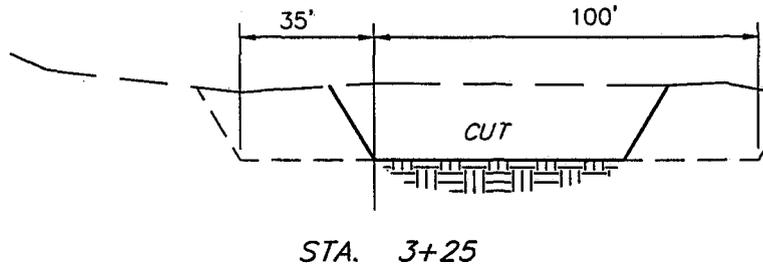
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FEB 23 2000

DIVISION OF
OIL, GAS AND MINING



DATE: 02-07-00
Drawn By: D.R.B.

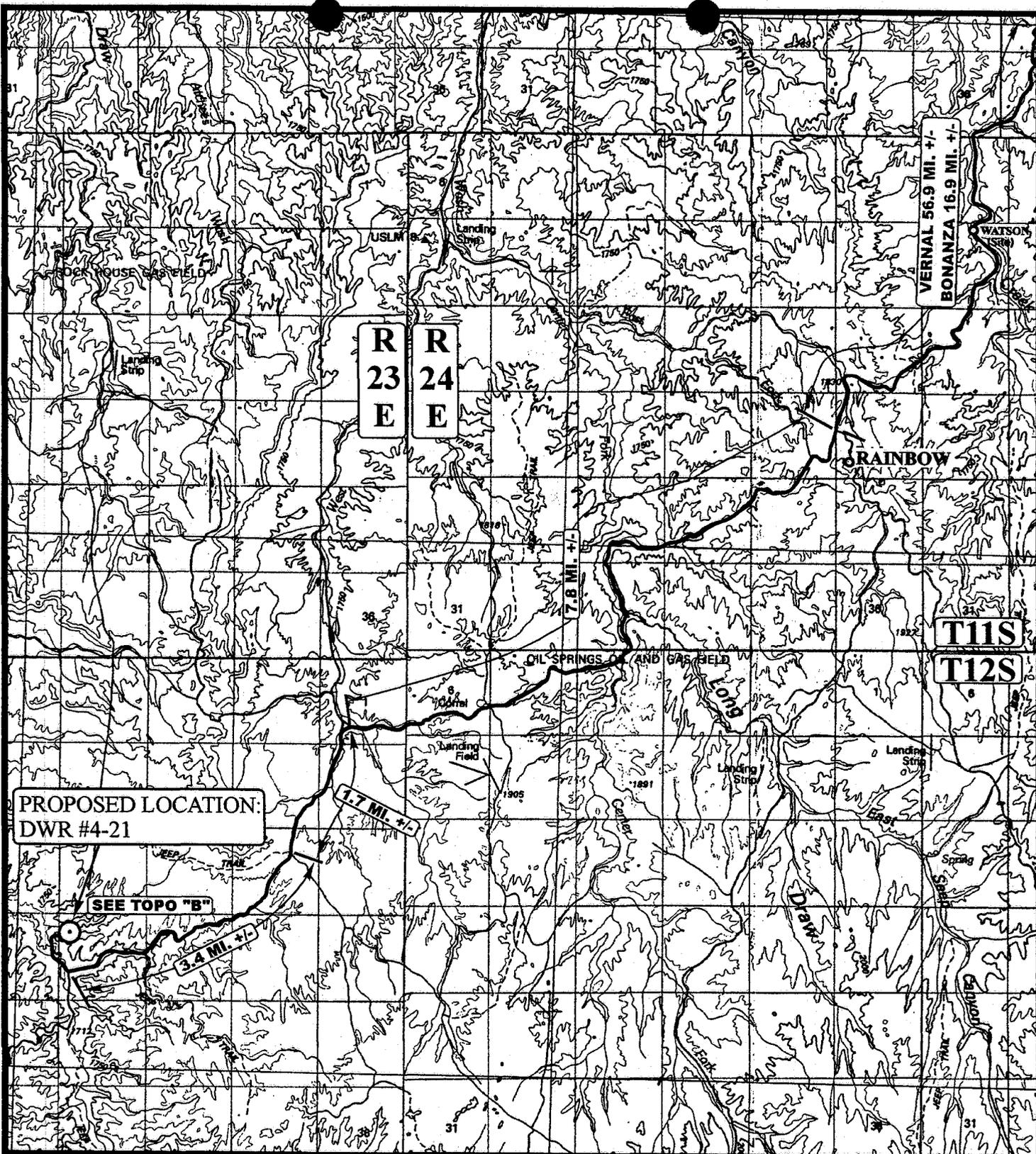


APPROXIMATE YARDAGES

CUT	
(6") Topsoil Stripping	= 950 Cu. Yds.
Remaining Location	= 6,860 Cu. Yds.
TOTAL CUT	= 7,810 CU.YDS.
FILL	= 2,980 CU.YDS.

EXCESS MATERIAL AFTER 5% COMPACTION	= 4,670 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 1,620 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	= 3,050 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017



PROPOSED LOCATION:
DWR #4-21

SEE TOPO "B"

LEGEND:

⊙ PROPOSED LOCATION

RANKEN ENERGY CORP.

DWR #4-21
SECTION 21, T12S, R23E, S.L.B.&M.
688' FNL 528' FWL



Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

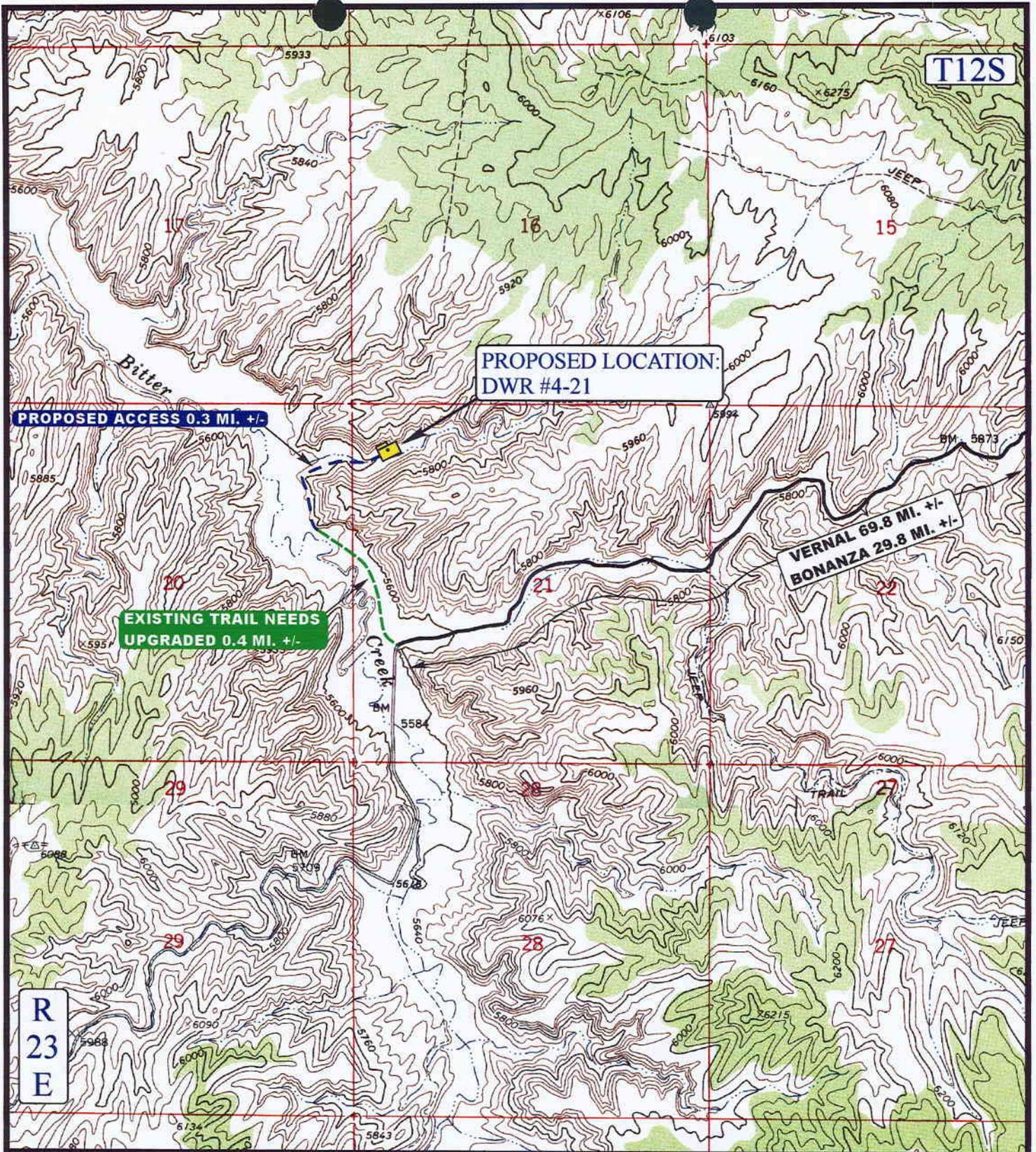


TOPOGRAPHIC
MAP

1 31 00
MONTH DAY YEAR

SCALE: 1:100,000 DRAWN BY: J.L.G. REVISED: 00-00-00





**PROPOSED LOCATION:
DWR #4-21**

PROPOSED ACCESS 0.3 MI. +/-

**EXISTING TRAIL NEEDS
UPGRADED 0.4 MI. +/-**

**VERNAL 69.8 MI. +/-
BONANZA 29.8 MI. +/-**

**R
23
E**

LEGEND:

- PROPOSED ACCESS ROAD
- EXISTING ROAD



RANKEN ENERGY CORP.

**DWR #4-21
SECTION 21, T12S, R23E, S.L.B.&M.
688' FNL 528' FWL**



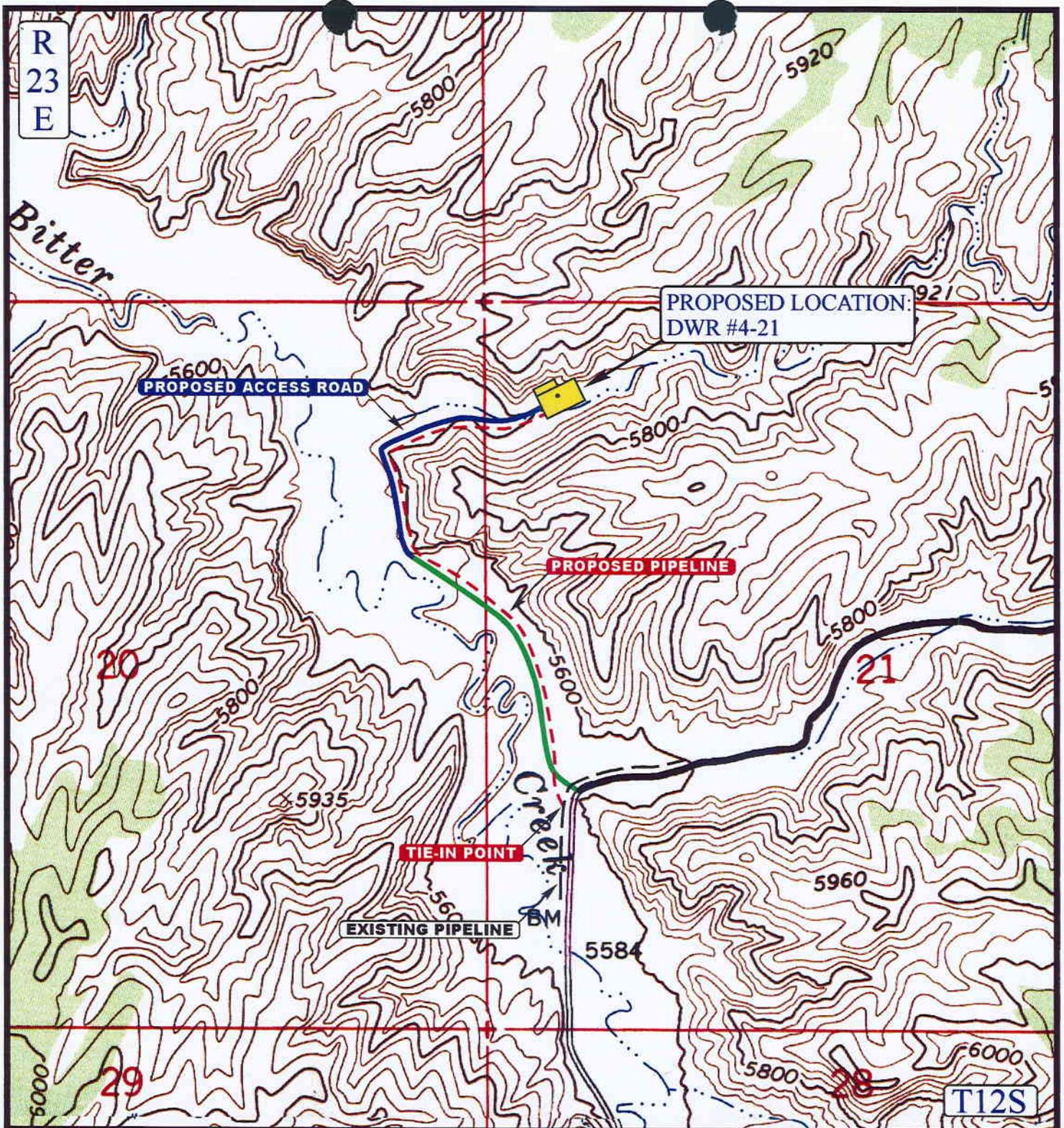
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

**TOPOGRAPHIC
MAP**

1 31 00
MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: J.L.G. REVISED: 00-00-00





APPROXIMATE TOTAL PIPELINE DISTANCE = 4200' +/-

LEGEND:

- EXISTING PIPELINE
- PROPOSED PIPELINE
- PROPOSED ACCESS

RANKEN ENERGY CORP.

