

**R. HEGGIE WILSON**  
Certified Professional Landman  
4994 N.E. Meadows Dr. • Park City, Utah 84098  
Phone: (435) 647-9712 • Fax: (435) 647-9713  
heggie@xmission.com

June 16, 2003

Ms. Diana Mason  
Division of Oil, Gas and Mining  
Box 14581  
Salt Lake City, Utah 84114-5801

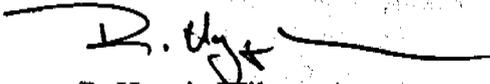
Re: Application For Permit To Drill  
Royale Energy, Inc.'s, - Moon Canyon # 32-1 Well  
Sec. 32: T16S-R21E  
Grand County, Utah

Dear Ms. Mason:

Enclosed please find two (2) fully executed copies of Royale Energy's APD for the above referenced well. The bonding for this well is being sent directly to SITLA. They have also been provided with duplicate copies of this APD along with a copy of this letter.

Please do not hesitate to contact me at (435) 647-9712 regarding any questions you may have regarding this application.

Sincerely,

  
R. Heggie Wilson, Agent  
Royale Energy, Inc.

c.c. E. Bonner - SITLA

RECEIVED  
JUN 19 2003  
DIV. OF OIL, GAS & MINING

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

FORM 3

AMENDED REPORT   
(highlight changes)

001

*Bad copy used  
this name  
7/31/03*

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO: ML-48391  
6. SURFACE: State

7. IF INDIAN, ALLOTTEE OR TRIBE NAME:

8. UNIT or CA AGREEMENT NAME: Moon Canyon

9. WELL NAME and NUMBER: Moon Canyon #32-1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSW 32 16S 21E S

12. COUNTY: Grand  
13. STATE: UTAH

1A. TYPE OF WORK: DRILL  REENTER  DEEPEN

B. TYPE OF WELL: OIL  GAS  OTHER \_\_\_\_\_ SINGLE ZONE  MULTIPLE ZONE

2. NAME OF OPERATOR: Royale Energy, Inc., 7676 Hazard Center, Suite 1500

3. ADDRESS OF OPERATOR: CITY San Diego STATE CA ZIP 92108 PHONE NUMBER: (619) 881-2800

4. LOCATION OF WELL (FOOTAGES):  
AT SURFACE: 1,390' FSL, 927' FWL 4358411Y 39.36901 617860X - 109.63183  
AT PROPOSED PRODUCING ZONE: Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 93 Miles from Cresent Junction, Utah

15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET): 927 feet  
16. NUMBER OF ACRES IN LEASE: 640.0  
17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40.0

18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET): NA  
19. PROPOSED DEPTH: 10,300  
20. BOND DESCRIPTION: SITLA Lease Bond

21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 8189 GR  
22. APPROXIMATE DATE WORK WILL START: 8/15/2003  
23. ESTIMATED DURATION: 30 days

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT		
14-3/4"	10-3/4" K-55 40.5#	350	"G"	250 sks	1.17 15.8 ppg
9-7/8"	7" K-55 23#	6,100	Lead: "Light"	350 sks	1.54 13.6 ppg
			Tail: 50/50 POZ	990 350 sks	1.26 14.2 ppg
6-1/8"	4-1/2" N-80 11.6#	10,300	50/50 POZ	300 sks	1.26 14.2 ppg

*Amended  
8/28/03  
DKD*

**CONFIDENTIAL**

ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- COMPLETE DRILLING PLAN
- EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
- FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) R. Heggie Wilson (435) 647-9712 TITLE Agent

SIGNATURE *R. Heggie Wilson* DATE 6/12/2003

(This space for State use only)

API NUMBER ASSIGNED: 43-019-31398

Approved by the  
Utah Division of  
Oil, Gas and Mining  
Date: 07-29-03  
*[Signature]*

RECEIVED  
JUN 19 2003

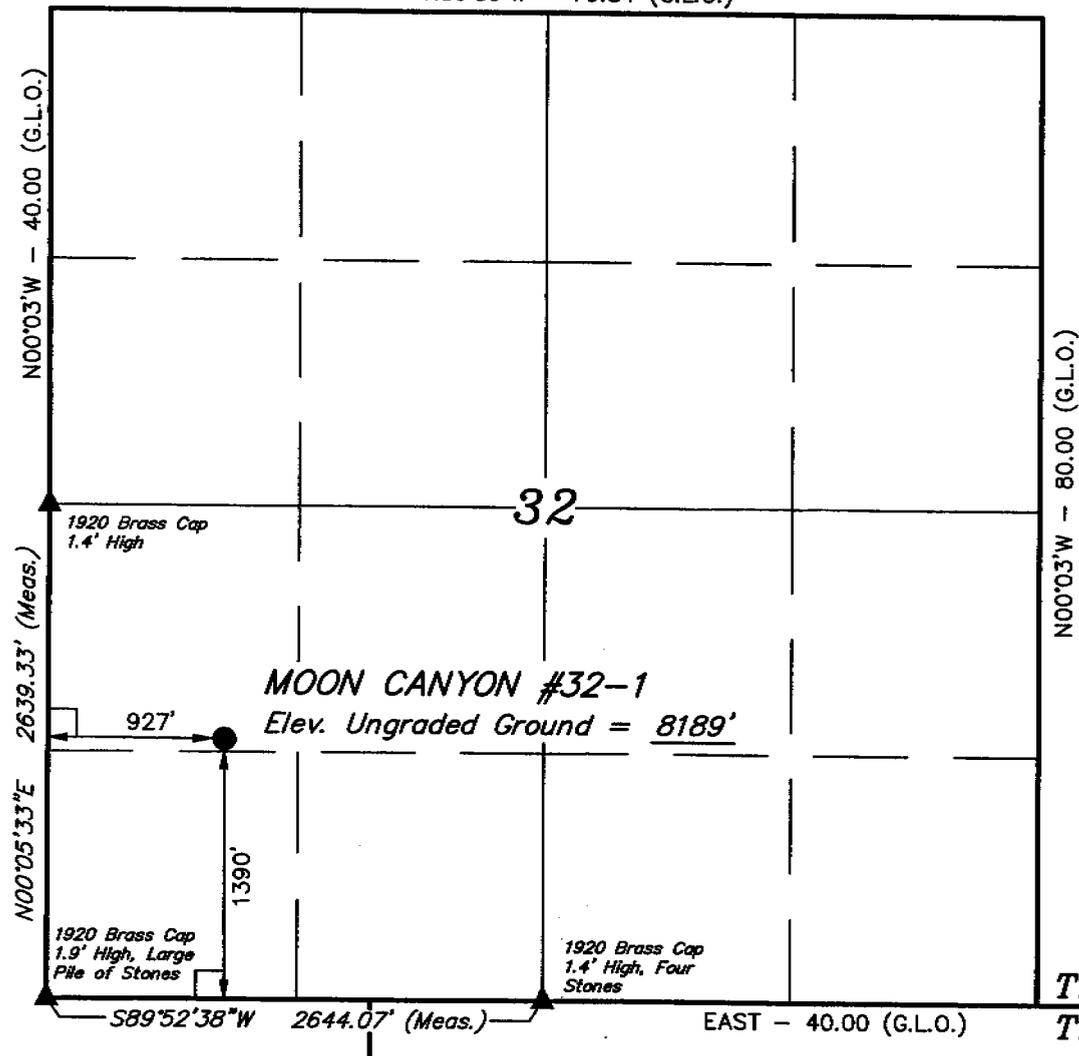
DIV. OF OIL, GAS & MINING

# R16S, R21E, S.L.B.&M.

## ROYALE ENERGY, INC.

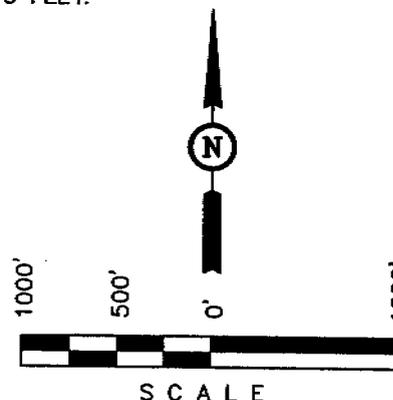
Well location, MOON CANYON #32-1, located as shown in the NW 1/4 SW 1/4 of Section 32, T16S, R21E, S.L.B.&M., Grand County, Utah.

N89°59'W - 79.84 (G.L.O.)



### BASIS OF ELEVATION

SPOT ELEVATION LOCATED AT THE NORTHWEST CORNER OF SECTION 5, T17S, R21E, S.L.B.&M., TAKEN FROM THE SUPPLY CANYON QUADRANGLE, UTAH, GRAND COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 8113 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 H. Hayes*  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 151318  
 STATE OF UTAH  
 KAY

### LEGEND:

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

### BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

(AUTONOMOUS NAD 83)  
 LATITUDE = 39°22'07.97" (39.368881)  
 LONGITUDE = 109°37'57.27" (109.632575)

<b>UTAH ENGINEERING &amp; LAND SURVEYING</b>		
85 SOUTH 200 EAST - VERNAL, UTAH 84078		
(435) 789-1017		
SCALE 1" = 1000'	DATE SURVEYED: 04-18-03	DATE DRAWN: 04-25-03
PARTY G.O.      M.P.      D.R.B.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE ROYALE ENERGY, INC.	

**MOON CANYON #32-1**  
**Application For Permit To Drill (Attachment)**  
**State of Utah, Division of Oil, Gas and Mining Form 3**

**Request for Exception to Location and Siting of Wells: R649-3-3, Moon Canyon #32-1,  
NW/4SW/4 Sec. 32 – T16S-R21E, Grand County, Utah**

As part of the Application for Permit To Drill for the Moon Canyon #32-1, Royale Energy, Inc., as Designated Operator for National Fuel Corporation under STILA Lease ML-48391, request an exception to the general state siting rule for the #32-1. The subject well is a proposed 10,300' gas well on State Lease ML 48391, located within the Moon Canyon Federal Unit Area. Topographic restraints on the physical well location force Royale to request this exception pursuant to Rule 649-3-3. The standard 40 acre siting would create greater surface disturbances and visual impact.

The proposed well location is 927 feet from the nearest lease line, and National Fuel Corporation owns 100% working interest in ML-48391. There are no other owners within 460 feet of the proposed well location

Attached and made part of the subject APD are:

Survey Plat of the proposed location

Topographic maps showing location, section and unit boundaries.

**DESIGNATION OF OPERATOR**

The undersigned is, on the records of the School and Institutional Trust Lands Administration, holder of lease, ML 48391:

And hereby designates:

**NAME:** Royale Energy, Inc.

**ADDRESS:** 7676 Hazard Center Drive, Suite 1500  
San Diego, CA 92108

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the Director of the Administration or his representative may serve written or oral instructions in securing compliance with the Rules and Regulations Governing the Issuance of Mineral Leases with respect to (describe acreage to which this designation is applicable):

Sec. 32, T16S, R21E, S.L.B.&M.

Operator agrees to comply with all lease provisions, statutes, rules, and regulations, whether federal, state, or local, in its operations on the subject lease.

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Rules and Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

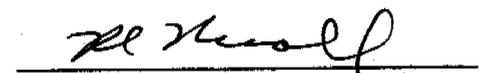
In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Director, Trust Lands Administration or his representative.

The lessee agrees promptly to notify the Trust Lands Administration of any change in the designated operator.

5/29/03  
Date

5/28/03  
Date

  
Signature of Lessee  
National Fuel Corporation  
Suite B-300  
7720 E. Bellview Ave.  
Englewood, CO Address 80111

  
Signature of Operator

**Royale Energy, Inc.**  
**Drilling Prognosis**  
**Moon Canyon Unit #32-1**  
**NWSW; Sec. 32-T16S-R21E, SLM**  
**Grand County, Utah**

May 5, 2003

**General**

NOTE: This well is to be drilled as a tight hole. Unauthorized personnel are not to be allowed on rig floor. All information is to be kept confidential.

Surface Location: 1390' FSL and 927' FWL  
NWSW; Sec. 32-T16S-R21E, SLM  
Grand County, Utah

Bottomhole Location: Same

Proposed Total Depth: 10,300'

Elevation: 8,189' Ground Level (Ungraded)

Drilling Contractor: Yet to be determined

**Drilling Procedure**

Location

- 1) Build location, dig and line reserve pit as per pad layout specifications.

Surface Hole

- 1) Move in and rig up air drilling rig.
- 2) Drill a 14-3/4" surface hole to 350' with air. Notify State of Utah DOGM as to cementing of surface casing.
- 3) Circulate and condition as required. Trip out of hole.
- 4) Run and cement 350' of 10-3/4", 40.5#, K-55, ST&C, 8rd casing and as per cement recommendation. If cement returns to surface are not obtained, run 1" pipe in casing/hole annulus and top out w/ neat cement. Wait 8 hrs on cement.
- 5) Weld on 11" X 5,000 PSI flanged casing head.
- 6) Rig down and move off surface hole drilling rig.

Intermediate Hole

- 1) MIRU rotary rig. Notify State of Utah DOGM as to BOP/CSG pressure test. Nipple up and pressure test BOPE and 10-3/4" casing to 70% internal yield of 10-3/4" csg.
- 2) Mud up. Trip in hole w/ 9-7/8" bit. Drill out float collar and guide shoe
- 3) Drill 9-7/8" intermediate hole from base of surface casing to 6,100' (or 200'+/- into Mancos)
- 4) Condition hole as per mud program. Run openhole logs as per logging program.
- 5) Trip in hole w/ bit and drill string. Condition hole for running pipe.
- 6) Run and cement 7" 23# production casing according to cement recommendation.
- 7) Pressure test 7" casing string to 1,500 psi for thirty (30) minutes.
- 8) Drill out 7" intermediate casing with 6-1/8" bit.
- 9) Well will be drilled to a depth of 10,300'

**Moon Canyon #32-1  
Drilling Prognosis**

- 6) At T.D., condition hole for running openhole logs as per mud program.
- 7) Run openhole logs as per logging program.

Decision Point: Producible/Dryhole

Producible

- 1) Trip in hole w/ bit and drill string. Condition hole for running pipe. Trip out of hole laying down drill-pipe and collars. Notify DOGM as to running and cementing of longstring.
- 2) Run and cement 4-1/2" production casing according to cement recommendation.

Dryhole

- 1) Notify State of Utah DOGM and receive plugging orders. Trip in hole open ended and plug well as per DOGM orders.
- 2) Release drilling rig. Reclaim location.

**Estimated Tops of Geological Markers  
(From Ungraded GL)**

<u>Formation</u>	<u>Top</u>	<u>Sub Surface</u>
Green River	Surface	+8189
Wasatch	2257	+5932
Mesaverde	3857	+4332
Castlegate Sandstone	5712	+2477
Main Mancos	5857	+2332
Dakota Silt	9632	-1443
Dakota Sandstone	9752	-1563
Cedar Mountain	9892	-1703
Morrison	9932	-1743
<b>TD</b>	<b>10300</b>	<b>-2111</b>

**Estimated Depths of Anticipated Water, Oil, Gas or Mineral Formations  
(From Ungraded GL)**

<u>Formation</u>	<u>Top</u>	<u>Possible Formation Content</u>
Green River	Surface to 2257	water
Wasatch	2257 to 3857	water
Castlegate Sandstone	5712 to 5760	gassy water
Dakota Sandstone	9752 to 9892	gas
Cedar Mountain	9892 to 9932	gas
Morrison	9932 to 10100	gas or water

**Pressure Control Equipment**

- 1) Type: 11" X 5,000 psi WP, double-gate BOP and 11" X 5,000 psi WP annular BOP with hydraulic closing unit.

**Moon Canyon Unit #32-1  
Drilling Prognosis**

The blowout preventer will be equipped as follows:

- 1) One set of blind rams
  - 2) One set of pipe rams
  - 3) Drilling spool with two side outlet (choke side: 3" minimum and kill side 2" minimum)
  - 4) Kill line: Two-inch minimum
  - 5) Two kill line valves, one of which will be a check valve (2" minimum)
  - 6) Choke line: Three-inch minimum.
  - 7) Two choke line valves: Three-inch minimum.
  - 8) One manually operated choke: Three-inch minimum.
  - 9) Pressure gauge on choke manifold.
  - 10) Upper kelly cock with handle readily available.
  - 11) Full opening internal blowout preventer or drill pipe safety valve able to fit all connections.
  - 12) Fill-up line to be located above uppermost preventer.
- 2) PRESSURE RATING: 5,000 PSI
- 3) TESTING PROCEDURE

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the approved BOP stack. (if isolated from the surface casing by means of a test plug) or 70% of the internal yield strength of the surface casing (if not isolated from the surface casing by means of a test plug). Pressure will be maintained for a period of at least ten minutes or until requirements of the test are met, whichever is longer.

At a minimum, this pressure test will be performed:

- 1) When the BOP is initially installed
- 2) Whenever any seal subject to test is broken.
- 3) Following related repairs.
- 4) At thirty day intervals.

In addition to the above, the pipe rams will be activated daily, and the blind rams will be activated on each trip (but not more frequently than once each day). All BOP tests and drills will be recorded in the IADC Driller's Log (tour sheet)

5) CHOKE MANIFOLD EQUIPMENT:

All choke lines will be straight lines, unless turns use tee-blocks, or are targeted with running tees. These lines will be anchored to prevent whip and vibration.

6) ACCUMULATOR:

The accumulator will have sufficient capacity to close all rams (plus the annular preventer, if applicable) and maintain a minimum of 200 psi above the precharge pressure without the use of the closing-unit pumps. The fluid reservoir capacity will be double the accumulator capacity and the fluid level will be maintain at the manufacturer's recommendation. The BOP system will have two independent power sources to close preventers. Nitrogen bottles (three minimum) will be considered one of these sources and will maintain a charge equal to the manufacturer's specifications.

The accumulator precharge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six months thereafter. The accumulator pressure will be corrected if the measured precharge pressure is found to be above or below the maximum or minimum limits of manufacturer's specifications.

**Moon Canyon Unit #32-1  
Drilling Prognosis**

## 7) MISCELLANEAUS INFORMATION:

The blowout preventer and related pressure-control equipment will be installed, tested, and maintained in compliance with the specifications in and requirements of DOGM's Drilling and Operating Practices #R649-3-7. The choke manifold and BOP extension rods will be located outside the rig sub-structure.

The hydraulic BOP closing unit will be located at least twenty-five feet from the wellhead, but will be readily accessible to the driller. Exact location and configuration of the hydraulic BOP closing unit will depend upon the particular drilling rig contracted to drill this hole.

### Casing and Cementing Programs

## 1) PROPOSED CASING DESIGN

Size	Interval	Length	Description
10-3/4"	0' - 350'	350'	40.5#, K-55, STC
7"	0' - 6,100'	6,100'	23#, J-55, LTC
4-1/2"	6,100'-10,300'	10,300'	11.60# N-80, LTC

A regular guide shoe and insert float will be run on the bottom and top of the first joint on casing. The guide shoe and float collar will be made up with A.P.I. thread locking compound. On 4-1/2" casing, a stop ring and centralizer will be run in the middle of the shoe joint. Centralizers will be ran 1 joint above float and across all potential pay zones.

NOTE: Casing strings will be pressure tested to 0.22 psi/ft of casing string depth, or 1,500 psi, whichever is greater ( not to exceed 70 % of the internal yield strength of the casing ) after cementing and prior to drilling out from under the casing shoe.

## 2) PROPOSED CEMENTING PROGRAM

Casing / Hole Size	Cement Slurry	SX	PPG	Yield
10-3/4" / 14-3/4"	Tail: Class "G" w/ 2% CaCl <sub>2</sub> & 0.25 PPS Flocele ( 100% excess )	250	15.8	1.17

Casing Equipment: 1 - Regular Guide Shoe  
1 - Insert float collar

NOTE: Precede cement w/ 50 bbls of fresh water. Have 100 sx "neat" cement on location and 1" line pipe to pump a cement top job if cement is not circulated to surface and/or cement falls back. All waiting-on - cement times will be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

Casing / Hole Size	Cement Slurry	SX	PPG	Yield
7" / 9-7/8"	Lead: "Light" cement Tail: 50/50 Pozmix	350 350	13.6 14.2	1.54 1.26

**Moon Canyon Unit #32-1  
Drilling Prognosis**

Casing / Hole Size	Cement Slurry	SX	PPG	Yield
4-1/2" / 6-1/8"	50/50 poz cement w/ 0.25 PPS Flocele ( 30% excess )	300	14.2	1.26

NOTE: Actual cement volumes will be calculated from caliper log.

