



M A C
Metcalf Archaeological Consultants, Inc.

November 3, 1997

Bruce Louthan
BLM - Moab District
P.O. Box 970
Moab, UT 84532

Dear Bruce:

To fulfill requirements of Riata Energy's lease agreement with the BLM, Lisa Smith of Permitco has requested that I submit a letter to you, describing the results of our inventory for the proposed Riata Energy Government 2318 #5-1 drill location and access in Grand County, Utah. Because I located several cultural resource sites in the project area, Riata Energy decided to have us wait on recording them until they had decided how they wanted to proceed. As I discussed with you during our phone conversation in October, I found a lithic procurement site on the proposed drill location. This site appears to be quite large and portions of it were encountered along the access route. Undoubtedly some portions of the site are eligible for the NRHP, while others are non-contributing. There are also two other lithic scatters and a rockshelter site along the proposed access route. None of these resources have been recorded, though their approximate locations have been marked on a topo map. It is probable that the proposed drill location can be adjusted or moved to a non-contributing portion of the lithic procurement site. The access route can also be relocated or adjusted to avoid the sites, or the contributing portions thereof.

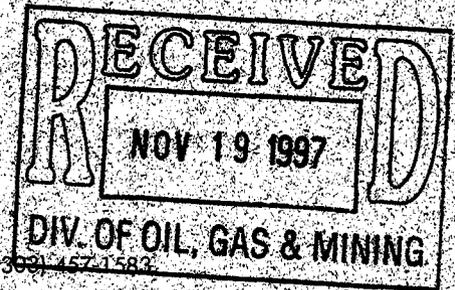
Because it could be a year or so before the environmental assessment for this area is completed, Riata Energy would prefer to continue the archaeological work for these sites when drilling operations are more imminent. Please let me know if you require any additional information or have any concerns.

Sincerely,

Carole Graham
Staff Archaeologist

cc: Lisa Smith, Permitco

11/6/97 - original to Riata - Terry Pope



13585 Jackson Drive • Denver, Colorado 80241 • (303) 452-8888 • FAX (303) 457-1583

November 17, 1997

Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, UT 84114-5801

Attn: John Baza

Re: Riata Energy, Inc.
Government 2318 #3-1
1784' FSL and 2041' FWL
NE SW Sec 5, T23S R18E
Grand County, Utah
Lease No. CUU-75891

Dear John,

Enclosed please find three copies of the A.P.D. for the above mentioned well along with one copy of the Onshore Order No. which has been filed with the BLM offices in Moab, Utah.

If you should have any questions regarding the enclosed material, please don't hesitate to contact me. Your early approval of this application would be greatly appreciated.

Sincerely,

PERMITCO INC.

Lisa L. Smith
Consultant for:
Riata Energy, Inc.

Enc.
cc: Riata Energy, Inc. - Amarillo, TX

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. UTU-75891		
1b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A		
2. NAME OF OPERATOR Riata Energy, Inc.			7. UNIT AGREEMENT NAME N/A		
3. ADDRESS OF OPERATOR PERMITCO INC. - Agent			8. FARM OR LEASE NAME WELL NO. Government 2318		
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. *) At Surface: 1784' FSL and 2041' FWL At proposed Prod. Zone: NE SW Sec. 5, T23S - R18E <i>644 622</i>			9. API WELL NO. #5-1		
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 14.7 miles southwest of Crescent Junction, Utah			10. FIELD AND POOL OR WILDCAT Wildcat		
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1784'		16. NO. OF ACRES IN LEASE 2555.87	17. NO. OF ACRES ASSIGNED TO THIS WELL 40	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 5, T23S - R18E	13. STATE Utah
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT. Approximately 8400'		19. PROPOSED DEPTH 950'	20. ROTARY OR CABLE TOOLS Rotary		
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 4532' GR		22. APPROX. DATE WORK WILL START* Upon Approval of this Application			
23. PROPOSED CASING AND CEMENTING PROGRAM					
SIZE OF HOLE	SIZE OF CASING	WEIGHT/FOOT	SETTING DEPTH	QUANTITY OF CEMENT	
12-1/4"	8-5/8"	24#	200'	155 sx Class "G" - Circ to surf.	
7-7/8"	5-1/2"	10.5#	950'	186 sx Class "G" & Poz w/additives	

CONFIDENTIAL

Riata Energy, Inc. proposes to drill a well to 950' to test the Moab Tongue of the Entrada Sandstone. If productive, casing will be run and the well completed. If dry, the well will be plugged and abandoned as per BLM and State of Utah requirements.

See Onshore Order No. 1 attached.

CONFIDENTIAL - TIGHT HOLE

Please be advised that Riata Energy, Inc. is considered to be the Operator of the above mentioned well. Riata Energy, Inc. agrees to be responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

Bond coverage for this well is provided by Riata Energy, Inc. under their Statewide BLM Bond #UT-1006.

CONFIDENTIAL

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

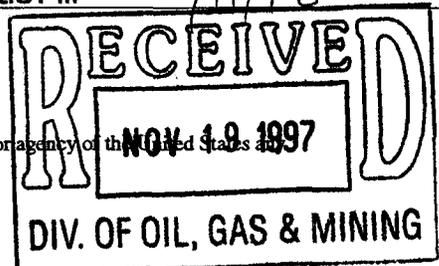
24. SIGNED *[Signature]* CONSULTANT FOR: **Riata Energy, Inc.** DATE **11/17/97**

PERMIT NO. **43-019-31362** APPROVAL DATE **BRADLEY G. HILL**
APPROVED BY *[Signature]* RECLAMATION SPECIALIST III DATE **5/19/98**

Federal Approval of this Action is Necessary

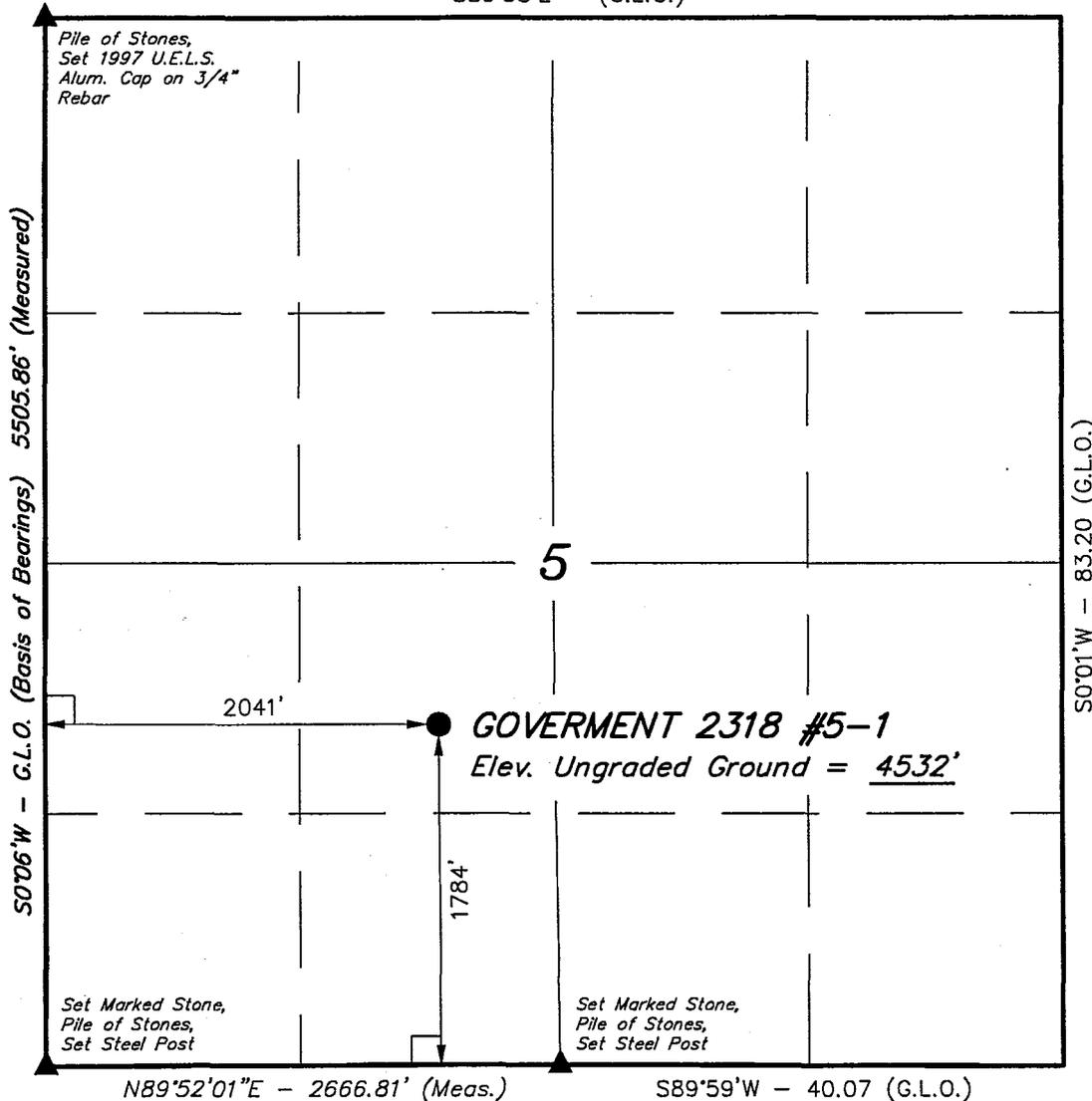
***See Instructions On Reverse Side**

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



T23S, R18E, S.L.B.&M.

S89°58'E - (G.L.O.)

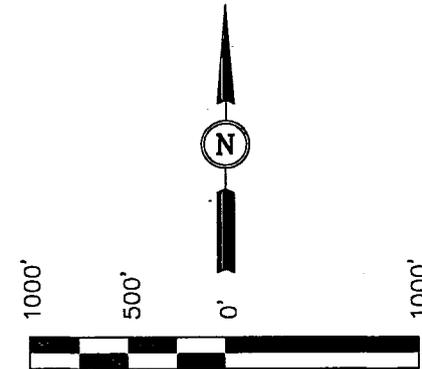


RIATA ENERGY, INC.

Well location, GOVERMENT 2318 #5-1, located as shown in the NE 1/4 SW 1/4 of Section 5, T23S, R18E, S.L.B.&M., Grand County, Utah.

BASIS OF ELEVATION

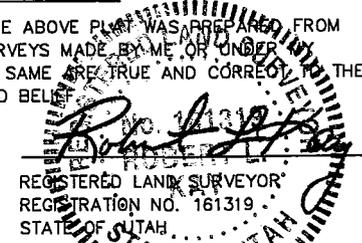
SPOT ELEVATION AT THE SOUTHWEST CORNER OF SECTION 5, T23S, R18E, S.L.B.&M. TAKEN FROM THE DEE PASS, QUADRANGLE, UTAH, GRAND COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4476 FEET.



SCALE

CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER 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.

UINTAH ENGINEERING & LAND SURVEYING

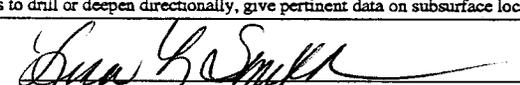
85 SOUTH 200 EAST - VERNAL, UTAH 84078

(801) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 9-18-97	DATE DRAWN: 9-22-97
PARTY D.A. K.H. D.COX	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE RIATA ENERGY, INC.	

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

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1b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>				6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A	
2. NAME OF OPERATOR Riata Energy, Inc.				7. UNIT AGREEMENT NAME N/A	
3. ADDRESS OF OPERATOR PERMITCO INC. - Agent				8. FARM OR LEASE NAME WELL NO. Government 2318	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At Surface 1784' FSL and 2041' FWL At proposed Prod. Zone NE SW Sec. 5, T23S - R18E				9. API WELL NO. #5-1	
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18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT. Approximately 8400'		19. PROPOSED DEPTH 950'		13. STATE Utah	
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23. PROPOSED CASING AND CEMENTING PROGRAM				20. ROTARY OR CABLE TOOLS Rotary	
22. APPROX. DATE WORK WILL START* Upon Approval of this Application					
24. SIGNED 		TITLE Consultant for: Riata Energy, Inc.		DATE 11/17/97	
(This space for Federal or State office use)					
PERMIT NO. 43-019-31362		APPROVAL DATE _____			
APPROVED BY _____		TITLE _____		DATE _____	
CONDITIONS OF APPROVAL, IF ANY: _____					

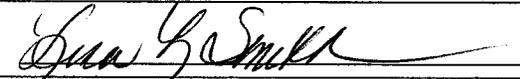
Riata Energy, Inc. proposes to drill a well to 950' to test the Moab Tongue of the Entrada Sandstone. If productive, casing will be run and the well completed. If dry, the well will be plugged and abandoned as per BLM and State of Utah requirements.

See Onshore Order No. 1 attached. **CONFIDENTIAL - TIGHT HOLE**

Please be advised that Riata Energy, Inc. is considered to be the Operator of the above mentioned well. Riata Energy, Inc. agrees to be responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

Bond coverage for this well is provided by Riata Energy, Inc. under their Statewide BLM Bond #UT-1006.

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

24. SIGNED  TITLE **Consultant for:
Riata Energy, Inc.** DATE **11/17/97**

(This space for Federal or State office use)

PERMIT NO. **43-019-31362** APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY: _____

***See Instructions On Reverse Side**

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

ONSHORE OIL & GAS ORDER NO. 1

**Approval of Operations on Onshore
Federal and Indian Oil & Gas Leases**

**Government 2318 #5-1
1784' FSL and 2041' FWL
NE SW Sec. 5, T23S - R18E
Grand County, Utah**

Prepared For:

RIATA ENERGY, INC.

By:

**PERMITCO INC.
13585 Jackson Drive
Denver, Colorado 80241
303/452-8888**

CONFIDENTIAL - TIGHT HOLE

Copies Sent To:

- 4 - BLM - Moab, UT**
- 1 - Utah Division of Oil, Gas & Mining - SLC, UT**
- 3 - Riata Energy, Inc. - Amarillo, TX**



Permitco Incorporated
A Petroleum Permitting Company



September 8, 1997

Bureau of Land Management
82 E. Dogwood
Moab, UT 84532

Attention: Minerals

RE: All Permits and Filings
Gov't 2318-5-1
Gov't 2318-9-1
Grand County, Utah

Gentlemen:

This letter is to inform you that Permitco, Inc. is authorized to act as Agent and to sign documents on behalf of Riata Energy, Inc. when necessary for filing county, state and federal permits including Onshore Order No. 1, Right of Way applications, etc., and for the above mentioned well.

It should be understood that Permitco is acting as Agent only in those matters stated above and is not responsible for drilling, completion or compliance with regulations.

Riata Energy, Inc. agrees to accept full responsibility for operations conducted in order to drill, complete and produce the above-mentioned wells.

Sincerely,



Terry D. Pope
Special Projects Manager

SELF CERTIFICATION

Be advised that Riata Energy, Inc. is considered to be the operator the following well, located as follows:

**Government 2318 #5-1
1784' FSL and 2041' FWL
NE SW Sec. 5, T23S - R18E
Grand County, Utah**

and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for this well is will be provided by Riata Energy, Inc. The BLM Statewide bond number is UT-1006. The principal is Riata Energy, Inc. via surety consent as provided for in 43 CFR 3104.2.

It is understood that the Bureau of Land Management will hold the aforementioned operator and bond liable until the provisions of 43 CFR 3106.7-2 continuing responsibility are met.



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Government 2318 #5-1

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ONSHORE ORDER NO. 1
Riata Energy, Inc.
Government 2318 #5-1
1784' FSL and 2041' FWL
NE SW Sec. 5, T23S - R18E
Grand County, Utah

CONFIDENTIAL - TIGHT HOLE

Lease No. UTU-75891

Drilling Program
Page 1

ONSHORE OIL & GAS ORDER NO. 1
Approval of Operations on Onshore
Federal and Indian Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Order No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

1. **Estimated Tops/ Geologic Markers**

The estimated tops of important geologic markers are as follows:

<u>Formation</u>	<u>Depth</u>	<u>Subsea</u>
Morrison Sand	505'	+4027'
Moab Tongue Member of Entrada SS	705'	+3827'
T.D.	950'	+3582'

2. **Estimated Depth of Oil, Gas Water and Other Mineral Bearing Zones**

The estimated depths at which the top and bottom of the anticipated water, oil, gas or other mineral bearing formations are expected to be encountered are as follows:

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
Water		0-200'
Oil/Gas	Moab Tongue	705'

All fresh water and prospectively valuable minerals encountered during drilling, will be recorded by depth and will be cased and cemented. When possible, water flow rates will be measured and samples will be taken and analyzed with the results being submitted to the BLM. All oil and gas shows will be tested to determine commercial potential.

ONSHORE ORDER NO. 1
Riata Energy, Inc.
Government 2318 #5-1
1784' FSL and 2041' FWL
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Grand County, Utah

CONFIDENTIAL - TIGHT HOLE

Lease No. UTU-75891

Drilling Program
Page 2

3. BOP Equipment

Riata Energy, Inc.'s minimum specifications for pressure control equipment are as follows:

Ram Type: 10" Hydraulic double, 2000 psi w.p.

BOP systems will be consistent with API RP 53 and Onshore Oil and Gas Order No. 2. Pressure tests of the surface casing and all BOP equipment potentially subject to pressure will be conducted before drilling the surface casing shoe. Blowout preventer controls will be installed prior to drilling the surface casing shoe and will remain in use until the well is completed or abandoned. Ram preventers will be inspected and operated each trip (no more than once a day is necessary), and annular preventers will be inspected and operated weekly to ensure good mechanical working order. These inspections shall be recorded in the drilling log and in the daily drilling report.

Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 70 percent of internal yield pressure of casing. Pressure shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer. If a test plug is utilized, no bleed-off pressure is acceptable. For a test not utilizing a test plug, if a decline in pressure of more than 10 percent in 30 minutes occurs, the test shall be considered to have failed. Valve on casing head below test plug shall be open during test of BOP stack.

Annular type preventers (if used) shall be tested to 50 percent of rated working pressure. Pressure shall be maintained at least 10 minutes or until provisions of test are met, whichever is longer.

Valves shall be tested from working pressure side during BOPE tests with all down stream valves open.

When testing the kill line valve(s) the check valve shall be held open or the ball removed.

A BOPE pit level drill shall be conducted weekly for each drilling crew.

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

Pressure tests shall apply to all related well control equipment.

All of the above described tests and/or drills shall be recorded in the drilling log. Test charts, with individual test results identified, shall be maintained on location while drilling and shall be made available to a BLM representative upon request. Pressure tests shall apply to all related well control equipment.

- a. The size and rating of the BOP stack is shown on the attached diagram. Although a rig has not been chosen to drill this well, most of the equipment for this depth of hole in the area use a 10", 2000 psi working pressure blowout preventor.
- b. A choke line and a kill line are to be properly installed. The kill line is not to be used as a fill-up line.
- c. The accumulator system shall have a pressure capacity to provide for repeated operation of hydraulic preventers.
- d. Drill string safety valve(s), to fit all tools in the drill string, are to be maintained on the rig floor while drilling operations are in progress.

4. Casing and Cementing Program

- a. The proposed casing and cementing program shall be conducted as approved to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain the maximum pressure to which it will be exposed during normal drilling



operations. Determination of casing setting depth shall be based on all relevant factors, including; presence/absence of hydrocarbons; fracture gradients; usable water zones; formation pressures; lost circulation zones; other minerals; or other unusual characteristics. All indications of usable water shall be reported.

- b. Casing design shall assume formation pressure gradients of 0.44 to 0.50 psi per foot for exploratory wells (lacking better data).
- c. Casing design shall assume fracture gradients from 0.70 to 1.00 psi per foot for exploratory wells (lacking better data)
- d. Casing collars shall have a minimum clearance of 0.422 inches of all sides in the hole/casing annulus, with recognition that variances can be granted for justified exceptions.
- e. All waiting on cement times shall be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.
- f. All casing except the conductor casing, shall be new or reconditioned and tested used casing that meets or exceeds API standards for new casing.
- g. The surface casing shall be cemented back to surface either during the primary cement job or by remedial cementing.
- h. All indications of usable water shall be reported to the authorized officer prior to running the next string of casing or before plugging orders are requested, whichever occurs first.
- i. Three centralizers will be run on the bottom three joints of surface casing with a minimum of one centralizer per joint starting with the shoe joint.
- j. Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a suitable preflush fluid, inner string cement method, etc. shall be utilized to help isolate the cement from contamination by the mud fluid being displaced ahead of the cement slurry.