DWR #4-21
SECTION 21, T12S, R23E, S.L.B.&M.
688' FNL 528' FWL



Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC 1 31 00
MAP MONTH DAY YEAR

SCALE: 1" = 1000' DRAWN BY: J.L.G. REVISED: 00-00-00



**WORKSHEET
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 02/23/2000

API NO. ASSIGNED: 43-047-33486

WELL NAME: DWR 4-21
 OPERATOR: RANKEN ENERGY CORP (N6250)
 CONTACT: RANDOLPH COY

PHONE NUMBER: 405-340-2363

PROPOSED LOCATION:
 NWNW 21 120S 230E
 SURFACE: 0688 FNL 0528 FWL
 BOTTOM: 0688 FNL 0528 FWL
 UINTAH
 UNDESIGNATED (2)

INSPECT LOCATN BY: / /		
Tech Review	Initials	Date
Engineering	3-27-00	RJK
Geology		
Surface		

LEASE TYPE: 4-Fee
 LEASE NUMBER: FEE
 SURFACE OWNER: 3-State / DWR

PROPOSED FORMATION: WSTC

RECEIVED AND/OR REVIEWED:

Plat
 Bond: Fed[] Ind[] Sta[] Fee[4]
 (No. 135671)

Potash (Y/N)
 Oil Shale (Y/N) *190 - 5 (B)
 Water Permit
 (No. T72132)

RDCC Review (Y/N)
 (Date: _____)

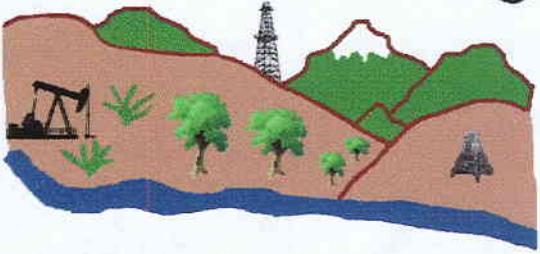
Fee, Surf Agreement (Y/N)

LOCATION AND SITING:

R649-2-3. Unit _____
 R649-3-2. General
 Siting: _____
 R649-3-3. Exception
 Drilling Unit
 Board Cause No: _____
 Eff Date: _____
 Siting: _____
 R649-3-11. Directional Drill

COMMENTS: Need Presite. (3/10/00)

STIPULATIONS: ① STATEMENT OF BASIS



Utah Oil Gas and Mining

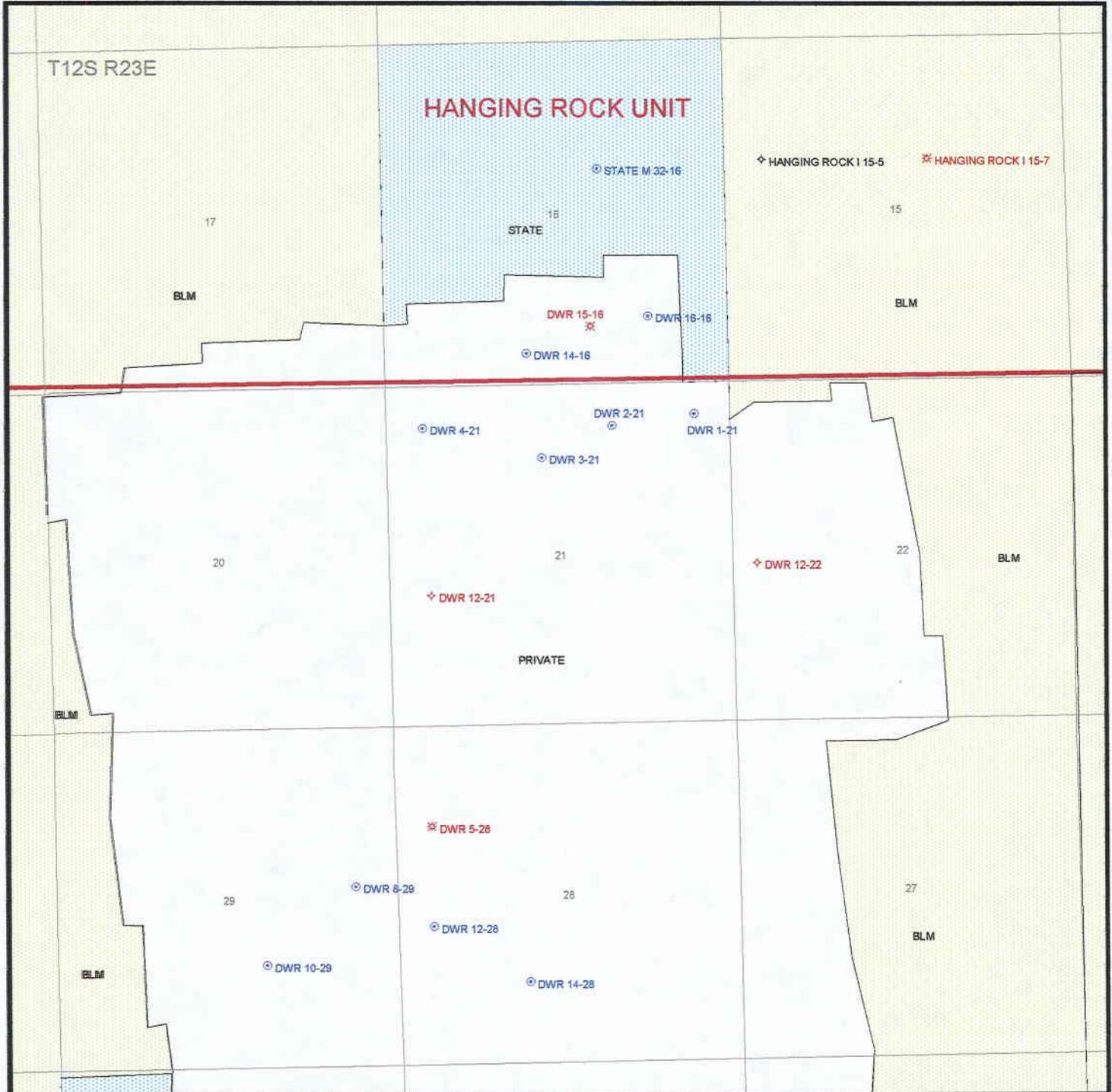
Serving the Industry, Protecting the Environment

OPERATOR: RANKEN ENERGY CORPORATION (N6250)

FIELD: UNDESIGNATED (002)

S EC. 16, 21, & 29, T 12 S, R 23 E

COUNTY: UINTAH UNIT: HANGING ROCK



PREPARED
DATE: 28-Feb-2000

RESOURCE DEVELOPMENT COORDINATING COMMITTEE

April 11 , 2000

Agenda

I. Approval of Minutes

March 14, 2000

II. Special Presentations

Great Salt Lake, and Bear Lake Drilling - Dennis Nielson (DOSECC)

General Public please note! The following items on the Agenda may or may not be discussed by the Committee. No special discussions are planned.

III. Other Proposed Actions

A. State

1. UT000322-120 Forestry, Fire and State Lands/Grand County: Nash Wash Prescribed Burn (Sec. 16, T20S, R21E). Comments due 4/14/00.
2. UT000323-010 Trust Lands Administration/Wayne County: Anderson Development Lease and Sale (Sec. 27, T29S, R4E). Comments due 4/16/00.
3. UT000323-040 Division of Wildlife Resources/Uintah County: Ranken Energy Corporation Easement Application for well #DWR-4-21 (Sec. 21, T12S, R23E). Comments due 4/11/00.
4. UT000323-050 Division of Wildlife Resources/Uintah County: Ranken Energy Corporation Easement Application for well #DWR-16-16 (Sec. 16, T12S, R23E). Comments due 4/11/00.
5. UT000323-060 Division of Wildlife Resources/Uintah County: Ranken Energy Corporation Easement Application for well #DWR-3-21 (Sec. 21, T12S, R23E). Comments due 4/11/00.

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

Operator Name: RANKEN ENERGY CORP.

Well Name & Number: DWR #4-21

API Number: 43-047-33486

Location: 1/4,1/4 NW/NW Sec. 21 T. 12S R. 23E

Geology/Ground Water:

Ranken Energy has proposed setting 300 feet of 8 5/8" surface casing which will be cemented to surface at this location. The base of the moderately saline groundwater is estimated to be at a depth of 3100 feet. This is near the proposed total depth of this well in the Wasatch formation. A search of Division of Water Rights records show no water wells within 10,000 feet of the center of Section 21. The proposed surface casing program should adequately protect Ground water resources in the area.

Reviewer: Brad Hill

Date: 3/23/00

Surface:

The pre-drill investigation of the surface was performed on 3/10/00. The Division of Wildlife Resources is the surface owner, and they were represented by Jack Lytle and Natalie Gale. Mr. Lytle stated that all DWR concerns and stipulations would be addressed in the Landowner Agreement. The nearest moving water to this site is Bitter Creek 0.3 miles to the west. A low water crossing will be necessary where access road crosses dry stream bed.

Reviewer: David W. Hackford

Date: 3/14/00

Conditions of Approval/Application for Permit to Drill:

1. None

ON-SITE PREDRILL EVALUATION
Division of Oil, Gas and Mining

OPERATOR: RANKEN ENERGY CORP.

WELL NAME & NUMBER: DWR 4-21

API NUMBER: 43-047-33486

LEASE: FEE **FIELD/UNIT:** _____

LOCATION: 1/4, 1/4 NW/NW SEC:21 TWP:12S RNG: 23E

688' F N L 528' F W L

LEGAL WELL SITING: Statewide 400 foot window in center of 40
acre tract and no closer than 920 feet from
another well.

GPS COORD (UTM): 12640826E 4402879N

SURFACE OWNER: DIVISION OF WILDLIFE RESOURCES

PARTICIPANTS:

BILL RYAN (RANKEN), JACK LYTLE (DWR), DAVID HACKFORD (DOGM),
NATALIE GALE, (DWR).

REGIONAL/LOCAL SETTING & TOPOGRAPHY:

SITE IS IN THE BOTTOM OF A CANYON RUNNING WEST TOWARD BITTER
CREEK 0.3 MILES AWAY. A DRY STREAM BED RUNS DOWN CANYON ADJACENT
TO SITE. THERE ARE STEEP SLOPES TO THE NORTH AND SOUTH.

SURFACE USE PLAN:

CURRENT SURFACE USE: WILDLIFE AND LIVESTOCK GRAZING.
HUNTING.

PROPOSED SURFACE DISTURBANCE: LOCATION WOULD BE 325' BY 185'
AND ACCESS ROAD WOULD BE 0.3 MILES OF NEW CONSTRUCTION AND
0.4 MILES OF UPGRADED TRAIL.

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: SEE
ATTACHED MAP FROM GIS DATABASE

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: _____
ALL PRODUCTION FACILITIES WILL BE ON LOCATION AND ADDED
AFTER DRILLING WELL. PIPELINE WILL FOLLOW ACCESS ROAD.

SOURCE OF CONSTRUCTION MATERIAL: ALL CONSTRUCTION MATERIAL
WILL BE BORROWED FROM SITE DURING CONSTRUCTION OF LOCATION.