Casing Equipment: 1 – Regular guide shoe  
 1 – Differential-fill float collar  
 10 – Centralizers (Casing will be centralized on shoe jt and across all potential pay zones )

NOTE: Precede cement with 50 bbls of fresh water. Run compatibility test on proposed cement with actual make-up water. Cement design and volumes may be altered depending on results of caliper log and presence of lost circulation zones.

**Drilling Fluids Program**

SURFACE HOLE: 0' – 350'                      HOLE SIZE: 14-3/4"                      10-3/4" CASING

Surface pipe will be pre-set with air rig.

INTERMEDIATE HOLE: 350' – 6,100'                      HOLE SIZE: 9-7/8"                      7" CASING

Drill out surface casing cement with water discarding contaminated fluid into reserve pit. Mud up with low-solids, non-dispersed 3-4% KCL mud system. Keep trip speeds down to reduce surge/swab pressure. Keep hole full at all times. Monitor pit levels to detect loss circulation and gas kicks. Sweep hole as dictated by hole conditions and prior to running production casing. Keep drill string moving at all times.

Recommend Fluid Properties: Weight 8.8 – 9.2 PPG  
 Viscosity 36-40 SEC / QT  
 Water Loss 6-8 CCS

PRODUCTION HOLE: 6,100' – 10,300'                      HOLE SIZE: 6-1/8"                      4-1/2" CASING

Drill out intermediate casing cement with water discarding contaminated fluid into reserve pit. Mud up with low-solids, non-dispersed 3-4% KCL mud system. Keep trip speeds down to reduce surge/swab pressure. Keep hole full at all times. Monitor pit levels to detect loss circulation and gas kicks. Sweep hole as dictated by hole conditions and prior to running production casing. Keep drill string moving at all times. Have 100-200 PPM nitrates in mud system prior to drilling any potential pay zones that may be DST'd.

Recommended Fluid Properties: Weight 8.8 – 9.2 PPG  
 Viscosity 32-36 SEC / QT  
 Water Loss 6 – 8 CCS

### **Evaluation Program**

**MUDLOGGING:** Drilling samples will be caught every 20' from 350' to 9,000'. Mudloggers will be on location and rigged up before drilling out intermediate casing. 10' samples will be caught from 9,000' to T.D. or as directed by wellsite geologist.

**OPENHOLE LOGGING:** 6100 –350' – CNL/FDC w/ XY caliper and DLL  
10,300 –6100' – CNL/LDT w/ XY caliper and DLL  
10,300 – 9460' – Magnetic Resonance Tool

**DRILLSTEM TESTING:** None anticipated.

**CORING:** None anticipated.

**STIMULATION:** All prospective zones will be perforated, flow tested and evaluated to determine if acidizing and/or fracturing is required. The drill site will be of sufficient size to accommodate all completion operations.

The proposed Evaluation Program may change at the discretion of the well site drilling supervisor and geologist with the approval of the DOGM.

One copy of all logs, core descriptions, core analyses, DST test data, geologic summaries, sample descriptions, and all other surveys or data obtained and compiled during drilling, workover, and/or completion operations will be filed on form #8. Samples (cuttings, fluids, and/or gases) will be submitted when requested by DOGM.

### **Anticipated Bottomhole Pressure**

A bottomhole pressure of 3,605 psi (.35 gradient) is anticipated at total depth (10,300')

### **Abnormal Conditions**

No abnormal temperature or pressures are anticipated in the drilling of the Moon Canyon #32-1

### **Anticipated Starting Date and Miscellaneous**

1) ANTICIPATED STARTING DATE:	Location Construction	July 28, 2003
	Spud Date	August 11, 2003
	Drilling Days	30 days
	Completion Days	10 days

**Moon Canyon Unit #32-1  
Drilling Prognosis**

2) MISCELLANEOUS

There will be no deviation from the proposed drilling and/or workover program as approved. Safe drilling and operating practices will be observed.

All wells, whether drilling, producing, suspended or abandoned will be identified in accordance with R649-3-5. There will be a sign or marker with the name of the operator, lease serial number, well name and number and survey description of the well.

Any changes in operation must have prior approval from the DOGM. Pressure test will be performed before drilling out from under of all casing strings set and cemented in place. Blowout preventers controls will remain in use until the well is either completed or abandoned. Preventers will be inspected and operated at least daily to insure good mechanical working order, and inspection will be recorded on the daily drilling report. All BOP test will be recorded on the daily drilling report.

The spud date will be orally reported to the DOGM twenty-four (24) hours after spudding. If spudding occurs on a weekend or holiday, this report will be called in on the next regular work day following spudding of the well.

In accordance with R649-3-6, this well will be reported on form #6, *Entity Action Form*, starting within five working days of spudding the well.

All undesirable events ( fires, accidents, blowouts, spills, discharges ) as specified in R649-3-32 will be reported to the DOGM Office. Major events will be reported verbally within twenty-four (24) hours and will be followed with a written report within five (5) days.

No well abandonment operations will be commenced without the prior approval of the DOGM. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the Division. A *Notice of Intention to Abandon* (Form #9) will be filed with the Division within five (5) days following the granting of oral approval to plug and abandon.

Upon completion of approved plugging, a regulation marker will be erected in accordance with R649-3-25(7). The following information will be permanently placed on the marker with a plate, cap, or beaded-on with a welder: Company Name and Number, Location by Quarter/Quarter, Section, Township, Range and State Lease Number.

A *Subsequent Report of Abandonment* (Form #9) will be submitted within thirty (30) days following the actual plugging of the well bore. This report will indicate cement type and volumes, where plugs were placed, casing left in hole, statement of mud volumes used and the current status of surface restoration operations.

Pursuant to R649-3-19, operator will conduct a stabilized production test of at least 24 hours no later than fifteen (15) days following the completion of well. Lessees and operators are authorized to vent/flare gas during first calendar month after initial well evaluation tests and/or the production of three (3) MMCF of gas, whichever occurs first. An application must be filed with the DOGM, and approval received, for any venting /flaring of gas beyond the initial thirty (30) day or otherwise authorized test period.

Page 8  
Moon Canyon Unit #32-1  
Drilling Prognosis

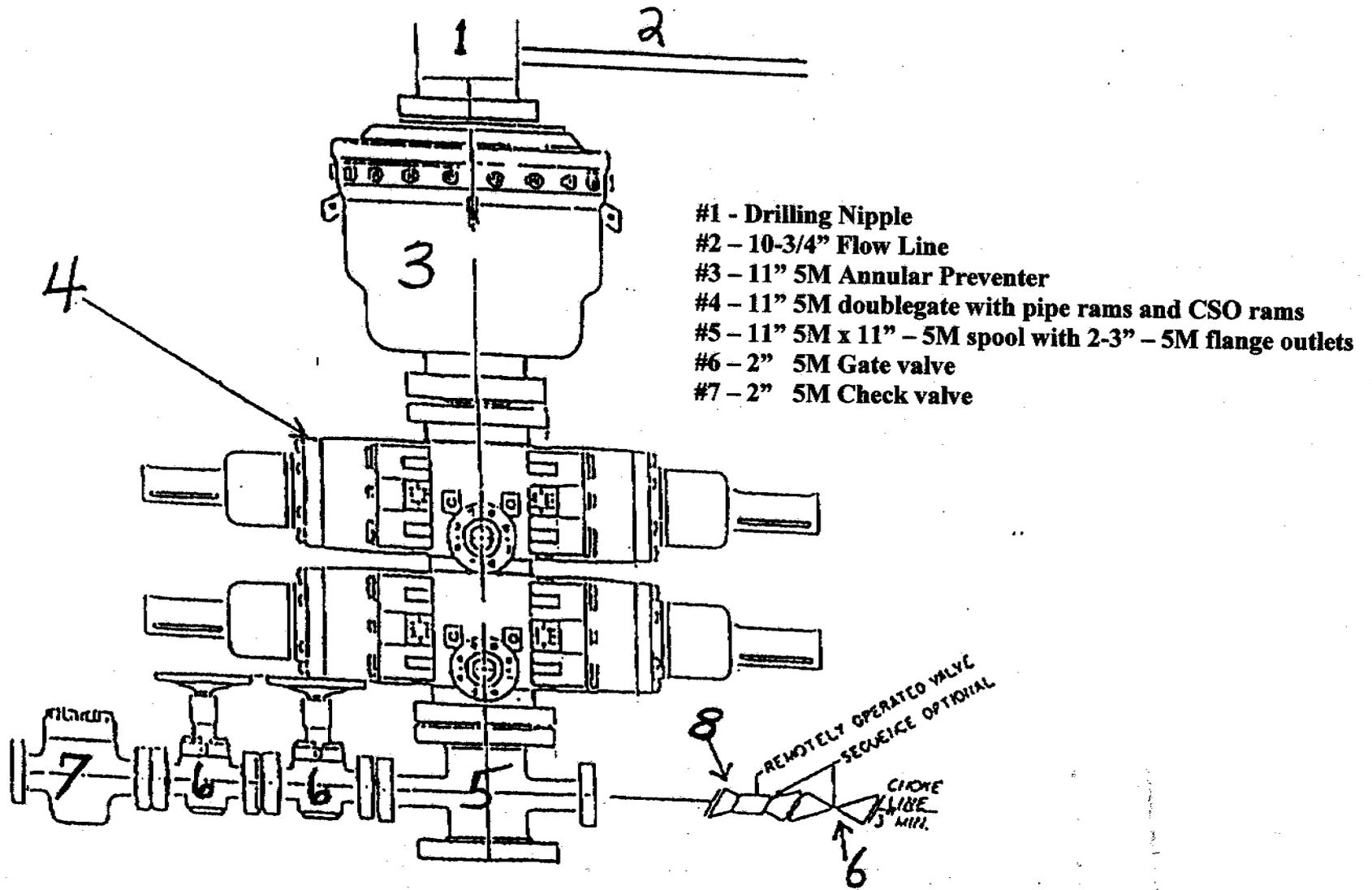
Pursuant to R649-2-1, lessees and operators have the responsibility to see that their exploration, development, production, and construction operations are conducted in such a manner as to conserve the natural resources of oil and gas in the state, to protect human health and the environment, to prevent waste, to protect the correlative rights of all owners and to realize the greatest ultimate recovery of oil and gas.

Date:

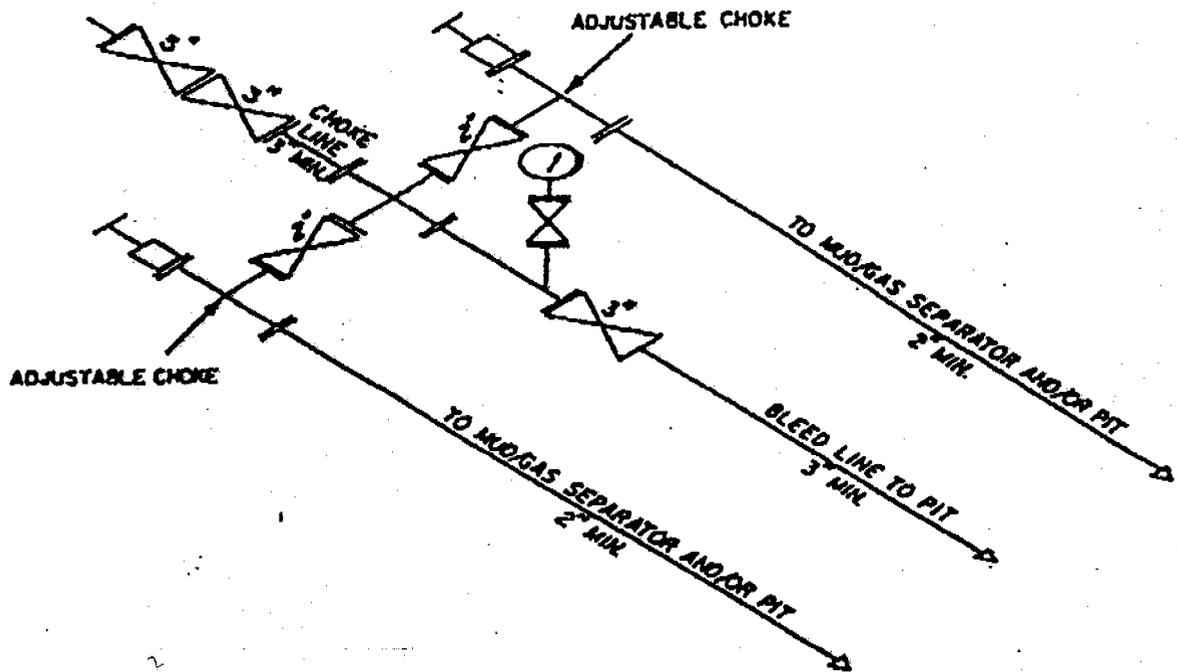
6/18/03

Prepared by:

Eric Noblitt (H)  
Eric Noblitt, Agent  
Royale Energy, Inc.



11" 5M Doublegate with Annular Preventer



**SM Choke Manifold Equipment – Configuration of Chokes May Vary**

**ROYALE ENERGY, INC.**  
**Lease # ML-48391**  
**Moon Canyon #32-1**  
**NW/4SW/4; Section 32, Township 16 South, Range 21 East, SLM**  
**Grand County, Utah**

***Surface Use & Operations Plan***

Ownership

*Surface & Minerals:*

State of Utah  
School Trust Lands  
675 E. 500 S.  
Salt Lake City, UT 84102  
(801) 538-5100

1. **EXISTING ROADS – Refer to Exhibit Topo Maps “A” and “B”.**
  - A. The proposed wellsite has been surveyed to memorialize the existing well pad (see Location Layout Plat)
  - B. To reach the proposed location from Crescent Junction proceed West on Interstate 70 approximately 45 miles to the Westwater exit; proceed north ¼ mile, turn right and go East ½ mile to Hay Canyon & East Canyon roads, proceed Northwest 7.5 miles to Hay Canyon road, turn left and travel up Hay Canyon 20.5 miles to Steer Ridge road.
  - C. Access roads refer to Exhibit Topo Maps “A” and “B”.
  - D. Access roads within a one (1) mile radius, none – refer to Exhibit Topo Maps “A” and “B”.
  - E. The existing roads will be maintained in the same or better condition as existed prior to the commencement of operation and said maintenance will continue until final abandonment and reclamation of said well location.
2. **EXISTING 2-TRACK ROADS (needing upgrade) – Refer to Map Exhibits “A” “B” & “ROW”**

Access to the location will be on Grand County maintained roads, until where County road 211 turns North in the SW/4 Section 9, T 17S-21E. the road will follow an existing 2-track 2.8 mile crossing BLM and State lands.

- A. **Width –** The current approximate width is approximately 12 foot running surface. This road will be widen and improved where needed to a twenty (20) foot running surface.

- B. **Construction Standard** – Any road improvements will be conducted in accordance and with consultation with the appropriate governing authority.
- C. **Maximum grade** – The maximum grade is under 8%.
- D. **Turnouts** – Several turnouts exist on the existing road any new turnouts will be consultation of the appropriate governing authority.
- E. **Drainage design** – The existing road shall be maintained to provide proper drainage along the road.
- F. **Culverts and low water crossings** – No Culverts are anticipated.
- G. **Surface material** – It is anticipated that no additional surface material will be required for drilling and production operations. Should spot graveling be required during drilling operations, gravel would be obtained from the nearest commercial site.
- H. **Gates, cattleguards or fence cuts**: No Fence cuts or cattleguards will be required along the proposed existing route. All gates will be maintained during operations.
- I. **Road maintenance** – During both the drilling and production phase of operations, the road surface will be kept in a safe and useable condition and will be maintained in accordance with the original construction standards. All drainage ditches and culverts will be kept clear and free-flowing, and will also be maintained in accordance with the original construction standards. The access road will be kept free and clear of trash during all operations.

### 3. LOCATION OF EXISTING WELL WITHIN A ONE-MILE RADIUS

- |    |                             |      |
|----|-----------------------------|------|
| A. | Water wells                 | none |
| B. | Abandoned wells             | none |
| C. | Temporarily abandoned wells | none |
| D. | Disposal wells              | none |
| E. | Proposed wells              | none |
| F. | Shut-in wells               | none |
| G. | Producing                   | none |

### 4. LOCATION OF PROPOSED FACILITIES

- A. All production facilities will be located on the disturbed portion of the well pad and at a minimum from of twenty-five (25) feet from the toe of the back slope or top of the fill slope.

- B. Production facilities will be located on the drillsite location. A diagram showing the proposed production facility layout will be submitted to the Division via Sundry Notice (Form # 9) will be submitted upon completion and installation of facilities.
- C. An existing pipeline for gas gathering is in place in Sec. 9, T17S-R21E. If the subject is commercial a 3" welded surface line will be laid adjacent to the new improved 2-track from the Drillsite to Section 9.
- D. All permanent (in place for six months or longer) structures constructed or installed (including oil well pump jacks) will be painted a flat, non-reflective color to match the standard environmental colors. All facilities will be painted within six months of installation. Facilities required by OSHA may be excluded. Colors will be painted desert brown (Munsell standard color #10 YR 6/3), unless otherwise advised by the governing authority.
- E. 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 until it leaves the pad. The meter run will be housed. 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 provisions of the Division and the American Gas Association (AGA) Report No. 3.
- F. If a tank battery is constructed on the 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 measurements shall conform to provisions of the Division.
- G. Production facilities on location may include a lined or unlined water pit as specified in Division rule R649-3-16. Any pit will be fenced with barbwire held in place by metal side post and wooden corner "H" braces in order to protect livestock and wildlife.
- H. During drilling and subsequent operations, all equipment and vehicles will be confined to the access road, drill pad and any additional area specified in the approved Application for Permit to Drill (APD).
- I. Reclamation of disturbed areas no longer needed for operations will be accomplished by grading, leveling and seeding as provided for in Division rule R649-3-34.

## 5. LOCATION AND TYPE OF WATER SUPPLY

- A. Water supply for the subject well shall come from a private source in Sec. 6, T16S-R23, owned by Bert Delambert., Permit # 49-123, Temporary Change of Water Permit # 127975 authorizes such use and a water use agreement with Mr. Delambert has been obtained (see attachments.)

- B. No water well will be drilled.

## 6. SOURCE OF CONSTRUCTION MATERIALS

- A. It is not anticipated that any construction materials (gravel) will be required during construction or operations. If required, a private contractor (or surface owner) having a previously approved source within the general area will be used.
- B. No construction material will be taken from Federal lands.

## 7. METHODS OF HANDLING WASTE MATERIALS

- A. Cuttings - The drill cuttings will be deposited in the reserve pit.
- B. Drilling fluids – All fluids including chemicals will be contained in the reserve pit. The reserve pit will be designed to prevent the collection of surface runoff and will be constructed with a minimum of one-half (1/2) total depth below the original ground level and at the lowest point within the pit. Pursuant to Division rule R649-3-16 & 34, prior to back-filling the reserve pit liquids will be disposed in an approved facility and the contents will be allowed to dry. The disturbed portion of the pad will be reclaimed. A 9-mil synthetic pit liner is proposed.
- C. Produced fluids – Liquid hydrocarbons that may be produced during completion operations will be placed in test tanks on the location. Produced water will be placed in the reserve pit for a period not to exceed ninety days after initial production.

Any spills of oil, gas, salt water or any other potentially hazardous substances will be cleaned up and immediately removed to an approved disposal site in accordance with Division rule R649-3-32.

- D. Sewage – Portable, self-contained chemical toilets will be provided for human waste disposal. Upon completion of operations, or as required, these toilets will be removed and the contents thereof disposed of in an approved sewage disposal facility.
- E. Garbage and other waste material – All garbage and non-flammable waste materials will be contained in a dumpster or trash cage. Upon completion of operations, or as needed, the accumulated trash will be hauled off-site to an approved sanitary landfill. No trash will be placed in the reserve pit during any operations pertaining to this well.
- F. Immediately after removal of the drilling rig, all debris and other waste materials not contained in the trash cage will be cleaned up and removed from the well location. No potentially adverse materials or substances will be left on location.
- G. Any open pits will be fenced during the drilling operation and said fencing will be maintained until such time as the pits have been back-filled.

## 8. ANCILLARY FACILITIES

None anticipated.