- k. All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string length or 1500 psi, whichever is greater, but not to exceed 70 percent of the minimum internal yield. If pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.
- l. On all exploratory wells, and on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- m. The proposed casing program will be as follows:

<u>Purpose</u>	<u>Depth</u>	<u>Hole Size</u>	<u>O.D.</u>	<u>Weight</u>	<u>Grade</u>	<u>Type</u>	<u>New or Used</u>
Surface	0-200'	12-1/4"	8-5/8"	24.0#	J-55	ST&C	New/Used
Produc.	0-950'	7-7/8"	5-1/2"	10.5#	J-55	LT&C	New/Used

Used casing will be white band and will be tested to API standards for new casing.

- o. Casing design subject to revision based on geologic conditions encountered.
- p. The cement program will be as follows:

<u>Surface</u> 0-200'	<u>Type and Amount</u> 155 sx Class "G" with additives, or sufficient volume to circulate to surface.
--------------------------	--

<u>Production</u>	<u>Type and Amount</u> 156 sx Class "G" and 30 sacks Poz with additives or sufficient to circulate to surface.
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- q. After cementing but before commencing any test, the casing string shall stand cemented until the cement has reached a compressive strength of at least 500 psi at the shoe. WOC time shall be recorded in the driller's log.



ONSHORE ORDER NO. 1
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Lease No. UTU-75891

Drilling Program

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- r. The following reports shall be filed with the District Manager within 30 days after the work is completed.
1. Progress reports, Form 3160-5 (formerly 9-331) "Sundry Notices and Reports on Wells", must include complete information concerning:
 - a. Setting of each string of casing, showing the size, grade, weight of casing set, hole size, setting depth, amounts and type of cement used, whether cement circulated or the top of the cement behind the casing, depth of cementing tools used, casing test method and results, and the date work was done. Show the spud date on the first reports submitted.
 - b. Temperature or bond logs must be submitted for each well where the casing cement was not circulated to the surface.
 - s. Auxiliary equipment to be used is as follows:
 1. Kelly cock
 2. No bit float is deemed necessary.
 3. A sub with a full opening valve.

5. Mud Program

- a. The proposed circulating mediums to be employed in drilling are as follows:

<u>Interval</u>	<u>Mud Type</u>	<u>Mud Wt.</u>	<u>Visc.</u>	<u>F/L</u>	<u>PH</u>
0-T.D.	Produced Water and KCL with Air	9.0	34	12	8.0

If conditions dictate, mist or a surfactant foamer will be used to generate a +50 quality foam.



Permitco Incorporated
A Petroleum Permitting Company

Sufficient mud materials will be stored on location to maintain well control and combat lost circulation problems that might reasonably be expected.

- b. Due to potential for contamination of usable quality water aquifers, chromates are banned from Federal leases.
- c. Hazardous substances specifically listed by the EPA as a hazardous waste or demonstrating a characteristic of a hazardous waste will not be used in drilling, testing or completion operations.

6. Evaluation Program

The anticipated type and amount of testing, logging and coring are as follows:

- a. No drill stem tests are anticipated, however, if DST's are run, the following requirements will be adhered to:

Initial opening of drill stem test tools shall be restricted to daylight hours unless specific approval to start during other hours is obtained from the authorized officer. However, DST's may be allowed to continue at night if the test was initiated during daylight hours and the rate of flow is stabilized and if adequate lighting is available (i.e. lighting which is adequate for visibility and vapor-proof for safe operations). Packers can be released, but tripping shall not begin before daylight, unless prior approval is obtained from the authorized officer. Closed chamber DSTs may be accomplished day or night.

A DST that flows to the surface with evidence of hydrocarbons shall be either reversed out of the testing string under controlled surface conditions. This would involve provided some means for reverse circulation.

Separation equipment required for the anticipated recovery shall be properly installed before a test starts.

All engines within 100 feet of the wellbore that are required to "run" during the test shall have spark arresters or water cooled exhausts.



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Drilling Program
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- b. The logging program will consist of a GR-CNL-Temp from T.D. to base of surface casing.
- c. No cores are anticipated.
- d. Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with form 3160-4. Samples (cuttings, fluids, and/or gases) will be submitted when requested by the authorized officer (AO).
- e. The anticipated completion program is as follows:

Perforate and acidize Moab Tongue formation. Produce up tubing with artificial lift, if needed.

7. Anticipated Pressures and H₂S

- a. The expected maximum bottom hole pressure is 1139 psi. No abnormal pressures are anticipated.
- b. No hydrogen sulfide gas is anticipated.

8. Other Information and Notification Requirements

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

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Drilling Program
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- b. Production data shall be reported to the MMS pursuant to 30 CFR 216.5 using form MMS/3160.
- c. The date on which production is commenced or resumed will be construed for oil wells as the date on which liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which liquid hydrocarbons are first produced into a permanent storage facility, whichever first occurs; and, for gas wells as the date on which associated liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or the date on which gas is first measured through permanent metering facilities, whichever first occurs.
- d. Pursuant to NTL-4A, lessees or operators are authorized to vent/flare gas during initial well evaluation tests, not exceeding a period of 30 days or the production of 50 MMCF of gas, whichever occurs first. An application must be filed with the District Engineer and approval received, for any venting/flaring of gas beyond the initial 30 day or authorized test period.
- e. Gas produced from this well may not be vented or flared beyond an initial authorized test period of 30 days or 50 MMCF following its completion, whichever occurs first, without the prior written approval of the Authorized Officer. Should gas be vented or flared without approval beyond the authorized test period, the operator may be directed to shut-in the well until the gas can be captured or the operator shall be required to compensate the lessor for that portion of the gas vented or flared without approval which is determined to have been avoidably lost.
- f. A schematic facilities diagram as required by 43 CFR 3162.7-2, 3162.7-3 and 3162.7-4 shall be submitted to the appropriate District Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in 43 CFR 3162.7 and Onshore Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 43 CFR 3162.7-4.



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

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

- h. Drilling operations are planned to commence on immediately upon approval of this application.
- i. It is anticipated that the drilling of this well will take approximately 4 days.
- j. No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the AO. If operations are to be suspended, prior approval of the AO will be obtained and notification given before resumption of operations.
- k. Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported in accordance with the requirements of NTL-3A or its revision.
- l. If a replacement rig is contemplated for completion operations, a "Sundry Notice" Form 3160-5 to that effect will be filed, for prior approval of the AO, and all conditions of this approved plan are applicable during all operations conducted with the replacement rig.



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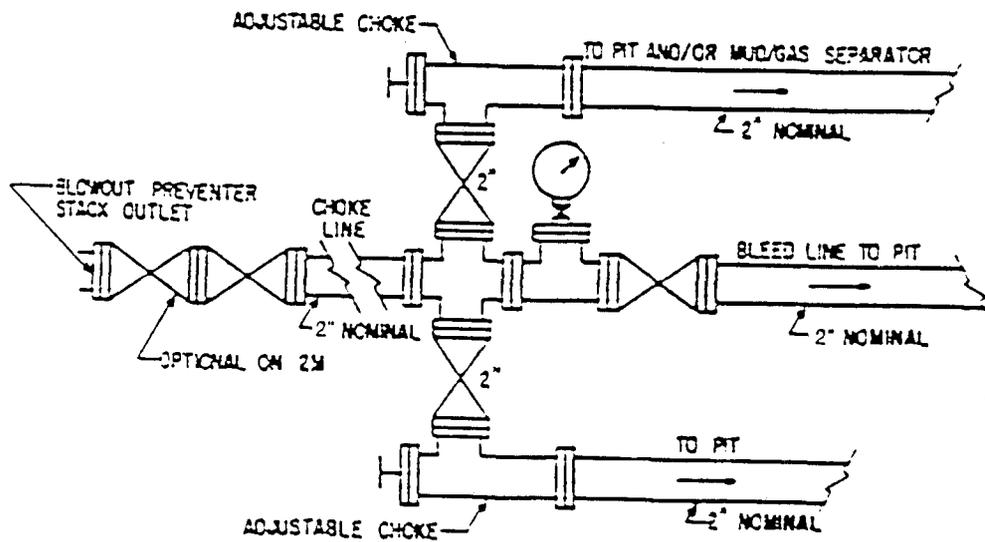
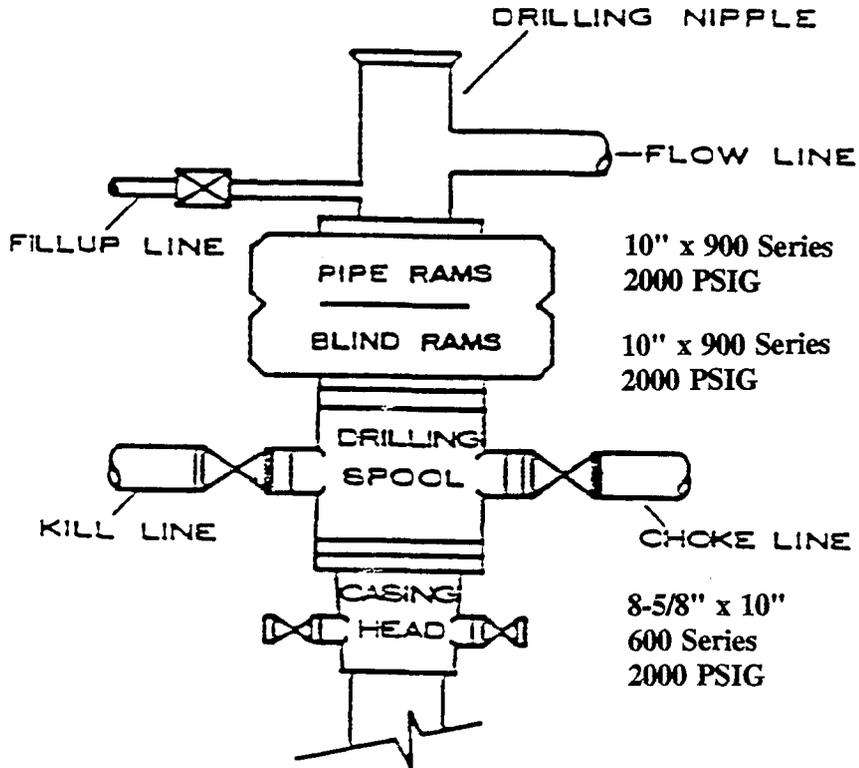
Drilling Program
Page 11

- m. Pursuant to Onshore Order No. 7, with the approval of the District Engineer, produced water may be temporarily disposed of into unlined pits for a period of up to 90 days. During the period so authorized, an application for approval of the permanent disposal method, along with the required water analysis and other information, must be submitted to the District Engineer.

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

BOP STACK

2,000 PSI



2,000 PSI CHOKER MANIFOLD

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Page 1

ONSHORE OIL & GAS ORDER NO. 1

Thirteen Point Surface Use Plan

An onsite inspection of the subject well was conducted on Thursday, October 2, 1997 at approximately 10:45 a.m. Weather conditions were warm and overcast. In attendance at the onsite inspection were the following individuals:

Rich McClure
Carol Graham
Lisa Smith
Robert Kay

Bureau of Land Management
Metcalf Archeological Consultants
Permitco Inc.
Uintah Engineering and Land Surveying

The wellsite appears to be located in a large quarry site which may be eligible for the NRHP. Due to geologic considerations, we were unable to find a suitable alternate location. Therefore, it will be necessary to later re-locate this wellpad to a non-contributing portion of the archeological site. Another field trip will be required with the geologist, surveyor and archeologist to find an alternate location.

The following information is based on the original staked location. If the wellsite is moved, a Sundry Notice will be submitted showing the revised location layout, survey plat and maps.

1. **Existing Roads**

- a. The proposed well site is located approximately 14.7 miles southwest of Crescent Junction, Utah.
- b. Directions to the location from Crescent Junction are as follows:

Proceed westerly on Interstate 70 for 6.6 miles. Exit off of I-70 at the Floy exit and proceed southerly along a county road for 4.2 miles to a fork in the road. Continue southwesterly for an additional 1.8 miles. Turn left and proceed southeasterly along the new access route (flagged) for approximately 2.1 miles to the location.



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- c. For location of access roads within a 2-Mile radius, see Maps A & B.
- d. Improvement to the existing access will not be necessary since this is a county maintained road.
- e. All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.
- f. Existing roads and newly constructed roads on surface under the jurisdiction of any Surface Managing Agency shall be maintained in accordance with the standards of the SMA.

2. Planned Access Roads

- a. There will be approximately 2.1 miles of new access road to be constructed. (See Map "B"). The actual access route may vary slightly to avoid archeological sites which were located at the initial field inspection.
- b. The new access will be flatbladed with a running surface of approximately 18 feet with a 35' maximum disturbed width. The maximum travel surface will be 18-20 feet.
- b. The maximum grade of the access is 5%.
- c. Turnouts will be installed if determined necessary at the time of construction.
- d. No culverts will be necessary during drilling. Any drainages will be crossed utilizing low water crossings.
- e. The new access road was centerline flagged at the time of staking.
- f. The need for surfacing material during drilling is not anticipated, however, should it become necessary, it will be installed at the discretion of the operator.
- g. No cattleguards will be necessary.



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- h. Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved by the Area Manager in advance.**
 - i. If at any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease (due to a contraction in the unit or other lease or unit boundary change) the BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental, or other financial obligations determined by the authorized officer.**
 - j. If the well is productive, the access road will be rehabilitated or brought to Resource (Class III) Road Standards within 60 days of dismantling the rig. If upgraded, the access road must be maintained at these standards until the well is properly abandoned. If this time frame cannot be met, the Area manager will be notified so that temporary drainage control can be installed along the access road.**
- 3. Location of Existing Wells Within a 1-Mile Radius of the Proposed Location.**
- a. Water wells -none**
 - b. Injection wells -none**
 - c. Producing wells - none**
 - d. Drilling wells - none**
- 4. Location of Tank Batteries and Production Facilities.**
- a. All production facilities will be located at the wellsite. If the well is productive, a Sundry Notice will be submitted showing the placement of proposed facilities.**



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- b. All permanent structures (onsite for six months or longer) constructed or installed (including oil well pump jacks) will be painted a flat, nonreflective color to match the standard environmental colors, as determined by the Rocky Mountain Five-State Interagency Committee. All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded. Colors will match the soil or rocks in the area.
- c. All site security guidelines identified in 43 CFR 3162.7-5 and Onshore Oil and Gas Order No. 3 shall be followed:
- d. If a gas meter run is constructed, it will be located within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and will be buried downstream of the meter until it leaves the pad. Meter runs will be housed and/or fenced. The gas meter shall be calibrated prior to first sales and shall be calibrated quarterly thereafter. All gas production and measurement shall comply with the provision of 43 CFR 3162.7-3, Onshore Order No. 5 and American Gas Association (AGA) Report No. 3.
- e. If a tank battery is constructed on this lease, it will be surrounded by a berm of sufficient capacity to contain 1-1/2 times the storage capacity of the largest tank. All loading lines and valves will be placed inside the berm surrounding the tank battery. All oil production and measurement shall conform to the provisions of 43 CFR 3162.7-3 and Onshore Oil and Gas Order No. 4.
- f. Production facilities on location may included a lined or unlined produced water pit as specified in Onshore Order No. 7. If water is produced from the well, an Onshore Order No. 7 application must be submitted.
- g. Any necessary pits will be properly fenced to prevent any wildlife entry.
- h. All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the Authorized Officer.
- i. All access roads will be maintained as necessary to prevent erosion and accommodate year-round traffic.



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- j. The road will be maintained in a safe useable condition.

5. Location and Type of Water Supply

- a. All water needed for drilling purposes will be obtained from either the Green River or a water source located on the Ruby Ranch.
- b. Water will be hauled to location over the roads marked on Maps A and B.
- c. No water well is to be drilled on this lease.
- d. A temporary water use permit for this operation will be obtained from the Utah State Engineer in Price, Utah at 801/637-1303.

6. Source of Construction Material

- a. Pad construction material will be native (that found in the wellpad).
- b. Any gravel used will be obtained from a private or commercial source.
- c. The use of materials under BLM jurisdiction will conform with 43 CFR 3610.2-3.
- d. No construction materials will be removed from Federal land.

7. Methods of Handling Waste Disposal

- a. The reserve pit will be constructed so as not to leak, break, or allow discharge.
- b. If porous materials are encountered during construction of the reserve pit, the reserve pit will be lined to prevent seepage of drilling fluids.



- c. **The reserve pit will be located on the south side of the wellpad. See location layout attached.**
- d. **The reserve pit will be located in cut material, with at least 50% of the pit volume being below original ground level. Three side of the reserve pit will be fenced before drilling starts. The fourth side will be fenced as soon as drilling is completed, and shall remain until the pit is dry. As soon as the reserve pit has dried, all areas not needed for production will be rehabilitated.**
- e. **Burning will not be allowed. All trash will be contained in a trash cage and its contents removed at the end of drilling operations and hauled to an approved disposal sight. Trash will be hauled as necessary, but not later than at the completion of drilling operations.**
- f. **Drill cuttings are to be contained and buried in the reserve pit.**
- g. **Any salts and/or chemicals which are an integral part of the drilling system will be disposed of in the same manner as the drilling fluid.**
- h. **Sewage will be placed in a portable chemical toilet or holding tank and disposed of in accordance with state and county regulations.**
- i. **The produced fluids (other than water) will be produced into a test tank until such time as construction of production facilities is completed. Any spills of oil, gas salt water or other produced fluids will be cleaned up and removed.**

8. Ancillary Facilities

There are no airstrips, camps, or other facilities planned during the drilling of the proposed well.

9. Well Site Layout

- a. See Location Layout for orientation of rig, cross section of drill pad and cuts and fills.
- b. All wells, whether drilling, producing, suspended, or abandoned, will be identified in accordance with 43 CFR 3162.6
- c. The location of mud tanks; reserve pit, trash cage; pipe racks; living facilities and soil stockpiles will be shown on the Location Layout.
- d. To minimize the amount of fugitive dust and spray escaping from the blooie pit, cuttings will be directed into the dirt bank. See location layout for location of flare/blooie pit.
- e. All pits will be fenced to prevent wildlife entry.
- f. The reserve pit fencing will be on three sides during drilling operations and on the fourth side when the rig moves off the location. Pits will be fenced and maintained until cleanup.

10. Plans for Restoration of Surface

- a. The top 6 inches of topsoil material will be removed from the location and stockpiled separately along the perimeter of the wellpad, as shown on the location layout.
- b. Topsoil along the access road will be reserve in place adjacent to the road.
- c. Immediately upon completion of drilling, all equipment that is not necessary for production shall be removed.
- d. The reserve pit and that portion of the location not needed for production will be reclaimed.

- e. **Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, equipment, debris, materials, trash and junk not required for production.**
- f. **Immediately upon well completion, any hydrocarbons on the pit shall be removed in accordance with 43 CFR 3162.7-1.**
- g. **Before any dirt work to restore the location takes place, the reserve pit must be completely dry. Once the reserve pit is dry, the reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours.**
- h. **All road surfacing will be removed prior to the rehabilitation of roads.**
- i. **The stockpiled topsoil will be evenly distributed over the disturbed area.**
- j. **Prior to reseeded, all disturbed areas, including the access roads, will be scarified and left with a rough surface.**
- k. **No vegetation presently exists at the current site. The soil is clay and some areas are covered with cobbly stone. If requested by the BLM, the area will be reseeded at the end of drilling operations. A seed mixture will be supplied by the Bureau of Land Management at the time of reclamation.**
- m. **The abandonment marker will be at least four feet above ground level and will be inscribed with the following: operator name, lease number, well name and surveyed description (township, range, section and either quarter-quarter or footages).**
- n. **At such time as the well is plugged and abandoned, the operator shall submit a subsequent report of abandonment.**

11. Surface Ownership

Access Roads - All roads are County maintained or are located on lands managed by the BLM.