ANCILLARY FACILITIES: NONE WILL BE REQUIRED.

WASTE MANAGEMENT PLAN:

DRILLED CUTTINGS WILL BE SETTLED INTO RESERVE PIT. LIQUIDS FROM PIT WILL BE ALLOWED TO EVAPORATE. FORMATION WATER WILL BE CONFINED TO STORAGE TANKS. SEWAGE FACILITIES, STORAGE AND DISPOSAL WILL BE HANDLED BY COMMERCIAL CONTRACTOR. TRASH WILL BE CONTAINED IN TRASH BASKETS AND HAULED TO AN APPROVED LAND FILL.

ENVIRONMENTAL PARAMETERS:

AFFECTED FLOODPLAINS AND/OR WETLANDS: NONE

FLORA/FAUNA: NATIVE GRASSES, GREASEWOOD, PRICKLY PEAR, CHEAT GRASS, SHADSCALE: SONG BIRDS, RAPTORIAL BIRDS, RODENTS, COYOTES, DEER, ELK, PRONGHORN, COUGAR, BOBCATS.

SOIL TYPE AND CHARACTERISTICS: LIGHT BROWN SANDY CLAY LOAM WITH VERY LIGHT FLAT SHALE ROCKS.

EROSION/SEDIMENTATION/STABILITY: MINOR NATURAL EROSION ON STEEP SLOPE TO THE SOUTH AND NORTH. SEDIMENTATION AND STABILITY ARE NOT A PROBLEM AND LOCATION CONSTRUCTION SHOULDN'T CAUSE ANY INCREASE IN STABILITY OR EROSION PROBLEMS.

PALEONTOLOGICAL POTENTIAL: NONE OBSERVED. SUE ANN BILBY FROM THE VERNAL MUSEUM OF NATURAL HISTORY WILL PERFORM A PALEO STUDY FOR RANKEN AT DWR REQUEST.

RESERVE PIT:

CHARACTERISTICS: 100' BY 50' AND 10'DEEP.

LINER REQUIREMENTS (Site Ranking Form attached): A LINER WILL NOT BE REQUIRED.

SURFACE RESTORATION/RECLAMATION PLAN:

AS PER LANDOWNER AGREEMENT OR AS DIRECTED BY DIVISION.

SURFACE AGREEMENT: A SURFACE AGREEMENT HAS NOT BEEN SIGNED AT THIS TIME.

CULTURAL RESOURCES/ARCHAEOLOGY: SITE WILL BE INSPECTED BY SAGE-BRUSH CONSULTING. A REPORT OF THIS INVESTIGATION WILL BE PLACED ON FILE.

OTHER OBSERVATIONS/COMMENTS:

THE PRE-DRILL INVESTIGATION TOOK PLACE ON A WARM SUNNY DAY.

ATTACHMENTS:

PHOTOS OF SITE WILL BE PLACED ON FILE.

DAVID W. HACKFORD
DOGM REPRESENTATIVE

3/10/00 1:15PM
DATE/TIME

Evaluation Ranking Criteria and Ranking Score
For Reserve and On-site 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>0</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>0</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>0</u>
Final Score		<u>15</u>







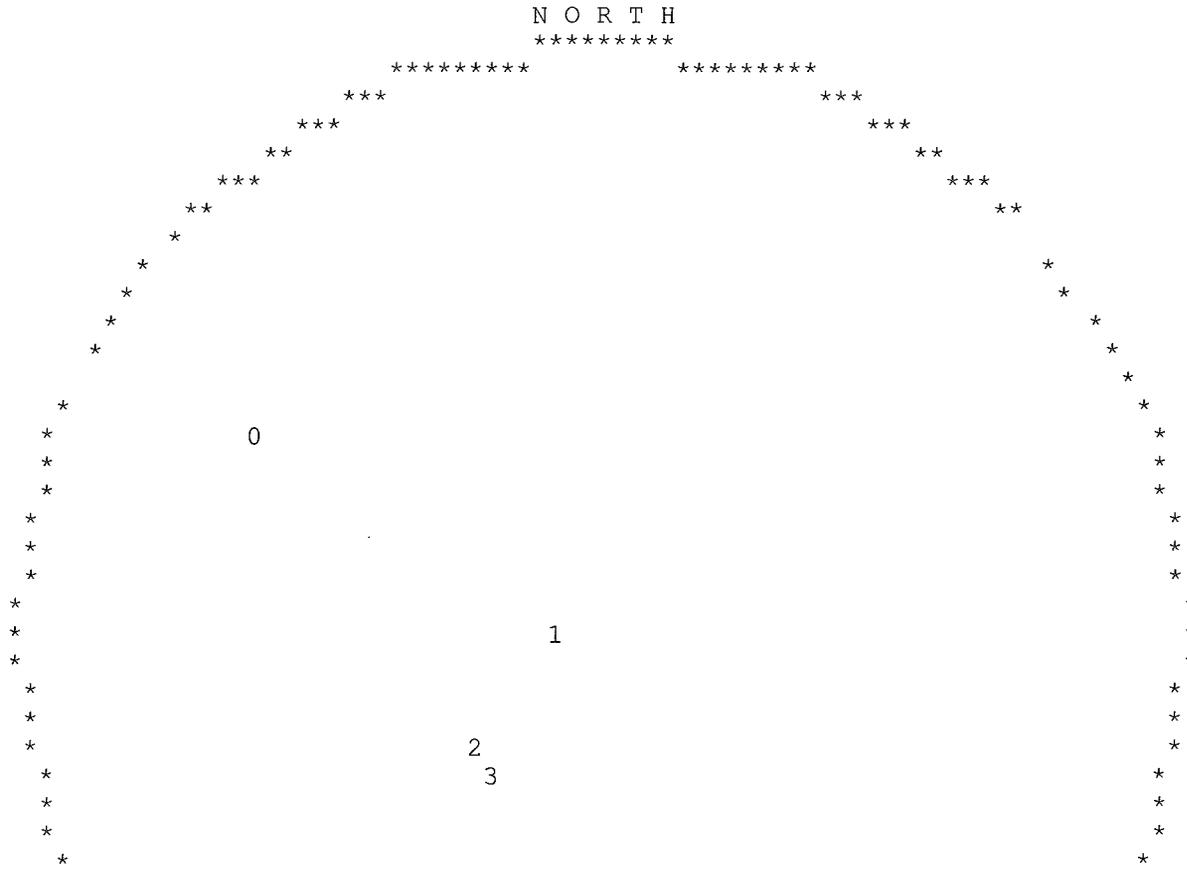




UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED THU, MAR 23, 2000, 9:35 AM
PLOT SHOWS LOCATION OF 5 POINTS OF DIVERSION

PLOT OF AN AREA WITH A RADIUS OF 10000 FEET FROM A POINT
FEET, FEET OF THE CT CORNER,
SECTION 21 TOWNSHIP 12S RANGE 23E SL BASE AND MERIDIAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 4000 FEET



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UTAH DIVISION OF WATER RIGHTS
 NWPLAT POINT OF DIVERSION LOCATION PROGRAM

MAP CHAR	WATER RIGHT	QUANTITY CFS	AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER DEPTH	POINT OF DIVERSION DESCRIPTION YEAR LOG NORTH EAST CNR SEC TWN RNG B&M
0	49 900	.0000	.00	Bitter Creek	
		WATER USE(S): STOCKWATERING OTHER			PRIORITY DATE: 00/00/190
		USA Bureau of Land Management		2370 South 2300 West	Salt Lake City
1	49 113	.0000	250000.00	White River & Tributaries	N 2620 E 1700 SW 21 12S 23E SL
		WATER USE(S): DOMESTIC MINING POWER			PRIORITY DATE: 05/19/196
		State of Utah Board of Water Resources		1594 West North Temple, Ste 310	Salt Lake City
1	49 304	.0000	105000.00	White River & tributaries	N 2620 E 1700 SW 21 12S 23E SL
		WATER USE(S): DOMESTIC POWER OTHER			PRIORITY DATE: 05/19/196
		State of Utah Board of Water Resources		1594 West North Temple, Ste 310	Salt Lake City
2	49 1560	.0000	10.00	Bitter Creek	N 700 E 500 SW 21 12S 23E SL
		WATER USE(S): OTHER			PRIORITY DATE: 07/26/199
		Jim Nebeker Trucking		Route 2 Box 2060	Roosevelt
3	49 1633	.0000	10.00	Bitter Creek	N 300 E 800 SW 21 12S 23E SL

WATER USE(S): OTHER
Dalbo Inc.

P. O. Box 1168

PRIORITY DATE: 05/12/199
Vernal

Well name:	3-00 Ranken DWR4-21		Project ID:
Operator:	Ranken Energy Corporation		43-047-33486
String type:	Surface		
Location:	Uintah Co.		

Design parameters:

Collapse

Mud weight: 8.330 ppg
 Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 75 °F
 Bottom hole temperature: 79 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 300 ft

Cement top: 1 ft

Burst

Max anticipated surface pressure: 0 psi
 Internal gradient: 0.433 psi/ft
 Calculated BHP 130 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
 8 Round LTC: 1.80 (J)
 Buttress: 1.60 (J)
 Premium: 1.50 (J)
 Body yield: 1.50 (B)

Tension is based on buoyed weight.
 Neutral point: 262 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 300 ft
 Next mud weight: 8.330 ppg
 Next setting BHP: 130 psi
 Fracture mud wt: 19.250 ppg
 Fracture depth: 300 ft
 Injection pressure 300 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	300	8.625	24.00	J-55	ST&C	300	300	7.972	14.4
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	130	1370	10.56	130	2950	22.73	6	244	38.74 J

Prepared by: Bob Krueger
 Utah Dept. of Natural Resources

Phone: (801) 538-5274
 FAX: (801) 359-3940

Date: March 27, 2000
 Salt Lake City, Utah

ENGINEERING STIPULATIONS: NONE

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
 Collapse is based on a vertical depth of 300 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes.
 Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	3-00 Ranken DWR4-21	
Operator:	Ranken Energy Corporation	
String type:	Production	Project ID: 43-047-33486
Location:	Uintah Co.	

Design parameters:

Collapse

Mud weight: 8.600 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 124 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 720 ft

Burst

Max anticipated surface pressure: 0 psi
Internal gradient: 0.447 psi/ft
Calculated BHP 1,564 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Non-directional string.

Tension is based on air weight.
Neutral point: 3,052 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	3500	4.5	10.50	J-55	ST&C	3500	3500	3.927	73.1
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	1564	4010	2.56	1564	4790	3.06	37	132	3.59 J