## 9. WELLSITE LAYOUT

- A. Attached hereto is a diagram showing the proposed location layout. No permanent living facilities are planned. There will be approximately three (3) trailers on location during drilling operations: one each for the wellsite supervisor, geologist and toolpusher.
- B. Topsoil will be stock piled on the Southwest and Southeast of the drillpad. Brush and trees will also be stock piled on the Southwest corner of pad and will be used in the site reclamation process. Erosion ditches will be created along the side of the drill pad to control runoff from the drill pad. (see location layout plat)
- C. A diagram showing the proposed production facility layout will be submitted to the Division via *Sundry Notice* (form # 9) for approval (see # 4B).
- D. Prior to commencement of drilling operations, the reserve pit will be fenced on three (3) sides with four strand barbed wire held in place by metal side post and wooden corner "H" braces in order to protect livestock and wildlife.
  - 1. Corner post shall be braced in such a manner to keep the fence tight at all times.
  - 2. Standard steel, wood or pipe post shall be used between the corner braces. The maximum distance between any two (2) posts shall be no greater than sixteen (16) feet.
  - 3. All wire shall be stretched tight before attaching to corner post.
  - 4. The fourth (4<sup>th</sup>) side of the reserve pit will be fenced immediately upon removal of the drilling rig and the fencing will be maintained until the pit is back-filled.
- E. Any Hydrocarbons on the pit will be removed immediately.
- F. Flare pit will be a minimum of 100 feet from the wellhead and 30 feet from the reserve pit when applicable. The flare pit will be on laydown side of pad.

## 10. PLANS FOR RECLAMATION OF THE SURFACE

### Producing

- A. Any rat and mouse holes will be back-filled and compacted from to top immediately upon release of the completion rig from the location. The location and surrounding area will be cleared of all unused tubing, equipment, debris, materials, trash, and junk not required for production.

- B. Any oil located on the pits will be removed immediately in accordance with Division rule R649-3-16 & 34.
- C. Back-filling, leveling and re-contouring are planned as soon as possible after cessation of drilling and completion operations. Waste and spoil materials will be disposed of immediately upon cessation of drilling and completion activities.

Fluids from the reserve pit shall be removed. The liner shall be torn and perforated before back-filling of the reserve pit.

The reserve pit and that portion of the location not needed for production facilities/operations will be re-contoured to the approximate natural contours. The reserve pit will be reclaimed within six (6) months from the date of well completion. Before any dirt work takes place, the reserve pit will be completely dry and all cans, barrels, pipe, etc., shall be removed.

Surface owner will be contacted for required seed mixture pursuant to Division rule R649-3-34.

#### Dry Hole/Abandoned Location

- 1. At such time as the well is plugged and abandoned, the operator shall submit a subsequent report of abandonment and the DOGM/SITLA will attach the appropriate surface rehabilitation conditions of approval.

#### 11. OTHER INFORMATION

- A. Proximity of Water, Occupied Dwellings, Archaeologist, Historical or Cultural Sites:

- 1. There are no known, occupied dwellings within one (1) mile of the location.
- 2. There are no known water wells within one (1) mile of location.
- 3. Royale Energy, Inc. will be responsible for informing all persons in the area who are associated with the 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, Royale will suspend all operations that might further disturb such materials and immediately contact the State Historical Preservation Office "SHIPO".
- 4. A Class III cultural resource inventory dated June 6, 2003, of the proposed Moon Canyon #32-1 well and its related 2.8 mile-long access road have been filed with SHIPO BLM-Vernal, SITLA-State Office.

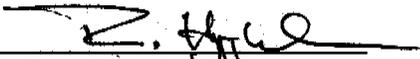
- B. The operator will, control noxious weeds along right-of-way for roads, pipelines, wellsites or other applicable facilities.

12. LESSEE'S OR OPERATORS REPRESENTATIVE AND CERTIFICATION

Royale Energy, Inc.  
7676 Hazard Center Drive, Suite 1500  
San Diego CA 92108  
Phone: (619) 881-2870  
Fax (619) 881-2876  
Drilling@royl.com  
Attention: Phillip D. Nicholl

Prepared by:

Date: June 16, 2003

  
R. Heggie Wilson, Agent  
4994 E. Meadows Dr.  
Park City, UT 84098  
Phone: (435) 647-9712  
Fax: (435) 647-9713  
Heggie@xmission.com

# ROYALE ENERGY, INC.



May 27, 2003

Mr. Bert DeLambert  
P.O. Box 607  
Vernal, UT 84078

Water Purchase Agreement Moon Canyon #32-1 Well  
Section 32: NW/4SW/4 Township 16 South, Range 21 East Grand County, Utah

Dear Mr. DeLambert:

Pursuant to your recent conversations with Eric Noblitt, Royale Energy, Inc. desires to purchase water for the drilling and completion of the above referenced well from your water source. Said source is permit # 491223 T26714 and located in the NE/4, Sec. 31: T15S-R23E. Royale will tender you the sum of \$5,000.00 within ten (10) days of the commencement of our operations.

If this is acceptable, please sign both originals of this letter and return one to me at the letterhead address. Thank you for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'D Hoffman', written over a horizontal line.

Dale Hoffman

Accepted and Agreed to this 3 of June, 2003.

By:   
Bert DeLambert

# APPLICATION FOR TEMPORARY CHANGE OF WATER RECEIVED

Rec. by BMW  
Fee Paid \$ 75.00 CH 410  
Receipt # 03-02703

JUN 17 2003  
WATER RIGHTS  
VERNAL

## STATE OF UTAH

For the purpose of obtaining permission to make a temporary change of water in the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of Section 73-3-3 Utah Code Annotated 1953, as amended.

CHANGE APPLICATION NUMBER: t27975

WATER RIGHT NUMBER: 49-123

(BWHITE)

\*\*\*\*\*  
This change application proposes to change the PLACE OF USE and NATURE OF USE.  
\*\*\*\*\*

### 1. OWNERSHIP INFORMATION.

- A. NAMES: Burt and Christine DeLambert INTEREST: 100%  
ADDRESS: P. O. Box 607, Vernal, UT 84078
- B. PRIORITY OF CHANGE: June 17, 2003 FILING DATE: June 17, 2003
- C. EVIDENCED BY:  
49-123 (A8615)

-----\*  
\* DESCRIPTION OF CURRENT WATER RIGHT: \*  
-----\*

### 2. SOURCE INFORMATION.

- A. QUANTITY OF WATER: 0.9034 cfs
- B. SOURCE: A Spring Branch in Main Canyon COUNTY: Uintah
- C. POINT(S) OF DIVERSION.  
  
POINT OF DIVERSION -- SURFACE:  
(1) N 2,870 feet E 16 feet from SW corner, Section 32, T 15S, R 23E, SLBM  
DIVERT WORKS: Earth & Brush Dam

### 3. WATER USE INFORMATION.

IRRIGATION: from Apr 1 to Oct 31. IRRIGATING: 64.0400 acres.

4. PLACE OF USE. (Which includes all or part of the following legal subdivisions:)

BASE TOWN RANG SEC	NORTH-WEST				NORTH-EAST				SOUTH-WEST				SOUTH-EAST			
	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE
SL 15S 23E 30				***				***				X	***			
31		X		X	***		X	***					***			

-----\*

\* THE FOLLOWING CHANGES ARE PROPOSED: \*

-----\*

5. SOURCE INFORMATION.

A. QUANTITY OF WATER: 20.0 acre-feet

B. SOURCE: Earth and Brush Dam

COUNTY: Uintah

C. POINT(S) OF DIVERSION. Same as HERSTOPORE.

POINT OF DIVERSION -- SURFACE:

(1) N 2,870 feet E 16 feet from SW corner, Section 32, T 15S, R 23E, SLBM  
 DIVERT WORKS: pump into tank trucks and haul to place of use.

D. COMMON DESCRIPTION: Main Canyon-Book Cliffs

6. WATER USE INFORMATION. Changed as Follows:

OIL EXPLORATION from Jun 17 to Jun 16. drilling oil/gas wells in the South Book Cliffs - 6/17/03 - 6/16/04.

7. PLACE OF USE. Changed as Follows:

(Which includes all or part of the following legal subdivisions:)

BASE TOWN RANG SEC	NORTH-WEST				NORTH-EAST				SOUTH-WEST				SOUTH-EAST			
	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE
SL 15S 23E	Entire TOWNSHIP															
SL 15S 24E	Entire TOWNSHIP															
SL 16S 23E	Entire TOWNSHIP															
SL 16S 24E	Entire TOWNSHIP															

8. SIGNATURE OF APPLICANT(S).

The undersigned hereby acknowledges that even though he/she/they may have been assisted in the preparation of the above-numbered application, through the courtesy of the employees of the Division of Water Rights, all responsibility for the accuracy of the information contained herein, at the time of filing, rests with the applicant(s).

*Burt DeLambert* *Christine DeLambert*  
 Burt and Christine DeLambert

**ROYALE ENERGY, INC.**  
**MOON CANYON #32-1**  
 LOCATED IN GRAND COUNTY, UTAH  
 SECTION 32, T16S, R21E, S.L.B.&M.

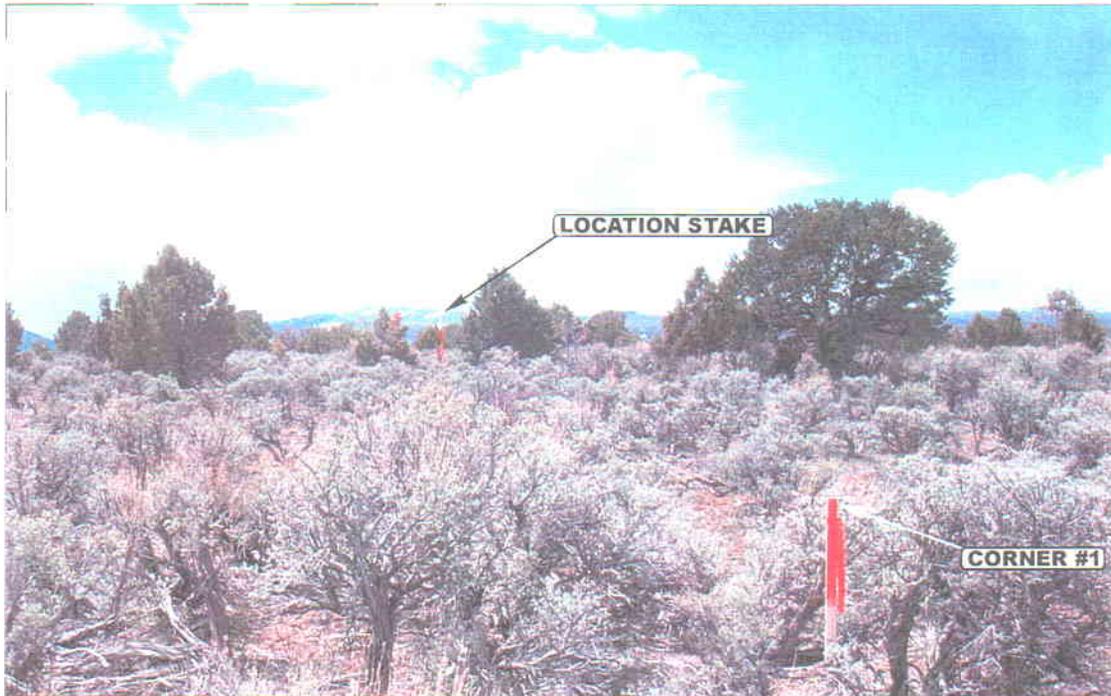


PHOTO: VIEW FROM CORNER #1 TO LOCATION STAKE

CAMERA ANGLE: SOUTHWESTERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: NORTHWESTERLY

• Since 1964 •

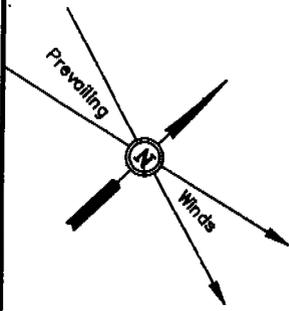
**ELS** Uintah Engineering & Land Surveying  
 85 South 200 East Vernal, Utah 84078  
 435-789-1017 uels@uelsinc.com

LOCATION PHOTOS	4	24	03	PHOTO
	MONTH	DAY	YEAR	
TAKEN BY: G.O.	DRAWN BY: J.L.G.		REVISED: 00-00-00	

# ROYALE ENERGY, INC.

## LOCATION LAYOUT FOR

MOON CANYON #32-1  
SECTION 32, T16S, R21E, S.L.B.&M.  
1390' FSL 927' FWL



SCALE: 1" = 50'  
DATE: 04-25-03  
Drawn By: D.R.B.

El. 85.4'  
C-7.5'  
(btm. pit)

F-2.8'  
El. 85.1'

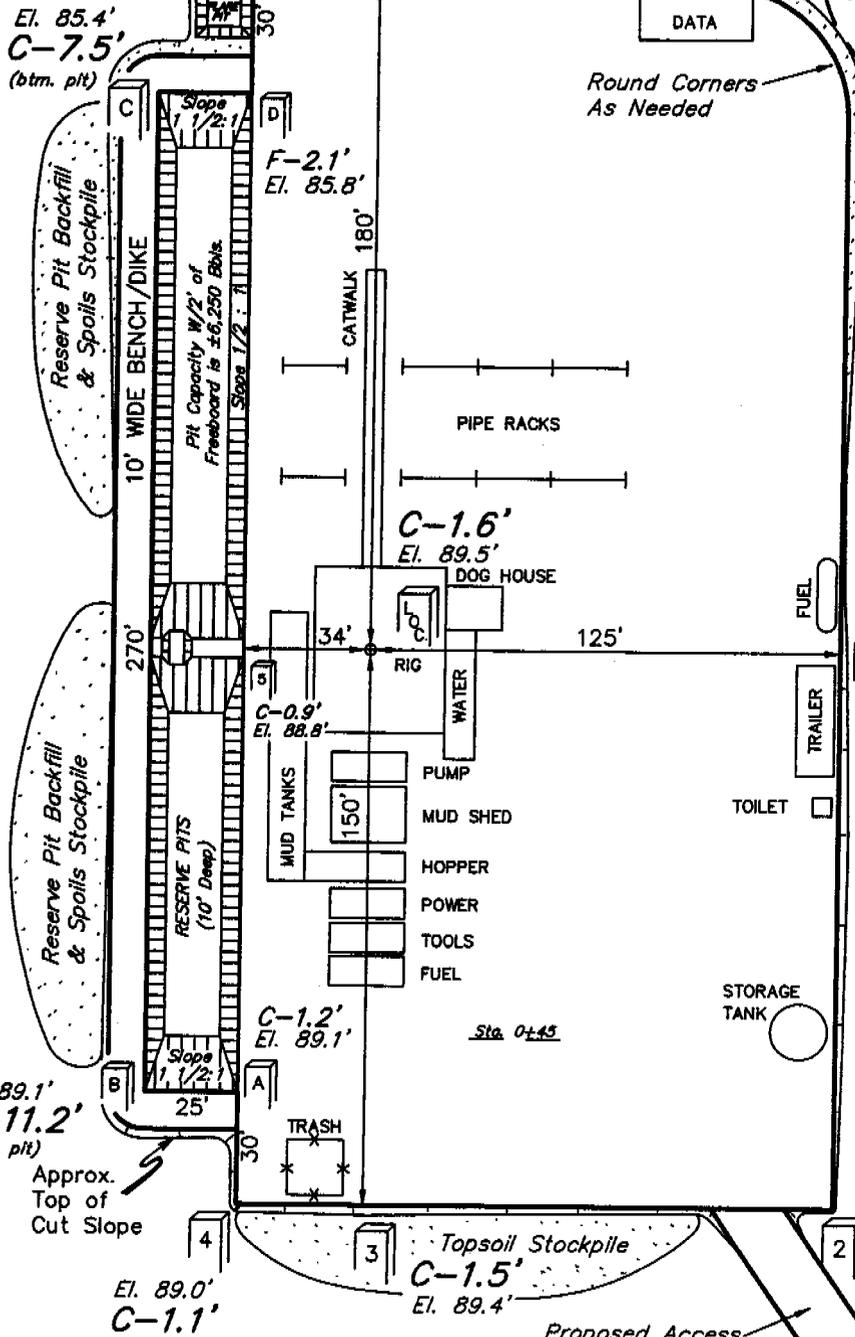
F-2.9'  
El. 85.0'

Approx. Toe of Fill Slope

F-3.5'  
El. 84.4'

Sta. 3+30

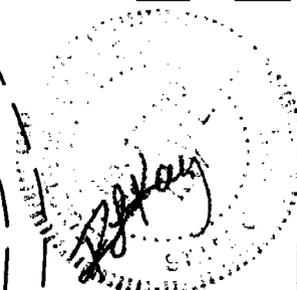
**NOTE:**  
Flare Pit is to be located a min. of 100' from the Well Head.



Sta. 1+50

C-1.2'  
El. 89.1'

Sta. 0+00



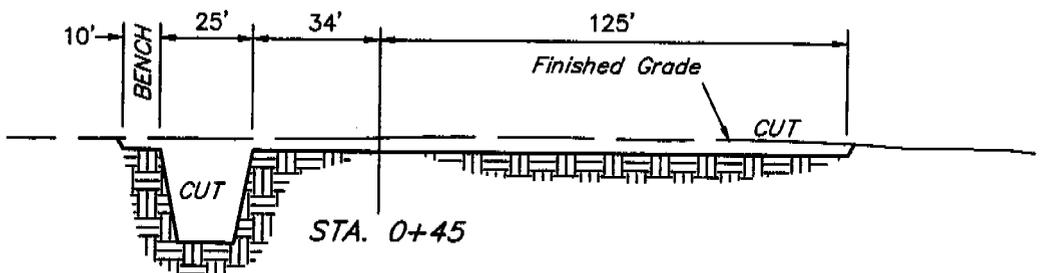
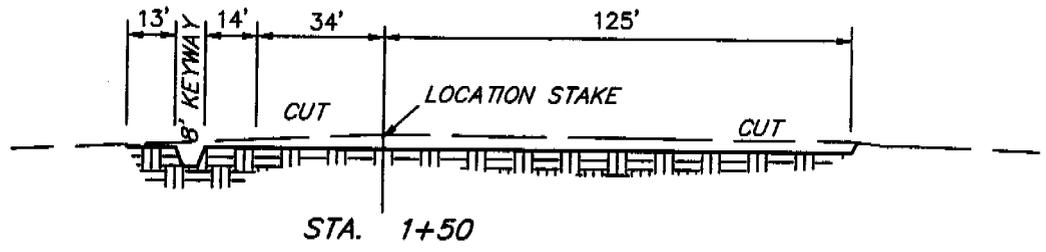
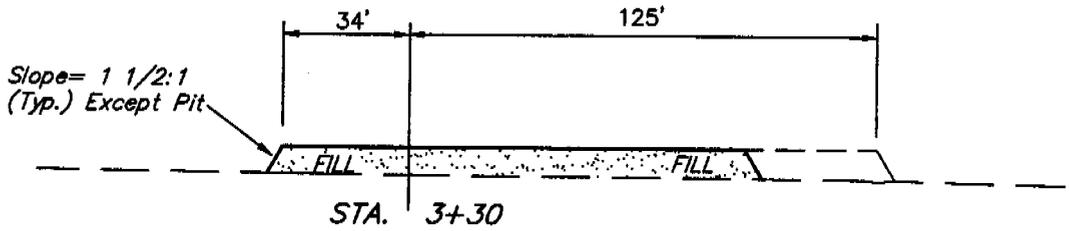
Elev. Ungraded Ground at Location Stake = 8189.5'  
Elev. Graded Ground at Location Stake = 8187.9'

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

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

DATE: 04-25-03  
 Drawn By: D.R.B.