Wellpad - The well pad is located on lands managed by the BLM.



12. Other Information

- a. **A Class III archeological survey was conducted by Metcalf Archeological Consultants. Additional archeological work will need to be conducted in order to relocate the drillsite to a non-contributing portion of the wellpad. See letter from Metcalf Archeological Consultants attached.**
- b. **The operator is responsible for informing all persons in the areas who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the authorized officer (AO). Within five working days the AO will inform the operator as to:**

-whether the materials appear eligible for the National Register of Historic Places;

-the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and

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

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

- c. **All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and**



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Gas Orders, the approved plan of operations, and any applicable Notice to Lessees. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

- d. A complete copy of the approved APD shall be on location during construction of the location and drilling activities.
- e. There will be no deviation from the proposed drilling and/or workover program without prior approval from the AO. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.h.
- f. "Sundry Notice and Report on Wells" (From 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.
- g. This permit will be valid for a period of one year from the date of approval. An extension period may be granted, if requested, prior to the expiration of the original approval period.
- h. The operator or his contractor shall contact the BLM Offices at 801/977-4300 48 hours prior to construction activities.

13. Lessee's or Operator's Representative and Certification

Permit Matters
PERMITCO INC.
Lisa L. Smith
13585 Jackson Drive
Denver, CO 80241
303/452-8888

Drilling & Completion Matters
RIATA ENERGY INC.
5912 Amarillo Blvd. West
Amarillo, TX 79106
806/352-2936 (W)
806/733-3353 (H) James Follis
806/352-0723 (H) Malone Mitchell



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A Petroleum Permitting Company

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Riata Energy, Inc.
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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 currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Riata Energy Inc. and their contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

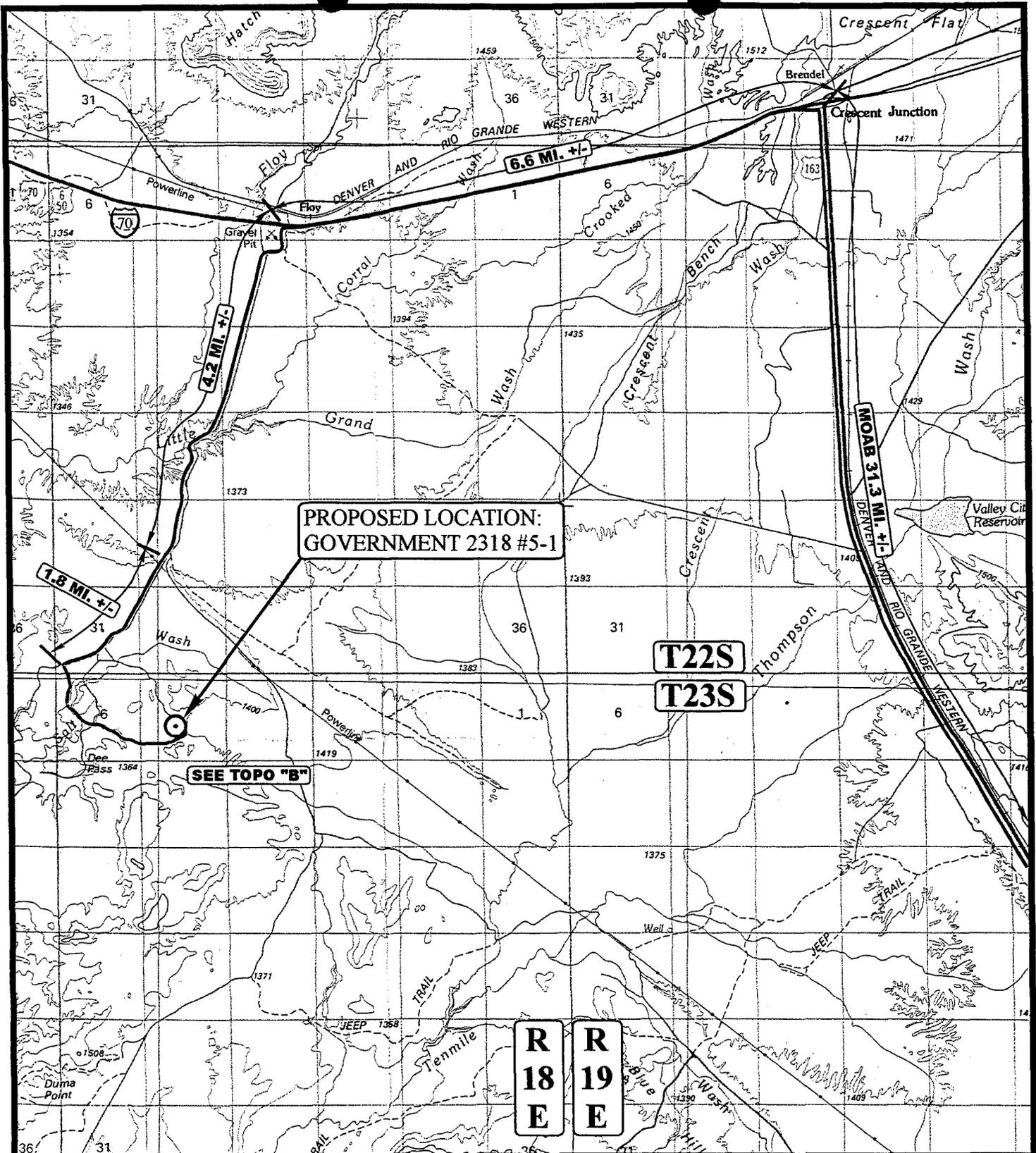
November 17, 1997

Date:

Lisa L. Smith
Authorized Agent for:
Riata Energy, Inc.



Permitco Incorporated
A Petroleum Permitting Company



LEGEND:

⊙ PROPOSED LOCATION

N



RIATA ENERGY, INC.

GOVERNMENT 2318 #5-1
SECTION 5, T23S, R18E, S.L.B.&M.
1784' FSL 2041' FWL



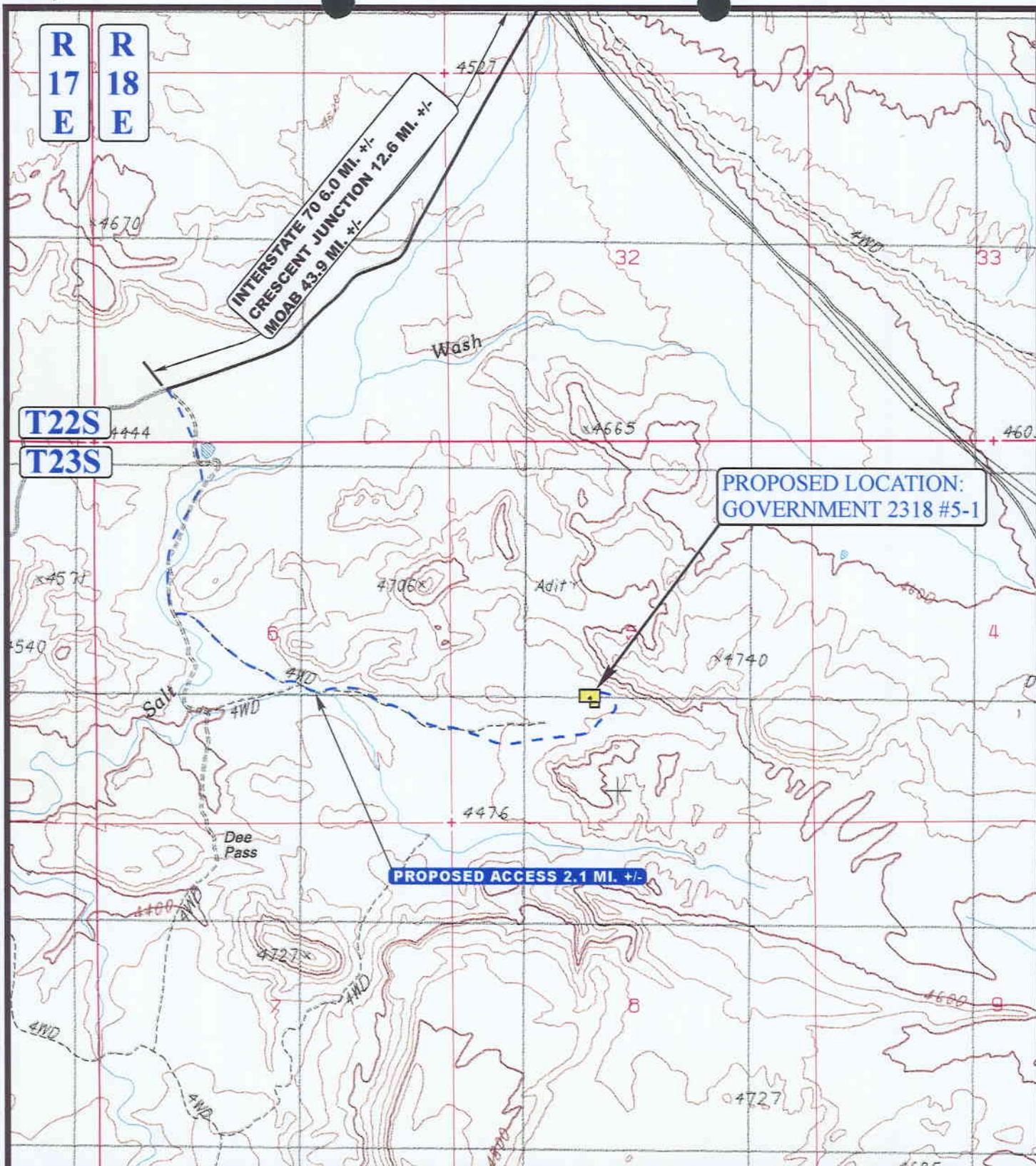
Uintah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 (801) 789-1017 * FAX (801) 789-1813
 Email: uels@easilink.com

TOPOGRAPHIC
MAP

9 22 97
 MONTH DAY YEAR

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





LEGEND:

- - - - - PROPOSED ACCESS ROAD
- EXISTING ROAD



RIATA ENERGY, INC.
GOVERNMENT 2318 #5-1
SECTION 5, T23S, R18E, S.L.B.&M.
1784' FSL 2041' FWL



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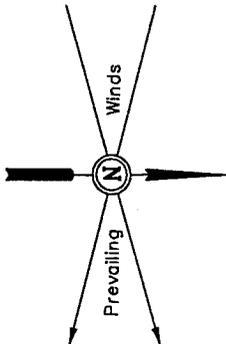
TOPOGRAPHIC **9 22 97**
MAP MONTH DAY YEAR
 SCALE: 1" = 2000' DRAWN BY: C.G. REVISED: 00-00-00



RIATA ENERGY, INC.

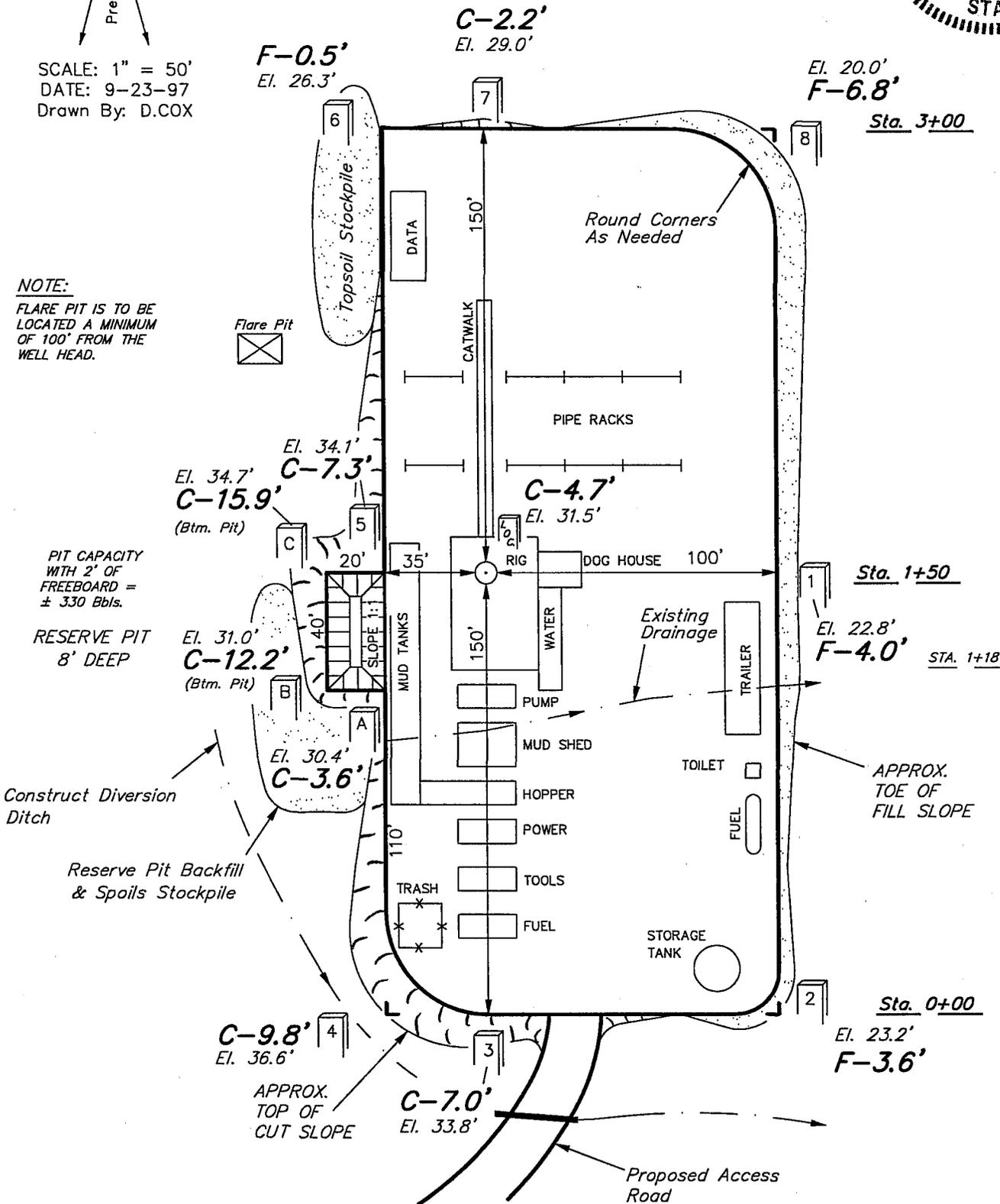
LOCATION LAYOUT FOR

GOVERNMENT 2318 #5-1
SECTION 5, T23S, R18E, S.L.B.&M.
1784' FSL 2041' FWL



SCALE: 1" = 50'
DATE: 9-23-97
Drawn By: D.COX

NOTE:
FLARE PIT IS TO BE LOCATED A MINIMUM OF 100' FROM THE WELL HEAD.

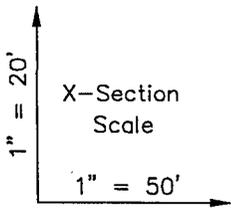


Elev. Ungraded Ground at Location Stake = 4531.5'
Elev. Graded Ground at Location Stake = 4526.8'

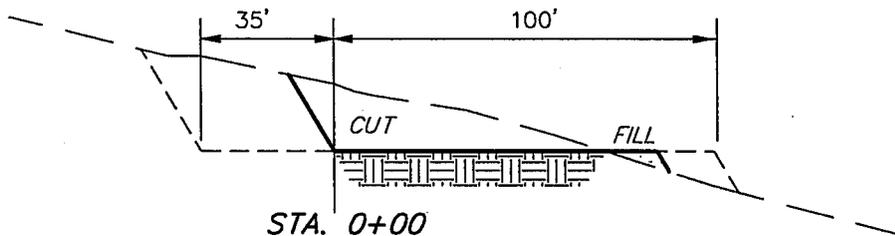
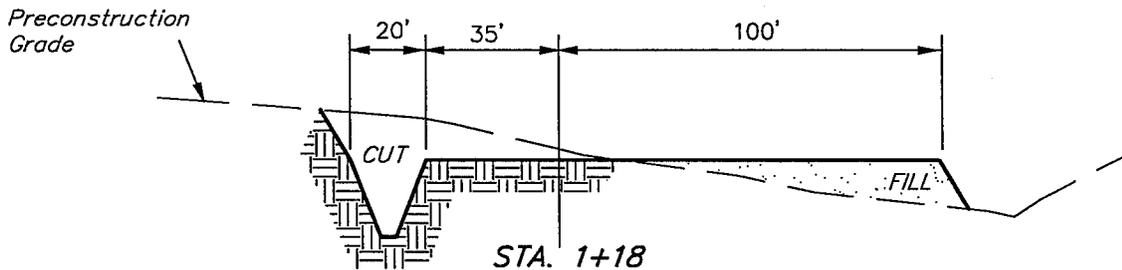
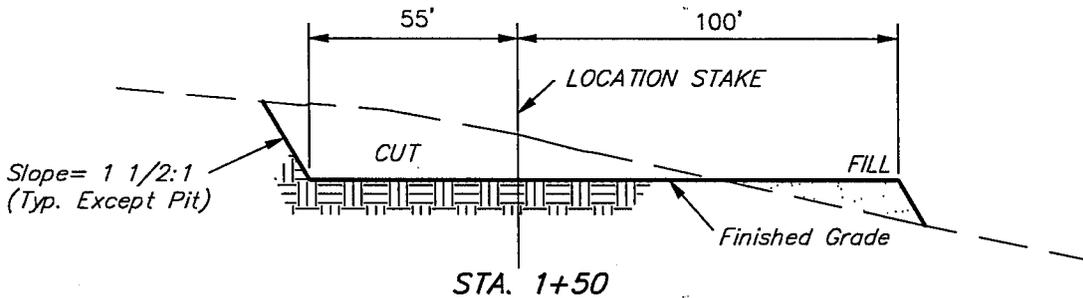
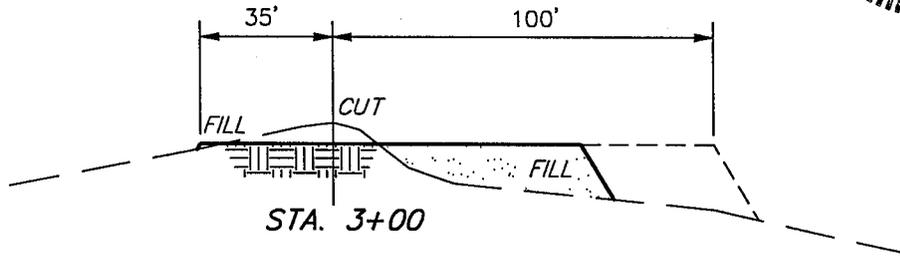
RIATA ENERGY, INC.

TYPICAL CROSS SECTIONS FOR

GOVERNMENT 2318 #5-1
SECTION 5, T23S, R18E, S.L.B.&M.
1784' FSL 2041' FWL



DATE: 9-23-97
Drawn By: D.COX



CUT APPROXIMATE YARDAGES

(6") Topsoil Stripping	=	760 Cu. Yds.
Remaining Location	=	2,700 Cu. Yds.
TOTAL CUT	=	3,460 CU.YDS.
FILL	=	2,510 CU.YDS.

EXCESS MATERIAL AFTER 5% COMPACTION	=	820 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	820 Cu. Yds.
EXCESS CUT MATERIAL	=	0 Cu. Yds.

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

There are no federal stipulations at this time.



WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/19/97

API NO. ASSIGNED: 43-019-31362

WELL NAME: GOVERNMENT 2318 5-1
 OPERATOR: RIATA ENERGY (N8265)

NE SW
 PROPOSED LOCATION:
~~NW~~ 05 - T23S - R18E
 SURFACE: 1784-FSL-2041-FWL
 BOTTOM: 1784-FSL-2041-FWL
 GRAND COUNTY
 WILDCAT FIELD (001)

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

LEASE TYPE: FED
 LEASE NUMBER: UTU - 75891

PROPOSED PRODUCING FORMATION: ENRD

RECEIVED AND/OR REVIEWED:

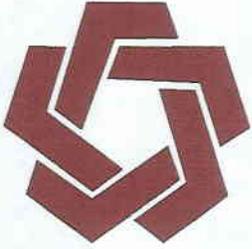
Plat
 Bond: Federal State Fee
 (Number UT 1006)
 Potash (Y/N)
 Oil shale (Y/N)
 Water permit
 (Number BEING OBTAINED)
 RDCC Review (Y/N)
 (Date: _____)

LOCATION AND SITING:

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

COMMENTS: _____

STIPULATIONS: 1. A SUNDRY WITH WATER PERMIT INFORMATION SHALL BE FILED PRIOR TO SPUD.
2. FEDERAL APPROVAL



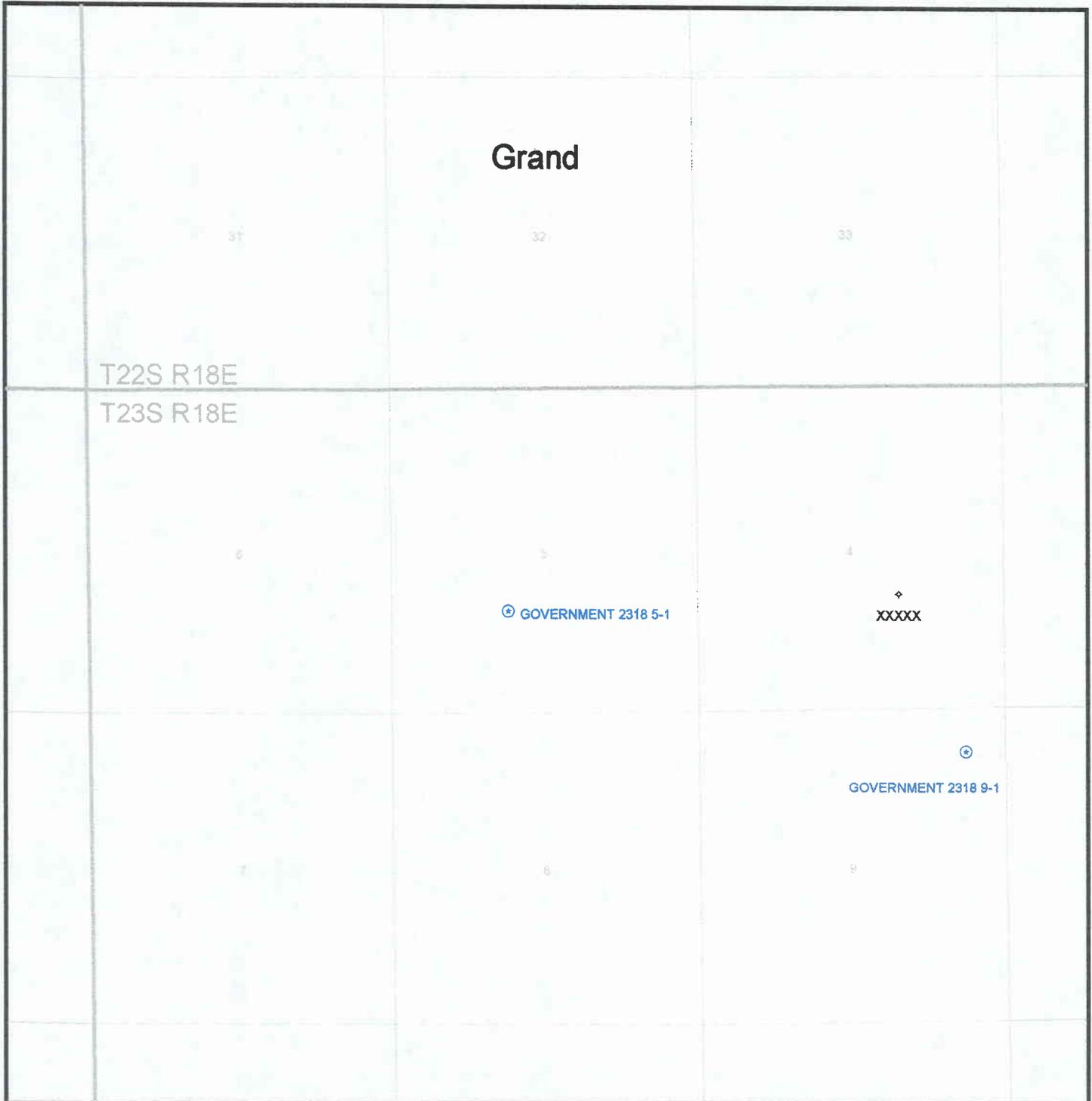
DIVISION OF OIL, GAS & MINING

OPERATOR: RIATA ENERGY CO. (N8265)

FIELD: WILDCAT (001)

SEC. TWP. RNG.: SEC. 5, T23S, R18E

COUNTY: GRAND UAC: R649-3-3



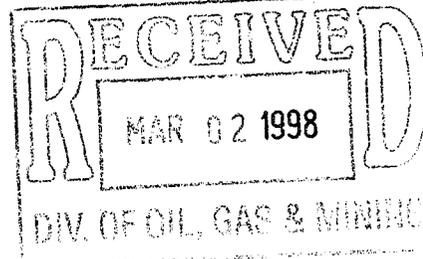
DATE PREPARED:
20-NOV-1997



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Moab District
82 East Dogwood Avenue
Moab, Utah 84532



1790
(UT-062)

FEB 26 1998

Dear Reader:

Attached is a copy of a proposed action for an environmental assessment (EA) being prepared by the BLM Moab District. EA UT-062-98-054 will analyze the impacts of drilling five oil and gas wells in the Jug Rock, The Knoll, Big Flat, and Dee Pass areas of Grand County, Utah.

The proposed action is available for a 30-day public comment period. Comments must be submitted in writing by 4:30 p.m. on March 27, 1998 to be considered. Thank you for your participation.

Sincerely yours,

Assistant District Manager
Resource Management

Enclosure

1. EA # UT-062-98-054
(Proposed Action)

INTRODUCTION

The Grand Resource Area Resource Management Plan (RMP) was approved in June 1985. The RMP selected Alternative C from the 1983 Environmental Impact Statement (EIS) prepared for the RMP. Alternative C analyzed the cumulative impacts of drilling 145 wells annually throughout the Grand Resource Area (RMP, Appendix A, page A-11). In December 1988, the RMP Oil and Gas Supplemental Environmental Assessment (EA), EA# UT-060-89-025, was approved. The EA incorporated the Supplemental Program Guidance from Bureau of Land Management (BLM) Manual 1624.2 that was adopted in 1986. The Supplemental Program Guidance included the preparation of a Reasonably Foreseeable Development (RFD) based on historic drilling, current market trends, and industry forecasts. The RFD for EA# UT-060-89-025 projected or estimated 10 wells would be drilled within the Paradox Fold and Fault Belt between 1989 and 1995.

In June 1993, with the drilling of the Kane Springs 20-1 well, ten well sites had been constructed and nine wells had been drilled. When Applications for Permit to Drill (APDs) were submitted on Federal oil and gas leases after the drilling of the 20-1 well, the Grand Resource Area notified the operator that processing of the APD would be delayed: "any additional wells within the greater Big Flat area will be postponed until an EIS is prepared to address impacts from full field development." BLM further advised operators that future APDs could "conceivably result in the drilling of an 11th well in this area, putting us beyond the cumulative well threshold." However, BLM has always held that the ten well threshold could be exceeded to obtain information necessary to prepare a field development EIS. A list of pending APDs appears later in this document.

There are currently 5 producing wells within the Paradox Fold and Fault Belt of the Grand Resource Area that have been drilled since 1988. Four of these wells are within the Kane Springs Unit operated by Aviara Energy Corporation (formerly operated by Columbia Gas Development), the fifth is a non-unit well operated by Coastal within the unit boundary:

Kane Springs Unit 19-1A, T. 26 S., R. 20 E., section 19;
Kane Springs Unit 27-1, T. 25 S., R. 19 E., section 27;
Kane Springs Unit 34-1, T. 25 S., R. 19 E., section 34;
Kane Springs Unit 10-1, T. 25 S., R. 18 E., section 10;
Coastal 16-1, T. 25 S., R. 18 E., section 16 (State Lease).

There are 3 wells that have been drilled and temporarily abandoned since 1988:

Kane Springs Unit 28-1, T. 25 S., R. 19 E., section 28;
Kane Springs Unit 20-1, T. 26 S., R. 19 E., section 20;
Central Resources (drilled by Giant) Hatch Point #1, T. 29 S., R. 21 E., section 14.

There have been 2 wells drilled, plugged, and reclaimed since 1988:

Chevron 1-36, T. 27 S., R. 20 E., section 36 (State Lease);
Burlington Resources 22-33H, T. 27 S., R. 21 E., section 33.

One well site was constructed, not drilled, and reclaimed:

Exxon (constructed by Meridian) 33-4H, T. 26 S., R. 19 E., section 4.

Prior to 1997, Moab District had 8 APDs pending in the Paradox Fold and Fault Belt. None of those APDs were proposed in areas that would provide new geologic information to help determine the actual extent or boundaries of the Paradox Fold and Fault Belt, and the Moab BLM Office did not consider any of these proposed wells to be "rank wildcat wells", (i.e. wells located over one mile from any previous drilling outside of the Big Flat area). None of those APDs were processed, and several suspensions of lease operations and production were granted.

Between 1993 and 1997, BLM tried to determine the extent of the oil and gas resources that could be developed within the Paradox Fold and Fault Belt in order to delineate an area to analyze in a National Environmental Policy Act (NEPA) document for full field development. The wells that had been drilled since 1988 were located within the areas categorized in the RFD as having high and moderate potential for the occurrence of oil and gas, but it was not possible to delineate any specific areas for future development. The Paradox Fold and Fault Belt covers approximately 1/2 of the Grand Resource Area, and the drilling had been spread over 1/3 or more of the Paradox Fold and Fault Belt. It is not feasible to analyze full field development over an area of 250,000 to 500,000 acres, and further efforts for analyzing full field development have been postponed by BLM.

Early drilling success made Columbia Gas Development and other area lessees confident that the area would progress into development rather quickly. They advised BLM that they planned on preparing a field development EIS. At the time it appeared that ten wells would provide adequate exploration of the play. However, unexpected dry holes and inability to reduce drilling costs caused them to reconsider. Faced with geology and drilling conditions that were more complicated than originally thought, they concluded that development of the play was still in question, and it would be premature to invest in a field development EIS without more exploratory information.

Columbia Gas Development never concurred with BLM's determination that the Kane Springs Unit had entered a stage of full field development. When BLM rescinded the APD for the Kane Springs Unit 36-1 Well, based on BLM's determination that the Kane Springs Unit was entering a stage of full-field development; Columbia requested a State Director Review. Columbia maintained that the geologic and reservoir data indicated that drilling within the Kane Creek Unit was exploratory, not developmental. The State Director remanded the case back to Moab District on August 27, 1993, and directed Moab District to analyze additional geologic and reservoir data to determine if the well was exploratory or developmental. Although Columbia did not proceed with the drilling of the 36-1 Well based on business considerations, they maintained that geologic and reservoir data indicated that the 36-1 Well was exploratory, not developmental.

During May 1997, Aviara Energy Corporation (formerly Columbia Gas Development) met with BLM personnel in the Moab Office and presented information indicating that all of their producing wells were located in separate reservoirs, and that additional drilling adjacent to their producing wells was still exploratory, rather than developmental. Production histories and interference tests from the horizontal wells drilled during the 1990's confirm that no two of the existing wells are producing from the same reservoir.

The geologic target in this area is the Cane Creek zone of the Paradox Formation. The Cane Creek is a fractured shale, with oil accumulating in the fractures. Wells that intercept these fractures tend to produce very well whereas wells that do not intercept fractures do not produce. Available information indicates that these fracture systems are not interconnected over large distances, and to date, each producing well is in its own isolated fracture system. The fractures tend to be nearly vertical, so horizontal drilling is employed to dramatically increase the chances of intercepting a fracture. Because the target is not simply a geologic horizon, but rather, isolated fracture systems within a geologic horizon, exploration of the Cane Creek is particularly challenging. In addition to the physical data derived from drilling, the proposed wells are designed to contribute to the understanding of the influence of tectonic features on the fracture systems and the effectiveness of geophysical data interpretation in predicting fracture system occurrence and orientation. Such information will allow geologists to utilize existing data to more accurately map the target.

While lessees, operators and the BLM had several years to interpret data obtained in the early 1990's and the successful horizontal wells established a production history, we are still unable to define a reasonable scenario for future development to be carried forward in a NEPA document. Based on current information, any RFD or NEPA analysis prepared at this time would be short-sighted. Prior to initiating an amendment to the RMP (including new RFD, NEPA document), it would be beneficial to gather additional geologic data on the limits of the Paradox Fold and Fault Belt or on the existing producing reservoirs. Without additional information on the extent of the producible reservoirs or the parameters of the existing reservoirs; a NEPA analysis at this time would have to be of broad scope, would not be prepared on the actual potential for field developments, and would not have specific locations where wells or fields would be developed.

In summary, (1) the production histories from the horizontal wells do not support the concept that the 5 producing wells in the Big Flat - Bartlett Flat areas of the Kane Springs Unit have entered a stage of field development, and (2) BLM's 1993 assumption that the drilling in the Big Flat - Bartlett Flat areas of the Kane Springs Unit had reached a stage of full field development was not accurate. If BLM initiated the preparation of NEPA documentation, either an EA or EIS, for full field development at this time; there would not be enough geologic data to focus the analysis on site specific areas for full field development, and the analysis would be over a broad area encompassing over half a million acres within the Paradox Fold and Fault Belt of the Grand Resource Area. In order to develop a new RFD to focus the scope of future development, additional geologic information would be required. Based on this information, BLM reconsidered options for approving additional exploratory drilling to help collect geologic data on the extent of the oil and gas reserves within the Paradox Fold and Fault Belt and the parameters of the existing oil reservoirs which may be more isolated than originally assumed.

Following their meeting with BLM in May 1997, Aviara Energy Corporation located three potential well sites within the Kane Creek Unit that could be drilled to provide additional information that would be useful to test geologic theories and to confirm reservoir occurrence or reservoir production parameters. Aviara personnel worked with the BLM to select potential well sites that would reduce new surface disturbances and visual impacts.

On November 21, 1997, Moab District mailed a letter to the operators with pending APDs or lease suspensions within the Paradox Fold and Fault Belt. The letter notified operators that BLM was prepared to examine additional proposals which would help define a reasonable scenario for future development of the Cane Creek play or Paradox Fold and Fault Belt. BLM requested that lessees proposing to conduct operations in the play submit those proposals for evaluation, and the proposals would be evaluated on a case-by-case basis to determine whether the information to be obtained will provide specific information as to the feasibility of developing the Cane Creek as a producing field. The letter requested that proposals be submitted by December 31, 1997.

Aviara, Intrepid Oil and Gas, and Riata Energy, Inc. contacted BLM regarding options for exploratory drilling operations that could provide the types of information requested by BLM. On December 31, 1997, the Moab BLM Office had pending 12 APDs within the Paradox Fold and Fault Belt. BLM screened the 12 pending APDs to determine which of them could be classified as exploratory based on the distance from known production.

Six of the 12 APDs were for wells that could be classified as exploratory:

Riata, #5-1 Well, T. 23 S., R. 18 E., section 5;
Riata, #9-1 Well, T. 23 S., R. 18 E., section 9;
Aviara, Kane Springs Unit 7-1 Well, T. 25 S., R. 19 E., section 7;
Aviara, Kane Springs Unit 11-1 Well, T. 26 S., R. 19 E., section 11;
Exxon, Shafer #1 Well, T. 27 S., R. 20 E., section 11; and
Exxon, Hatch Point #1 Well, T. 27 S., R. 21 E., section 33.

The other 6 pending APDs were considered developmental in nature due to their proximity to producing wells:

S.W. Energy, #9-1 Well, T. 23 S., R. 17 E., section 9;
Coastal, Kane Springs Unit 21-1 Well, T. 25 S., R. 18 E., section 21;
Columbia (Aviara), Kane Springs Unit 36-1 Well, T. 25 S., R. 19 E., section 36;
Columbia (Aviara), Kane Springs Unit 18-1 Well, T. 26 S., R. 20 E., section 18;
Celsius, Largo #1 Well, T. 26 S., R. 20 E., section 15; and
Aviara, Kane Springs Unit 30-1 Well, T. 26 S., R. 20 E., section 30.

Although Exxon's Hatch Point #1 Well appeared to be exploratory, the well would be located within 1 mile of two plugged and abandoned wells and two temporarily abandoned wells. Based on the geologic and production information available for the adjacent wells, BLM determined that the Exxon Hatch Point #1 Well would not provide the types of information needed prior to revising the RFD or the RMP and that the APD would not be processed at this time.

The visibility of the proposed Exxon Shafer #1 Well may be screened from Dead Horse Point State Park; however, the well would be within the viewshed of Anticline Overlook. BLM considers the impacts and potential conflicts associated with drilling a well (and potentially developing an oil and gas field) in Shafer Basin as issues better addressed through the RMP. The potential impacts from locating a well anywhere within Shafer Basin would be beyond the scope of this EA, and BLM will postpone the processing of the APD for the Exxon Shafer #1 Well.

During the initial geologic screening of the pending APDs, Aviara's Kane Springs Unit 30-1 Well was considered developmental due to its proximity to a producing well, the Kane Springs Unit 19-1A Well. When originally staked by Aviara, using the existing geophysical data, this well was located in T. 26 S., R. 19 E., section 25 (Oil and Gas Lease UTU-67558), approximately 1/2 mile southwest of the 30-1 Well. Oil and Gas Lease UTU-67558 was issued with an oil and gas leasing stipulation for no surface occupancy in section 25. When reviewing options for horizontally drilling from adjacent locations to hit the target in section 25, Aviara considered two sites for relocating the well. BLM checked both of the options in the field with Aviara, and BLM preferred the location for the 30-1 Well (section 30) over the other option in section 24 which would have been over 1 mile west of the 30-1 Well. BLM considers the proposed location for the 30-1 Well as less of a visual impact than the other option which would be located closer to the road to Canyonlands National Park. As a result of following BLM's recommendation to reduce potential visual impacts, Aviara moved the surface location of the 30-1 Well from an area that would have been exploratory to an old drill site that is closer to a producing well (19-1A Well). The original subsurface target in section 25 was not changed by moving the surface location of the well into section 30. The drilling of the 30-1 would test the validity of geophysical data interpretation which would be used in selecting well locations across the area. This type of information would be useful prior to preparing a new RFD and RMP update, and BLM will analyze the 30-1 Well in this EA.

NEED FOR THE PROPOSED ACTION

Based on the BLM's screening and review of the pending APDs, as specified in the previous section; five APDs were selected for processing in this EA.

Aviara Energy submitted Applications for Permit to Drill (APD) three wells in the Kane Springs Unit, on December 17, 1997:

Kane Springs Federal 7-1 Well, Oil and Gas Lease UTU-51239;
Kane Springs Federal 11-1 Well, Oil and Gas lease UTU-65972; and
Kane Springs Federal 30-1 Well, Oil and Gas Lease UTU-46697.

On October 24, 1997, Riata submitted an APD for the #9-1 Well, and on November 20, 1997, Riata submitted an APD for the #5-1 Well:

#5-1 Well, Oil and Gas lease UTU-75891; and
#9-1 Well, Oil and Gas Lease UTU-75891.

All of the proposed wells would be located on Federal oil and gas leases with Federal surface locations administered by the BLM.

The APD is the mechanism whereby the lessee/operator requests approval to exercise their lease rights to explore for and possibly develop Federal oil and gas resources. The drilling of the proposed wells would determine if oil and gas reserves could be recovered at the proposed locations.