Prepared by: Bob Krueger
Utah Dept. of Natural Resources

Phone: (801) 538-5274
FAX: (801) 359-3940

Date: March 27, 2000
Salt Lake City, Utah

ENGINEERING STIPULATIONS: NONE

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

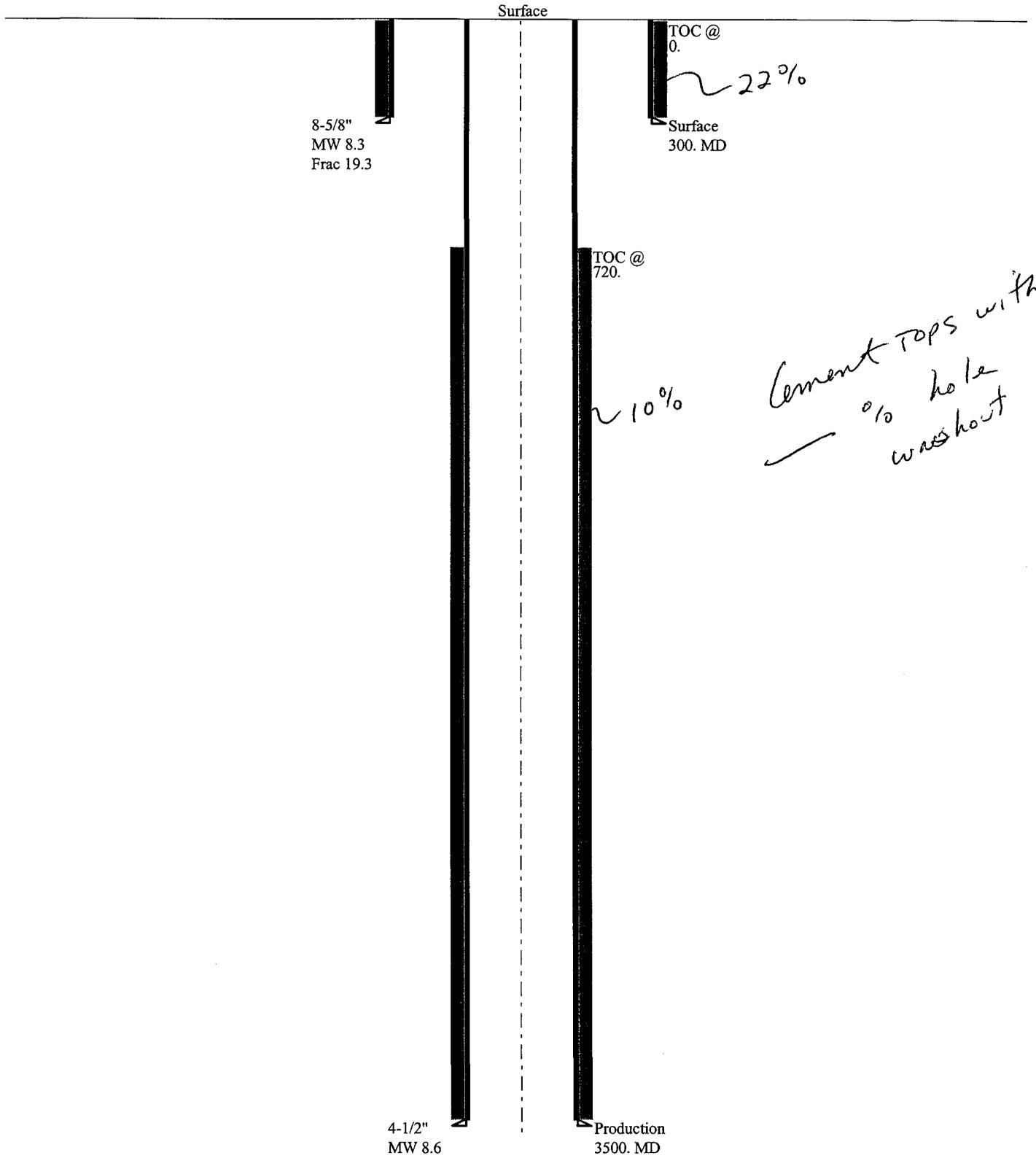
Collapse is based on a vertical depth of 3500 ft, a mud weight of 8.6 ppg. The casing is considered to be evacuated for collapse purposes.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

3-00 Ranken DWR4-21

Casing Schematic



SAGEBRUSH CONSULTANTS, L.L.C.

Cultural Resources • Environmental Studies • Historic Preservation



March 27, 2000

John Basa
Utah Division of Oil, Gas and Mining
P.O. Box 145801
1594 West North Temple, Suite 210
Salt Lake City, Utah 84114-5801

RE: *A Cultural Resource Survey of Ranken Energy Wells DWR #16-16, DWR #14-16, DWR #1-21, DWR # 2-21, DWR #3-21, DWR #4-21 and Associated Access Corridors, Uintah County, Utah; Sagebrush Report No. 1152.*

Dear Mr. Basa;

Sagebrush Consultants, Inc. have completed an inventory and report on six proposed wells for Ranken Energy, Incorporated in Uintah County, Utah. Enclosed please find a copy of the report. All are located on state lands administered by DWR. Three isolated finds were located, but are not recommended significant. One previously located site, 42UN2582, was encountered on the access road to location DWR 14-16. It is recommended that the road be moved 5 meters to the south and the pipeline moved south of the road. Moving those linear features will avoid effects to the site in question.

Please let me know if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Michael R. Polk".

Michael R. Polk
Principal Archaeologist/Owner

enclosure

RECEIVED

MAR 31 2000

DIVISION OF
OIL, GAS AND MINING

**A CULTURAL RESOURCE SURVEY OF RANKEN ENERGY WELLS
DWR #16-16, DWR #14-16, DWR #1-21, DWR # 2-21, DWR #3-21, DWR #4-21
AND ASSOCIATED ACCESS CORRIDORS, UINTAH COUNTY, UTAH**

by

Michael R. Polk
Principal Archaeologist

and

James R. Christensen
Assistant Archaeologist

Prepared for:

Rocky Mountain Consulting
350 South 800 East
Vernal, Utah 84078

Prepared by:

Sagebrush Consultants, L.L.C.
3670 Quincy Avenue, Suite 203
Ogden, Utah 84403

Under Authority of Utah State Antiquities Permit No. U-00-SJ-0033s

Archaeological Report No. 1152

March 26, 2000

INTRODUCTION

In February 2000, Ranken Energy, Inc. (Ranken) of Vernal, Utah requested that Sagebrush Consultants, L.L.C. (Sagebrush) conduct a cultural resource inventory of Ranken Energy Wells DWR #16-16, DWR #14-16, DWR #1-21, DWR # 2-21, DWR #3-21, DWR #4-21 and associated access corridors in Uintah County, Utah. The purpose of this inventory is to identify cultural resource sites which may be present within the proposed project area.

The proposed wells are located in T. 12S., R. 23E., S. 16 and 21 on USGS 7.5' Quadrangle Archy Bench SE (1968) (Figure 1). Footages for the proposed well locations are as follows: DWR #14-16 (474' FSL 2237' FWL); DWR #16-16 (1054' FSL 1192' FEL); DWR #1-21 (461' FNL 585' FEL); DWR #2-21 (644' FNL 1856' FEL); DWR #3-21 (1148' FNL 2366' FWL); DWR #4-21 (688' FNL 528' FWL). The proposed well pad locations and most of the associated access corridors lie on Utah State Lands administered by the Division of Wildlife Resources (DWR). A small portion of the access corridors lie on Utah State Lands administered by the State Institutional Trust Lands Administration (SITLA). The survey of the project area was carried out by Michael R. Polk under authority of Utah State Antiquities Permit No. U-00-SJ-0033s.

Prior to conducting fieldwork, a file search for previously recorded cultural resource sites located near the current project area was conducted by Heather M. Weymouth and James R. Christensen at the Bureau of Land Management, Vernal District Office on June 11, 1999. An updated file search was conducted by James R. Christensen at the Utah State Historic Preservation Office, Salt Lake City, on March 20, 2000.

More than 20 previous cultural resource projects have been conducted in the vicinity of the current project. Due to the large number of projects conducted in this area, individual project descriptions will not be listed. However, two previously recorded cultural resource sites are located near the current project area. Both were documented in 1998 by Grand River Institute during an inventory for seven proposed wells (Conner 1998a;1998b). Following are brief descriptions of each site:

Site 42Un2582. This site, located northeast of Bitter Creek, is a small prehistoric/historic Ute campsite locality. The site consists of the remains of two collapsed wickiup structures. One structure is represented by 10 juniper poles or limbs, and the second is represented by approximately seven. No artifacts were identified at this site. This site was recommended ELIGIBLE to the NRHP.

Site 42Un2588. This site, located northeast of Bitter Creek, is a historic campsite locality. The site consists of a small historic trash scatter, three hearth features and two rock alignments. This site was recommended NOT eligible to the NRHP.

No additional cultural resource sites have been recorded in the vicinity of the current project area. The NRHP was consulted prior to the commencement of fieldwork for the present project. No NRHP listed sites were found located in the vicinity of the current project area.

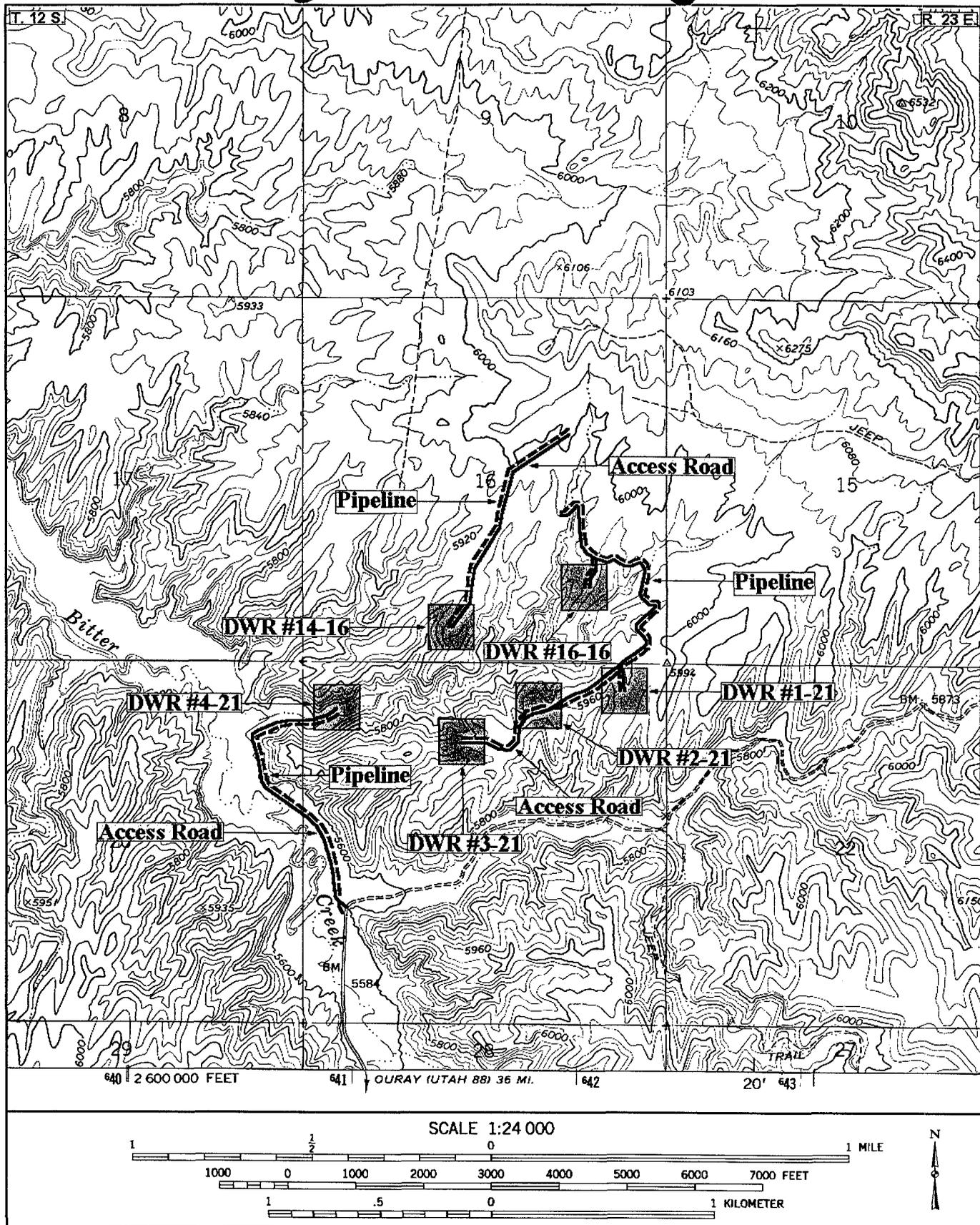


Figure 1. Location of the area surveyed for Ranken Energy's proposed wells DWR #1-21, #2-21, #3-21, #4-21, #14-16, #16-16, associated access roads and pipelines. Taken from USGS 7.5' Quadrangle Archy Bench SE, Utah (1968; P.R. 1987).

ENVIRONMENT

The project area lies in the dissected tablelands surrounding Bitter Creek in the northern Book Cliffs area. The elevation of the project locations surveyed range from 5600 to 6000 ft a.s.l. Sediments consist of tan to brown sandy silt. Vegetation in the higher elevations covers approximately 30 percent of the ground surface and consists of pinyon-juniper community species including ephedra, yucca, juniper, pinyon pine, mountain mahogany and cactus. Vegetation in the lower elevations covers approximately 45 percent of the ground surface and consists of pinyon-juniper community species including sagebrush, greasewood, cactus, spiny hopsage, pinyon pine and juniper. The nearest significant permanent water source is Bitter Creek which is located approximately 0.4 to 1.6 km (0.25 to 1.0 miles) west of the proposed well locations. Numerous seasonal drainages and washes are present throughout the general vicinity. Natural disturbance in the area consists of arroyo cutting, sheetwash and aeolian erosion. Cultural disturbance includes existing well pad locations and access roads, pipelines and sheep and cattle grazing.

METHODOLOGY

The project area inventoried consists of six 40,469 m² (10 ac) parcels of land 201-by-201 m (660-by-660 ft) centered on the proposed well heads, and 4.02 km (2.5 mi) of proposed access corridors. A total of 3.29 km (2.05 mi.) of access corridors cross Utah State lands managed by the DWR. A total of 0.73 km (0.45 mi.) of access corridors cross Utah State lands managed by the SITLA. The well pads were inventoried in parallel transects spaced no more than 15 m (50 ft) apart. The access roads and pipelines were walked in two parallel transects spaced 10 m (32 ft) apart to cover a corridor width of 30m (100 ft). The area surveyed during this project (including proposed well pads and access corridors) totaled 36.5 ha (90.4 ac).