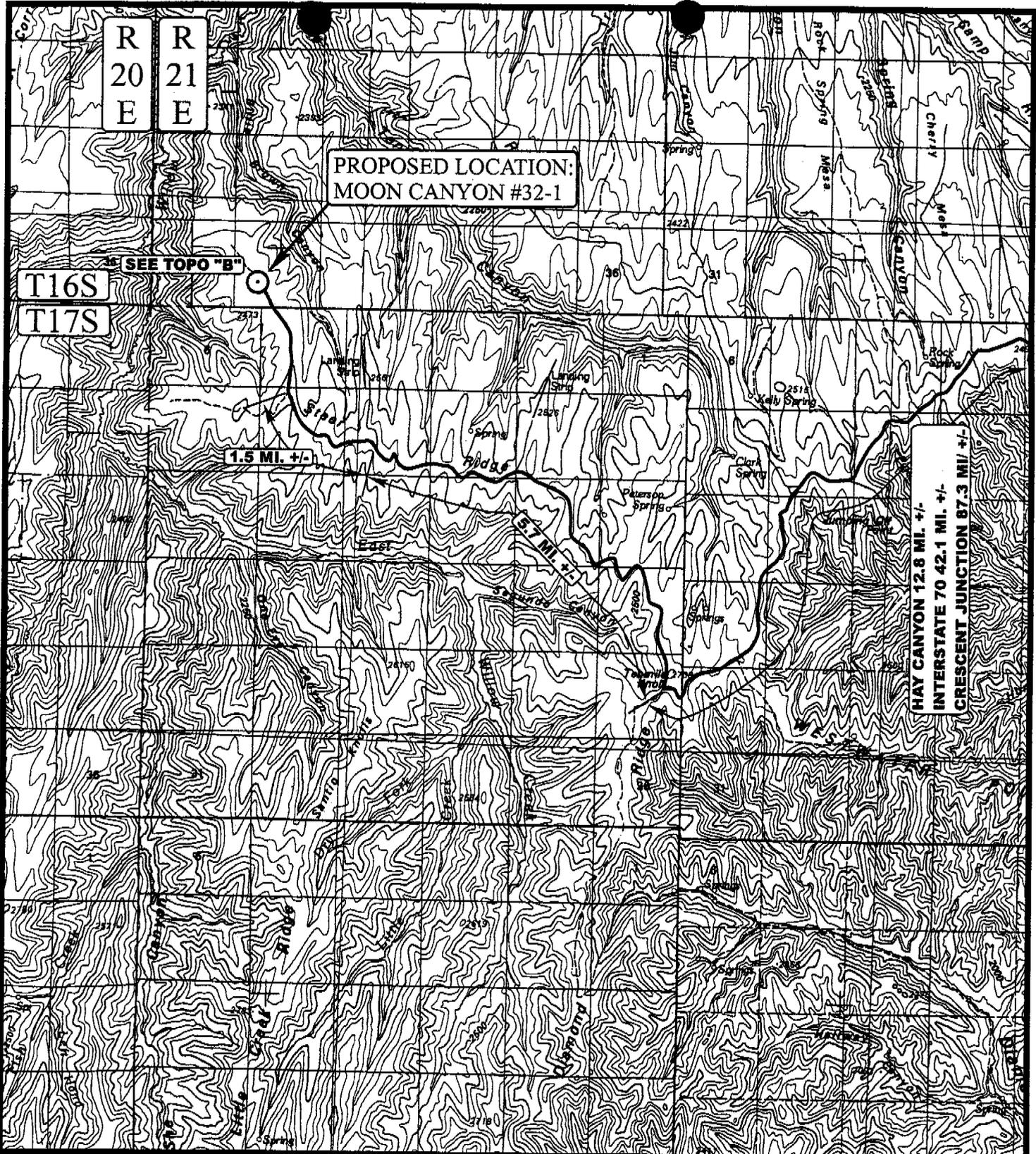
**ROYALE ENERGY, INC.**  
**TYPICAL CROSS SECTIONS FOR**  
**MOON CANYON #32-1**  
**SECTION 32, T16S, R21E, S.L.B.&M.**  
**1390' FSL 927' FWL**



**APPROXIMATE YARDAGES**

(6") Topsoil Stripping	=	1,160 Cu. Yds.
Remaining Location	=	2,810 Cu. Yds.
<b>TOTAL CUT</b>	<b>=</b>	<b>3,970 CU.YDS.</b>
<b>FILL</b>	<b>=</b>	<b>1,830 CU.YDS.</b>

EXCESS MATERIAL AFTER 5% COMPACTION	=	2,040 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	2,040 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	=	0 Cu. Yds.



**LEGEND:**

○ PROPOSED LOCATION



**ROYALE ENERGY, INC.**

MOON CANYON #32-1  
SECTION 32, T16S, R21E, S.L.B.&M.  
1390' FSL 927' FWL

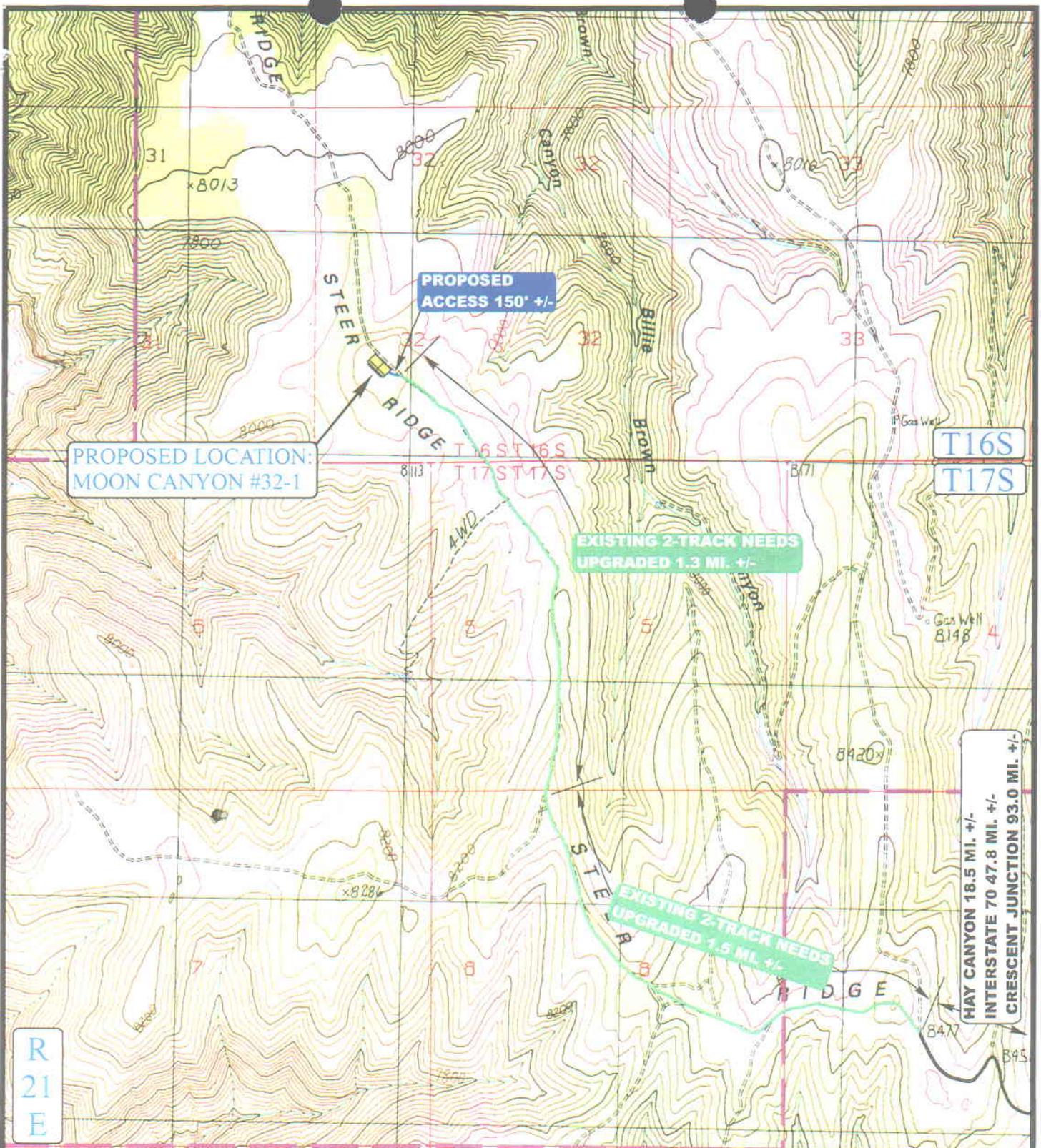


Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

TOPOGRAPHIC MAP  
4 24 03  
MONTH DAY YEAR

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





PROPOSED LOCATION:  
MOON CANYON #32-1

PROPOSED  
ACCESS 150' +/-

EXISTING 2-TRACK NEEDS  
UPGRADED 1.3 MI. +/-

EXISTING 2-TRACK NEEDS  
UPGRADED 1.5 MI. +/-

T16S  
T17S

HAY CANYON 18.5 MI. +/-  
INTERSTATE 70 47.8 MI. +/-  
CRESCENT JUNCTION 93.0 MI. +/-

R  
21  
E

LEGEND:

- PROPOSED ACCESS ROAD
- EXISTING ROAD
- PROPOSED UNIT BOUNDARY



ROYALE ENERGY, INC.

MOON CANYON #32-1  
SECTION 32, T16S, R21E, S.L.B.&M.  
1390' FSL 927' FWL



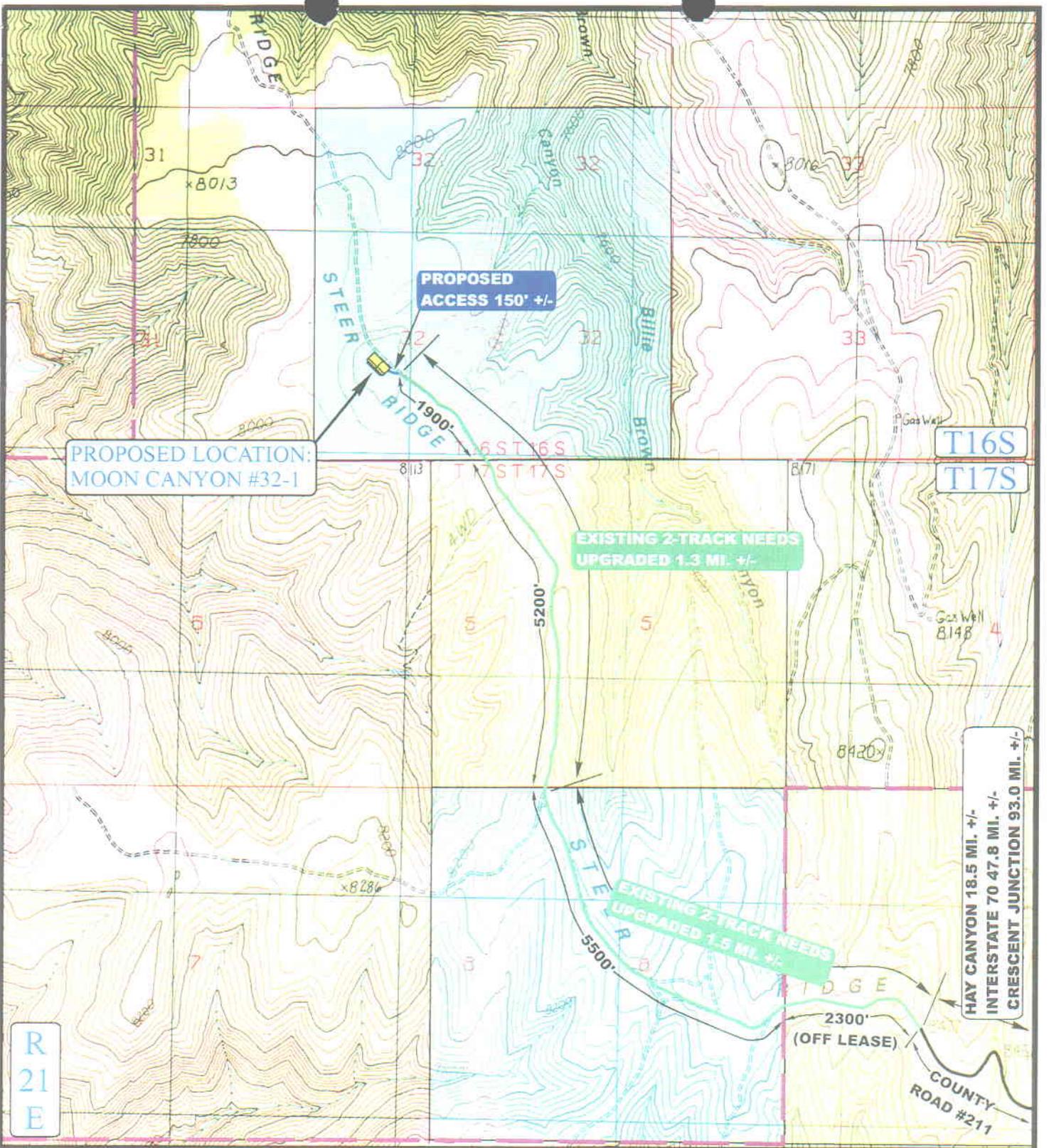
Utah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

TOPOGRAPHIC  
MAP

4 24 03  
MONTH DAY YEAR

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

B  
TOPO



PROPOSED LOCATION:  
MOON CANYON #32-1

PROPOSED  
ACCESS 150' +/-

EXISTING 2-TRACK NEEDS  
UPGRADED 1.3 MI. +/-

EXISTING 2-TRACK NEEDS  
UPGRADED 1.5 MI. +/-

T16S  
T17S

HAY CANYON 18.5 MI. +/-  
INTERSTATE 70 47.8 MI. +/-  
CRESCENT JUNCTION 93.0 MI. +/-

R  
21  
E

LEGEND:

- PROPOSED ACCESS ROAD
- EXISTING ROAD
- PROPOSED UNIT BOUNDARY
- STATE OF UTAH
- BLM

ROYALE ENERGY, INC.

MOON CANYON #32-1  
SECTION 32, T16S, R21E, S.L.B.&M.  
1390' FSL 927' FWL



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

**TOPOGRAPHIC MAP** **4 24 03**  
 MONTH DAY YEAR  
 SCALE: 1" = 2000' DRAWN BY: J.L.G. REVISED: 00-00-00

**ROW**  
TOPO

**LEGEND:**

— WATER HAUL ROUTE



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



**ROYALE ENERGY, INC.**

MOOD CANYON #32-1  
PROPOSED WATER HAUL ROUTE  
SECTION 32, T16S, R21E, S.L.B.&M.

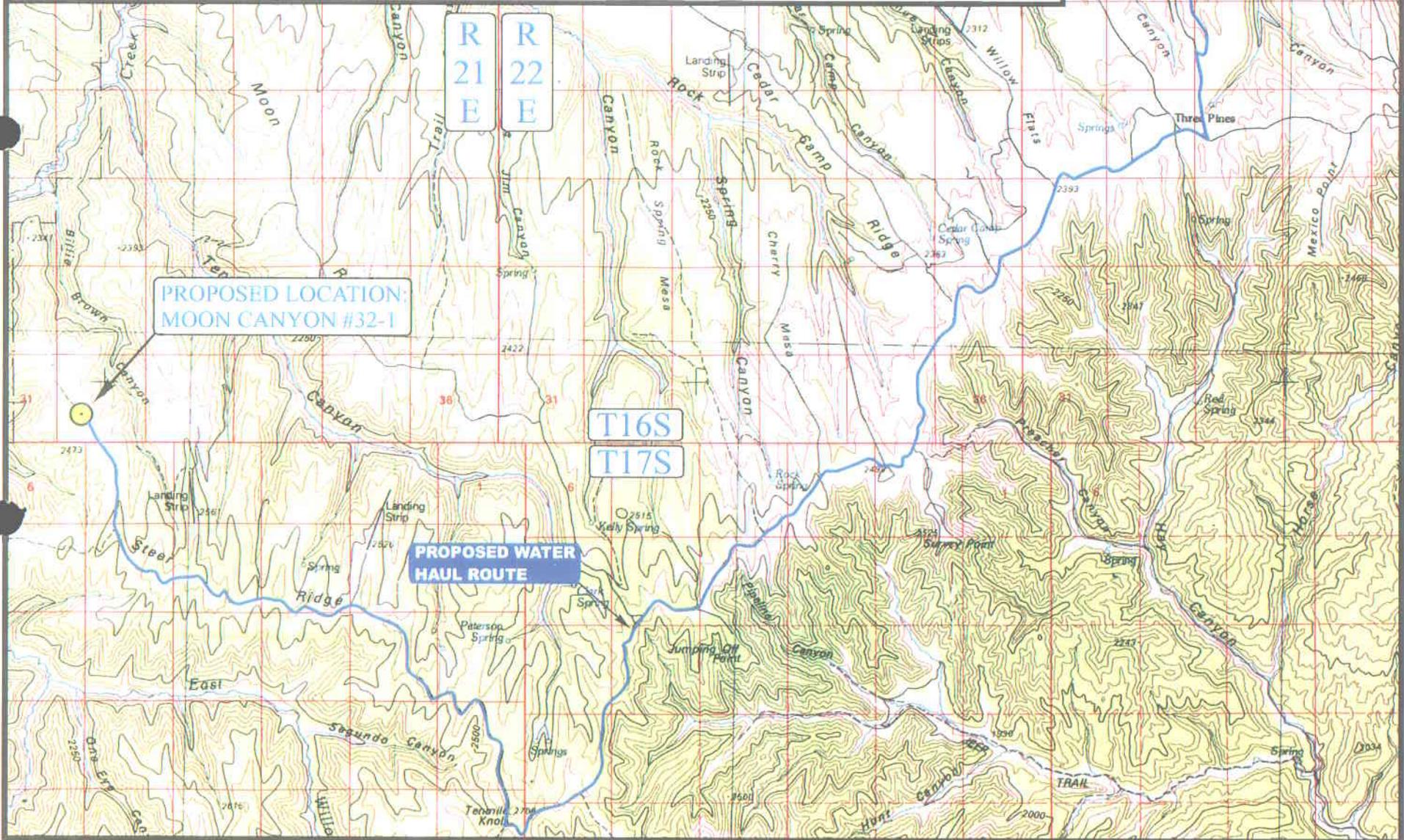
TOPOGRAPHIC  
MAP

4 30 03  
MONTH DAY YEAR

1  
TOPO

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

WATER SOURCE  
MAIN CANYON  
C E 1/2, E 1/2  
SEC. 31, T15S,  
R23E  
UINTAH CO., UT



**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 06/19/2003

API NO. ASSIGNED: 43-019-31398

WELL NAME: MOON CYN 32-1  
 OPERATOR: NATIONAL FUEL ( N8060 )  
 CONTACT: HEGGIE WILSON

PHONE NUMBER: 435-647-9712

PROPOSED LOCATION:

NWSW 32 160S 210E  
 SURFACE: 1390 FSL 0927 FWL  
 BOTTOM: 1390 FSL 0927 FWL  
 GRAND  
 UNDESIGNATED ( 2 )

INSPECT LOCATN BY: / /		
Tech Review	Initials	Date
Engineering	DKD	7/29/03
Geology		
Surface		

LEASE TYPE: 3 - State  
 LEASE NUMBER: ML-48391  
 SURFACE OWNER: 3 - State  
 PROPOSED FORMATION: MRSN

LATITUDE: 39.36901  
 LONGITUDE: 109.63183

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Fed[] Ind[] Sta[3] Fee[]  
(No. 180250 )
- Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit  
(No. 49-123 )
- RDCC Review (Y/N)  
(Date: \_\_\_\_\_ )
- Fee Surf Agreement (Y/N)

LOCATION AND SITING:

- \_\_\_ R649-2-3.  
Unit \_\_\_\_\_
- \_\_\_ R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells
- R649-3-3. Exception
- \_\_\_ Drilling Unit  
Board Cause No: \_\_\_\_\_  
Eff Date: \_\_\_\_\_  
Siting: \_\_\_\_\_
- \_\_\_ R649-3-11. Directional Drill

COMMENTS: Needs Permit (07-08-03)

STIPULATIONS: + General Approval  
 ① Surface Casing Cement Step  
 ② Production Casing Shall be Cemented to minimum above Whatch (+2000')  
 ③ STATEMENT OF BASIS

T16S R21E

30

29

28

\* STATE 920-1

31

32

33

MOON  
CYN 32-1



ICE CANYON U  
ST 32-15\*

STATE 32-14  
x

SEGUNDO CANYON  
FIELD

SEGUNDO 2

T17S R21E

6

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SEGUNDO 23-4

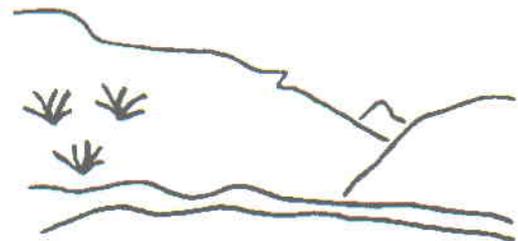
OPERATOR: ROYALE ENERGY INC. (N2465)

SEC. 32 T.16S, R.21E

FIELD: UNDESIGNATED (002)

COUNTY: GRAND

SPACING: R649-3-3 / EXCEPTION LOCATION



Utah Oil Gas and Mining

Wells

- GAS INJECTION
- GAS STORAGE
- LOCATION ABANDONED
- NEW LOCATION
- PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- TEMP. ABANDONED
- TEST WELL
- WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL

Unit Status

- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Field Status

- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED



PREPARED BY: DIANA MASON  
DATE: 19-JUNE-2003

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

OPERATOR: Royale Energy Inc  
WELL NAME & NUMBER: Moon Canyon #32-1  
API NUMBER: 43-019-31398  
LEASE: ML-48391 FIELD/UNIT: Wildcat  
LOCATION: 1/4, 1/4 NW/SW Sec: 32 TWP: 16S RNG: 21E 1390' FSL 927' FWL  
LEGAL WELL SITING: 460 F SEC. LINE; 460 F 1/4, 1/4 LINE; 460 F ANOTHER WELL.  
GPS COORD (UTM): X =617840E; Y =4358406 N SURFACE OWNER: SITLA

**PARTICIPANTS**

Dennis L. Ingram (DOGM); Floyd Bartlett (UDWR); Philip Nicoll (Royale Energy Inc.) Eric Noblitt (Consultant); Brent Stubbs (Dirt Contactor)

**REGIONAL/LOCAL SETTING & TOPOGRAPHY**

Well proposed on northwest side of Steer Ridge along northern rim of the Book Cliffs on long north/south finger with Willow Creek to the west and Billie Brown Canyon to east. Location is relatively flat but slopes gently toward the north. The Willow Creek Drainage system runs adjacent to this finger of Steer Ridge and has been cut approximately 900' feet deep but located 1.25 miles from location.