In addition to testing the feasibility of producing oil and gas reserves at the proposed locations, all five of the proposed wells would provide additional geologic and reservoir data. The drilling of the three Aviara wells would provide additional geologic and reservoir data that would help delineate the boundaries of the Paradox Fold and Fault Belt and help define the parameters of the oil and gas reservoirs. The Aviara wells would also test three different geological theories for predicting the location of reservoirs. The #5-1 and #9-1 Wells proposed by Riata would be 4 miles away from the nearest production, and these wells would test a new horizon. The geologic and reservoir information is needed for establishing a new RFD and for determining the boundaries of the productive areas within the Paradox Fold and Fault Belt.

This EA will document the impacts and mitigation for drilling the 5 wells and will update the cumulative impacts of drilling 5 wells within the Paradox Fold and Fault Belt of the Grand Resource Area.

CONFORMANCE WITH LAND USE PLAN

This proposed action has been determined to be in conformance with the terms and conditions of the Grand Resource Area Resource Management Plan (RMP), approved July 1985, as required by 43 CFR 1610.5. This is shown on page 15 of the plan and reads as follows: "to keep public lands open for exploration and development of mineral resources while protecting areas with sensitive resource values."

The proposed locations for the two Riata wells, Aviara 7-1 Well, and the Aviara 11-1 Well are in areas with no special oil and gas leasing stipulations identified in the RMP (Category 1 area). The Aviara 30-1 Well would be located in a Category 3 area with oil and gas leasing stipulations for no surface occupancy that were developed in the RMP. However, Oil and Gas Lease UTU-46697 at the proposed location for the 30-1 Well was issued prior to the approval of the RMP; and therefore, Lease UTU-46697 was issued without the no surface occupancy stipulation. Oil and Gas Lease UTU-46697 is held by production, and it is unlikely that a new lease would be issued in the near future.

The Supplemental Program Guidance (SPG) for fluid minerals (1624.22 C.) specify RFDs should be projected as number of wells and fields. The RFD projections are also linked to cumulative impacts, which are generally measured in acreage of surface disturbance for the construction of well sites, roads, and pipelines. The 1988 RMP Oil and Gas Supplemental EA estimated an average well would result in 6.5 acres of surface disturbance. In March of 1993, the average surface disturbance for a well within the Paradox Fold and Fault Belt was approximately 4 acres (EA# UT-068-93-031). The cumulative impacts of the drilling from 1988 through 1993 is less than the 65 acres estimated for 10 wells in the existing RFD for the Paradox Fold and Fault Belt. The 1988 RMP Oil and Gas Supplemental EA assumed that 50 percent of the wells would be productive and 50 percent would be abandoned and reclaimed. The EA also assumed revegetation would be successful within a scope of 10 years. Based on the drilling that has occurred within the Paradox Fold and Fault Belt since 1988, these assumptions from the existing RFD would still be valid.

The Potash-Confluence Habitat Management Plan (HMP) encompasses the areas of the proposed actions. The goals and objectives for the Potash-Confluence HMP have been developed to protect and enhance habitat for desert bighorn sheep, peregrine falcon, riparian habitat, Cycladenia humilis which is an endangered plant, deer, and elk.

All of the proposed wells would be in areas grazed as part of the Big Flat - Ten Mile allotment, and an Allotment Management Plan (AMP) has been developed for the area. The implementation of the AMP would not be affected by the proposed actions as long as the surface impacts from the proposed actions were properly mitigated.

This environmental assessment (EA) tiers to the Environmental Analysis Record for Proposed Oil and Gas Leasing in the Grand Resource Area (1975), the EIS for the Grand Resource Area Management Plan (1983), and the RMP Oil and Gas Supplemental EA UT-060-89-025 (December 14, 1988). EA UT-068-91-079 for the Western Gas Gathering Pipeline, EA UT-068-91-080 for the Chevron Green River Federal #1-20 Exploratory Well, EA UT-068-91-082 for the Columbia Gas Development Corporation Kane Springs Federal #10-1 and #20-1 Exploratory Oil Wells, and UT-068-93-031 for the Kane Springs Federal 25-19-34-1 Well provide additional information on affected environments and potential impacts from similar projects.

RELATIONSHIP TO STATUTES, REGULATIONS, OR OTHER PLANS

The exploration, development and production of Federal oil and gas leases is regulated by 43 CFR 3160, Onshore Oil and Gas Orders, and Notices to Lessees and operators (NTLs).

The proposed action is consistent with Grand County's 1979 Master Plan for Development.

The proposed action would meet the BLM's policy to manage energy and mineral resources on public lands in accordance with the provisions of the Mining and Minerals Policy Act of 1970 and the Federal Land Policy and Management Act of 1976 (FLPMA). The Mining and Minerals Policy Act of 1970 declares that it is the continuing policy of the Federal government to encourage and facilitate private enterprise in the development of a stable domestic minerals industry and the orderly and economic development of domestic mineral resources. FLPMA reiterates the Nation's need for domestic sources of mineral and other resources and requires that public lands be managed accordingly.

In keeping with these policies, the BLM actively facilitates the development by private industry of public land mineral resources in a manner that satisfies national and local needs and provides for economically and environmentally sound exploration, extraction, and reclamation practices (BLM Manual Section 3000.06).

PROPOSED ACTION AND ALTERNATIVES

The proposed action would require the construction and maintenance of a well pad to drill, produce and eventually plug/abandon an oil well at each of the proposed locations. The Surface Use Plans submitted with the APDs provide specifications for construction, operation, and restoration of the well sites. The Surface Use Plans were developed during onsite inspections of the proposed well sites. Representatives from the oil companies and BLM participated in the onsite inspections.

The Surface Use Plans for the Aviara wells and the Riata wells are substantially different from each other. Therefore, the information for the proposed action was separated into two headings; Aviara Wells and Riata Wells. Maps of the proposed wells and access routes are attached in Appendix A.

Aviara Wells

Kane Springs Federal 7-1 Well, T. 25 S., R. 19 E., section 7;
Kane Springs Federal 11-1 Well, T. 26 S., R. 19 E., section 11; and
Kane Springs Federal 30-1 Well, T. 26 S., R. 20 E., section 30.

Approximately 1.3 miles of an existing two-track road would be upgraded and 0.6 mile of new road would be constructed between the Spring Canyon road (Grand County Road #140) and the proposed location for the Kane Springs Unit 7-1 Well. The 11-1 Well would be located approximately 300 feet from State Route 313, and the proposed access would be constructed on a previous surface disturbance. The access for the 30-1 Well would follow 0.3 miles of the road to the 19-1A Well, and 0.7 miles of an existing two-track road would be upgraded. The existing roads and new roads would be flatbladed for the drilling operations. If a well was completed for production, the roads would require a road width of 35 feet to include the travel surface of 21 feet wide, ditches and topsoil berms.

The construction of a drilling location and well site would involve a surface disturbance of approximately 400 feet by 400 feet. The top 6 inches of soil would be removed and stockpiled. A lined reserve pit would be constructed within the surface disturbance of the proposed well site. Based on previous construction at Columbia wells, it is anticipated that the construction of a well pad could entail some blasting of rock.

The construction of a well site would require about 10 days, and the drilling operations would take approximately 50 days. Well testing and completion activities could take another 20-30 days.

Approximately 48 truckloads of equipment would be required to transport the drilling rig to the location. During the drilling phase, the use of 10-15 vehicles per day would be anticipated. Trucks hauling water for drilling would also be on the highway. One or two vehicles would travel to the well each day during production to inspect and maintain equipment. Depending on oil production and facilities constructed for production handling, one tanker truck would transport oil every 1-2 weeks.

Initially, drilling of the well would utilize an air drilling system, with cuttings contained in a blooie pit. The blooie line would be misted to control dust. An oil-base drilling mud would be used to finish the drilling. Oil-based muds have been the most successful when drilling horizontal wells, and any alternative muds would need to meet very specific parameters for the anticipated drilling conditions. All fluids used during the drilling or testing of the well would be contained in a fenced reserve pit. The reserve pit would be fenced on three sides during drilling operations and the fourth side would be fenced when the rig moves off the location. After the fluids have been removed or evaporated, the reserve pit contents would be stabilized, covered with the subsoil stockpiled during construction of the pit, and reclaimed. Sewage would be contained in a chemical toilet during the drilling operations. Trash would be stored in a portable self-contained trash cage and hauled to an approved sanitary landfill when the drilling is completed.

If commercial production is established, the production facilities would probably be located on the well pad. An area of approximately 400 feet by 300 feet (2.75 acres) would be needed for production operations. The majority of this area would be occupied by production facilities. It is anticipated that a wireline truck would be on location every 2-3 weeks to remove paraffin from the well. The entire well pad would be required during future down-hole maintenance operations.

It may be feasible to pipe production from the 30-1 Well to the 19-1A Well. In the event that oil can be piped to the 19-1A battery, there may be an opportunity to utilize some of the existing production facilities at the 19-1A Well and to eliminate some of the production facilities that would be located at the 30-1 Well.

The specific design and layout of a production facility would be based on the volume of production during the well tests, cut and fill logistics at the well site, and potential visual impacts from the equipment. The anticipated production facilities would include a tank battery, heater treater, separator, circulation pump and flare pit. A typical tank battery would include 3-4 tanks (500 barrel capacity per tank) to contain oil and an additional tank for produced water. The tank battery and production equipment would be surrounded by a berm adequate to contain any fluids lost during production handling or discharged in the event of a spill. The well pad (or certain portions of the tank battery, treater, and flare pit) would probably be fenced to exclude livestock. It is anticipated that a pumping unit would be needed to produce the well after 2 years of production. Internal combustion engines associated with production facilities would be equipped with noise reducing mufflers. All permanent production facilities would be painted a neutral non-reflective color. If the well is a producer, additional upgrading and maintenance would be needed for drainage control on the new road. Unless pipelines were constructed to this area, oil production would be hauled from the well site by tanker trucks and gas would be flared pursuant to the guidelines in NTL-4A. Any salt water produced at the well would be hauled to an approved disposal site unless alternate disposal methods were authorized according to Onshore Oil and Gas Order 7.

If the well is not developed into a producing well or when it is no longer commercially productive, the well would be plugged. Gravel would be removed from the areas requiring reclamation. The well pad and access road would be recontoured, topsoil replaced, scarified, and seeded as specified by BLM.

Riata Wells

- #5-1 Well, T. 23 S., R. 18 E., section 5; and
- #9-1 Well, T. 23 S., R. 18 E., section 9.

The #9-1 Well would be located approximately 300 feet from a Grand County Road #138, between the Ruby Ranch Road and the Moab Airport. The access for the #5-1 Well would follow an existing road that would be upgraded for approximately 1.8 miles, and approximately 0.3 miles of new road would be constructed to reach the well site for the #5-1 Well. The existing roads and new roads would be flatbladed for the drilling operations. If a well was completed for production, the roads would require a road width of 35 feet to include the travel surface of 18-20 feet wide, ditches and topsoil berms.

The construction of a drilling location and well site would involve a surface disturbance of approximately 300 feet by 175 feet. The top 6 inches of soil would be removed and stockpiled. A reserve pit of 40 feet by 20 feet would be constructed adjacent to the proposed well site.

The construction of a well site would require 2-5 days, and the drilling operations would take 5-10 20 days. Well testing and completion activities could take another 20-30 days.

During the drilling phase, there would be 3-5 vehicles driving to the well site each day. Trucks hauling water for drilling would also be using the Grand County roads. One or two vehicles would travel to the well each day during production to inspect and maintain equipment. Depending on oil production and facilities constructed for production handling, one tanker truck would transport oil every 1-2 weeks.

The Riata wells would be vertical wells; and the drilling operations would utilize an air drilling system. The blowout line would be misted with water to control dust, and cuttings would be contained in a pit. All fluids used during the drilling or testing of the well would be contained in a fenced reserve pit. The reserve pit would be fenced on three sides during drilling operations and the fourth side would be fenced when the rig moves off the location. After the fluids have been removed or evaporated, the reserve pit contents would be covered with the subsoil stockpiled during construction of the pit, and reclaimed. Sewage would be contained in a chemical toilet during the drilling operations. Trash would be stored in a portable self-contained trash cage and hauled to an approved sanitary landfill when the drilling is completed.

If commercial production is established, the production facilities would probably be located on the well pad. An area of approximately 300 feet by 160 feet (1.1 acres) would be needed for production operations. The majority of this area would be occupied by production facilities. It is anticipated that a wireline truck would be needed periodically to remove paraffin from the well. The entire well pad may be required during future down-hole maintenance operations.

As indicated in the previous section for the Aviara wells, the specific design and layout of a production facility would be based on the volume of production during the well tests, cut and fill logistics at the well site, and potential visual impacts from the equipment. The anticipated production facilities would probably include a tank battery, heater treater, separator, circulation pump and flare pit. A typical tank battery would include 2-3 tanks (200-500 barrel capacity per tank) to contain oil and an additional tank for produced water. The tank battery and production equipment would be surrounded by a berm adequate to contain any fluids lost during production handling or discharged in the event of a spill. It is anticipated that a pumping unit would be needed to produce the well after 2 years of production. All permanent production facilities would be painted a neutral non-reflective color. If the well is a producer, additional upgrading and maintenance would be needed for drainage control on the new road. Oil production would be hauled from the well site by tanker trucks and gas would be flared pursuant to the guidelines in NTL-4A. Any salt water produced at the well would be hauled to an approved disposal site unless alternate disposal methods were authorized according to Onshore Oil and Gas Order 7.

If the well is not developed into a producing well or when it is no longer commercially productive, the well would be plugged. Gravel would be removed from the areas requiring reclamation. The well pad and access road would be recontoured, topsoil replaced, scarified, and seeded as specified by BLM.

In addition to the Surface Use Plan, the APD includes a Drilling Program that provides specifications and mitigation for drilling through potential water and hydrocarbon zones, casing and cementing programs, pressure control equipment, drilling fluid programs, and well evaluation programs. The proposed Aviara wells would be drilled and completed as horizontal wells. The Riata wells would be drilled as vertical wells. The drilling information would be reviewed by a Geologist and Petroleum Engineer in the Moab District Office prior to the approval of the APD. The Moab District Engineer would also provide specifications for plugging the wells.

NO ACTION ALTERNATIVE

Under the no action alternative, an APD would not be approved for the proposed location. The existing environment would remain in its current condition, and there would be no new environmental consequences as a result of this alternative.

The lessee has the legal right to explore and develop oil and gas resources underlying the lease. Therefore, denying all efforts to exercise these lease rights is not a viable alternative. Selection of the no action alternative would likely result in the applicant submitting a new APD with a new surface location. This would be treated as a new proposed action requiring additional analysis.

ISSUE IDENTIFICATION AND ASSUMPTIONS

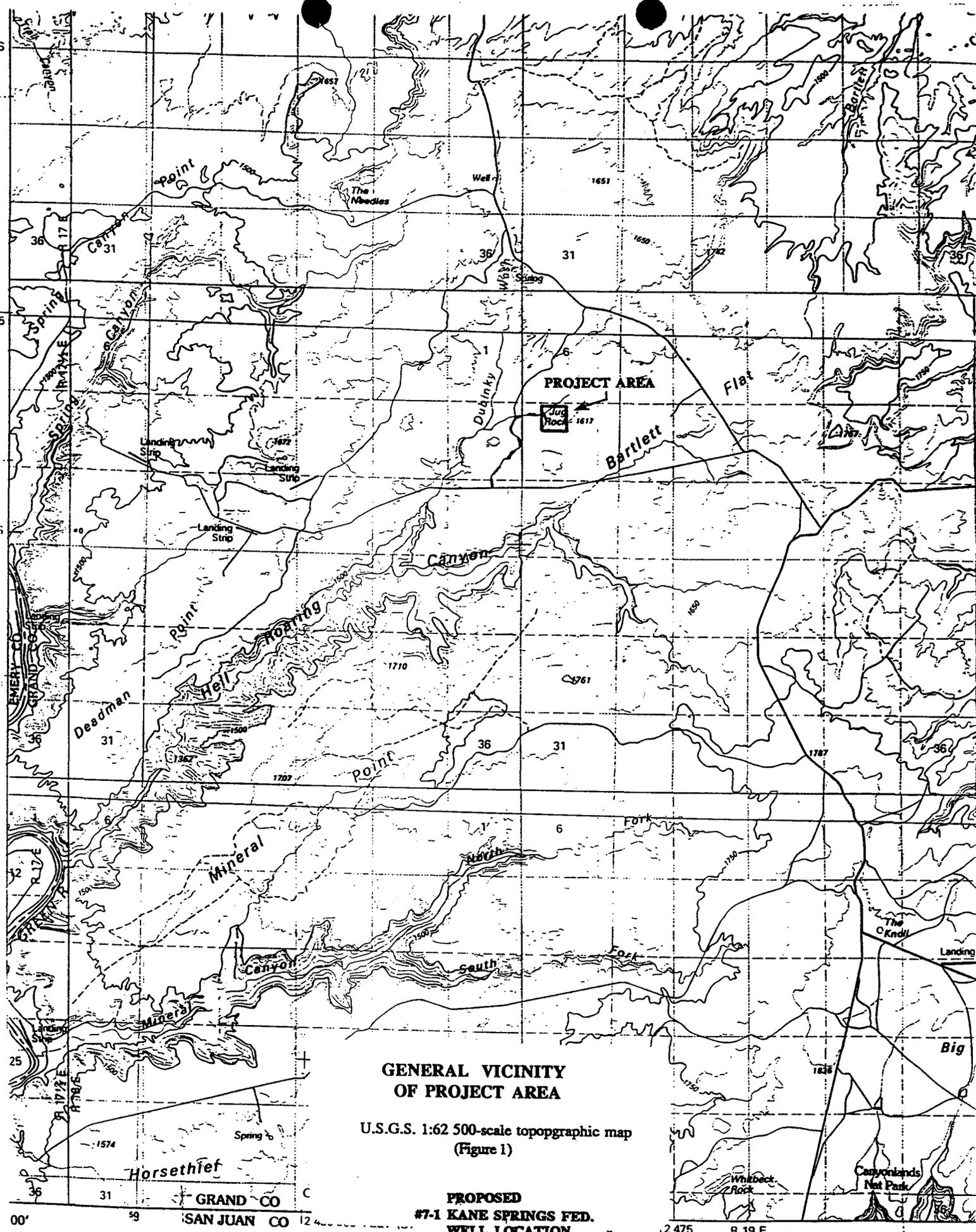
Based on previous public reviews and public comments received on wells in the Kane Springs Unit, BLM anticipates the majority of the issues for the Kane Springs wells will be related to visual or recreational values. Personnel from Aviara Energy located the Kane Springs 11-1 and 30-1 Wells on old, reclaimed drilling locations to minimize new surface disturbances. BLM personnel checked proposed well sites with Aviara and discussed potential modifications for reducing impacts to visual resources.

The Reader can assume that potential impacts to threatened and endangered (T&E) species and cultural resources from the proposed action would be analyzed in the EA and mitigation would be consistent with the Federal laws and regulations. This information would be documented in the EA.

The EA would document the affected environment and environmental impacts to each affected resource. At this time, it is anticipated that the EA would have specific sections for Vegetation and Soil, Recreation, Visual Resources, Air Quality and Noise, Livestock Grazing, Wildlife/T&E Species, and Cultural Resources. Under the analysis for each resource, there would be headings for Affected Environment, Impacts, Mitigation, and Residual Impacts for the Proposed Action and No Action Alternatives. The cumulative impacts would be covered in a separate section of the EA and would address all affected resources.