RESULTS

A cultural resource inventory was conducted for proposed Ranken Energy Wells DWR #16-16, DWR #14-16, DWR #1-21, DWR # 2-21, DWR #3-21, DWR #4-21 and associated access corridors in Uintah County, Utah. Three Isolated Finds were identified during the inventories including IF-1, IF-2 and IF-3 (Figures 2, 3, 4, and 5). Also, one previously documented cultural resource site (site 42Un2582) was encountered during the inventory of the proposed access corridor leading to the planned location for Ranken Energy Well DWR #14-16 (Figure 2).

IF-1. A large monolithic sandstone rock slab was found, propped upright, about 19 m (62 ft) east of the proposed access corridor to well location DWR 14-16 in T. 12S., R. 23E., S. 16 SWSWNWSE. It lies on the edge of a ridge finger. The slab measures about 1.02 m (3 ft 4 in) high by up to 43 cm (1 ft 6 in) wide by up to 10 cm (4 in) thick. It is held up by other slabs piled at its base. No inscription could be discerned on the slab, and no artifacts or other features were found associated with it. The age of the feature could not be discerned, though packrat midden was noted at its base. It is likely not historic in origin since erosional conditions would probably not allow a rock such as this to remain in such a position for 50 years or more.

IF-2. A concentrated pile of sandstone slabs was found adjacent to the north side of the proposed access road to well DWR 2-21 in T. 12S., R. 23E., S. 16 NWNENE. The pile of rocks is 2.5 m north of the existing 2 track road on a level area of a finger ridge. The feature consists of a pile of flat sandstone slabs, piled 12 courses high in a generally circular shape. The pile measures 1.1 m (3 ft 9 in) north-south, by 1.0 m (3 ft 4 in) east-west by 88 cm (2 ft 11 in) high. The feature does not appear historic in age (less than 50 years) though there is some twig nesting material located between some of the rocks. The relatively recent age of the feature is suggested by: 1) the well kept condition of the feature; 2) the lack of vegetation growing around the feature, the lack of a "settled in" appearance of the feature in the soil beneath it; 3) the varied lichen growth on rock exteriors (showing that the rocks were moved from previous positions in the relatively recent past; 4) and the ground patina that is prominent on many rocks (ground patina only forms on rock surfaces facing the ground).

IF-3. Two hole-in-top cans were found in a very shallow drainage in low rolling hills along the proposed access to well location DWR 1-21 in T. 12S., R. 23E., S. 16 NWSESE. The cans are historic in origin and measure 3 5/8" high by 3" wide. The hole-in-top in one can is 1 3/4" wide and in the other it is 1" wide (also has less solder than the other). No other artifacts or cultural features were noted in the area.

Site 42Un2582, located northeast of Bitter Creek, is a small prehistoric/historic Ute campsite locality. This site lies within the northern half of the proposed access corridor leading to the planned location for Ranken Energy Well DWR #14-16. The site consists of the remains of two collapsed wickiup structures. One structure is represented by 10 juniper poles or limbs, and the second is represented by approximately seven. No artifacts were identified at this site. This site was recommended ELIGIBLE to the NRHP as part of initial documentation (Conner 1998a).

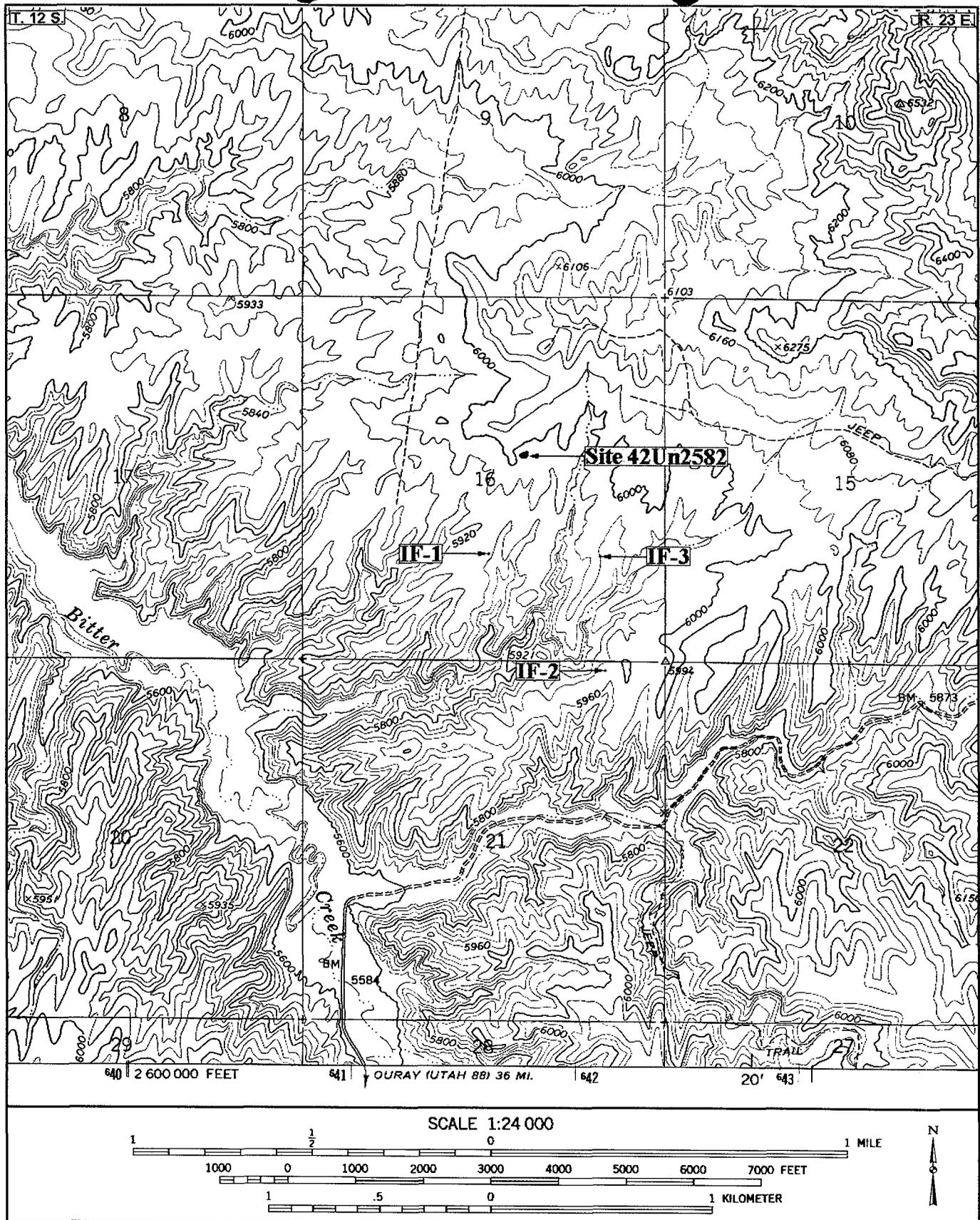


Figure 2. Location of site 42Un2582 and isolated finds 1-3 identified during the survey. Taken from USGS 7.5' Quadrangle Archy Bench SE, Utah (1968; P.R. 1987).



Figure 3. Close-up of IF-1, slab feature; view to the north-northeast.



Figure 4. IF-2, piled rocks; view to the east.

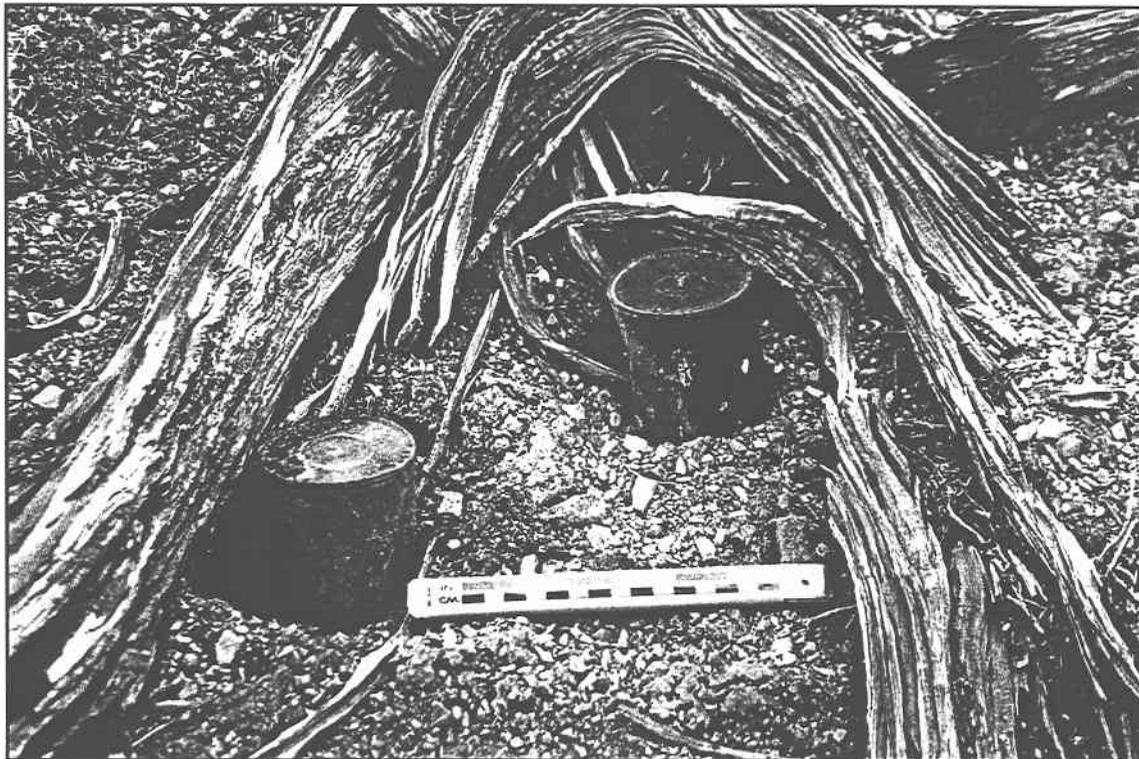


Figure 5. Close-up of IF-3, two hole-in-top cans.

RECOMMENDATIONS

A cultural resource inventory was conducted for proposed Ranken Energy Wells DWR #16-16, DWR #14-16, DWR #1-21, DWR # 2-21, DWR #3-21, DWR #4-21 and associated access corridors in Uintah County, Utah. Three Isolated Finds were identified during this inventory. Also, one previously documented cultural resource site (site 42Un2582) was encountered and revisited during this inventory.

The Isolated Finds include IF-1, a vertically set stone slab feature; IF-2, a sandstone slab pile; and IF-3, two historic hole-in-top cans. The first two isolates are not historic in origin, and so cannot be considered for eligibility to the NRHP. The historic cans are isolates and, in and of themselves, are not considered significant enough to be considered for eligibility to the NRHP. As such, cultural resources clearance is recommended for the access roads and pipelines to be constructed in the vicinity of these features.

Site 42Un2582 lies within the northern half of the proposed Ranken Energy Well DWR #14-16 access corridor. The proposed access corridor is centered on an existing two-track road. The pipeline would, under the current plan, lay on the northern margin of the two-track road and cut through site 42Un2582. AVOIDANCE of this site is recommended.

An alternate access route is suggested that will move a 100 m (328 ft) long segment of the access corridor centerline 5 m (16 ft) south-southeast of its originally proposed alignment (Figure 6). This alternate centerline for the access corridor has been flagged by Sagebrush personnel. It is also recommended that the proposed pipeline servicing Ranken Energy Well DWR #14-16 be moved south of the revised centerline where it will not impact the archaeological site in question.

This investigation was conducted with techniques which are considered to be adequate for evaluating cultural resources that are available for visual inspection and could be adversely affected by the proposed project. However, should such resources be discovered during construction, a report should be made immediately to the State Archaeologist, Division of State History, Utah State Historic Preservation Office, Salt Lake City, Utah. Should cultural resources be discovered on lands administered by the SITLA, a supplemental report should be made immediately to the SITLA Archaeologist, Salt Lake City, Utah.

REFERENCES CITED

Conner, Carl E.

1998a Intermountain Antiquities Computer System Site Form; Site 42Un2582. Grand River Institute. Grand Junction, Colorado.

1998b Intermountain Antiquities Computer System Site Form; Site 42Un2588. Grand River Institute. Grand Junction, Colorado.