**SURFACE USE PLAN**

CURRENT SURFACE USE: Wildlife and domestic grazing

PROPOSED SURFACE DISTURBANCE: Have proposed 150 +/- feet of new access plus upgrading 2.8 miles of existing two-track road, approximately half of that road is BLM and the other half Sitla; plus location measuring 330'x 159' and reserve pit.

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: \_\_\_\_\_

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: Equipment shall be set on location pad. Pipeline along access road unless otherwise authorized.

SOURCE OF CONSTRUCTION MATERIAL: Native cut and fill unless gravel is need that shall be purchased from nearest commercial site.

ANCILLARY FACILITIES: None requested

**WASTE MANAGEMENT PLAN:**

Was submitted with Application to Drill to DOGM

**ENVIRONMENTAL PARAMETERS**

AFFECTED FLOODPLAINS AND/OR WETLANDS: N/A

FLORA/FAUNA: Pinyon/juniper and sagebrush habitat; elk and deer summer range, year round black bear, mountain lion, bobcat, rabbit, coyote, and other native birds and insects found in region.

SOIL TYPE AND CHARACTERISTICS: tan to brown fine grained sandy loam with underlying shale

SURFACE FORMATION & CHARACTERISTICS: Green River Formation

EROSION/SEDIMENTATION/STABILITY: Minor erosion with no stability problems anticipated.

PALEONTOLOGICAL POTENTIAL: None observed during onsite

**RESERVE PIT**

CHARACTERISTICS: Reserve pit proposed as 25'x 270'x 10' deep on southwest corner edge of location and upwind of wellbore. Operator claims pit size or shape might change according to the drilling contractors needs; however they will notify the division by Sundry notice if changes are needed.

LINER REQUIREMENTS (Site Ranking Form attached): 25 points

**SURFACE RESTORATION/RECLAMATION PLAN**

Reshape and contour location and reserve pit back to original condition unless otherwise authorized by Sitla at time of reclamation. Stock pile topsoil and woody debris together and utilize it for reclamation effort on reserve pit when closed and remaining material on location when plugged and reclaimed. Seed mixture was given by UDWR to Royale for Sitla at onsite as 15 pounds per acre and include: 3pd Siberian wheatgrass; 3pd Crested wheatgrass; 3 pd Thickspike wheatgrass; 3pd Intermediate wheatgrass; 1pd alfalfa; 1/2pd Forage kochia; and 1/2pd Wyoming big sagebrush.

SURFACE AGREEMENT: Yes

CULTURAL RESOURCES/ARCHAEOLOGY: yes, a Class 111 cultural resource inventory dated June 6, 2003 was submitted to the BLM Vernal Office and Sitla's State Office. Eric Noblitt was notified that Royale must provide a copy of the cultural/arch inventory to the division for our records.

**OTHER OBSERVATIONS/COMMENTS**

There weren't any fences, drainages, surface water, or water crossing associated with the new disturbance (or upgraded road) noted during the onsite meeting. Adjacent canyons were noted to east and west of locating but at a distance of over 1.0 mile. Surface vegetation onsite and along roadway were good and untouched by the wildfire of 2002, see photos of surface.

**ATTACHMENTS**

Photos of this location were taken and placed on file.

Dennis L. Ingram  
DOGM REPRESENTATIVE

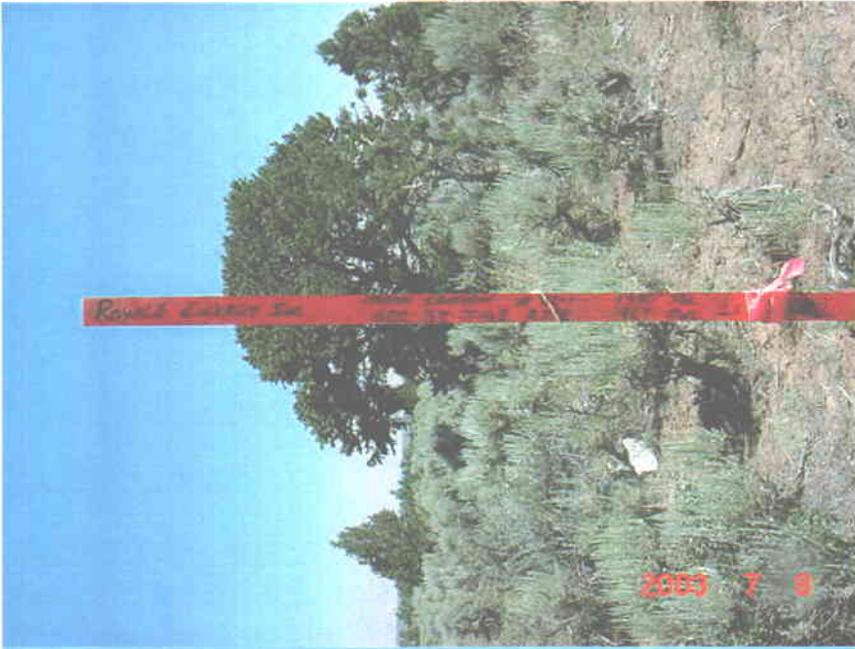
July 8, 2003 10:45 A.M.  
DATE/TIME

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

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

**Final Score**      25      (Level I Sensitivity)

Sensitivity Level I = 20 or more: total containment is required.  
Sensitivity Level II = 15-19: lining is discretionary.  
Sensitivity Level III = below 15: no specific lining is required.













**From:** Ed Bonner  
**To:** Mason, Diana  
**Date:** 7/10/03 11:53AM  
**Subject:** Well Clearances

The following wells have been given cultural resource clearance by the Trust Lands Cultural Resources Group:

EOG Resources  
Horse Point 1-34  
Horse Point 4-32

Royale Energy  
Moon Canyon 32-1

ConocoPhillips  
Utah 05-224d  
Utah 03-647  
Utah 03-648  
Utah 10-649

If you have any questions please give me a call.

**CC:** Baza, John; Garrison, LaVonne; Hill, Brad; Hunt, Gil

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

**OPERATOR:** Royale Energy Inc  
**WELL NAME & NUMBER:** Moon Canyon #32-1  
**API NUMBER:** 3-019-31398  
**LOCATION:** 1/4,1/4 NW/SW Sec: 32 TWP: 16S RNG: 21E 1390' FSL 927' FWL

**Geology/Ground Water:**

Royale is proposing 350 feet of surface casing in the proposed well. The base of the moderately saline water is at approximately 7,200 feet in this area. This location lies on the Green River Formation. The proposed location is in a recharge area for the aquifers of the upper Green River formation and fresh water can be expected to be found in the upper Green River. A search of Division of Water Rights records indicates no water wells within a 10,000 foot radius of the center of Section 32. The proposed casing and cement program should adequately protect any useable ground water.

**Reviewer:** Brad Hill **Date:** 07-17-2003

**Surface:**

The Roosevelt Field Office performed an onsite on said date to look at surface issues and take input from interested parties. Ed Bonner with Sitla was notified and invited to participate by email on June 30, 2003 and were not able to attend; Floyd Bartlett with UDWR was also invited by the division and was present to provide reclamation seed mix for surface area and address wildlife concerns. Bartlett says the surface area provides summer range for elk and mule deer but has year long potential for black bear (seed mixture for reclamation was given to Royale and included under reclamation section). There weren't any drainages, surface water, or other problems found or noted during the walkover at time of the onsite. Royale was also told to submit a copy of the arch/cultural report findings to the division. This location does require an exception spacing variance and is outside the window of tolerance for 40 acre spacing. The request for it was attached to Application to Drill submitted by Royale to the division. Because of underlying Green River shale and a limited water resource, the operator shall walk in reserve pit and break up rock then utilize a felt pad and 12 mil or thicker liner.

**Reviewer:** Dennis L. Ingram **Date:** July 9, 2003

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

1. A felt pad and 12 mil synthetic liner shall be used to line reserve pit because of underlying shale rock.

UTAH DIVISION OF WATER RIGHTS  
WATER RIGHT POINT OF DIVERSION PLOT CREATED THU, JUL 17, 2003, 8:36 AM  
PLOT SHOWS LOCATION OF 0 POINTS OF DIVERSION

PLOT OF AN AREA WITH A RADIUS OF 10000 FEET FROM A POINT  
FEET, FEET OF THE CT CORNER,  
SECTION 32 TOWNSHIP 16S RANGE 21E SL BASE AND MERIDIAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 4000 FEET

N O R T H

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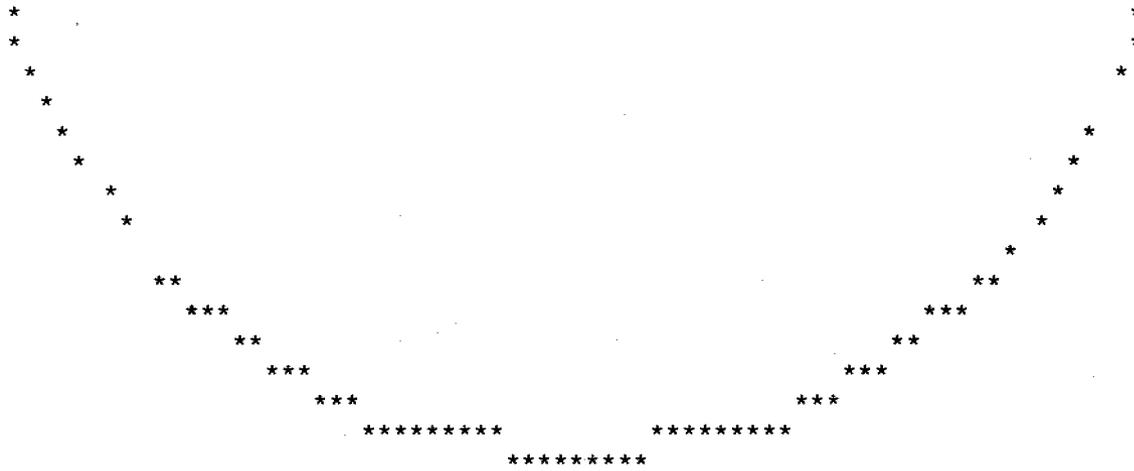
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Well name:	<b>07-03 Royale Energy Moon Cny 32-1</b>	
Operator:	<b>Royale Energy Inc.</b>	Project ID:
String type:	Surface	43-019-31398
Location:	Grand County	

**Design parameters:**

**Collapse**  
 Mud weight: 8,400 ppg  
 Design is based on evacuated pipe.

**Burst**

Max anticipated surface pressure: 2,594 psi  
 Internal gradient: 0.074 psi/ft  
 Calculated BHP: 2,620 psi  
 No backup mud specified.

**Minimum design factors:**

**Collapse:**  
 Design factor: 1.125

**Burst:**

Design factor: 1.00

**Tension:**

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

Tension is based on air weight.  
 Neutral point: 306 ft

**Environment:**

H2S considered? No  
 Surface temperature: 65 °F  
 Bottom hole temperature: 70 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 220 ft

Cement top: 64 ft

Non-directional string.

**Re subsequent strings:**

Next setting depth: 9,200 ft  
 Next mud weight: 8,500 ppg  
 Next setting BHP: 4,062 psi  
 Fracture mud wt: 19,250 ppg  
 Fracture depth: 2,800 ft  
 Injection pressure: 2,800 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	350 ✓	10.75 ✓	45.50 ✓	K-55 ✓	ST&C	350	350	9.875	31.6
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	153	2090	13.685	2620	3580	1.37	16	528	33.16 J

Prepared by: Clinton Dworshak  
 Utah Div. of Oil & Mining

Date: July 17, 2003  
 Salt Lake City, Utah

ENGINEERING STIPULATIONS: NONE  
 Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.  
 Collapse is based on a vertical depth of 350 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes.  
 Burst strength is not adjusted for tension.

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

Well name:

**07-03 Royale Energy Moon Cny 32-1**

Operator: **Royale Energy Inc.**  
String type: Intermediate

Project ID:  
43-019-31398

Location: Grand County

**Design parameters:**

**Collapse**

Mud weight: 9.200 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Environment:**

H2S considered? No  
Surface temperature: 65 °F  
Bottom hole temperature: 150 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 250 ft

**Burst:**

Design factor 1.00

Cement top: 3,853 ft

**Burst**

Max anticipated surface pressure: 2,958 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 3,690 psi

**Tension:**

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

Non-directional string.

No backup mud specified.

Tension is based on air weight.  
Neutral point: 5,256 ft

**Re subsequent strings:**

Next setting depth: 9,200 ft  
Next mud weight: 8.500 ppg  
Next setting BHP: 4,062 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 6,100 ft  
Injection pressure 6,100 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft <sup>3</sup> )
1	6100	7	23.00	J-55	LT&C	6100	6100	6.25	281.9
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	2915	3270	1.122	3690	4360	1.18	140	313	2.23 J

Prepared by: Clinton Dworshak  
Utah Div. of Oil & Mining

Date: July 17, 2003  
Salt Lake City, Utah

**ENGINEERING STIPULATIONS: NONE**

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.  
Collapse is based on a vertical depth of 6100 ft, a mud weight of 9.2 ppg. The casing is considered to be evacuated for collapse purposes.  
Burst strength is not adjusted for tension.

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

Well name:

**07-03 Royale Energy Moon Cny 32-1**

Operator: **Royale Energy Inc.**

String type: Production

Project ID:  
43-019-31398

Location: Grand County

**Design parameters:**

**Collapse**

Mud weight: 9.200 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Environment:**

H2S considered? No  
Surface temperature: 65 °F  
Bottom hole temperature: 209 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 220 ft

**Burst:**

Design factor 1.00

Cement top: 7,940 ft

**Burst**

Max anticipated surface pressure: 428 psi  
Internal gradient: 0.436 psi/ft  
Calculated BHP 4,923 psi

**Tension:**

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

Non-directional string.

No backup mud specified.

Tension is based on air weight.  
Neutral point: 8,883 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	10300	4.5	11.60	N-80	LT&C	10300	10300	3.875	238.8
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	4923	6350	1.290	4923	7780	1.58	119	223	1.87 J

Prepared by: Clinton Dworshak  
Utah Div. of Oil & Mining

Date: July 17, 2003  
Salt Lake City, Utah

**ENGINEERING STIPULATIONS: NONE**

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.  
Collapse is based on a vertical depth of 10300 ft, a mud weight of 9.2 ppg. The casing is considered to be evacuated for collapse purposes.  
Burst strength is not adjusted for tension.

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

Park City, UT. OFF: (801) 647-9712  
FAX: (801) 647-9713  
Grand Junction, CO. OFF: (970) 245-3951  
FAX: (970) 241-5730

# Stonegate Resources, LLC.

# Fax

**To:** Dustin Ducet/ UT DOGM                      **From:** Eric Noblitt  
**Fax:** 801.359.3940                                      **Pages:** 2 w/ cover  
**Phone:**    **Date:** July 28, 2003  
**Re: Royale Energy / Moon Canyon #32-1**                      **CC:**

**Urgent**       **For Review**       **Please Comment**       **Please Reply**       **Please Recycle**

● **Comment**

Eric Noblitt  
907-245-3951  
enoblitt@Bresnan.net

**RECEIVED**  
**JUL 28 2003**  
**DIV. OF OIL, GAS & MINING**

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

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-48391
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		7. UNIT or CA AGREEMENT NAME: Moon Canyon
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____	8. WELL NAME and NUMBER: Moon Canyon #32-1	
2. NAME OF OPERATOR: Royale Energy, Inc. 7676 Hazard Center, Suite 1500		9. API NUMBER: 43019 X 398
3. ADDRESS OF OPERATOR: CITY San Diego STATE CA ZIP 92108		10. FIELD AND POOL, OR WILDCAT: Wildcat
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1,390' FSL, 927' FWL		COUNTY: Grand
CONTRCT, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSW 32 16S 21E S		STATE: UTAH

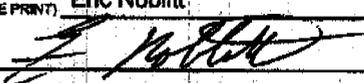
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

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

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

Royale Energy, Inc. proposes the following changes to the Moon Canyon #32-1 APD dated 6/12/2003:

Cement 7" intermediate casing with 990 sxs 50/50 Poz, 1.26 yield, 14.2 PPG cement (15% excess).

NAME (PLEASE PRINT) Eric Noblitt	TITLE Agent
SIGNATURE 	DATE 7/28/2003

(This space for State use only)

RECEIVED  
JUL 28 2003  
DIV. OF OIL, GAS & MINING

BOND NUMBER 180250  
PREMIUM: \$1,600.00  
Corporate Surety Bond

STATE OF UTAH  
BOND OF LESSEE

KNOW ALL MEN BY THESE PRESENTS, that we Royale Energy, Inc.  
of San Diego, California  
principal and American Contractors Indemnity Company as surety,  
are held and firmly bound unto the State of Utah in the sum of Eighty Thousand Dollars  
(\$ 80,000.00) lawful money of the United States to be paid to the School & Institutional Trust Lands Administration, as  
agent for the State of Utah, for the use and benefit of the State of Utah, and of any possessor or purchaser of any portion of the  
land covered by the hereinafter described lease heretofore sold or which may hereafter be sold with a reservation to the State  
of Utah, on the surface or of other mineral deposits of any portion of such lands, for which payment, well and truly to be made,  
we bind ourselves, and each of us, and each of our heirs, executors, administrators, successors, assignees, and assigns,  
jointly and severally by these presents.

Signed with our hands and sealed this 10th day of June, 2003.

The condition of the foregoing obligation is such that,

WHEREAS, The State of Utah, as Lessor, issued a(n) Oil and Gas  
lease, Lease Number ML 48391 and dated 1/26/00, to National Fuel Corporation  
as lessee (and said lease has been duly assigned under date of 1/10/03  
to ROYALE ENERGY, INC.) to drill for, mine, extract, and remove all of the  
Oil, Gas and associated Hydrocarbon Carbon deposits in and under the following described lands, to wit:

All SITLA Lands

NOW, THEREFORE, the principal and surety shall be obligated to pay all incises, rentals, royalties, costs of  
reclamation, damages to the surface and improvements thereon and any other damages, costs, expenses, penalties, interest or  
liabilities which arise by operation of or in connection with the above described lease(s) accruing to the Lessor and shall fully  
comply with all other terms and conditions of said lease, the rules, regulations, and policies relating thereto of the School &  
Institutional Trust Lands Administration, the Board of Oil, Gas and Mining, and the Division of Oil, Gas and Mining as they  
may now exist or may from time to time be modified or amended. This obligation is in effect even if the principal has conveyed  
part of its interest to a successor in interest. If the principal fully satisfies the above described obligations, then the surety's  
obligation to make payment to the State of Utah is void and of no effect, otherwise, it shall remain in full force and effect until  
released by the School & Institutional Trust Lands Administration.