Appendix

Appendix A - Two Maps for Each Proposed Well

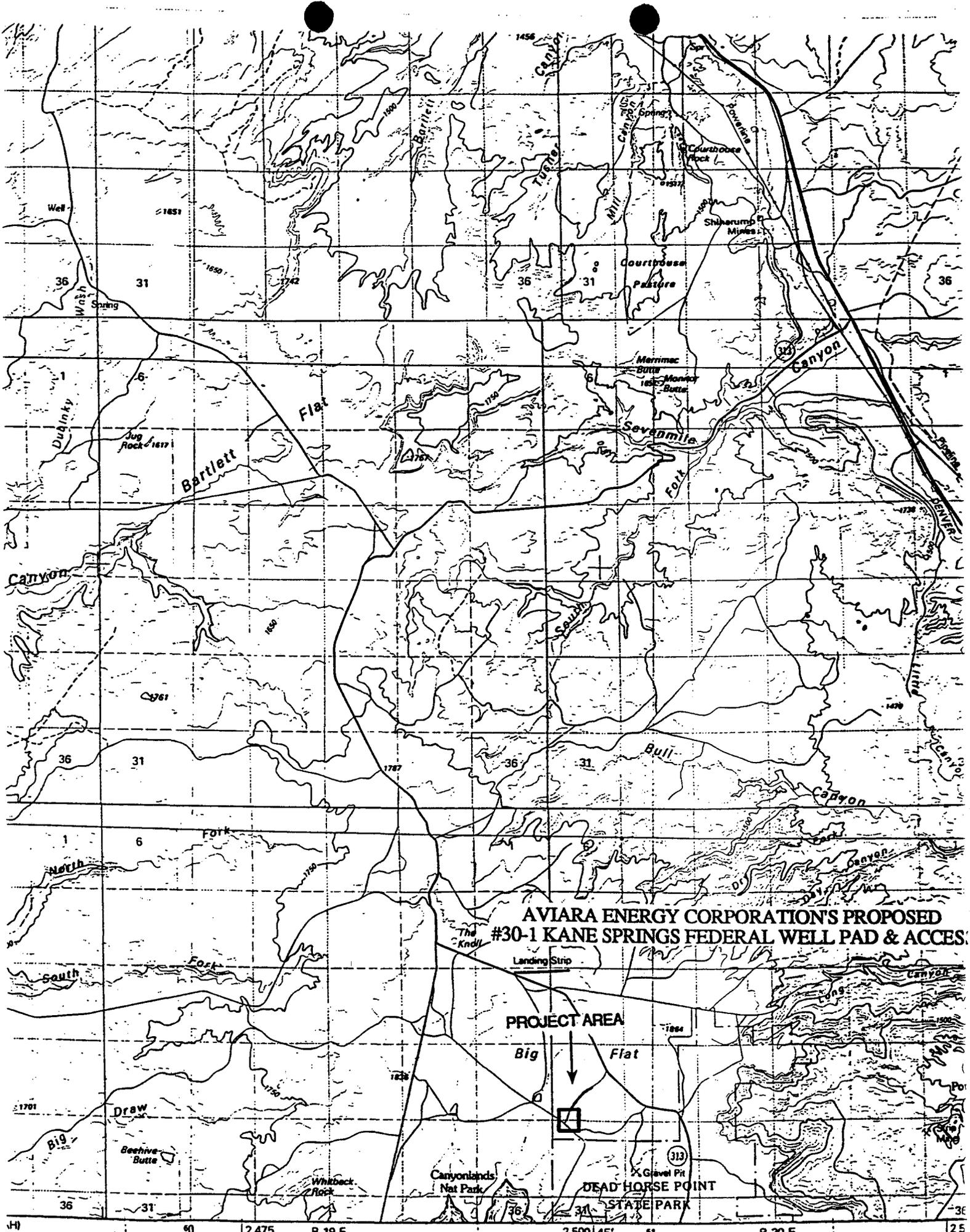


**GENERAL VICINITY
OF PROJECT AREA**

U.S.G.S. 1:62 500-scale topographic map
(Figure 1)

**PROPOSED
#7-1 KANE SPRINGS FED.
WELL LOCATION**





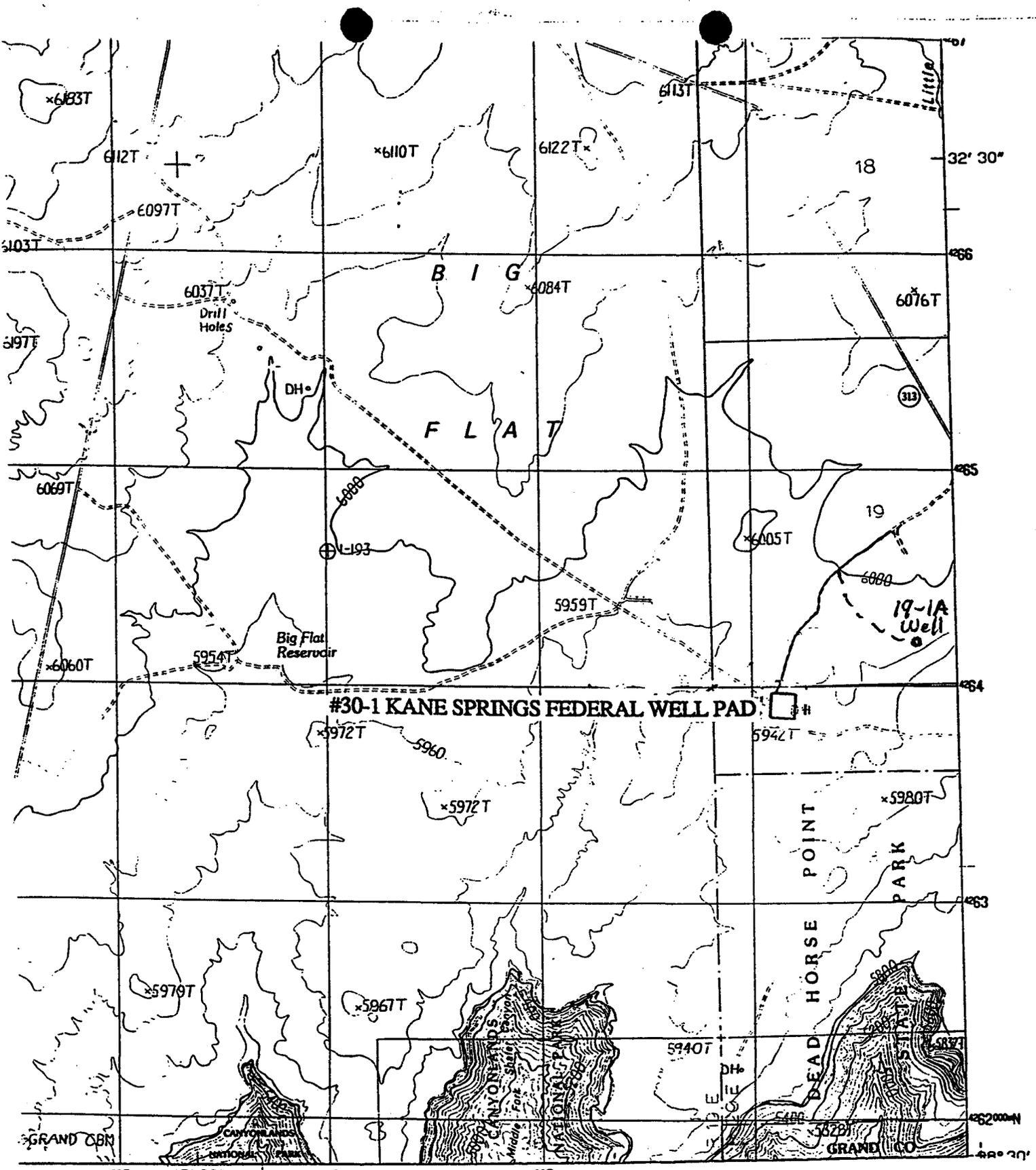
**AVIARA ENERGY CORPORATION'S PROPOSED
#30-1 KANE SPRINGS FEDERAL WELL PAD & ACCESS**

PROJECT AREA

1:100 000

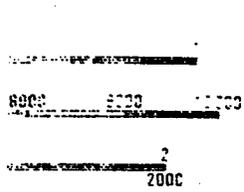
Figure 1

KILOMETERS 1 0 1 2 3 4 5 6 7 8 9 10 11



#30-1 KANE SPRINGS FEDERAL WELL PAD

605 47' 30" 606 607
 INTERIOR GEOLOGICAL SURVEY, REGIONAL VISUOGRAM-1988



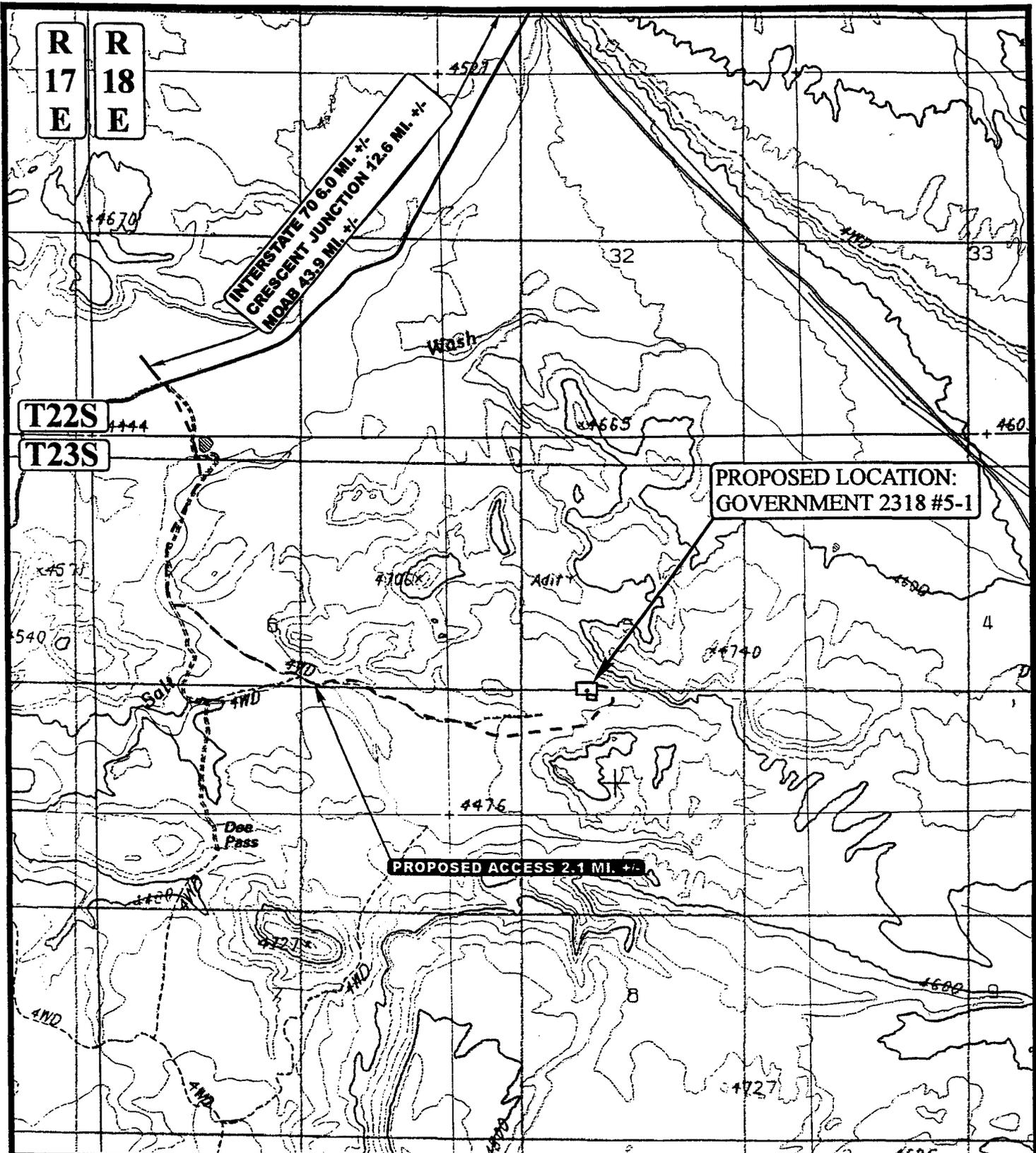
1	2	3	1 Dubinsky Wash
			2 Jug Rock
			3 Merrimac House
4			4 Mineral Canyon
		5	5 Gold Bar Canyon

PROJECT AREA

U.S.G.S. The Knoll, Utah
 7.5' (1988) series map
 T26S, R20E, sec. 19 & 30;
 Grand County, Utah

(Figure 2)

THE KNOLL, UTAH
 PROVISIONAL EDITION 1988



INTERSTATE 70 6.0 MI. +/-
 CRESCENT JUNCTION 12.6 MI. +/-
 MOAB 43.9 MI. +/-

PROPOSED LOCATION:
 GOVERNMENT 2318 #5-1

PROPOSED ACCESS 2.1 MI. +/-

LEGEND:

- PROPOSED ACCESS ROAD
- EXISTING ROAD



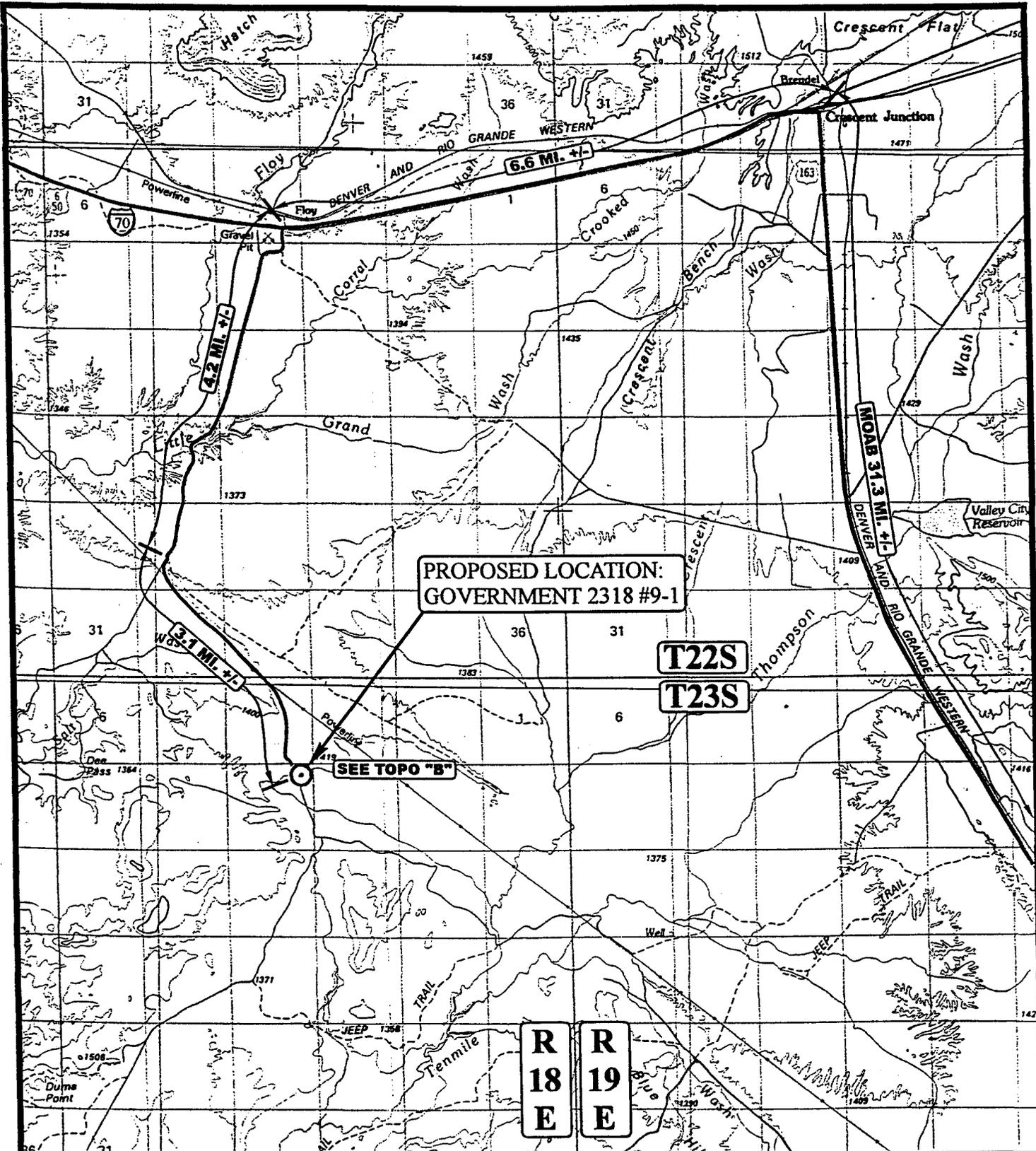
RIATA ENERGY, INC.

GOVERNMENT 2318 #5-1
SECTION 5, T23S, R18E, S.L.B.&M.
1784' FSL 2041' FWL

U E L S
Utah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 (801) 789-1017 * FAX (801) 789-1813
 Email: uels@eastlink.com

TOPOGRAPHIC **9 22 97**
MAP MONTH DAY YEAR
 SCALE: 1" = 2000' DRAWN BY: C.G. REVISED: 00-00-00

B
 TOPO



LEGEND:

⊙ PROPOSED LOCATION

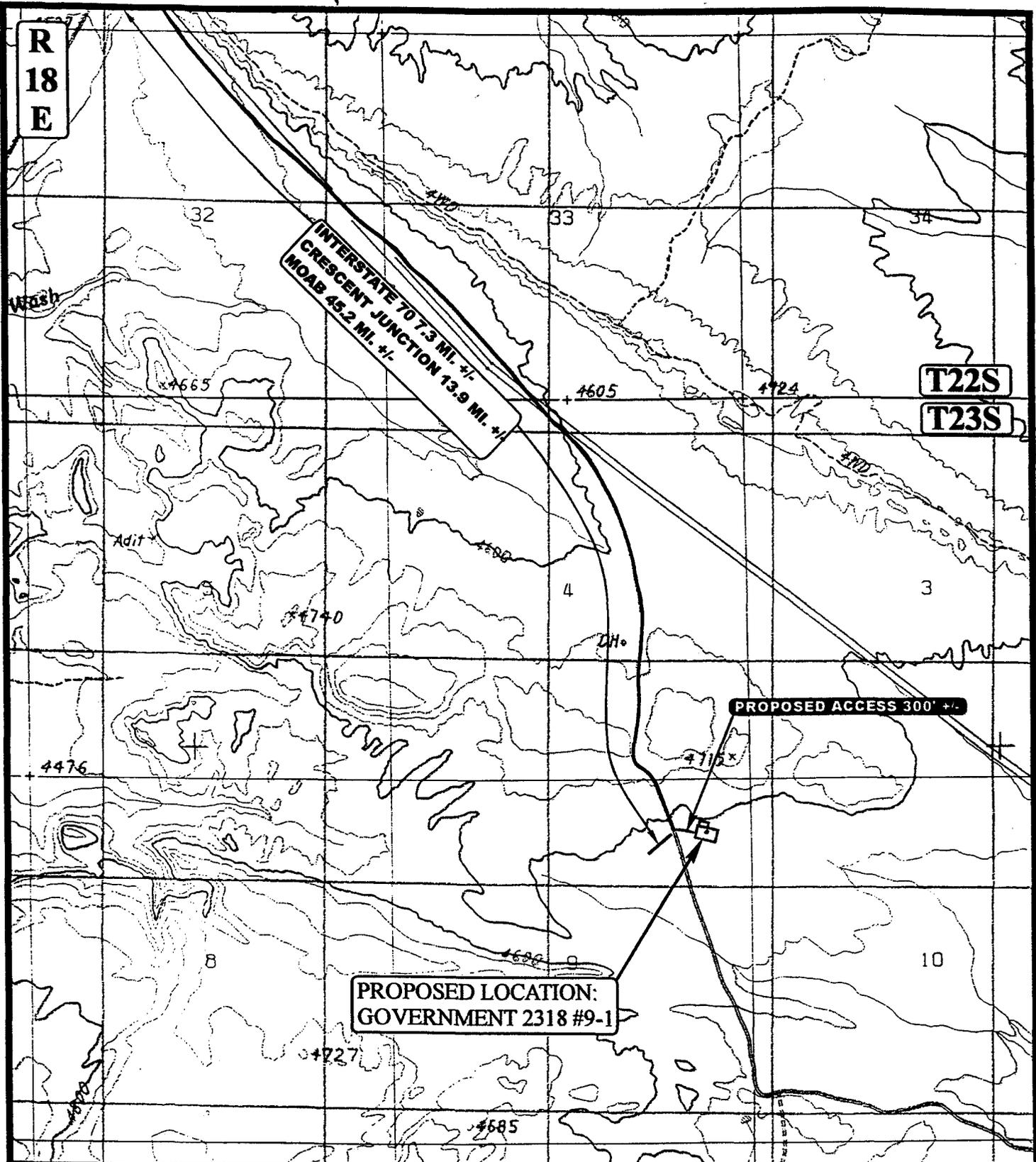


RIATA ENERGY, INC.
GOVERNMENT 2318 #9-1
SECTION 9, T23S, R18E, S.L.B.&M.
738' FNL 678' FEL

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

TOPOGRAPHIC 9 22 97
MAP MONTH DAY YEAR
 SCALE: 1 : 100,000 DRAWN BY: C.G. REVISED: 00-00-00





LEGEND:

- PROPOSED ACCESS ROAD
- EXISTING ROAD



RIATA ENERGY, INC.