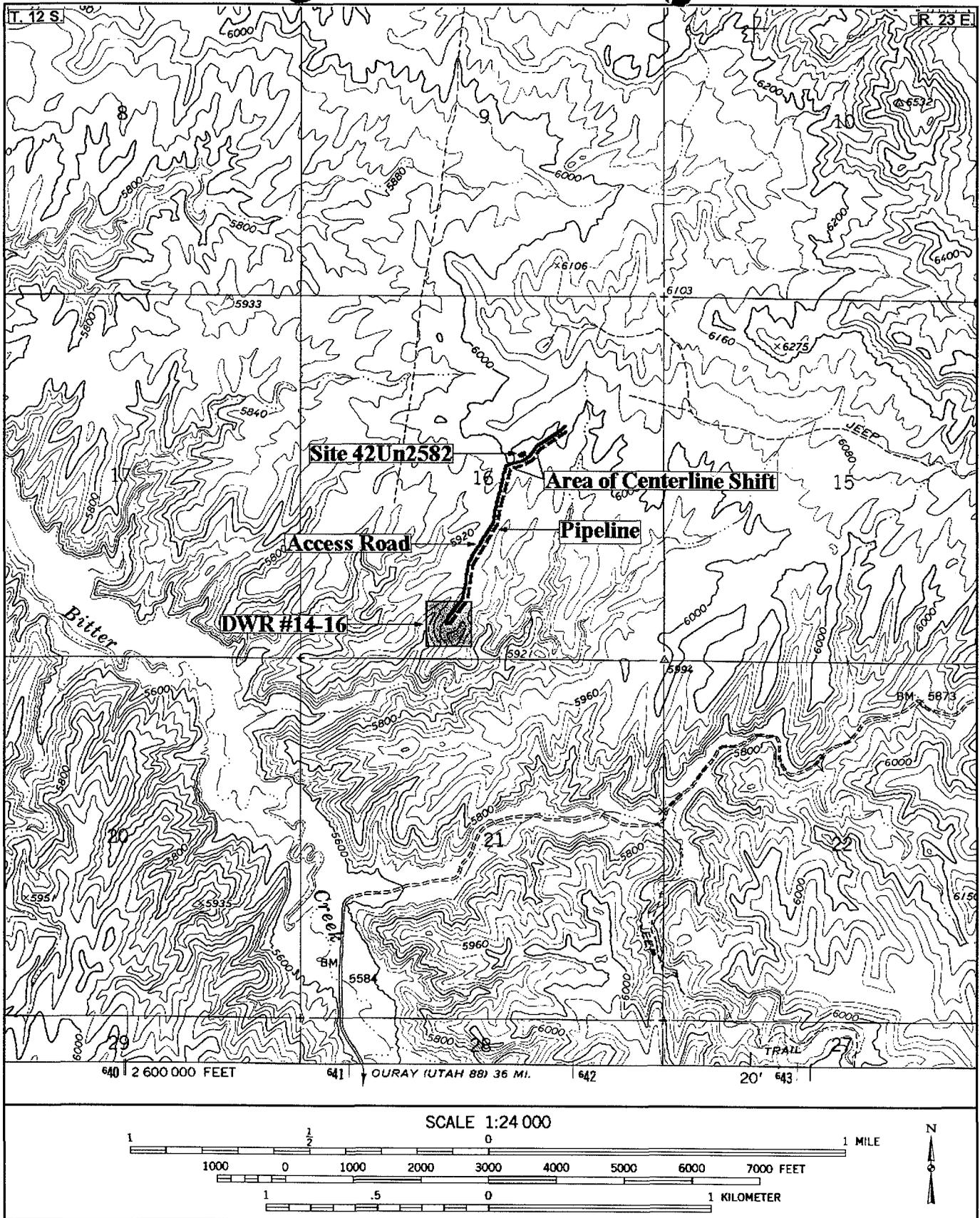


Figure 6. Location of pipeline and area affected by proposed go-around of site 42Un2582. Taken from USGS 7.5' Quadrangle Archy Bench SE, Utah (1968; P.R. 1987).



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

Michael O. Leavitt
Governor
Kathleen Clarke
Executive Director
Lowell P. Braxton
Division Director

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

April 25, 2000

Ranken Energy Corporation
417 West 18th Street, Suite 101
Edmond, OK 73013-3663

Re: DWR 4-21 Well, 688' FNL, 528' FWL, NW NW, Sec. 21, T. 12S, R. 23E, Uintah 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 enclosed Conditions of Approval, approval to drill the referenced well is granted.

This approval will 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 43-047-33486.

Sincerely,

A handwritten signature in black ink that reads "John R. Baza".

John R. Baza
Associate Director

er
Enclosures

cc: Uintah County Assessor
Division of Wildlife Resources

Operator: Ranken Energy Corporation

Well Name & Number: DWR 4-21

API Number: 43-047-33486

Lease: Fee

Location: NW NW **Sec.** 21 **T.** 12S **R.** 23E

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 of the following actions during drilling of this well:

- . 24 hours prior to cementing or testing casing
- . 24 hours prior to testing blowout prevention equipment
- . 24 hours prior to spudding the well
- . within 24 hours of any emergency changes made to the approved drilling program
- . prior to commencing operations to plug and abandon the well

Division contacts (please leave a voice mail message if the person is not available to take the call):

- . Dan Jarvis at (801)538-5338
- . Robert Krueger at (801)538-5274 (plugging)
- . Carol Daniels at (801)538-5284 (spud)

3. Reporting Requirements

All required reports, forms and submittals will 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 State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations you are required to immediately suspend all operations and immediately inform the Division of Wildlife Resources and the Division of State History of the discovery of such remains.

5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)



State of Utah

GOVERNOR'S OFFICE OF PLANNING AND BUDGET
Resource Development Coordinating Committee

John,
FYI for you folks
Jack

Michael O. Leavitt
Governor
Brad T. Barber
State Planning Coordinator
James L. Dykman
Committee Chairman
John A. Harja
Executive Director

116 State Capitol Building
Salt Lake City, Utah 84114
(801) 538-1027
Fax: (801) 538-1547

RECEIVED
APR 27 2000
UTAH CENTENNIAL 1896-1996
DIVISION OF WILDLIFE RESOURCES
NORTHEASTERN REGIONAL OFFICE

April 20, 2000

RECEIVED
MAY 15 2000
DIVISION OF
OIL, GAS AND MINING

Jack Lytle
Division of Wildlife Resources
1594 West North Temple
Salt Lake City, Utah 84114

SUBJECT: Ranken Energy Corporation Easement Applications for wells #: DWR-4-21;
DWR-16-16; DWR3-21; DWR-10-29; DWR2-21; DWR-8-29; DWR-12-28;
DWR-14-16; DWR-14-28; and DWR-1-21
State Identification Number: UT000323-040 to 130

Dear Mr. Lytle,

The Resource Development Coordinating Committee (RDCC), representing the State of Utah, has reviewed this proposal. State agencies' comments are as follows:

Utah Geological Survey

There are no paleontological localities recorded in this project area. However, the Eocene Green River and Uinta Formations are exposed throughout this area, and there is potential for the occurrence of significant paleontological resources. Other exposures of these two formations in this region have yielded sites with vertebrates, plants, and insect fossils. Any surface areas that may be disturbed should be surveyed and if needed mitigated by a qualified paleontologist.

Trust Lands Administration

The Trust Lands Administration is not opposed to issuance of rights-of-way or drill site locations on lands managed by Division of Wildlife Resources ("DWR"). The Trust Lands Administration is withholding permission to Ranken Energy Corporation ("Ranken") to cross adjacent trust land to access the DWR land pending a decision by the Bureau of Land Management ("BLM") and DWR that Ranken's oil and gas drilling, road construction, travel and presence on the DWR lands and adjoining trust land and BLM land will not negatively affect the intention of the Resource Development Group ("RDG") partners to proceed with oil and gas development in the adjacent RDG environmental assessment area.

Jack Lytle
Ranken Energy Corporation Easement Applications
2

The Trust Lands Administration notes that the DWR appears to be acting inconsistently in recommending approval of surface disturbance for oil and gas exploration and development on DWR land while encouraging BLM to limit the RDG proposal.

The Committee appreciates the opportunity to review this proposal. Please direct any other written questions regarding this correspondence to the Utah State Clearinghouse at the above address or call Carolyn Wright at (801) 538-1535 or John Harja at (801) 538-1559.

Sincerely,


for Brad T. Barber
State Planning Coordinator

BTB/ar



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

Michael O. Leavitt
Governor
Kathleen Clarke
Executive Director
Lowell P. Braxton
Division Director

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

June 25, 2001

Randolph L. Coy
Ranken Energy Corporation
417 West 18th Street, Suite 101
Edmond, Oklahoma 73013-3663

Re: APD Rescinded - DWR 2-21, Sec. 21, T12S, R23E, API 43-047-33484
APD Rescinded - DWR 3-21, Sec. 21, T12S, R23E, API 43-047-33485
APD Rescinded - DWR 4-21, Sec. 21, T12S, R23E, API 43-047-33486
APD Rescinded - DWR 10-29, Sec. 29, T12S, R23E, API 43-047-33488
Uintah County, Utah

Dear Mr. Coy:

The Applications for Permit to Drill (APD's) for the subject wells were approved by the Division of Oil, Gas and Mining (the Division) on April 25, 2000. No drilling activity at these locations have been reported to the Division. Due to the excessive time delay in commencing drilling operations, approval to drill the wells is hereby rescinded, effective April 25, 2001.

New APD's must be filed with this office for approval prior to the commencement of any future work on the subject locations.

If any previously unreported operations have been performed on any of these well locations, it is imperative that you notify the Division immediately.

Sincerely,

Lisha Cordova
Eng. Technician

cc: Well File(s)
Bureau of Land Management, Vernal

May 20, 2008

Sent via Certified Mail

Enduring Resources, LLC
Attn: Alex Campbell
475 17th Street, Suite 1500
Denver, CO 80202

The Houston Exploration Company
1100 Louisiana, Suite 2000
Houston, TX 77002-5215

Re: Notice of Lease Termination and Demand for Release
Oil and Gas Lease dated March 30, 1999, covering 8060.10 acres, more or less,
Township 12 South, Range 23 East and Township 13 South, Range 23 East,
Uintah County, Utah (copy enclosed)

Gentlemen:

Pursuant to my telephone conversation with Alex Campbell on May 13, 2008, we wish to inform you that the subject oil and gas lease ("Lease") has terminated for your failure to comply with provision 7 of said Lease. Specifically, your drilling rig was released on March 5, 2007, at 10:00 pm from your DWR 12-23-31-21 well location according to the information furnished by your office. As a result of your cessation of operations lasting more than one hundred eighty (180) consecutive days, said Lease terminated as to all lands and depths except those producing from the Proration Units (as defined in said Lease) for the DWR #5-28 well and the DWR #12-21 well, on or about September 2, 2007.

Also, our records show that we have not received any shut-in payments as provided for in provision 9 of said Lease. This provision clearly states, "...Should such shut-in royalty payments not be made in a timely manner as provided for above, then, in that event, it shall be considered for all purposes that there is no production of gas from any such well or wells and, unless this Lease is being maintained by any other preservative provision hereof, this Lease shall terminate automatically at midnight on the last day provided for the payment of such shut-in royalties, and Lessee shall thereupon furnish to Lessor a release of all of its interest in and to this Lease as provided in Section 17...." For your information, we enclose Exhibit "B" from the Assignment, Conveyance and Bill of Sale of said Lease unto Enduring Resources, LLC, et al, showing the "shut-in" status of numerous wells on the leased premises.

RECEIVED

MAY 23 2008

DIV. OF OIL, GAS & MINING

Enduring Resources, LLC
The Houston Exploration Company
May 20, 2008
Page Two

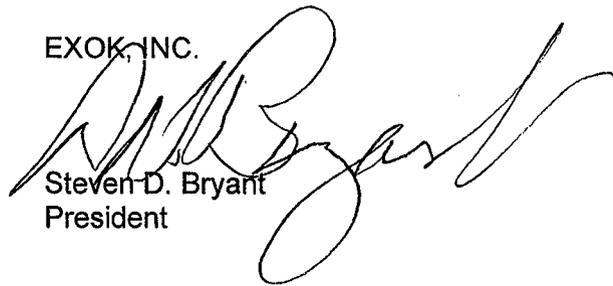
Further, since your acquisition of the lease in August of 2006, we have not received any of the data and information required in items A, B, C, and E of provision 15. Notifications Required of said Lease. Please furnish all required data and information immediately.