Signed, sealed and delivered  
in the presence of:

[Signature]  
Witness

Royale Energy, Inc.  
[Signature] (SEAL)  
Don Hosmer, Principal President

[Signature]  
Witness

BONDING COMPANY  
BY American Contractors Indemnity  
Attest: [Signature]  
ROSAMBA ANDERSON FERNANDEZ, ATTORNEY-IN-FACT  
Resident Agent:

APPROVED AS TO FORM  
MARK L. SHURTLEFF  
Attorney General

Bonding Co. Address: 9841 AIRPORT BLVD., 9TH FLOOR  
LOS ANGELES, CA 90045

By [Signature]

Corporate Seal of Bonding Company Must be Affixed.





# American Contractors Indemnity Company

9241 Alport Blvd., 9th Floor, Los Angeles, California 90045

03-3682

## POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That American Contractors Indemnity Company of the State of California, a California corporation does hereby appoint,

**Susanne Anderson Fernandez**

Its true and lawful Attorney(s)-in-Fact, with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business and to bind the Company thereby, in an Amount not to exceed \$ 3,000,000.00. This Power of Attorney shall expire without further action on September 27, 2005.

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of AMERICAN CONTRACTORS INDEMNITY COMPANY at a meeting duly called and held on the 6th day of December, 1990.

"RESOLVED that the Chief Executive Officer, President or any Vice President, Executive Vice President, Secretary or Assistant Secretary, shall have the power and authority

1. To appoint Attorney(s)-in-Fact and to authorize them to execute on behalf of the Company, and attach the seal of the Company thereto, bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof and,
2. To remove, at any time, any such Attorney-in-fact and revoke the authority given.

RESOLVED FURTHER, that the signatures of such officers and the seal of the Company may be affixed to any such Power of Attorney or certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached."

IN WITNESS WHEREOF, American Contractors Indemnity Company has caused its seal to be affixed hereto and executed by its President on the 1st day of September, 2000.



AMERICAN CONTRACTORS INDEMNITY COMPANY

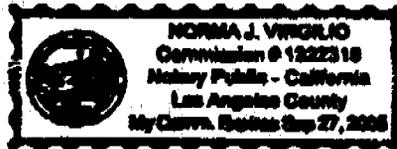
By: *Andy Faust*  
Andy T. Faust, Jr., Corporate President

STATE OF CALIFORNIA  
COUNTY OF LOS ANGELES

On this 1st day of September, 2000 before me, Norma J. Virgilio, a notary public, personally appeared Andy T. Faust, Jr., Corporate President of American Contractors Indemnity Company, to me personally known to be the individual and officer described herein, and acknowledged that he executed the foregoing instrument and affixed the seal of said corporation thereto by authority of his office.

WITNESS my hand and official seal

*Norma J. Virgilio*  
Norma J. Virgilio, Notary



I, JAMES H. FERGUSON, Corporate Secretary of American Contractors Indemnity Company, do hereby certify that the Power of Attorney and the resolution adopted by the Board of Directors of said Company as set forth above, are true and correct transcripts thereof and that neither the said Power of Attorney nor the resolution have been revoked and they are now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this 22nd day of JUNE, 2003.

Bond No. 180250

Agency No. 9003

*James H. Ferguson*  
JAMES H. FERGUSON, Corporate Secretary

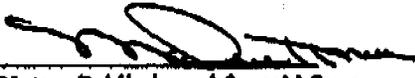
**STATE OF CALIFORNIA**

County of San Diego

On June 23, 2003, before me, the undersigned Notary Public, personally appeared Donald H. Hoamer, personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.



By   
Notary Public in and for said State



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

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

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

July 29, 2003

Royale Energy, Inc.  
7676 Hazard Center, Suite 1500  
San Diego, CA 92108

Re: Moon Canyon 32-1 Well, 1390' FSL, 927' FWL, NW SW, Sec. 32, T. 16 South,  
R. 21 East, 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.

Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby 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 43-019-31398.

Sincerely,

A handwritten signature in black ink, appearing to read "John R. Baza".

John R. Baza  
Associate Director

pab  
Enclosures

cc: Grand County Assessor  
SITLA

**Operator:** Royale Energy, Inc.  
**Well Name & Number** Moon Canyon 32-1  
**API Number:** 43-019-31398  
**Lease:** ML-48391

**Location:** NW SW                      **Sec.** 32                      **T.** 16 South                      **R.** 21 East

### Conditions of Approval

1. **General**

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

2. **Notification Requirements**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

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

The following are Division of Oil, Gas and Mining contacts and their work telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at (801) 538-5338
- Carol Daniels at (801) 538-5284 (spud)

3. **Reporting Requirements**

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

4. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.

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

6. Surface casing shall be cemented to the surface.

7. Production casing shall be cemented to minimum above Wasatch ( $\pm 2000'$ ).

Park City, UT. OFF: (801) 647-9712  
FAX: (801) 647-9713  
Grand Junction, CO. OFF: (970) 245-3951  
FAX: (970) 241-5730

CONFIDENTIAL

# Stonegate Resources, LLC.

# Fax

**To:** Dustin Ducet/ UT DOGM **From:** Eric Noblitt

---

**Fax:** 801.359.3940 **Pages:** <sup>3</sup> 2 w/ cover

---

**Phone:** **Date:** <sup>Aug. 8</sup> July 28, 2003

---

**Re:** Royale Energy / Moon Canyon #32-1 **CC:**

**Urgent**     **For Review**     **Please Comment**     **Please Reply**     **Please Recycle**

• **Comment**

Eric Noblitt

~~907-245-3951~~

970-245-3951

enoblitt@Bresnan.net

RECEIVED  
AUG 07 2003  
DIV. OF OIL, GAS & MINING

005

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

FORM 9

5. LEASE DESIGNATION AND SERIAL NUMBER:  
ML-48391

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:  
Moon Canyon

8. WELL NAME and NUMBER:  
Moon Canyon #32-1

9. API NUMBER:  
4301931398

10. FIELD AND POOL, OR WILDCAT:  
Wildcat

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. TYPE OF WELL OIL WELL  GAS WELL  OTHER CONFIDENTIAL

2. NAME OF OPERATOR:  
Royale Energy, Inc. 7676 Hazard Center, Suite 1500

3. ADDRESS OF OPERATOR: CITY San Diego STATE CA ZIP 92108 PHONE NUMBER: (619) 881-2800

4. LOCATION OF WELL  
FOOTAGES AT SURFACE: 1,390' FSL, 927' FWL COUNTY: Grand  
QTR/CTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSW 32 16S 21E S STATE: UTAH

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

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

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
Royale Energy, Inc. proposes the following change to the Moon Canyon #32-1 APD approved on 7/29/03:  
Modify the reserve pit from 25'X270'X10' deep to 70'X140'X8' deep. (See attached layout plat)

COPY SENT TO OPERATOR  
Date: 8-11-03  
Initials: CHO

NAME (PLEASE PRINT): Eric Noblitt TITLE: Agent  
SIGNATURE: [Signature] DATE: 8/7/2003

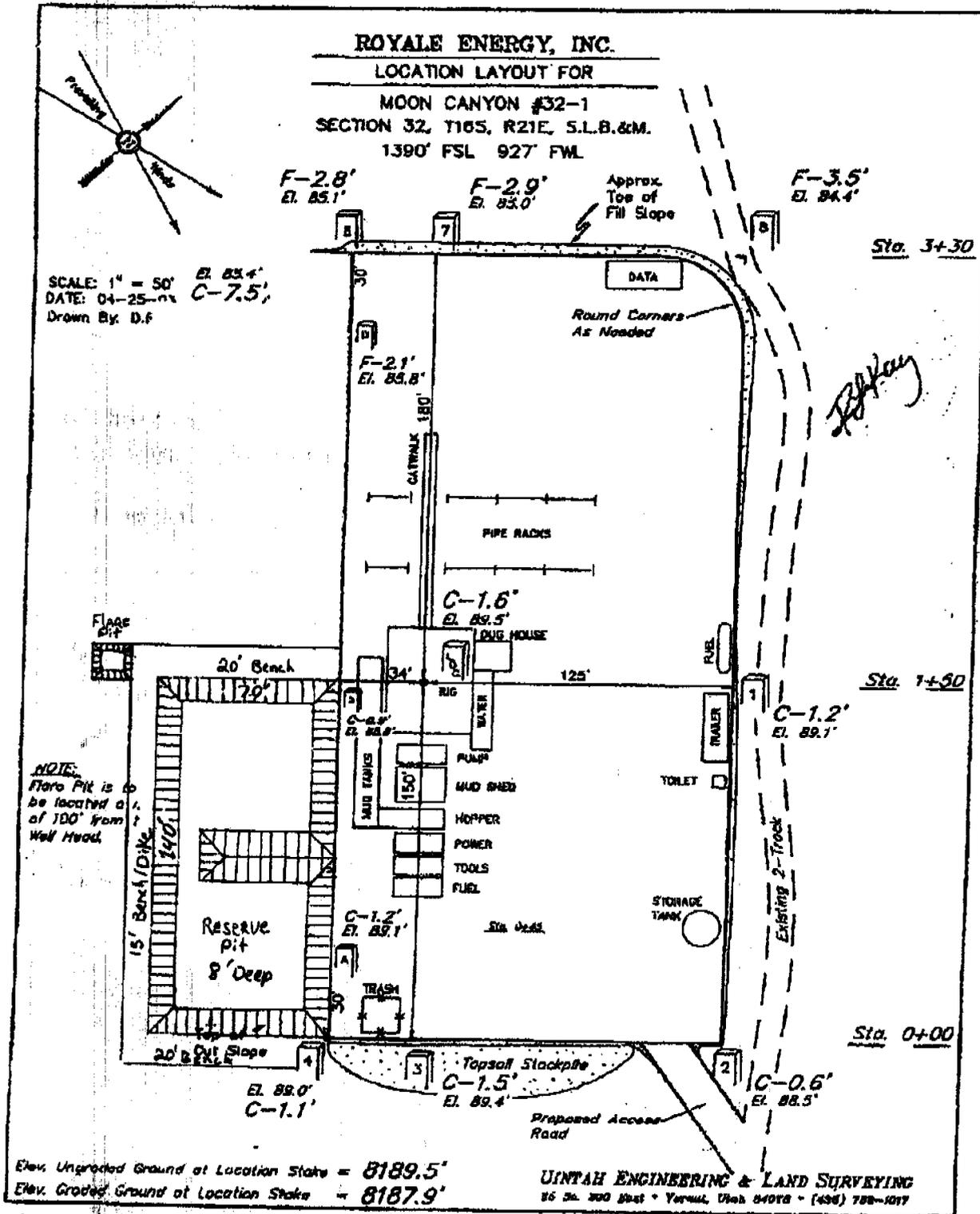
(This space for State use only)

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING (See Instructions on Reverse Side)

DATE: 8/8/2003  
BY: [Signature]

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AUG 07 2003  
DIV. OF OIL, GAS & MINING

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RECEIVED

AUG 07 2003

DIV. OF OIL, GAS & MINING

CONFIDENTIAL

## DIVISION OF OIL, GAS AND MINING

**SPUDDING INFORMATION**Name of Company: ROYALE ENERGY INCWell Name: MOON CYN 32-1Api No: 43-019-31398 Lease Type: STATESection 32 Township 16S Range 21E County GRANDDrilling Contractor BILL JUNIOR'S RIG # AIR**SPUDDED:**Date 09/14/03Time 8:30 AMHow ROTARY**Drilling will commence:** \_\_\_\_\_Reported by ERIC NOBLETTTelephone # 1-970-245-3951Date 09/16/2003 Signed: CHD

007

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

RECEIVED  
SEP 23 2003  
DIV. OF OIL, GAS & MINING

ENTITY ACTION FORM

Designated Operator:

Royale Energy, Inc.

Operator Account Number: N 2465

Address:

7676 Hazard Center Dr. Suite 1500

city San Diego

state CA

zip 92108

Phone Number: (619) 881-2892

for National Fuel (N8060)

Well 1

4301931398	Moon Canyon 32-1	nsw	32	16S	A/E	Grand
B	99999	13899	9/14/2003	9/29/03		
Comments: Drilling in Moon Canyon federal unit MRSN						

Well 2

Comments:						

Well 3

Comments:						

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Dale Hoffman

Name (Please Print)

Signature

Contracts Administrator

Title

9/23/2003

Date

*[Handwritten mark]*

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

008

**SUNDRY NOTICES AND REPORTS ON WELLS**

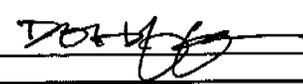
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-48391
2. NAME OF OPERATOR: Royale Energy, Inc. 7676 Hazard Center Dr., Suite 1500		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Moon Canyon
3. ADDRESS OF OPERATOR: CITY San Diego STATE CA ZIP 92108		7. UNIT or CA AGREEMENT NAME: Moon Canyon
PHONE NUMBER: (619) 881-2800		8. WELL NAME and NUMBER: Moon Canyon #32-1
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1,390' FSL, 927' FWL		9. API NUMBER: 4301931398
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSW 32 16S 21E S		10. FIELD AND POOL, OR WILDCAT: Wildcat
COUNTY: Grand		STATE: UTAH

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

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

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
Change name of Moon Canyon #32-1 well to Moon Canyon #1.

NAME (PLEASE PRINT) <u>Dale Hoffman</u>	TITLE <u>Contracts Administrator</u>
SIGNATURE 	DATE <u>10/8/2003</u>

(This space for State use only)

RECEIVED  
OCT 08 2003

ATTN: Dustin Ducet

009

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

CONFIDENTIAL FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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

5. LEASE DESIGNATION AND SERIAL NUMBER:  
ML-48391

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT OR CA AGREEMENT NAME:  
Moon Canyon

8. WELL NAME AND NUMBER:  
Moon Canyon #1

9. API NUMBER:  
4301931398

10. FIELD AND POOL OR WILDCAT:  
Wildcat

1. TYPE OF WELL  
OIL WELL  GAS WELL  OTHER \_\_\_\_\_

2. NAME OF OPERATOR:  
Royale Energy, Inc. 7676 Hazard Center Dr. Suite 1500

3. ADDRESS OF OPERATOR:  
CITY San Diego STATE CA ZIP 92108 PHONE NUMBER: (619) 881-2800

4. LOCATION OF WELL  
FOOTAGES AT SURFACE: 1,390' FSL, 927' FWL

COUNTY: Grand  
STATE: UTAH

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSW 32 16S 21E S

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: 12/3/2003	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion:	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input checked="" type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

Royale Energy, Inc. proposes to set a set a RBP at 7,300' +/- to isolate Dakota perforations 9,792'-10,055' (gross) and perforate and test the Mancos "B" 7,070'-7,140'. If commercial production is established from the Mancos, Royale Energy, Inc may commingle production from the Dakota. Royale will submit the appropriate sundry before commingling of production.

Verbal approval for this request was given by Dustin Ducet, Utah DOGM on 12/02/2003

NAME (PLEASE PRINT) Eric Noblitt TITLE Agent

SIGNATURE *[Signature]* DATE 12/2/2003

(This space for State use only)

APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING  
DATE: 12/3/03  
BY: *[Signature]*

COPY SENT TO OPERATOR  
Date: 12-4-03  
Initials: CHS

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DEC 03 2003  
DIV. OF OIL, GAS & MINING



STONEGATE  
RESOURCES, L.L.C.

CONFIDENTIAL

Eric Noblitt

December 16, 2003

Utah Division of Oil, Gas and Mining  
1594 West Temple, Suite #1210  
Box 145801  
Salt Lake City, UT. 84114-5801

RE: Completion Report  
Royale Energy, Inc. / Moon Canyon #1  
NWSW Sec.32-T16S-R21E  
Grand Co. UT  
API# - 4301931398

Dear Sir/Madam,

Enclosed, please find in duplicate the completion report for Royale Energy, Inc. Moon Canyon #1 well. Also enclosed are copies of the e-logs, geological report, mudlog, cementing log and gas analysis.

Royale Energy request that all information, i.e. sundries, reports, logs, gas analysis submitted to the Utah DOGM, be held **CONFIDENTIAL** for the maximum period allowed under DOGM Rules and Regulations.

If you have any questions, please feel free to contact me at any time.  
Thank you for your time in this matter.

Sincerely,

Eric Noblitt  
Agent, Royale Energy, Inc.

RECEIVED

DEC 22 2003

DIV. OF OIL, GAS & MINING

010

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

AMENDED REPORT [ ] FORM 8 (highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL [ ] GAS WELL [x] DRY [ ] OTHER [ ]
b. TYPE OF WORK: NEW WELL [x] HORIZ. LATS. [ ] DEEP-EN [ ] RE-ENTRY [ ] DIFF. RESVR. [ ] OTHER [ ]
2. NAME OF OPERATOR: Royale Energy, Inc. 7676 Hazard Center Dr. Suite 1500

5. LEASE DESIGNATION AND SERIAL NUMBER: ML-48391
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT or CA AGREEMENT NAME: Moon Canyon
8. WELL NAME and NUMBER: Moon Canyon #1
9. API NUMBER: 4301931398

3. ADDRESS OF OPERATOR: CITY San Diego STATE CA ZIP 92108 PHONE NUMBER: (619) 881-2800
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 1,390' FSL, 927' FWL AT TOP PRODUCING INTERVAL REPORTED BELOW: Same AT TOTAL DEPTH: Same

10 FIELD AND POOL, OR WILDCAT: Wildcat
11. QTR./QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSW 32 16S 21E S
12. COUNTY: Grand 13. STATE: UTAH

14. DATE SPUDDED: 10/3/2003 15. DATE T.D. REACHED: 11/2/2003 16. DATE COMPLETED: 12/10/2003 ABANDONED [ ] READY TO PRODUCE [x]

17. ELEVATIONS (DF, RKB, RT, GL): 8,189' GR, 8,204' KB

18. TOTAL DEPTH: MD 10,220 TVD 10,220 19. PLUG BACK T.D.: MD 10,175 TVD 10,175 20. IF MULTIPLE COMPLETIONS, HOW MANY? \* Two

21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) MUDLOG-12-2003
375'-6,220' SDL/DSN, HRI & BCS Rec 12-22-03
6,218'-10,220' SDL/DSN, HRI, LSS 6,500'-10,110' CBL-GR-CLL Rec 12-22-03
23. WAS WELL CORED? NO [x] YES [ ] (Submit analysis)
WAS DST RUN? NO [x] YES [ ] (Submit report)
DIRECTIONAL SURVEY? NO [x] YES [ ] (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

Table with columns: HOLE SIZE, SIZE/GRADE, WEIGHT (#/ft.), TOP (MD), BOTTOM (MD), STAGE CEMENTER DEPTH, CEMENT TYPE & NO. OF SACKS, SLURRY VOLUME (BBL), CEMENT TOP \*\*, AMOUNT PULLED. Rows include 15", 8-3/4", and 6-1/4" hole sizes.

25. TUBING RECORD

Table with columns: SIZE, DEPTH SET (MD), PACKER SET (MD). Row: 2-3/8" N-80, 9.739, 9.745.

26. PRODUCING INTERVALS (MDB)

Table with columns: FORMATION NAME, TOP (MD), BOTTOM (MD), TOP (TVD), BOTTOM (TVD). Rows: (A) Buckhorn, (B) Dakota, (C) Dakota Silt, (D) Mancos.

27. PERFORATION RECORD

Table with columns: INTERVAL (Top/Bot - MD), SIZE, NO. HOLES, PERFORATION STATUS. Rows: 10,042-10,055, 9,963-9,987, 9,792-9,820, 7,070-7,140.

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

Table with columns: DEPTH INTERVAL, AMOUNT AND TYPE OF MATERIAL. Row: NA.