GOVERNMENT 2318 #9-1
SECTION 9, T23S, R18E, S.L.B.&M.
738' FNL 678' FEL



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

TOPOGRAPHIC	9	22	97	B
MAP	MONTH	DAY	YEAR	
SCALE: 1" = 2000'	DRAWN BY: C.G.		REVISED: 00-00-00	TOPO



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

Michael O. Leavitt
Governor
Ted Stewart
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)

May 19, 1998

Riata Energy, Inc.
5912 Amarillo Blvd. West
Amarillo, Texas 79106

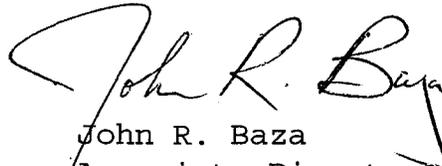
Re: Government 2318 #5-1 Well, 1784' FSL, 2041' FWL, NE SW,
Sec. 5, T. 23 S., R. 18 E., Grand County, Utah

Gentlemen:

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

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-019-31362.

Sincerely,


John R. Baza
Associate Director

lwp

Enclosures

cc: Grand County Assessor

Bureau of Land Management, Moab District Office

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. UTU-75891
1b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
CONFIDENTIAL		7. UNIT AGREEMENT NAME N/A
		8. FARM OR LEASE NAME WELL NO. Government 2318
2. NAME OF OPERATOR Riata Energy, Inc.		9. API WELL NO. #5-1
3. ADDRESS OF OPERATOR PERMITCO INC. - Agent		10. FIELD AND POOL OR WILDCAT Wildcat
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At Surface: 1784' FSL and 2041' FWL At proposed Prod. Zone: NE SW Sec. 5, T23S - R18E		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 5, T23S - R18E
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 14.7 miles southwest of Crescent Junction, Utah		12. COUNTY OR PARISH Grand
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1784'		13. STATE Utah
16. NO. OF ACRES OF LEASE 2555.87		17. NO. OF ACRES ASSIGNED TO THIS WELL 40
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT. Approximately 8400'		20. ROTARY OR CABLE TOOLS Rotary
21. ELEVATIONS (Show whether DP, RT, GR, etc.) 4532' GR		22. APPROX. DATE WORK WILL START* Upon Approval of this Application
23. PROPOSED CASING AND CEMENTING PROGRAM		
SIZE OF HOLE	SIZE OF CASING	WEIGHT/FOOT
12-1/4"	8-5/8"	24#
7-7/8"	5-1/2"	10.5#
		SETTING DEPTH
		200'
		950'
		QUANTITY OF CEMENT
		155 sx Class "G" - Circ to surf.
		186 sx Class "G" & Poz w/additives

RECEIVED
JUN 30 1998
DIV. OF OIL, GAS & MINING

Riata Energy, Inc. proposes to drill a well to 950' to test the Moab Tongue of the Entrada Sandstone. If productive, casing will be run and the well completed. If dry, the well will be plugged and abandoned as per BLM and State of Utah requirements.

See Onshore Order No. 1 attached.

CONFIDENTIAL - TIGHT HOLE

Please be advised that Riata Energy, Inc. is considered to be the Operator of the above mentioned well. Riata Energy, Inc. agrees to be responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

Bond coverage for this well is provided by Riata Energy, Inc. under their Statewide BLM Bond #UT-1006. 1081 VB 11/2010

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

24. CONSULTANT FOR:
SIGNED: *[Signature]* TITLE: Riata Energy, Inc. DATE: 11/17/97

PERMIT NO. 43-019-31362 APPROVAL DATE Assistant Field Manager,
APPROVED BY /s/ Brad D. Palmer TITLE Resource Management DATE JUN 23 1998
CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED

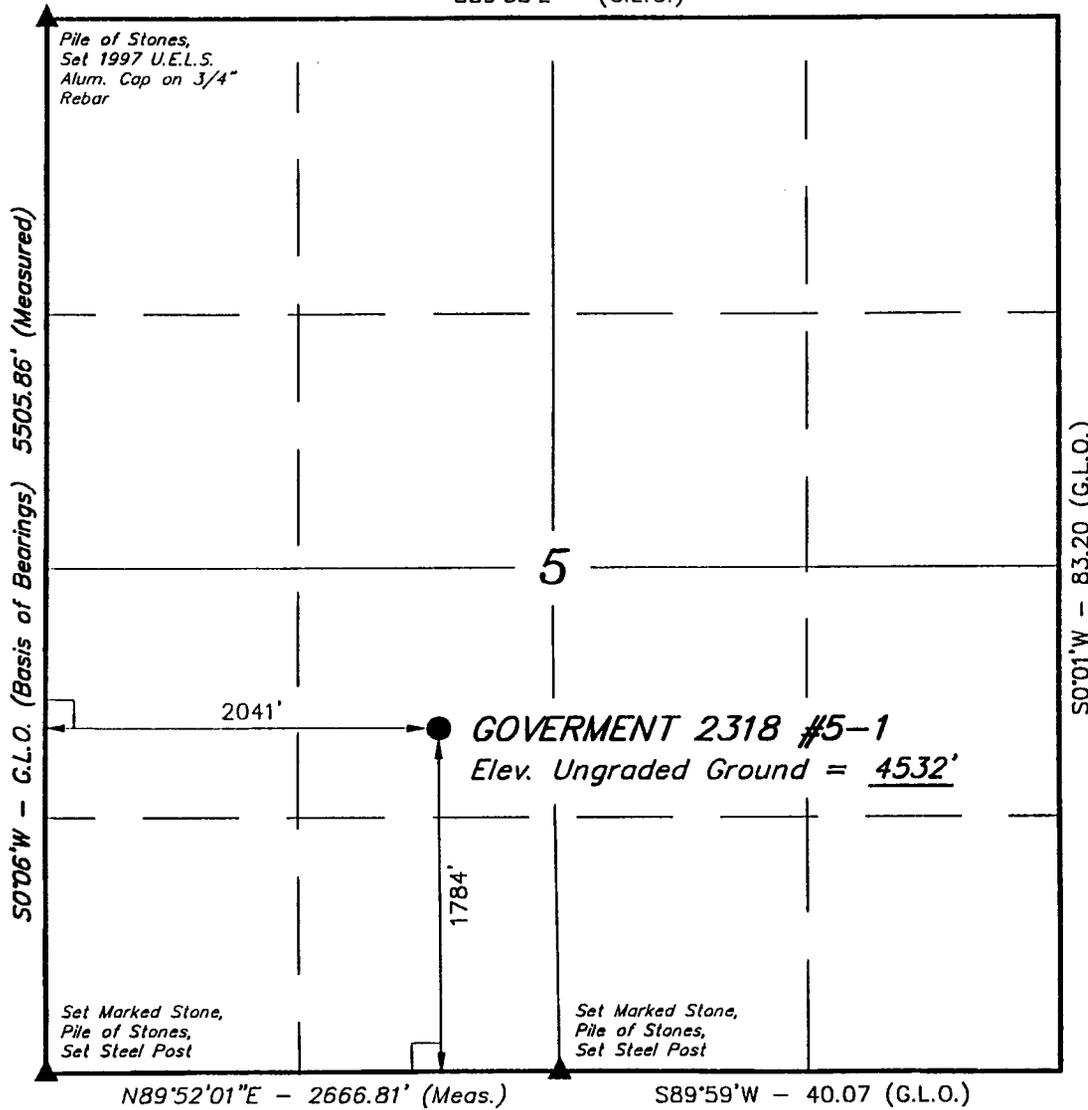
***See Instructions On Reverse Side**

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

Diam

T23S, R18E, S.L.B.&M.

S89°58'E - (G.L.O.)



LEGEND:

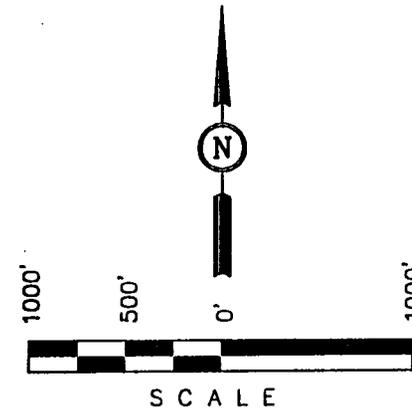
- = 90° SYMBOL
- = PROPOSED WELL HEAD.
- = SECTION CORNERS LOCATED.

RIATA ENERGY, INC.

Well location, GOVERNMENT 2318 #5-1, located as shown in the NE 1/4 SW 1/4 of Section 5, T23S, R18E, S.L.B.&M., Grand County, Utah.

BASIS OF ELEVATION

SPOT ELEVATION AT THE SOUTHWEST CORNER OF SECTION 5, T23S, R18E, S.L.B.&M. TAKEN FROM THE DEE PASS, QUADRANGLE, UTAH, GRAND COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4476 FEET.



CERTIFICATE

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

Robert J. [Signature]
 REGISTERED LAND SURVEYOR
 REGISTRATION NO. 146119
 STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING 85 SOUTH 200 EAST - VERNAL, UTAH 84078 (801) 789-1017		
SCALE 1" = 1000'	DATE SURVEYED: 9-18-97	DATE DRAWN: 9-22-97
PARTY D.A. K.H. D.COX	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE RIATA ENERGY, INC.	

Riata Energy, Inc.
Well No. 2318 #5-1
NESW Sec. 5, T. 23 S., R. 18 E.
Grand County, Utah
Lease UTU75891

CONDITIONS OF APPROVAL

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

Be advised that Riata Energy, Inc., is considered to be the operator of the above well and is responsible under the terms and conditions of the lease for the operations conducted on the leased land.

Bond coverage for this well is provided by BLM Bond UT1081 (Principle - Riata Energy, Inc.) as provided for in 43 CFR 3104.2.

This office will hold the aforementioned operator and bond liable until the provisions of 43 CFR 3106.7-2 continuing responsibility are met.

A. DRILLING PROGRAM

1. The BOP system shall be rated to 2M as proposed. Installation, testing and operation of the system shall be in conformance with Onshore Oil and Gas Order No. 2.
2. Air drilling must be done in accordance with Onshore Oil and Gas Order No. 2, III.E. As a minimum use of a rotating head, spark arresters, blowie line, float valve, and automatic igniter is required.
3. In accordance with the proposal, cement for the 8-5/8" and 5-1/2" casings shall be circulated to surface.
4. Any fluid bearing zones or lost circulation zones encountered while drilling will be isolated behind casing and cement.

B. SURFACE USE PLAN

1. No construction or drilling operations will be authorized between February 1 and July 15, unless additional raptor surveys are completed prior to initiating operations to identify and avoid raptor nesting sites within 1/2 mile of the proposed action. Any peregrine falcon nesting areas identified within the project area will be avoided by 1 mile. These limitations do not apply to maintenance and operation of existing wells, and these limitations do not apply to wells where drilling was initiated between July 16 and January 31.
2. In order to protect antelope fawning habitat near the Riata wells, no construction or drilling will be authorized from May 15 through June 15. The limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation may be specified in writing by the authorized officer.
3. All phases of construction, drilling, operation, maintenance, and abandonment of the Riata 5-1 Well will avoid archaeological site 42GR2826 that was identified along the access to the well. The potential impacts to site 42Gr2826 will be avoided by relocating a portion of the proposed access to cross the wash as specified in the cultural resources inventory report for the 5-1 Well.

Prior to the initial construction or maintenance of the access for drilling operations, BLM (Rich McClure, 435-259-2127) will be contacted to schedule an onsite inspection of the access and archaeological site to be avoided. During the onsite inspection with BLM, options for flagging the site with surveyors ribbon or installing barriers around the site during construction and drilling operations will be discussed.

In the event that the 5-1 Well is completed as a producing well, additional site mitigation or project relocation may be necessary for long term avoidance of the historic properties.

4. If water is pumped directly from the Colorado or Green Rivers, screening with 1/8" mesh will cover the intake hose to reduce the possibility of "taking" endangered fishes. Intake hoses will not be placed in backwaters or other low-velocity portions of the river; water will be taken from fast-current areas whenever feasible.

In areas where pumping is allowed, haulers will not be authorized to pump between 8 pm and 9 am from June through September to avoid larval drift.

5. Prior to using water encountered during drilling operations for dust control, an analysis of the salt content, or total dissolved solids (TDS), will be required for BLM for review. BLM will consider the use of water with TDS levels higher than 10,000 ppm on a case by case basis.
6. At the end of drilling operations and prior to reclamation of the reserve pit, the fourth side of the pit will be fenced and the top of the pit will be covered with netting of one inch or less to prevent access by birds.

7. Prior to installing production facilities, the operator will schedule an on-site inspection of the well site with BLM to determine the locations of the production equipment. The purpose of the on-site inspection is to reduce potential visual impacts to known observation points. During the on-site inspection, the following types of mitigation will be discussed and implemented as needed:
 - a. Using equipment with neutral, non-reflective colors that blend with the surrounding rocks or trees; and using two neutral colors on an undulating or splotched (camo) pattern. (i.e. The lower portions of the equipment could be painted an earth-tone color and the upper portions could be painted to match the surrounding junipers.)
 - b. The use of low profile production tanks (seamless tanks, not bolted tanks), low profile pumping units, off-site production facilities, or pipelines.
 - c. The location and orientation of the equipment to help reduce the height of the facilities above the skyline and to help shield the moving components of the production equipment from view.
 - d. Lowering the flare pipe, raising the pit berm, or shielding the flare from known observation points along the highways or designated campgrounds.
8. Prior to spraying weeds on public lands, the operator will submit a Pesticide Use Proposal (PUP) to BLM for review and approval of the herbicide and methods to be used.
9. The following mixture of pure live seed (PLS) will be seeded between October and December, or at a time specified by the authorized officer:

Indian Ricegrass	3 lbs/acre
Galleta	3 lbs/acre
Fourwing Saltbush	2 lbs/acre
<u>Wedgeleaf Saltbush</u>	<u>2 lbs/acre</u>
Total	10 lbs/acre

If the seed is broadcast, the above rates will be doubled.

C. REQUIRED APPROVALS, REPORTS AND NOTIFICATIONS

Required verbal notifications are summarized in Table 1, attached.

Building Location- Contact the Moab BLM Office at least 48 hours prior to commencing construction of location.

Spud- The spud date will be reported to the Moab BLM Office 24 hours prior to spudding. Written notification in the form of a Sundry Notice (Form 3160-5) will be submitted to the Moab BLM Office within 24 hours after spudding, regardless of whether spud was made with a dry hole digger or big rig.

Daily Drilling Reports- Daily drilling reports shall detail the progress and status of the well and shall be submitted to the Moab BLM Office on a weekly basis.

Monthly Reports of Operations- In accordance with Onshore Oil and Gas Order No. 1, this well shall be reported on Minerals Management Service (MMS) Form 3160, "Monthly Report of Operations," starting the month in which operations commence and continuing each month until the well is physically plugged and abandoned. This report will be filed directly with MMS.

Sundry Notices- There will be no deviation from the proposed drilling and/or workover program without prior approval. "Sundry Notices and Reports on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR § 3162.3-2. Safe drilling and operating practices must be observed.

Drilling Suspensions- Operations authorized by this permit shall not be suspended for more than 30 days without prior approval of the Authorized Officer. All conditions of this approval shall be applicable during any operations conducted with a replacement rig.

Undesirable Events- Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be immediately reported to the Moab BLM Office in accordance with requirements of NTL-3A.

Cultural Resources- If cultural resources are discovered during construction, work that might disturb the resources is to stop, and the Moab BLM Office must be notified.

First Production- Should the well be successfully completed for production, the Moab BLM Office will be notified when the well is placed in producing status. Such notification may be made by phone, but must be followed by a sundry notice or letter not later than five (5) business days following the date on which the well is placed into production.

A first production conference will be scheduled as soon as the productivity of the well is apparent. This conference should be coordinated through the Moab BLM Office. The Moab BLM Office shall be notified prior to the first sale.

Well Completion Report- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted to the Moab BLM Office not later than thirty (30) days after completion of the well or after completion of operations being performed, in accordance with 43 CFR § 3162.4-1. Two copies of all logs, core descriptions, core analyses, well test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. When requested, samples (cuttings and/or samples) will be submitted to the Moab BLM Office.

Venting/Flaring of Gas- Gas produced from this well may not be vented/flared beyond an initial, authorized test period of 30 days or 50 MMcf, whichever first occurs, without the prior, written approval of the Authorized Officer. Should gas be vented or flared without approval beyond the authorized test period, the well may be ordered shut-in until the gas can be captured or approval to continue the venting/flaring as uneconomic is granted. In such case, compensation to the lessor shall be required for that portion of the gas that is vented/flared without approval and which is determined to have been avoidably lost.

Produced Water- Produced waste water may be confined to an unlined pit for a period not to exceed 90 days after initial production. During the 90 day period, an application for approval of a permanent disposal method and location, along with the required water analysis, will be submitted to the Moab BLM Office for approval pursuant to Onshore Oil and Gas Order No. 7.

Off-Lease Measurement, Storage, Commingling- Prior approval must be obtained from the Moab BLM Office for off-lease measurement, off-lease storage and/or commingling (either down-hole or at the surface).

Plugging and Abandonment- If the well is completed as a dry hole, plugging instructions must be obtained from the Moab BLM Office prior to initiating plugging operations.

A "Subsequent Report of Abandonment" (Form 3160-5) will be filed with the Moab BLM Office within thirty (30) days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration. Upon completion of approved plugging, a regulation marker will be erected in accordance with 43 CFR § 3162.6. Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the BLM, or the appropriate surface management agency.

TABLE 1 NOTIFICATIONS

Notify Jack Johnson at the Moab BLM Office 435-259-2129, or at home 435-259-4800 for the following:

2 days prior to commencement of dirt work, construction and reclamation;

1 day prior to spudding;

50 feet prior to the surface casing setting depth;

3 hours prior to testing BOPE

If the person at the above number cannot be reached, notify the Moab BLM Office at (435) 259-2100. If unsuccessful, contact one of the people listed below.

Well abandonment operations require 24 hour advance notice and prior approval. In the case of newly drilled dry holes, verbal approval can be obtained by calling the Moab BLM Office, (435) 259-2100. If approval is needed after work hours, you may contact the following:

Eric Jones, Petroleum Engineer	Office: (435) 259-2117
	Home: (435) 259-2214
Gary Torres, Petroleum Engineer	Office: (435) 587-1524
	Home: (435) 587-2705

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.
Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

1. Type of Well: OIL GAS OTHER:

2. Name of Operator:
RIATA ENERGY, INC.

3. Address and Telephone Number:
P.O. BOX 10209 AMARILLO, TX 79116-0209 (806) 352-2936

4. Location of Well
Footages: 1784' FSL & 2041' FWL
NE SW SEC 5, T23S-R18E
QQ, Sec., T., R., M.:

5. Lease Designation and Serial Number:

UTU-75891

6. If Indian, Allottee or Tribe Name:

N/A

7. Unit Agreement Name:

N/A

8. Well Name and Number:

Government 2318 #5-1

9. API Well Number:

43-019-31362

10. Field and Pool, or Wildcat:

WILDCAT

County: GRAND

State: UTAH

CONFIDENTIAL

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

NOTICE OF INTENT
(Submit in Duplicate)

- | | |
|--|---|
| <input type="checkbox"/> Abandon | <input type="checkbox"/> New Construction |
| <input type="checkbox"/> Repair Casing | <input type="checkbox"/> Pull or Alter Casing |
| <input type="checkbox"/> Change of Plans | <input type="checkbox"/> Recomplete |
| <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Reperforate |
| <input type="checkbox"/> Fracture Treat or Acidize | <input type="checkbox"/> Vent or Flare |
| <input type="checkbox"/> Multiple Completion | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Other _____ | |

Approximate date work will start _____

SUBSEQUENT REPORT
(Submit Original Form Only)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Abandon * | <input type="checkbox"/> New Construction |
| <input type="checkbox"/> Repair Casing | <input type="checkbox"/> Pull or Alter Casing |
| <input type="checkbox"/> Change of Plans | <input type="checkbox"/> Reperforate |
| <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Vent or Flare |
| <input type="checkbox"/> Fracture Treat or Acidize | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Other _____ | |

Date of work completion August 18, 1998

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION REPORT AND LOG form.

* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

RIATA ENERGY, INC. reports the following P&A procedure with BLM's Jack Johnson on location to observe:
TIH w/ DP to 400'. Mix & pump 15 Bbls, 38 Vis. mud. TOH to 260'. Mix 16 Sxs Class "G" cement. Pump & displace. Set @ 160' - 260'. TOH w/ DP & LD DC. TIH w/ DP to 60'. Mix 10 Sxs Class "G" cement. Pump. Set @ 0' - 50'. LD 3 jts. DP. TOH & Clean up.
Place Dry Hole marker on well.
Pits closed up.
Location cleaned up. Dozer leveled location.
Re-seeded per APD.

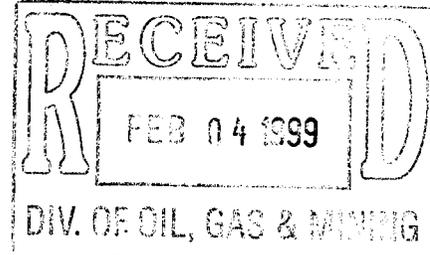
13.

Name & Signature: Terry D. Pope

Title: Production Mngr.

Date: 1/7/99

(This space for State use only)



Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE

1. Type of Well
 Oil Well Gas Well Other

2. Name of Operator
RIATA ENERGY, INC.

3. Address and Telephone No.
P.O. Box 10209 AMARILLO, TX 79116-0209

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1784' FSL & 2041' FWL
NE SW SEC 5, T23S-R18E

5. Lease Designation and Serial No.

UTU - 75891

6. If Indian, Allottee or Tribe Name

N/A

7. If Unit or CA, Agreement Designation

N/A

8. Well Name and No.

Gov't 2318 #5-1

9. API Well No.

43-019-31362

10. Field and Pool, or Exploratory Area

WILDCAT

11. County or Parish, State

GRAND, UT

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

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

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

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

Leach Drilling on location. RU.
Spud @ 2:45 mt 8/13/98
Drilling w/ air 20'/hr. to 220'
Run 211'.37" 7", 20#, JE, 8rd Weatherford F.S. & 3 - 7" centralizers.

Cement casing with 30 Sxs Class "G" cement. Circulate 5 Bbls good cement.

RECEIVED
FEB 18 1999
DIV. OF OIL, GAS & MINING

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

Signed 

Title Production Manager

Date 8/24/98

(This space for Federal or State office use)

Approved by _____
Conditions of approval, if any:

Title _____

Date _____

CONFIDENTIAL

GEOLOGICAL WELL REPORT

RIATA ENERGY, INC.

#5-1

Tenmile Area

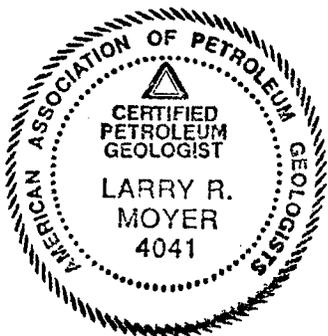
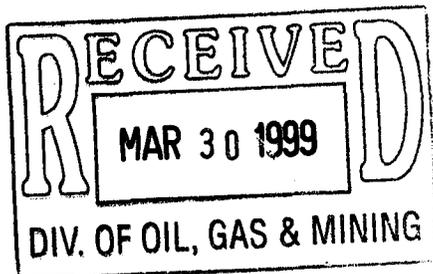
NE $\frac{1}{4}$ SW $\frac{1}{4}$
1,784' FSL & 2,041' FWL

Section 5, T23S, R18W, SLM

Grand County, Utah

By

Larry R. Moyer
P.O. Box 1812
Grand Junction, CO 81502
970-255-0575



August, 18, 1998

Respectfully submitted,

A handwritten signature in cursive script that reads "Larry R. Moyer".

Larry R. Moyer
AAPG, CPG No. 4041
Wyoming PG No. 728

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Geologic Discussion	7
Geological Well Log	Enclosed

WELL DATA

OPERATOR: RIATA ENERGY, INC.

WELL NAME: #5-1

WELL LOCATION: Section 5, Twsp 23 South, Range 18 East, SLM.
Grand County, Utah

Surface: NE¼SW¼, 1,784 FSL & 2,041' FWL

ELEVATIONS: 4,542' K.B. 4,532' G.L. (Ungraded)

TOTAL DEPTH: 506' - Driller

WELL STATUS: Plugging and Abandoning

COMMENCED DRILLING: August 13, 1998

COMPLETED DRILLING: August 17, 1998

COMPLETED LOGGING: No Logs Run

COMPLETED CASING: P & A'd

CONTRACTOR: Leach Drilling, Moab Utah

RIG TYPE: Gardner-Denver 1500

TOOL PUSHER: Terry Leach

AIR COMPRESSORS: Leach Drilling, Moab Utah

OPERATOR PERSONNEL: Terry Pope, Sonny Busch

DRILLING SUPERVISION: Terry Pope

WELLSITE GEOLOGY: Larry R. Moyer
P.O. Box 1812
Grand Junction, CO 81502

MUD LOGGING: None

WATER SOURCE: Tank Trailer

Riata Energy, Inc., #5-1

WELL DATA CONTINUED

SAMPLE STORAGE:	Riata Energy, Inc.	
HOLE SIZE:	8-3/4"	Surface to 220'
	6-1/4"	220' to 506'
DRILLING METHOD:	Air	Surface to 506'
CASING PROGRAM:	7"	Surface to 211'
LOGGING PROGRAM:	None	

WELL HISTORY

<u>DATE</u>	<u>DEPTH</u>	<u>PRESENT ACTIVITY & REMARKS</u>
1998	7:00 AM	
08/13		Spud Well
08/14	120' +/-	Finish Surface Hole
08/15	220'	Run and Cement 211' 7" Casing
08/16	220'	NU BOP, Test, Drill Cement, Shoe, 20' Formation
08/17	240'	Drill, Dusting to 482' in Entrada, Prep to P&A
08/18	506'	P&A

BIT RECORD

<u>Run No.</u>	<u>Size</u>	<u>Make</u>	<u>Type</u>	<u>Depth In</u>	<u>Depth Out</u>	<u>Feet</u>	<u>Remarks</u>
1	8-5/8	?	Button	Surf	220	220	
2	6-1/4	?	Button	211	506	295	

Riata Energy, Inc., #5-1

FORMATION TOPS

K.B. Elevation: 4,542 feet.

<u>Formation</u>	<u>Sample Top</u>	<u>Datum Elevation</u>	<u>Elevation vs. BMG #1</u>	<u>BMG, Tenmile #1 Sec. 4, T23S, R18E</u>	
				<u>Log Top</u>	<u>Datum Elevation</u>
Morrison					
Brushy Basin	Surface				
Salt Wash	100 +/-			317	+4,328
Tidwell	325	+4,217	+202	630	+4,015
Moab Tongue	Absent			672	+3,973
Sand Thickness	(Projects at 380)			8	
Entrada - Slickrock	460	+4,082	+189	752	+3,893
TD	506	+4,036		1615	

Since a drill time recorder was not available on the drilling rig, the sample tops were determined from first arrivals in the well samples, which are believed to be reasonably accurate based on good sample quality and the shallow nature of the hole.

SAMPLE DESCRIPTION

Sample Quality Good

200-220: Shale, gray-green and red (20%), silty in part, calcareous, some almost limestone. Sandstone, white to light gray, very fine to fine grained, subrounded, calcite cemented, quartz and chert (10%) grains, some white clay coatings on grains, no visible porosity, no stain, 10-15%. Typical Salt Wash member of the Morrison.

220-240: Shale and siltstone, red and gray-green (40%), calcareous. Sandstone, light gray, very fine to fine grained, moderately sorted, calcareous, some white clay, no visible porosity, no stain, 20%.

240-252: Shale and siltstone, gray, calcareous, some almost limestone. Sandstone, white to light gray, very fine to fine grained, a few chips medium grained, calcareous, white clay coatings, no visible porosity, no stain, 40%.

SAMPLE DESCRIPTION CONTINUED

252-260: Shale and siltstone, gray-green and red (50%), calcareous. Sandstone, light gray to white, very fine to fine grained, some medium loose quartz grains, calcite cemented, white clay coatings, no visible porosity, no stain, 35%.

260-270: Sandstone, white, fine to medium grained, calcareous, white clay grain coatings, moderate to well sorted, subrounded to subangular, no visible porosity. Shale and siltstone, gray-green and red, 30%. Dusting gray white dust at 263'.

Adjustment to drill depth. Add 6'.

276-286: Sandstone, white, mostly loose sand, some larger chips calcite cemented, very fine to fine grained, some medium grained sand, mostly clear quartz grains with few chert grains in loose sand, subrounded, moderately sorted, Loose sand likely porous with some permeability, no stain. Shale and siltstone, 10%. Dusting very white at 276', by 286' not much dust, "trying to get wet" per driller.

286-296: Shale, gray-green with some maroon, calcareous. Sandstone, white, fine grained, some loose medium grains, no stain, 20%.

296-306: Shale and siltstone, gray and maroon, calcareous. Sandstone, gray, very fine grained, 5%.

306-316: Shale, maroon, non-calcareous. Shale and siltstone, gray-green, 40%. Dusting reddish dust at 316'.

316-326: Shale and siltstone, gray-green and maroon (10%), calcareous. Siltstone, brownish red, non-calcareous, 30%. Dusting red to orange and whitish gray. First arrival of brownish red siltstone - correlated to Tidwell top.

326-336: Siltstone and shale, brownish red, non-calcareous. Shale and siltstone, gray-green, 20%.

336-346: Siltstone and shale, brownish red. Sandstone, white to light gray, very fine to fine grained, some loose medium quartz grains, calcareous, clay coatings, no visible porosity, no stain, 20%. Dusting white at 332' and 336'. Dusting red-orange at 338'. During connection at 346', auxiliary compressor went down. Head snapped off. Drilling ahead with rig compressor.

346-356: Sandstone, loose very fine to fine grained with occasional medium grains, mostly white to light gray, some pink-salmon colored sand, calcareous, most grains clay coated, no stain. Shale and siltstone, brownish red, 35%. Sandstones look dirty, typical of Curtis type sandstone.

SAMPLE DESCRIPTION CONTINUED

- 356-366: Shale and siltstone, brownish red, slightly calcareous. Sandstone, white to light gray, mostly fine grained, clay coatings, calcareous, no visible porosity, no stain, 20%. Dusting orange to salmon to whitish at 366'.
- 366-376: Shale and siltstone, brownish red, slightly calcareous, some floating medium sized sand grains. Sandstone, light gray-green, fine grained, calcareous, no visible porosity, no stain, 10%. Sand, loose, medium sized quartz grains, no stain, 5%. Dusting whitish orange at 376'.
- 376-386: Shale and siltstone, brownish red, small chips. Sand, loose, medium sized quartz grains, subrounded, 25%. Sandstone, white to light gray, calcareous, white clay coating grains, no visible porosity, no stain, 10%.
- 386-396: Sand, loose, upper and lower medium grained, mostly clear quartz grains, subrounded, no stain. Shale and siltstone, brownish red, some medium sand grains floating in silt and clay, 25%. Dusting whitish at 396'. Possible Moab Tongue.
- 396-406: Siltstone and shale, moderately calcareous, some floating medium quartz grains. Sand, loose, medium grained quartz, no stain, 15%. Sandstone, white to light gray, fine grained, no visible porosity, no stain, no odor, 15%.
- 406-416: Sandstone, light gray, mostly loose sand, fine to medium grained, pyrite common, some calcite cement, some clay grain coatings, no visible porosity, no stain, no odor. First arrival of sand with pyrite. Shale, silvery gray, 15%. Shale, very unique light green color, trace. Dusting white at 404'.
- 416-426: Sandstone, gray, lots of loose sand and small chips, calcite cement and gray clay, pyrite common, no visible porosity, no stain, no odor. Shale and siltstone, silver gray, abundant pyrite, 20%. Slight Dust, whitish, 418'-420'.
- 426-436: Sandstone, gray, loose sand, fine grained, abundant pyrite, calcareous, no stain, no odor. Shale, silver gray, 20%. Dusting light gray at 426'.
- 436-446: Shale and siltstone, brownish red, slightly calcareous, no sand. Dusting white at 446 +/-.
- 446-456: Shale and siltstone, red with some greenish, maroon and black. Sandstone, light gray to black, very fine to fine grained, calcareous, mottled appearance with probable black dead oil stain, possibly this is carbonaceous material, no fluorescence or cut, no odor, 5% or less.

Riata Energy, Inc., #5-1

SAMPLE DESCRIPTION CONTINUED

456-466: Sandstone, pink to whitish, white clay filled, very fine to fine grained, moderate amount of loose sand, no visible porosity, no stain or odor. Tight in top part of Entrada. Shale and siltstone, red, 35%. Dusting pink at 460'.

466-476: Sandstone, pink, very fine to fine grained, occasional medium grain, moderate amount loose sand and smaller chips, white clay cement in part, some visible porosity, no stain, no odor. Started getting damp.

476-486: Sand, loose, pink, some white clay, very fine to fine grained, no stain, no odor. Lost any more dust at 482'.

486-496: Sand, loose, pink, very fine to fine grained, no stain, no odor.

496-506: Sand, loose, pink, very fine to fine grained, no stain, no odor. Sample tastes salty.

GEOLOGIC DISCUSSION

The play concept with the #5-1 well was to drill updip to the BMG, Tenmile #1, Section 4, T23S, R18E, where a mudlog show and possible indication of oil stain was encountered in the Moab Tongue section. The #5-1 well was located just to the north of an east-west trending down to the south normal fault that forms the northern edge of the Tenmile Graben. The #5-1 did drill the stratigraphic section in the north east dipping upthrown block in a location approximately 200' structurally high to the BMG well.

The generally north-south regional trend of the Moab Tongue westward pinchout was originally envisioned to form closure to the west on the trap that was suggested by the shows in the BMG well. Based on comparing the #5-1 samples to the log and mudlog on the BMG well, it appears that the Moab Tongue was not present in the #5-1, and thus, the well was drilled to the west of the pinchout of the Moab Tongue.

Evidence for the lack of Moab Tongue includes lack of an obvious sandstone in the samples that should have contained fluid, either oil or water, in significant quantities at the proper stratigraphic location above the top of the Entrada and below the Tidwell Member of the Morrison, both of which are reliable picks. While no overwhelming amount of Moab Tongue sandstone was encountered, some sand grains were present in the 375'-386' sample and in the 386'-396' sample, so it is possible that a thin zone of Moab Tongue exists here. If so, the lack of significant fluid suggests it is probably tight. In any case, the zone did not contain any evidence of hydrocarbons.

Overall, the weight of evidence seems to come down on the side of the Moab Tongue being missing here.

With respect to the probable dead oil stain in the small amount of sample at 446-456, this is not considered significant. In fact, it looks to correlate to a sand at 750' in the BMG well where the mudlog reports "SS blk, dkbrn, vcarb, poss oil stn", which suggests that maybe it is more likely carbonaceous material than oil stain.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

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

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

3. LEASE DESIGNATION AND SERIAL NO.
UTU - 75891

6. IF INDIAN, ALLOTTEE OR TRIBE NAME _____

7. UNIT AGREEMENT NAME _____

8. FARM OR LEASE NAME
Government

9. WELL NO.
2318 #5-1

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
1784' FSL & 2041' FWL
NESW Sec.5, T23S-R18E

12. COUNTY _____ 13. STATE _____

CONFIDENTIAL

RECEIVED
MAR 30 1999
1784 FSL
2041 FWL
43-019-31262

2. NAME OF OPERATOR
Riata Energy, Inc.

3. ADDRESS OF OPERATOR
P.O. Box 10209 Amarillo, TX 79116

4. LOCATION OF WELL (Report location clearly and in accordance with any State Requirements)
At surface 4532'
At top prod. interval reported below _____
At total depth 506'

14. API NO. _____ DATE ISSUED _____

15. DATE SPUDDED 8/13/98 16. DATE T.D. REACHED 8/17/98 17. DATE COMPL. (Ready to Prod.) 8/18/98 (Plug & Abd.) 18. ELEVATIONS (DF, BER, RT, CR, ETC.) 4542' KB 19. ELEV. CASINGHEAD _____

20. TOTAL DEPTH, MD & TVD 506' 21. PLUS BACK T.D., MD & TVD Cement To Top 22. IF MULTIPLE COMPL. HOW MANY _____ 23. INTERVALS DRILLED BY _____ ROTARY TOOLS _____ CABLE TOOLS _____

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)
None 25. WAS DIRECTIONAL SURVEY MADE No

26. TYPE ELECTRIC AND OTHER LOGS RUN _____ 27. WAS WELL CORED YES NO (Submit analysis) DRILL STEM TEST YES NO (See reverse side)

CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
7"	20 #	211'	8 3/4"	30 Sacks Class G Circulate 2 Bbls.	None

LINER RECORD

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

TUBING RECORD

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

CONFIDENTIAL
PERIOD
EXPIRED
ON 9-15-99

PRODUCTION

33. DATE FIRST PRODUCTION _____ PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) _____ WELL STATUS (Producing or shut-in) P&A

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BSL.	GAS—MCF.	WATER—BSL.	GAS-OIL RATIO

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

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

35. LIST OF ATTACHMENTS

Geology Report & BLM, P&A Sundry

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

SIGNED [Signature] TITLE Landman DATE 3/24/99

See Spaces for Additional Data on Reverse Side

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

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UTU - 75891

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N/A

7. If Unit or CA, Agreement Designation
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8. Well Name and No.
Government 2318 #5-1

9. API Well No.

10. Field and Pool, or Exploratory Area
WILDCAT

11. County or Parish, State
GRAND, UTAH

SUBMIT IN TRIPLICATE

CONFIDENTIAL

1. Type of Well
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RIATA ENERGY, INC.

3. Address and Telephone No.
P.O. BOX 10209 AMARILLO, TX 79116-0209 (806) 352-2936

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	<input type="checkbox"/> Dispose Water

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

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Telephoned Jack Johnson at BLM, from location, for verbal approval to P&A dry hole.
Procedure done 8/18/98:
BLM's Jack Johnson on location to observe P&A Procedure
TIH w/ DP to 400'. Mix & pump 15 Bbls, 38 Vis. mud. TOH to 260'. Mix
16 Sx Class G Cement. Pump & displace. Set @ 160'-260'. TOH w/ DP & LD DC.
TIH w/ DP to 60'. Mix 10 Sx Class G cement. Pump. Set @ 0'-50'. LD 3 jts. DP.
TOH & clean up.
Place dry hole marker on well.

RECEIVED
MAR 30 1999
DIV. OF OIL, GAS & MINING

RECEIVED
OCT 30 1998
SEP 1998
Received
BLM
Marsh District

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

Signed Susan Prosser Title Engineering Technician Date 9/9/98

(This space for Federal or State office use)
Approved by William Hunter Title Assistant Field Manager
Division of Resources Date 10/26/98

CONDITIONS OF APPROVAL ATTACHED

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