If within thirty (30) days from the date hereof we do not receive a fully executed, recordable release and plat showing the proration units designated by you in accordance with Section 17 of said Lease, we will pursue all remedies available to us in the appropriate court of law, including without limitation, all our costs and expenses (including attorneys fees and expenses) as set forth in provision 18. Indemnification of said Lease.

If you have any questions or comments, I can be reached at 405.627.6025.

Sincerely,

EXOK, INC.



Steven D. Bryant
President

SDB:mkb
Enclosures

cc: Utah Royalty Owners Association
Box 192
Roosevelt, UT 84066

✓ State of Utah Department of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, UT 84114-5801

Exhibit "B"

Attached to and made a part of that certain Assignment, Conveyance and Bill of Sale dated August 15, 2006 by and between MAK-J Energy Partners, Ltd, as Assignor and Enduring Resources, LLC, etal, as Assignee.

<u>Well</u>	<u>API No.</u>	<u>Location</u>	<u>Status</u>
<u>Oil Springs Area</u>			
DWR 1-21	43-047-33480-00-00	NENE of Section 21-T12S-R23E	Shut in
DWR 2-21	43-047-33484-00-00	NWNE of Section 21-T12S-R23E	Surface pipe only-APD rescinded
DWR 3-21	43-047-33485-00-00	NENW of Section 21-T12S-R23E	Location built-APD rescinded
DWR 4-21	43-047-33486-00-00	NWNW of Section 21-T12S-R23E	Surveyed location only-APD rescinded
DWR 5-28	43-047-33343-00-00	SWNW of Section 28-T12S-R23E	Producing
DWR 8-29	43-047-33487-00-00	SENE of Section 29-T12S-R23E	Shut in
DWR 10-29	43-047-33488-00-00	NWSE of Section 29-T12S-R23E	Surveyed location only
DWR 12-21	43-047-33344-00-00	NWSW of Section 21-T12S-R23E	Producing
DWR 12-22	43-047033345-0-00	NWSW of Section 22-T12S-R23E	Shut in
DWR 12-28	43-047-33481-00-00	NWSW of Section 28-T12S-R23E	Shut in
DWR 14-16	43-047-33482-00-00	SESW of Section 16-T12S-R23E	Shut in (no surface equip)
DWR 14-28	43-047-33483-00-00	SESW of Section 28-T12S-R23E	Shut in (no surface equip)
DWR 15-16	43-047-33346-00-00	SWSE of Section 16-T12S-R23E	Shut in
DWR 16-16	43-047-33489-00-00	SESE of Section 16-T12S-R23E	Shut in
DWR 16-29	none	SESE of Section 29-T12S-R23E	Location only-APD not issued

End of Exhibit "B"

OIL AND GAS LEASE

This Agreement, made and entered into this 30th day of March, 1999 by and between Exok, Inc., an Oklahoma corporation whose address is 6410-B North Santa Fe, Oklahoma City, Oklahoma 73116, as Lessor, and Ranken Energy Corporation, whose address is 601 N. Kelly, Suite 103, Edmond, Oklahoma 73003-4855, as Lessee, Witnesseth:

1. That Lessor, in consideration of the cash bonus in hand paid, of the royalties herein provided, and of the agreements of Lessee herein contained, hereby grants, leases and lets exclusively unto Lessee for the sole and only purpose of exploring, drilling and operating for and producing oil and gas and of laying pipeline, storing oil and building tanks, roads, and structures thereon to produce, save, care for, treat and transport said substances produced from the land leased hereunder, the following described land (sometimes referred to in this lease as the "leased premises"), to wit:

Patented Placer Mining Claims, County of Uintah, State of Utah

Parcel I

Bitter Creek Nos. 2, 3, 4, 5, 6, 7, 8, 9 and 10.
Hydrocarbon Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12.
Denver-Los Angeles Nos. 1, 2, 3, 4, 5, 6, 7, 8, and 9.
Seep Ridge Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11.
Button Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12.
Button Hole Nos. 1, 2 and 3.
Gasoline Nos. 1, 2, 3, 4, 5, 6, 7, 8, 11 and 12.

Parcel II

Bitter Creek No. 1.
Gasoline No. 9.
Gasoline No. 10.

Insofar and only insofar as said Patented Placer Mining Claims cover the lands specifically located in the governmental sections set forth below:

Township 12 South, Range 23 East, S.L.M.

All or part of Sections 16,17,19,20,21,22,27,28,29,32,33,34 and 35;

Township 13 South, Range 23 East, S.L.M.

All or part of Sections 2,3,4,5,8,9,10 and 11

containing approximately 8060.10 acres, more or less.

Lessor expressly reserves and retains from this lease all of that portion of the Patented Placer Mining Claims described hereinabove insofar and only insofar as said mining claims cover lands located in governmental Sections 14,15,16,17,18,19,20,21,22 and 29, Township 13 South, Range 23 East, S.L.M. together with all rights of ingress and egress over and across the leased premises reasonably necessary to enable Lessor, its' successors or assigns, to develop, operate and produce wells on the lands reserved herefrom.

2. **Term.** Subject to the provisions hereinafter contained, this Lease shall be for a term of five (5) years from this date (hereinafter referred to as "primary term"), and so long thereafter as oil and gas, or either of them, is produced in paying quantities from the leased premises, or operations are conducted as hereinafter provided. Upon the termination or any partial termination of this Lease, Lessee shall prepare, execute and deliver to Lessor a recordable release of such acreage in accordance with Section 17 of this Lease.

At the expiration of the primary term, this Lease shall automatically terminate as to all lands except those included in a proration unit attributable to a well capable of producing oil and/or gas in paying quantities unless operations are then being conducted in accordance with the Continuous Development provisions of Section 6 below or the Additional Drilling or Reworking provisions of Section 7 below, in which case the terms of Sections 6 and 7 shall control.

If at the expiration of the primary term, this Lease is perpetuated by production of oil and/or gas in paying quantities, then, with respect to each proration unit on the leased premises, this Lease shall automatically terminate as to all rights granted by this Lease below 100 feet below the deepest depth from which oil and/or gas is then being produced. Provided, however, if at the expiration of the primary term, Lessor is engaged in drilling an additional well or wells pursuant to the provisions of Section 6 of this Lease, then this Lease shall not terminate with respect to the depths described in this paragraph so long as development continues in accordance with the terms of Section 6 of this Lease. Furthermore, if at the expiration of the primary term, Lessee is engaged in deepening an existing well, then for purposes of this paragraph only, the deepening of an existing well will be considered a continuous development operation under Section 6 of this Lease, and so long as Lessee continues developing the leased premises in accordance with the terms of Section 6, the rights to the depths described in this paragraph will not terminate.

If at any time after the expiration of the primary term, should the deepest producing formation attributable to any proration unit on this Lease cease to produce in paying quantities, then Lessee shall have one hundred eighty (180) days to begin either deepening that well or commencing the drilling of another well or wells on that proration unit in accordance with the provisions of Section 7 of this Lease, or this Lease, insofar as it covers such proration unit, shall automatically terminate with regard to all depths below 100 feet below the deepest depth from which oil and/or gas is then being produced.

To the extent that any part of this Lease remains in effect, Lessee shall retain such easements across the terminated portions of the Lease as shall be reasonably necessary for ingress and egress to enable Lessee to develop and operate the remaining portion of this Lease.

3. **Obligation Wells.** Lessee covenants and agrees to drill, or cause to be drilled, four (4) test wells (hereinafter referred to as "Obligation Wells") during the first year of the primary term hereof; locations for such Obligation Wells to be chosen by Lessee's geologists.

In order to qualify as an Obligation Well, each such well drilled hereunder shall be drilled to a minimum depth sufficient to test the Wasatch formation. Except as provided in Section 16 herein, failure by Lessee to cause or commence the actual drilling of all four (4) Obligation Wells on or before March 29, 2000 shall constitute and result in the automatic termination of this lease, except as to the proration unit for each such well previously drilled and capable of producing oil and/or gas in paying quantities and designated by Lessee in writing as hereafter provided. The only other penalty for Lessee's failure to timely commence all four (4) Obligation Wells shall be the loss of all additional rights earnable hereunder.

4. **Royalty.** Lessee covenants and agrees to pay Lessor the following royalties monthly, subject to the provisions of Section 5 hereof:

(a) 15.75% of 8/8ths of the gross proceeds of all oil and other liquid hydrocarbons recovered or separated on the leased premises, produced and saved from the leased premises and sold by Lessee in an arms' length transaction; and as to such oil and other liquid hydrocarbons not sold by Lessee in an arms' length transaction, royalties of that share or percentage calculated by using the highest price, plus premium, if any, paid or offered for oil and other liquid hydrocarbons of comparable quality in the general area where produced and when run; or after sixty (60) days written notice from Lessor, which notice may be given from time to time, Lessee shall deliver free of cost to Lessor at the well, or to the credit of Lessor into the pipeline to which the well is connected, such share or percentage of all oil and other liquid hydrocarbons produced and saved from the leased premises; and

(b) 15.75% of 8/8ths of the gross proceeds received by Lessee for all gas recovered or separated on the leased premises, produced from the leased premises and sold by Lessee in an arms' length transaction; and as to such gas not sold by Lessee in an arms' length transaction, royalties of that share or percentage calculated by using the highest price paid or offered for gas of comparable quality in the general area where produced and when run.

5. **Royalty.** (a) Lessee shall pay Lessor royalty on all oil and other liquid hydrocarbons, including condensate, and on all gas, including all substances contained in such gas, (all hereinafter collectively called "Products" and each individually called a "Product") produced from a well on the leased premises, whether or not such Products are produced to the credit of Lessee or sold under a contract executed by or binding on Lessee, and;

(b) In no event shall Lessor's royalty for a Product be based on a price less than the price paid Lessee for Lessee's share of that Product produced hereunder. For purposes of this lease, an arms' length transaction is a sale of a Product by Lessee to a buyer not affiliated with Lessee or with any subsidiary or other affiliate of Lessee under an agreement negotiated in good faith by all parties. Lessor shall not bear any production or post-production cost or expense, including without limitation, cost or expense for storing, separating, dehydrating, transporting, compressing, treating, gathering, or otherwise rendering marketable or marketing the Products, and Lessee shall make no deduction or reduction for any such cost or expense when computing any royalty due Lessor under this Lease.

6. **Continuous Development.** At the end of the primary term or upon the completion of any well then drilling on the leased premises as a well capable of producing in paying quantities or as a dryhole (completion being the release of the completion rig, or if the well is a dry hole, the release of the drilling rig), Lessee shall have the recurring right for one hundred eighty (180) days thereafter, to commence the drilling of another well or wells on the leased premises (commencement being the actual spudding of the succeeding well), with no more than one hundred eighty (180) days elapsing between the completion of one well as a producer or a dryhole and the commencement of the next succeeding well. Failure to commence such additional well or wells within the time herein provided, shall terminate this Lease ipso facto as to all lands except those included within the surface boundaries of any proration unit otherwise being maintained under the provisions of this Lease. Lessee shall also have the right to accelerate the drilling of additional wells and thereby accumulate and perpetuate this Lease for an additional one eighty (180) days for each additional well drilled in accordance herewith. Lessee's right to accumulate additional time hereunder is expressly limited to wells other than the four (4) Obligation Wells provided for in Section 3 above.

7. **Additional Drilling or Reworking.** If, at the expiration of the primary term, or the expiration of any extended term provided in Section 6 above, whichever is later, oil and/or gas are being produced in paying quantities, but production thereafter ceases from any cause this Lease shall not terminate as to the proration unit attributable to the well or wells affected thereby if Lessee commences reworking or additional actual drilling within one hundred eighty (180) days thereafter, and such reworking or additional drilling is diligently prosecuted with no cessation of more than one hundred eighty (180) consecutive days, and production in paying quantities thereafter resumes.

If, at the expiration of the primary term, or the expiration of any extended term provided in Section 6 above, whichever is later, oil and/or gas are not then being produced from any well or wells on the leased premises, but Lessee is then engaged in operations (as defined hereinafter) on any such well or wells, this Lease shall remain in force for so long as such operations are diligently prosecuted with no cessation of more than one hundred eighty (180) consecutive days between such cessation and the resumption of such operations. If such operations result in the production of oil or gas in paying quantities, this Lease shall not terminate as to the proration unit attributable to the well or wells then producing oil or gas in such quantities; but this Lease shall terminate as to all other acreage unless Lessee shall have commenced drilling a new well or wells in accordance with the Continuous Development provisions of Section 6 of this Lease.

Wherever used in this Lease the word "operations" shall mean operations for and any of the following: actual drilling, testing, completing, sidetracking, reworking, recompleting, deepening, plugging back or repairing of a well in search for or in an endeavor to obtain production of oil or gas in paying quantities.