29. ENCLOSED ATTACHMENTS:

30. WELL STATUS:

[x] ELECTRICAL/MECHANICAL LOGS [x] GEOLOGIC REPORT [ ] DST REPORT [ ] DIRECTIONAL SURVEY
[ ] SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION [ ] CORE ANALYSIS [ ] OTHER:

SI WOPL RECEIVED

31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE: 12/2/2003		HOURS TESTED: 22		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF: 41	WATER - BBL:	PROD. METHOD: Flowing
CHOKE SIZE: 16/64	TBG. PRESS. 18	CSG. PRESS. 0	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 45	WATER - BBL: 0	INTERVAL STATUS: Zones A,B,C

INTERVAL B (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:

INTERVAL C (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:

INTERVAL D (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE: 12/2/4003		HOURS TESTED: 8		TEST PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 0	WATER - BBL: 0	PROD. METHOD: Swab
CHOKE SIZE:	TBG. PRESS. 0	CSG. PRESS. 0	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 0	WATER - BBL: 0	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

Flared

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
Mancos "B"	6,705	7,137	Gas	Seo SS	5.674
Dakota/Buckhorn	9,798	10,060	Gas	Castlegate SS	5.986
				Mancos Shale	6.216
				Dakota Silt	9.798
				Morrison	10.055

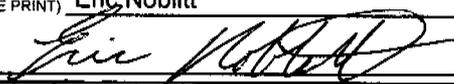
35. ADDITIONAL REMARKS (Include plugging procedure)

Intervals A,B&C (Lower Cretaceous) flow tested together.

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

NAME (PLEASE PRINT) Eric Noblitt

TITLE Agent

SIGNATURE 

DATE 12/15/2003

This report must be submitted within 30 days of

- completing or plugging a new well
- reentering a previously plugged and abandoned well
- drilling horizontal laterals from an existing well bore
- significantly deepening an existing well bore below the previous bottom-hole depth
- recompleting to a different producing formation
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940



**CONFIDENTIAL**

**ANALYTICAL TESTING LABORATORY**

685 W. Gunnison, Suite #108, Grand Junction, CO 81505-7249, (970) 242-6154, FAX (970) 245-9270

To: Royale Energy  
7676 Hazard Center D  
Suite 1500  
San Diego, CA 92108

DATE: DEC. 15, 2003  
NUMBER: MCA/RE 03-01

**GAS ANALYSIS**

MOON CANYON #1 SEC. 32-165-2

COMPANY: ROYALE

SUBMITTED BY: Eric Noblitt

SAMPLE IDENTIFICATION: DAKOTA PERFORMATIONS  
9792'-10055' (GROSS)

DATE SAMPLED: 12-01-03

DATE RECEIVED: 12-03-03

DATE TESTED: 12-12-03

CAL. NUMBER	NAME	MOLE % /100-X	IDEAL GAS SPECIFIC GRAVITY, G	IDEAL GROSS VALUE, DRY, (60F and 760mm Hg), H	HEATING BTU/SCF (60F & 760mm Hg)	COMPRESSIBILITY FACTOR @ STP, Z	SUMMA-TION FACTOR, SQR b	CONPR-ESS. F RATION, X SQR b	SP.GR. FRACT-ION, X G	HEATING CAL.	
										VALUE	LIQ./1000 SCF
1	HYDROGEN	0	0.0696	325.02	2.0006					0	0
2	PROPANE	0.106	1.5225	2517.5	0.982	0.1342	0.0001	0.0016	2.6685	0.0290	
4	ISO-BUTANE	0	2.0068	3252.7	0.9696	0.1744	0	0	0	0	
5	HYDROGEN SULFIDE	0	1.1765	637	0.9903	0.985	0	0	0	0	
6	N-BUTANE	0	2.0068	3262.1	0.9667	0.1825	0	0	0	0	
10	ISO-PENTANE	0	2.4911	4000.3	0.9482	0.2276	0	0	0	0	
11	N-PENTANE		2.4911	4009.6	0.9435	0.2377	0	0	0	0	
12	CARBON DIOXIDE	0.088	1.5195		0.9943	0.064	0.0000	0.0013			
14	ETHANE	0	1.0382	1768.8	0.9916	0.0917	0	0	0	0	
15	OXYGEN	0	1.1048		0.9992	0.027	0	0	0	0	
16	NITROGEN	0	0.9672		0.9997	0.0164	0	0	0	0	
17	METHANE	99.806	0.5539	1009.7	0.9981	0.0436	0.0435	0.5528	1007.7		
19		0	3.4596	5502.8	0.92	0.285	0	0	0	0	
20	C6+	0	2.9753	4756.2	0.92	0.283	0	0	0	0	
21		0	2.9753	4746	0.92	0.283	0	0	0	0	
TOTALS			100				0.0437	0.5557	1010.4	0.0290	

NOTES: Z = 0.9980 . IDEAL SPECIFIC GRAVITY OF MIXTURE = 0.5557 . REAL SPECIFIC GRAVITY OF MIXTURE = 0.5566

IDEAL GROSS HEATING VALUE, DRY BASIS, PER SCF (60F & 760mm Hg) = 1010.4 . REAL GROSS, DRY HEATING VALUE = 1012.3

TO CONVERT EITHER THE IDEAL OR REAL DRY, GROSS HEATING VALUE TO SATURATED BASIS @ STP, MULTIPLY EITHER BY 0.9826 .  
THE VALUES AND CALCULATION METHODS USED IN THIS REPORT ARE THOSE GIVEN IN GPA PUBLICATIONS 2145 - 82 AND 2172 - 76.

RESPECTFULLY SUBMITTED,

*Liese K. Thompson*  
LIESE K. THOMPSON  
CHEMIST

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DEC 22 2003

TOTAL P.01

# Big4

CEMENTING

(435) 789-1735

P.O. Box 1817, Vernal, Utah 84078

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DEPT. OF OIL, GAS & MIN.

249

### JOB SUMMARY REPORT

Customer <i>Novale Energy</i>		Date <i>9-15-03</i>		Ticket Number <i>1842</i>	
Lease & Well Name <i>Moon Canyon 32-1</i>		Sec.	Twp.	Range	County <i>Uinta</i>
Job Type <i>Surface</i>			Drilling Contractor		
Surface CSG Size <i>10 3/4</i>	Wt./Grade <i>40.5 J-55</i>	Thread <i>8rd</i>	Depth From <i>6</i>	To <i>361.0</i>	
Inter CSG Size	Wt./Grade	Thread	Depth From	To	
Prod. CSG Size	Wt./Grade	Thread	Depth From	To	
Liner CSG Size	Wt./Grade	Thread	Depth From	To	
TBG or D.P. Size	Wt./Grade	Thread	Depth From	To	

SKS	Materials Furnished	Slurry Wt. P.P.G.	Slurry Yield FT <sup>3</sup>	Water Gal./Sk.
<i>330</i>	<i>Premium Cement 270 gal to 1/4 1/2 Floor</i>	<i>15.6</i>	<i>1.18</i>	<i>5.2</i>

Float Equipment *Grid shoe J-slot float 2 Con. valves 2 weld*

*Limit Clamp*

Equipment & Personnel *10 Ben 241 Pit 21 Ed*

Notes: *30 bbl out to pit Float Failed*



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DIV. OF OIL, GAS & MINING

**CONFIDENTIAL**

# **ROYALE OPERATING CO.**

**MOON CANYON UNIT**

**1**

**API Well No.:**

**N/A**

**10/15/2003**

**GRAND COUNTY UTAH**

**7" TWO STAGE**

**Customer Representative:**

**RUSS BURDICK 970 640-3642**

**Halliburton Operator:**

**RICK CHAMBERS**

**Ticket No.:**

**2707302**

# **HALLIBURTON**



# HALLIBURTON

# JOB LOG

TICKET #  
**2707302**

TICKET DATE  
**10/15/2003**

BDA / STATE  
**COLORADO**

COUNTY  
**GRAND COUNTY UTAH**

REGION  
**NORTH AMERICA LAND**

MNA / COUNTRY  
**ROCKY MOUNTAIN**

PSL DEPARTMENT  
**CEMENTING SERVICES**

IBU ID / EMPL #  
**228283**

H.E.S. EMPLOYEE NAME  
**RICK CHAMBERS**

CUSTOMER REP / PHONE  
**RUSS BURDICK 970 640-3642**

LOCATION  
**GRAND JUNCTION, CO**

COMPANY  
**ROYALE OPERATING CO.**

APIUM #  
**N/A**

TICKET AMOUNT  
**\$32,679.13**

WELL TYPE  
**02 GAS**

JOB PURPOSE CODE  
**7522**

Description  
**7" TWO STAGE**

WELL LOCATION  
**CISCO 84515**

DEPARTMENT  
**ZONAL ISOLATION 10003**

LEASE NAME  
**MOON CANYON UNIT**

Well No.  
**1**

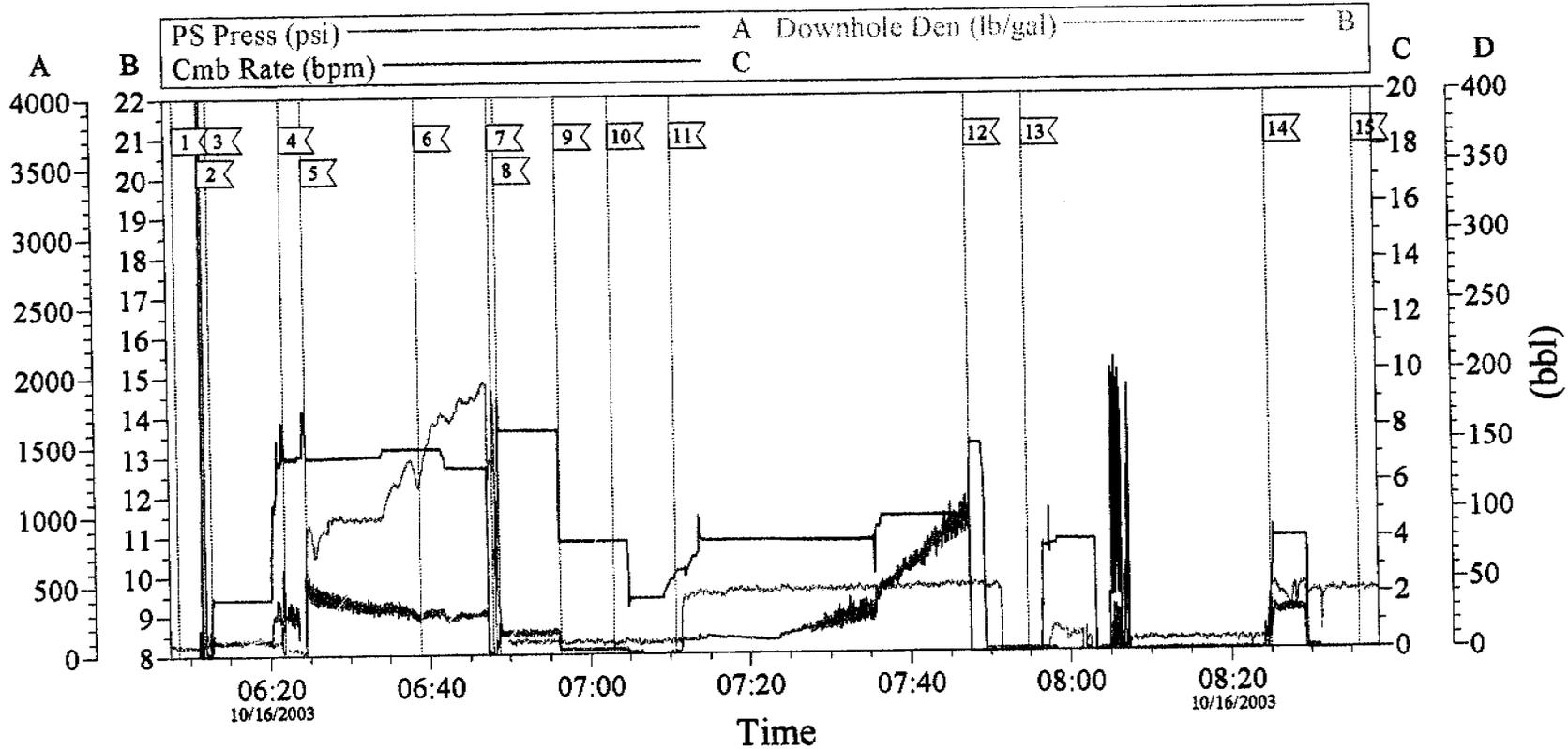
SEC / TWP / RING  
**SEC 32, T 16 S, R 21 E**

Job Description / Remarks

Chart No.	Time	Rate (BPM)	Volume (BBL)(GAL)	Pumps		Press. (PSI)		Job Description / Remarks
				T	C	Tbg	Csg	
	2130							CONDUCT IN YARD SAFETY MEETING LEAVE YARD
	0130							ARRIVE ON LOCATION 10/16/03
	0135							CONDUCT LOCATION ASSESSMENT SAFETY MEETING
	0215							SPOT EQP. AND RIG UP
	0345							RIG UP CEMENT HEAD TO CIRCULATE
	0600							CONDUCT PREJOB SAFETY MEETING
	0611					1	4300	TEST LINES
	0611	5.0	20.0		2		300	PUMP MUD FLUSH
	0621	7.0	10.0		2		400	PUMP FRESH WATER
	0624	7.0	106.0		2		500	PUMP LEAD CEMENT
	0638	7.0	54.0		2		350	PUMP TAIL CEMENT
	0647							SHUT DOWN DROP PLUG
	0648	8.0	60.0		2		175	PUMP FRESH WATER DISPLACEMENT
	0656	4.0	30.0		1		40	LOST CIRCULATION SLOWED RATE
	0703	4.0	20.0		1		30	CIRCULATION RETURNED
	0710	4.0	133.0		1		800	PUMP MUD DISPLACEMENT
	0745						1400	LAND PLUG
	0754							DROP BOMB
	0824	1.0	0.5		1		250	OPEN STAGE TOOL
	0825	4.0	10.0		1		250	CIRCULATE WELL
	0835							END FIRST STAGE
								RETURNS GOOD CIRCULATED 40 BBLs BACK TO SURFACE
								START SECOND STAGE
	1247							PUMP MUD FLUSH
	1248	4.0	20.0		2		100	PUMP FRESH WATER SPACER
	1257	5.0	10.0		2		150	PUMP LEAD CEMENT
	1258	5.0	180.0		2		340	PUMP TAIL CEMENT
	1330	5.0	10.7.		2		190	PUMP TAIL CEMENT
	1333							SHUT DOWN DROP PLUG
	1334	5.0	117.0		2		300	PUMP DISPLACEMENT
	1357	3.0	25.0		1		500	SLOW RATE
	1411						2300	LAND PLUG
	1414							END JOB
	1420							POST JOB SAFETY HUDDLE
	1515							POST TRIP SAFETY HUDDLE
								RETURNS GOOD THROUGH OUT JOB CIRCULATED 12 BBLs TO PIT

THANKS FOR USING HALLIBURTON  
RICK CHAMBERS, MIKE LEIST AND CREW

# 1ST STAGE



Event Log			
1 START JOB	06:08:34	2 TEST LINES	06:11:41
4 PUMP FRESH WATER SPACER	06:21:48	5 PUMP LEAD CEMENT	06:24:34
7 SHUT DOWN DROP PLUG	06:47:56	8 PUMP DISPLACEMENT	06:48:44
10 CIRC. RETURNED	07:03:00	11 PUMP MUD DISPLACEMENT	07:10:46
13 DROP BOMB	07:54:42	14 OPEN STAGE TOOL	08:24:55
		3 PUMP SPACER 1	06:12:43
		6 PUMP TAIL CEMENT	06:38:50
		9 SLOW RATE LOST CIRC.	06:56:17
		12 LAND PLUG	07:47:28
		15 END FIRST STAGE	08:35:59

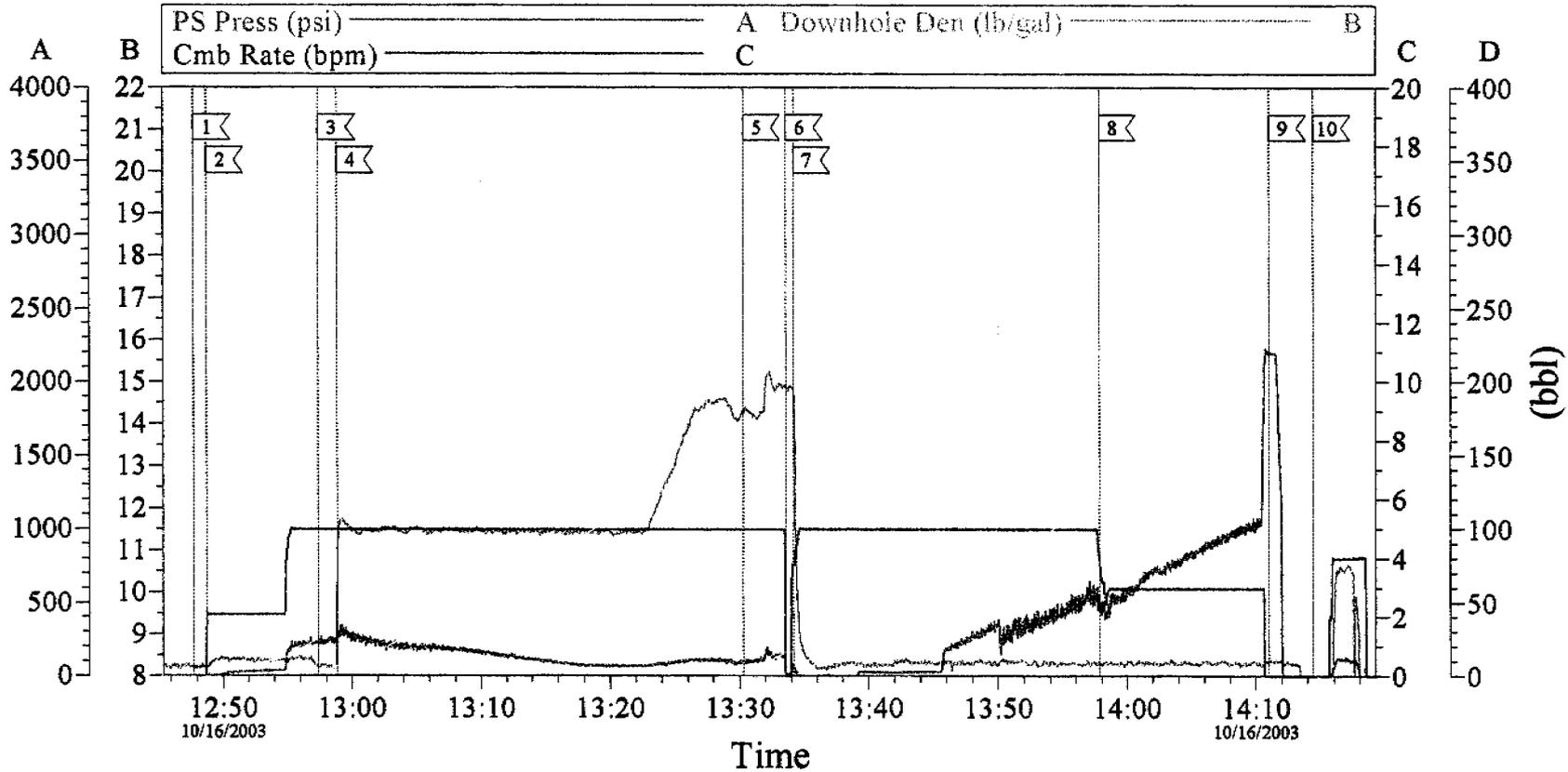
CUSTOMER: ROYALE OPERATING COMPANY  
 CEMENTER: RICK CHAMBERS  
 CO. MAN: RUSS BURDICK

JOB DATE: 10/16/03  
 ADC yes/no: YES  
 LEASE: ROYAL MOON CANYON ! GRAND

TICKET #: 2707302  
 REAL TIME yes/no: YES  
 WELL #: 1

**H** HALLIBURTON  
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 16-Oct-03 09:14

## 2ND STAGE



Event Log			
1 START SECOND STAGE	12:47:45	2 PUMP SPACER 1	12:48:44
3 PUMP FRESH SPACER	12:57:23	4 PUMP LEAD CEMENT	12:58:50
5 PUMP TAIL CEMENT	13:30:17	6 SHUT DOWN DROP PLUG	13:33:37
7 PUMP DISPLACEMENT	13:34:10	8 SLOW RATE	13:57:49
9 LAND PLUG	14:11:00	10 END JOB	14:14:25