8. **Right to Take Production in Kind.** Lessor shall always have the right, at any time and from time to time, upon reasonable written notice to Lessee, to take Lessor's share of oil, gas and processed liquids in kind. Lessor may elect to take Lessor's gas in kind at the well, or at the point of delivery where Lessee delivers Lessee's gas to any third party. If gas is processed, lessor may elect to take Lessor's share of the residue gas attributable to production from the leased premises, at the same point of delivery where Lessee received its share of residue gas or has its share of residue gas delivered to a third party. Lessor may elect to have its royalty share of processed liquids stored in tanks at the plant or delivered into pipelines on the same basis as Lessee's share of liquids is stored or delivered. Lessor shall reimburse Lessee for all reasonable costs incurred by Lessee in installing, operating or maintaining additional facilities necessary for Lessor's royalty gas and processed liquids to be separately metered, accounted for, and delivered to a third party, but Lessor shall not be charged for any expense in the production, gathering, dehydration, separation, compression, transportation, treatment, processing or storage of Lessor's share of gas and processed liquids along with Lessee's share of gas and processed liquids.

9. **Shut-in Payments.** While there is a well on the leased premises capable of producing gas in paying quantities but the production thereof is shut-in, shut-down or suspended for lack of a market, available pipeline, or because of government restrictions or, if it is economically inadvisable for Lessee to sell gas for a time, then, Lessee may pay as shut-in royalty on or before ninety (90) days after the date on which (1) production from any such well is shut-in, shut-down or suspended; or (2) this Lease is no longer maintained by compliance with one of the other preservation provisions hereof, whichever is the later date, and thereafter at annual intervals the sum of One Hundred Dollars (\$100.00) per well, for each and every shut-in, shut-down or suspended well. If such payment is made in accordance with the terms hereof, this Lease shall not terminate, but shall continue in force for a period of one (1) year from the date of making such shut-in payment (subject to the exceptions set out hereafter) and it will be considered that gas is being produced from the leased premises in paying quantities within the meaning of each pertinent provision of this Lease. Any shut-in royalty payment shall not be a credit against production nor credited with prior production royalty. In the event that production is begun or resumed during the year following the payment of a shut-in royalty payment and is subsequently shut-in, during such year the second annual shut-in payment shall be due and payable on the anniversary date of the first payment. If there is production on such first anniversary date and the well is subsequently shut-in, shut-down or suspended, then the second shut-in payment shall be made on or before ninety (90) days after such new shut-in date or the Lease shall terminate. Notwithstanding anything to the contrary set out above, should the shut-in period extend beyond the expiration of the primary term such shut-in provision will maintain the rights granted by this Lease only to the producing units and horizons of such gas well(s) as if they were producing gas in paying quantities pursuant to Section 2 above. Should such shut-in royalty payments not be made in a timely manner as provided for above, then, in that event, it shall be considered for all purposes that there is no production of gas from any such well or wells and, unless this Lease is being maintained by any other preservation provision hereof, this Lease shall

terminate automatically at midnight on the last day provided for the payment of such shut-in royalties, and Lessee shall thereupon furnish to Lessor a release of all of its interest in and to this Lease as provided in Section 17.

10. **Pooling.** Lessee does not have the right and power to pool or combine the acreage covered by this Lease or any portion thereof as to oil and gas, or either of them, with any other land or leases.

11. **Assignability.** The rights of either party hereunder may be assigned in whole or in part and the provisions hereof shall extend to the heirs, executors, administrators, successors and assigns of the parties hereto.

12. **Proration Unit.** The term "proration unit" where used in this Lease, shall mean *i*) forty (40) acres plus a tolerance of ten percent (10%) surrounding each well classified as an oil well by the appropriate governmental authority; and *ii*) one hundred sixty (160) acres plus a tolerance of ten percent (10%) surrounding each well classified as a gas well by the appropriate governmental authority.

13. **Water.** To the extent Lessor owns any water rights, Lessee shall have the free use of water from the leased premises, for all operations solely on the leased premises. Lessee shall comply with all applicable rules in disposition (by reinjection or otherwise) of salt water, brine or other fluids utilized in or resulting from operations, and shall not cause or permit any such substances to damage or pollute the surface of the leased premises or any fresh water sands lying thereunder.

14. **Limitation to Oil and Gas.** This Lease is intended to cover only oil and gas producible by conventional oil and gas industry accepted means (ie. the drilling and producing of vertical and/or horizontal wellbores.) Lessor expressly reserves and retains herefrom all gilsonite, trona, oil shale reserved by a prior owner and all other minerals (except oil and gas) which may underlie all or part of the leased premises. The term "oil shale" is defined as a mineable, kerogen-bearing, finely laminated brown or black sedimentary rock that will yield liquid or gaseous hydrocarbons on distillation.

15. **Notifications Required.** Lessee shall advise Lessor in writing of the location of each well to be drilled upon the leased premises after commencement of operations, and shall advise Lessor in writing the date of completion and/or abandonment of each well drilled on the leased premises (such notice shall include furnishing Lessor a copy of the applicable completion or plugging report filed with any governmental or regulatory agency) within thirty (30) days after completion or abandonment. As to any well drilled under the provisions of this Lease, Lessor, or Lessor's representatives, or any one or more of the same, shall have access to such well and upon request shall be furnished with copies of daily drilling reports. Such reports and information shall be furnished within seven (7) days after the same are obtained or compiled by Lessee. In addition, Lessee shall upon written request furnish Lessor within thirty (30) days from the date of the request or thirty (30) days from the date that the data is received by Lessee:

A. Plats or maps showing the location of the well on this Lease.

B. The details of any tests taken in said well, and the results of any core analysis or analyses which shall be run on any cores taken while drilling said well.

C. Upon commencement of any drilling or reworking operations on this Lease with copies of all reports filed with the appropriate governmental authority or other governmental agency having jurisdiction in connection with such operation.

D. Upon completion of any drilling or reworking operations on this Lease with copies of all logs run in such well and copies of core or other type of formation analysis subject to a confidentiality obligation on Lessor's part if filed as confidential with the appropriate governmental authority.

E. A summary report, to be made annually on the anniversary date of this Lease and commencing upon the expiration of the primary term of this Lease, to include (1) on the reporting date the number of producing wells and the number of wells not producing but not plugged; (2) the number of wells that were plugged during the previous twelve (12) months, and (3) a map denoting the location of each of these wells on the leased premises.

F. It is understood and agreed that all information provided Lessor herein is proprietary and is to be held in confidence.

16. **Force Majeure.** Lessee shall not be liable for delays or defaults in its performance of any agreement or covenant hereunder due to force majeure. The term "force majeure" shall mean: Any act of God including but not limited to storms, floods, washouts, landslides, and lightning; act of the public enemy; wars, blockades, insurrection or riots; strikes or lockouts; epidemics or quarantine regulations; laws, acts, orders or requests of Federal, State, Municipal or other governments or governmental officers or agents under the color of authority requiring, ordering or directing Lessee to cease drilling, reworking or producing operations; freight embargoes or failures; exhaustion or unavailability or delays in delivery of any product, labor, service or material. The term "force majeure" shall not include lack of markets for production or any other events affecting only the economic or financial aspects of drilling, development or production. For a period of sixty (60) days after termination of an event of force majeure, each and every provision of this Lease that might operate to terminate it or the estate conveyed by it shall be suspended and inoperative and this Lease shall continue in full force, provided, however, that in no event will the primary term be extended unless Lessee has begun the actual drilling of a well prior to the date of the expiration of the primary term.

17. **Releases Required.** Within ninety (90) days after the partial termination of this Lease as provided under any of the terms and provisions of this Lease, Lessee shall deliver to Lessor a plat showing the proration units designated by Lessee, and a fully executed, recordable release properly describing the lands and depths to be retained by Lessee around each producing well. If the lease terminates in its entirety, then Lessee shall deliver a complete, fully executed, recordable release to Lessor within thirty (30) days. If such release complies with the requirements of this section, Lessor shall record such release.

18. **Indemnification.** Lessee, its successors and assigns, agrees to indemnify, defend and hold harmless the parties herein designated Lessor, and each of them, from and against any and all claims, losses, liabilities, fines, costs, expenses (including attorneys fees and expenses) resulting from or arising out of Lessee's ownership of this Lease or in connection with operations of or for Lessee, its agents, contractors, or subcontractors hereunder, regardless of the cause of such claims, losses, liabilities, fines, costs or expenses. This provisions and its indemnities shall survive the termination of this Lease and shall bind and inure to the successors, heirs and assigns of Lessor and Lessee.

19. **No Warranties of Title.** This Lease is made without warranties of any kind, either express or implied. Lessor agrees that Lessee, at its option, after having given Lessor sixty (60) days' written notice, may discharge any tax, mortgage or other lien upon Lessor's interest in said land, either in whole or in part, and in the event lessee does so, it shall be subrogated to such lien with right to enforce same, subject to any defenses of Lessor, and apply royalties accruing hereunder toward satisfying same.

20. **Proportionate Reduction for less than Entire Interest.** It is agreed that if Lessor's interest in the oil and gas minerals in and under any of the leased premises is less than the entire oil and gas mineral estate, then the royalties and all other benefits to accrue or to be paid to Lessor hereunder as to such lands shall be reduced to the proportion thereof which the oil and gas mineral estate of Lessor in such land bears to the entire oil and gas mineral estate. However, Lessor's royalties herein shall not be reduced with respect to the 3% of 8/8ths non-participating royalty interest presently burdening the leased premises.

21. **Compliance with Environmental Laws and Regulations.** Lessee, its successors and assigns, by its acceptance of this Lease, hereby agrees to comply with all applicable laws, rules and regulations and hereby assumes full responsibility for, and agrees to indemnify, defend and hold harmless, Lessor from and against any loss, liability, claim, fine, expense cost (including attorneys fees and expenses) and cause of action caused by or arising out of the violation (or defense of the alleged violation) of any federal, state or local laws, rules or regulations applicable to any waste material, drilling matter fluid or any hazardous substances released or caused to be released by Lessee or Lessee's agents, or independent contractors from the land leased hereunder into the atmosphere or into or upon the land or any water course or body of water, including ground water.

22. **Alteration/Modification.** The terms of this Lease cannot be altered or amended except by a written instrument clearly demonstrating such purpose and effect, and executed by both parties to this Lease. The written instrument shall describe the specific terms or provisions being altered and the proposed modification or change thereto.

23. **Ancillary Rights.** Lessee shall have the right for a period of one (1) year following the expiration of this Lease or the release of any lands covered by this Lease to remove all property and fixtures placed by Lessee on said land, including the right to draw and remove all casing. If not, Lessor shall have the option to either claim the property, in whole or in part, as its own or having the said properties and fixtures removed, in whole or in part, at Lessee's expense. If the property is opted to be removed, additional expenses for surface damages and restoring the land shall be charged to Lessee, provided, however, lessee shall not be relieved of its liability to plug any well so abandoned.

IN WITNESS WHEREOF, this instrument is executed on the date first above written.

LESSOR: EXOK, INC.

ATTEST:

By: *Steven D. Bryant*
 Steven D. Bryant, President

David A. M...

Address: 6410-B North Santa Fe
 Oklahoma City, OK 73116

Tax ID #: 73-1058740

LESSEE: RANKEN ENERGY CORPORATION

ATTEST:

By: *Randolph L. Coy*
 Title: President

Deborah L. Coy

Address: 601 W. Kelly, Ste 103
Edmond, OK 73003

Tax ID #: 73-1278733

CORPORATE ACKNOWLEDGMENT

STATE OF OKLAHOMA)
) §
 COUNTY OF OKLAHOMA)

The foregoing instrument was acknowledged before me on this 30th day of March, 1999, by Steven D. Bryant, to me known to be the identical person who subscribed his name as President of EXOK, INC., and acknowledged to me that he executed the same as his free and voluntary act and deed and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth. Given under my hand and seal the day and year last above written.

My Commission Expires: 5/9/2000

Marilyn L. Dohnell
 Marilyn L. Dohnell, Notary Public

CORPORATE ACKNOWLEDGMENT

STATE OF OKLAHOMA)
) §
 COUNTY OF OKLAHOMA)

The foregoing instrument was acknowledged before me on this 29th day of March, 1999, by Randolph L. Coy, to me known to be the identical person who subscribed his name as President of **RANKEN ENERGY CORPORATION** and acknowledged to me that he executed the same as his free and voluntary act and deed and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth. Given under my hand and seal the day and year last above written.

My Commission Expires: 7/12/02

Janet J. Reynolds
 Notary Public, Janet J. Reynolds