CUSTOMER: ROYALE OPERATING CO.  
 CEMENTER: RICK CHAMBERS  
 CO. MAN: RUSS BURDICK

JOB DATE: 10/16/03  
 ADC yes/no: YES  
 LEASE: MOON CANYON UNIT

TICKET #: 2707302  
 REAL TIME yes/no: YES  
 WELL #: 1

**HALLIBURTON**  
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DIV. OF OIL, GAS & MINING

# **ROYALE OPERATING CO.**

**MOON CANYON UNIT**

**1**

**API Well No.:**

**N/A**

**11/1/2003**

**GRAND COUNTY UTAH**

**4 1/2" LONG STRING**

**Customer Representative:  
RUSS BURDICK 970-640-9841**

**Halliburton Operator:**

**LEX COOK**

**Ticket No.:**

**2744849**

# **HALLIBURTON**

# HALLIBURTON

CEMENTING SERVICE AND SALES

S.O.# 2744849



COMPANY <b>ROYALE OPERATING CO.</b>		FACILITY GRAND JUNCTION, CO	AFE/WORK ORDER <b>N/A</b>	DATE <b>10/30/03</b>
CONTRACTOR <b>UNION #7</b>		TOWN AND ZIP CODE <b>CISCO 84515</b>	LEGAL DESCRIPTION <b>SEC 32, T 16 S, R 21 E</b>	
LEASE <b>MOON CANYON UNIT</b>		WELL # <b>1</b>	COUNTY <b>GRAND COUNTY UTAH</b>	MILEAGE-RT <b>220</b>

**DIRECTIONS**  
**I-70 WEST TO WEST WATER EXIT #225, TR GO 0.2 MILES TR GO 2.0 MILES TO NATIONAL FUELS SIGN TL GO 5.4 MILES TO BLM SIGN TL GO 6.8 MILES STAY STRAIGHT GO 0.5 MILES TL GO 1.9 MILES STAY LEFT 6.9 MILES TO "Y" STAY RIGHT 5.3 MILES TO TOP OF HAY CANYON TL GO 9.5 MILES TO "Y" TL GO 3.3 MILES TO "Y" TR GO 5.7 TO "X" TL GO 2.8 MILES TO LOC.**

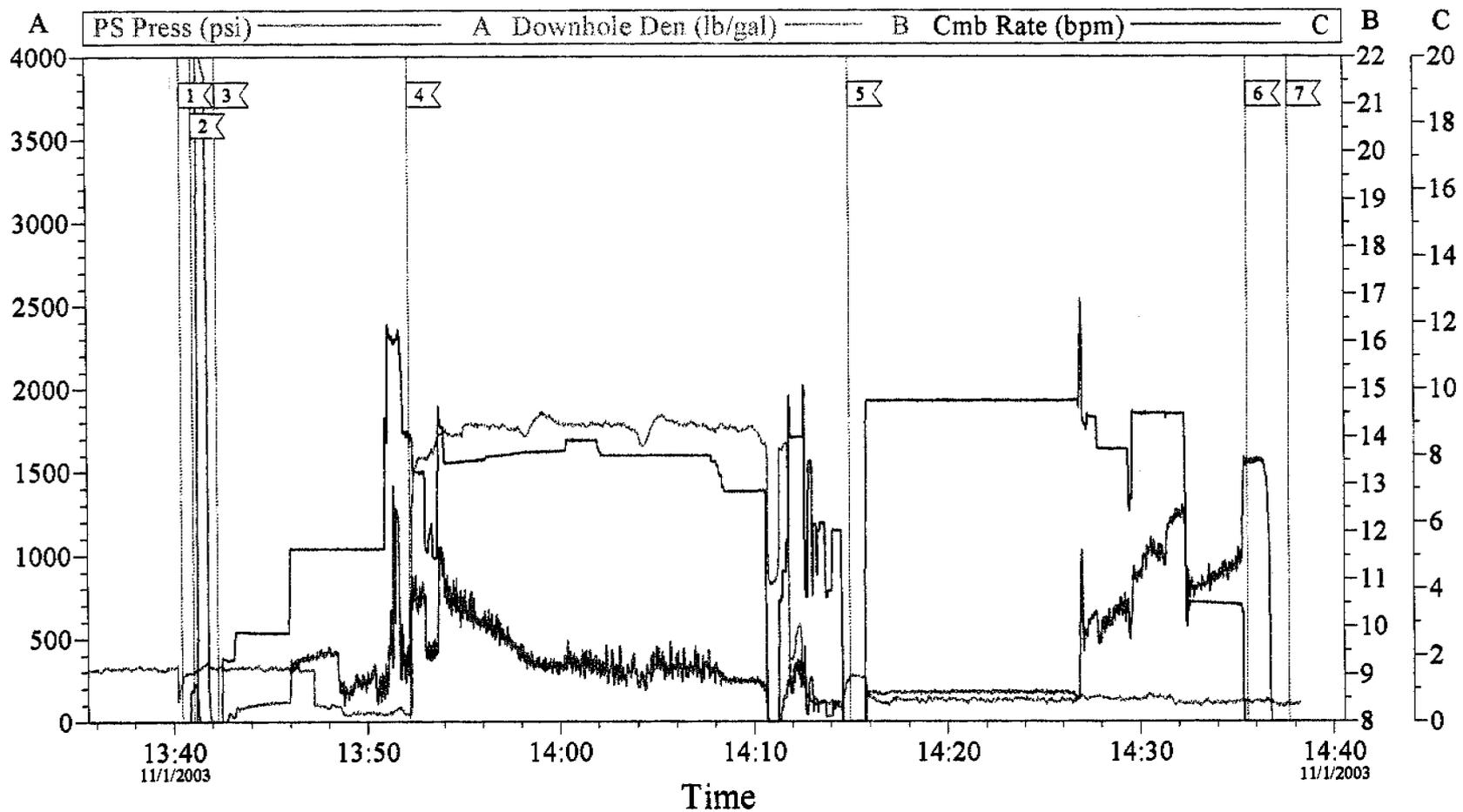
Pumping Services	<input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Longstring <input type="checkbox"/> Plug back <input type="checkbox"/> Liner <input type="checkbox"/> Squeeze <input type="checkbox"/> Acid <input type="checkbox"/> PTA <input type="checkbox"/> Other <input type="checkbox"/> Conductor									
	Casing Size/Weight	Thread	Tbng/DP Size	Thread	Plug. Cont.	Swage	Top Plug	Bottom Plug	% Excess	
	<b>4 1/2"</b>	<b>11.60#</b>	<b>8rd</b>		<b>YES</b>	<b>YES</b>	<b>100003140</b>	<b>NO</b>	<b>10% EXCESS</b>	
	Number and Type Units <b>1 RCM AND BULK EQP.</b>							BHST	BHCT	Hole Size
	Remarks <b>AUG 15 2003, 40%</b>							<b>191 F</b>		<b>6 1/4"</b>
							Depth-TMD	Depth-TVD	Mud Weight/Type	
							<b>10220</b>		<b>8.9#/gal</b>	

Tail	# of Sacks	Type	Additives		
	<b>610</b>	<b>G 50/50 POZ</b>	<b>2% Gel, 0.6% Lap-1, 0.3% CFR-3, 0.2% HR-5, 0.3% Versaset, 0.2% Super CBL</b>		
	Weight PPG	Yield Ft <sup>3</sup> /Sk	Water Gal/Sk		
	<b>14.20</b>	<b>1.23</b>	<b>5.40</b>		
	# of Sacks	Type	Additives		
	Weight PPG	Yield Ft <sup>3</sup> /Sk	Water Gal/Sk		
	# of Sacks	Type	Additives		
	Weight PPG	Yield Ft <sup>3</sup> /Sk	Water Gal/Sk		
Spacer or Flush	Quantity	Type	Additives		
	<b>20 BBLs</b>	<b>MUD-FLUSH</b>	<b>TAKE 4 SACKS MF1 AND 10 GALS MORFLO III</b>		
Spacer or Flush	Quantity	Type	Additives		
Other	Quantity	Type	Additives		
	<b>1100 LBS</b>	<b>KCL</b>	<b>TAKE 22 SACKS KCL, 1 1/2 SACKS PER 10 BBLs DISPLACEMENT</b>		

**Remarks/HSE**  
**TEST LINES 4000 PSI, 20 BBL MUD FLUSH, 10 BBL WATER, 134 BBL CEMENT, WASH PUMPS & LINES, DROP PLUG, 158 BBL DISPLACEMENT, 2000 PSI TO LAND PLUG, 320 BBL WATER NEEDED FOR JOB**

Sales Items	Casing Size	Casing Weight	Thread	
	<b>4 1/2"</b>	<b>11.60#</b>	<b>8rd</b>	
	Guide Shoe	Float Shoe	POF Float Collar	Insert Float Valve
	<b>1 EA 100004722</b>		<b>1 EA 100013965</b>	
	Centralizers - Number	Size	Type	<b>IMPERIAL BOW</b>
<b>15 EA 100004472</b>	<b>4 1/2" X 6 1/4"</b>			
Well Cleaners - Number	Type	MSC (DV Tool)	MSC Plug Set	
Limit Clamps	Weld-A	Other		
<b>1 EA 100004622</b>	<b>1 EA 100005045</b>			

Remarks <b>FE Set out at warehouse.</b>	
CUSTOMER REP / PHONE # <b>RUSS BURDICK 970-640-9841</b>	Satellite Phone
Call Taken By <b>DAVID CHEATHEAM 216-0240</b>	Operator or Driver Called
Time of Call <b>11/1/03 5:07</b>	Time Ready <b>10/31/03 W/C</b>
	Time



Event Log					
1	Start Job	13:40:27	2	Test Lines	13:41:03
3	Pump Spacer 1	13:42:18	4	Pump Tail Cement	13:52:14
5	Pump Displacement	14:15:00	6	Bump Plug	14:35:34
7	End Job	14:37:40			

CUSTOMER: CEMENTER: LEX COOK CO. MAN:	JOB DATE: ADC yes/no: YES LEASE:	TICKET #: REAL TIME yes/no: YES WELL #:
---	--	---

**HALLIBURTON**  
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01-Nov-03 14:59





**ROYALE ENERGY, INC**  
**MOON CANYON #1**  
**1390' FSL & 927' FWL**  
**SECTION 32, T16S, R21E**  
**GRAND COUNTY, UTAH**

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GEOLOGIC WELL REPORT  
by  
JASON G. BLAKE, RPG, CPG  
SUNBURST CONSULTING  
411 TAMARISK Drive  
BILLINGS, MONTANA  
(406) 259-4124

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## WELL SUMMARY

**OPERATOR:** ROYALE ENERGY, INCORPORATED

**NAME:** MOON CANYON #1

**LOCATION:** 1390' FSL & 927' FWL, SEC 32, T16S, R21E

**COUNTY/STATE:** GRAND COUNTY, UTAH

**ELEVATION:** GR 8189', KB 8204'

**SPUD DATE:** 10/2/03

**COMPLETION DATE:** 10/29/03

**DRILLING ENGINEER:** RUSS BURDICK, ENERGY OPERATING COMPANY

**WELLSITE GEOLOGY:** DAN POWELL/JASON BLAKE

**GAS DETECTION EQUIP:  
LOGGERS:** SUNBURST DIGITAL MSI SYSTEM  
JASON BLAKE, TOM GRIGGS

**CONTRACTOR:  
TOOL PUSHER:** UNION DRILLING COMPANY, RIG #7  
JIMMY ATCHESON

**HOLE SIZE:** 8 3/4" to 6220', 6 1/4" 6220' to 10,220'

**CASING RECORD:** 7" INTERMEDIATE TO 6219' W 855 SACKS IN 2 STAGES

**DRILLING MUD:  
ENGINEER:  
MUD TYPE:** M/I DRILLING FLUIDS, VERNAL, UT  
TOM RICE  
DAP/GEL/POLYMER

**ELECTRIC LOGS:** HALIBURTON, FARMINGTON, NM  
RUN 1: DIL, DENS/NEUT, SONIC; 375'-6216'  
RUN 2: DIL, DENS/NEUT, SONIC; ?????'-????'

**SAMPLES** 30' FROM 4000' TO 5200' & 6220'-9500'; 20' FROM 5200' TO 5550'; 10' FROM 5550' TO 6220' & 9500'-TD

**TOTAL DEPTH:** DRILLER- 10,220'; LOGGER- 10,217'

**DST'S/CORES:** NONE

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**DRILLING CHRONOLOGY****ROYALE ENERGY, INC.**  
**MOON CANYON #1**

DATE	DEPTH	DAILY	ACTIVITY
10/6/03	---	---	Sunburst geologic consulting with gas detection on location and rigged up at 1200 hours. Waiting on Pason connection to monitor penetration rate. Trip out to pick up PDC bit #3. Trip in hole, build mud volume and resume drilling @ 2320 hours. Drill 3965'-3995'.
10/7/03	3995'	697'	Drill 3995'-4692'.
10/8/03	4692'	553'	Drill 4692'-5245'.
10/9/03	5245'	262'	Drill 5245'-5482'. Circulate hole and condition mud. TOH, lay down jars, PU new bit (re-run bit #2) and TIH. Resume drilling at 2130 hours. Drill 5482'-5507'.
10/10/03	5507'	280'	Drill 5507'-5787. Mix mud and LCM.
10/11/03	5787'	150'	Mix mud and LCM. Lay down 8 joints drill pipe and TOH. PU NB#5, 8 drill collars and TIH. Resume drilling at 1320 hours. Drill 5787'-5937'.
10/12/03	5937'	203'	Drill 5937'-6140'.
10/13/03	6140'	80'	Drill 6140'-6220'. Circulate and condition hole. Pull to shoe of surface casing and work on rig. TIH and circulate and condition hole for logs.
10/14/03	6220'	0'	Condition hole for logs and chain out of hole. Rig up Haliburton and run Induction, Sonic & Density/Neutron logs. TIH.
10/15/03	6220'	0'	TIH-70 feet of fill. Circulate and condition hole for casing. TOH & lay down pipe. Run 6224' of 7", L-80 casing and land at 6219'. DV tool set at 3591'.
10/16/03	6220'	0'	Finish running 7" casing and rig up cementers. Cement 1 <sup>st</sup> stage with 455 sacks, open DV tool and cement second stage with 400 sacks. Circulate 12 bbls cement to pits. Nipple up BOP.
10/17/03	6220'	0'	Nipple up BOP, change out kelly and pressure test BOP. Rig up for 3 1/2" drillpipe and PU same. Change out #1 mud pump on rig and rig up.
10/18/03	6220'	0'	PU 3 1/2" drill pipe, tag and drill DV tool. RIH with rest of 3 1/2" drillpipe and tag cement. #1 pump still not operational. Wait on rig repair.
10/19- 22/03	6220'	751'	Wait on rig repairs-pump #1. Resume drilling @ 0100 hours, 10/22/03. Drill 6220'-6864. TOH 10 stands to shoe to work on pump. TIH & drill 6864'-6971'.
10/23/03	6971'	803'	Drill 6971'-7774'.

# DRILLING CHRONOLOGY (CONT.)

**ROYALE ENERGY, INC.**  
**MOON CANYON #1**

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DATE	DEPTH	DAILY	ACTIVITY
10/24/03	7774'	470'	Drill 7774'-8011'. Circ out and TOH for new teledrift tool. TIH to shoe & work on #1 pump. Trip to TD and resume drilling at 1830 hours. Drill 8011'-8244'.
10/25/03	8244'	1018'	Drill 8244'-9262'. #1 pump went down-work on pump. Pull out of hole to shoe of 7" casing and wait on pump repairs.
10/26/03	9262'	283'	Wait on pump repairs. Trip back to bottom and resume drilling at 1745 hours. Drill 9262'-9545'.
10/27/03	9545'	396'	Drill 9545'-9841'. Circulate out and TOH for NB#7. PU new downhole motor & NB #7 and TIH.
10/28/03	9941'	120'	Finish tripping in hole and resume drilling at 0430 hours. Drill 9941'-10,061'.
10/29/03	10,061'	159'	Drill 10,061'-10,220'. Circulate out and pull 10 stand short trip. Circulate & condition hole for logs.
10/30/03	10,220'	0'	TOH for logs. RU Halliburton and run wireline logs. Sunburst Consulting released at 1330 hours.

## BIT RECORD

**OPERATOR: ROYALE ENERGY, INC.**  
**WELL NAME: MOON CANYON #1**

RUN	SIZE	MAKE	TYPE	SERIAL #	IN	OUT	FTG	HR	FT/HR
1	8 3/4"	Reed	DSX205	104936	381'	3786'	3405'	48	70.74
2	8 3/4"	STC	F3H	MM8980	3786'	3965'	179'	12	14.92
3	8 3/4"	HTC	M75VPX	J59523	3965'	5482'	1517'	59.5	25.50
4 (rr #2)	8 3/4"	STC	F3HV	MM8980	5482'	5787'	305'	24.5	12.45
5	8 3/4"	STC	F3HV	MM8983	5787'	6220'	433'	44.5	9.73
6	6 1/4"	Reed	DSX146HGJW	105688	6220'	9941'	3721'	77.5	48.01
7	6 1/4"	Reed	SL53A	PA9150	9941'	10,220'	279'	36.5	7.64

**DEVIATION RECORD**

**OPERATOR: ROYALE ENERGY, INC.**  
**WELL NAME: MOON CANYON #1**

DEPTH	ANGLE	AZIM	DEPTH	ANGLE	AZIM	DEPTH	ANGLE	AZIM	DEPTH	ANGLE	AZIM
3724'	½°	---	6051'	1°	---	7963'	2 ½°	---	9534'	1°	---
4127'	½°	---	6467'	½°	---	8224'	2°	---	9863'	3°	---
4496'	½°	---	6851'	½°	---	8448'	2°	---	10,010'	2°	---
5137'	1°	---	7139'	½°	---	8762'	2°	---	10,220'	misrun	
5533'	1 ½°	---	7458'	3°	---	9182'	1°	---			

**MUD REPORT**

**OPERATOR: ROYALE ENERGY, INC.**  
**WELL NAME: MOON CANYON #1**

10/6/03	3965	8.6	25	1	1	1/1/1	7	-	-	200	0	TR	4.0	96.0
10/7/03	4367'	9.5	28	3	2	2/3/4	7	-	-	300	20	.25	5.0	95.0
10/8/03	5007'	9.2	30	5	5	5/6/6	7	-	-	200	20	.25	5.0	95.0
10/9/03	5482'	9.5	27	3	3	3/4/4	7	-	-	200	0	.25	5.0	95.0
10/10/03	5663'	9.7	28	2	2	1/2/2	7	-	-	200	0	.5	5.0	95.0
10/11/03	5855'	9.0	27	1	2	1/1/1	7	-	-	200	20	.25	4.0	96.0
10/12/03	6083'	9.7	31	4	3	5/7/7	7	-	-	100	20	.5	5.0	95.0
10/13/03	6220'	9.7	34	7	6	4/7/11	7	20	2/32	100	20	.5	5.4	94.6
10/14/03	6220'	WTR												
10/15/03	6220'	WTR												
10/16/03	6220'	WTR												
10/17/03	6220'	WTR												
10/18-21/03	CASING	&	RIG	RE-	PAIR									
10/22/03	6735'	8.7	27	1	2	1/1/1	8.0	18	1/32	500	0	TR	4.0	96.0
10/23/03	7436'	8.8	33	5	3	1/1/2	8.0	10	1/32	500	0	.25	4.6	95.4
10/24/03	8011'	8.9	30	4	2	1/1/2	8.0	10.4	1/32	500	0	.25	4.8	95.2
10/25/03	9167'	8.9	64	6	4	2/4/4	7.5	8.8	1/32	500	0	TR	4.8	95.2
10/26/03	NO	RPT	PUMP	RE-	PAIR									
10/27/03	9941'	9.0	32	5	3	1/1/1	7.5	9.0	1/32	600	0	.25	5.0	95.0
10/28/03	10,021'	8.9	34	7	3	1/1/2	7.5	8.8	1/32	600	0	.25	4.8	95.2
10/29/03	10,220' TD	8.9	32	6	2	1/3/4	7.5	14.0	1/32	600	0	.25	5.0	95.0

# FORMATION TOPS

CONFIDENTIAL

OPERATOR: ROYALE ENERGY, INC.  
WELL NAME: MOON CANYON #1

FORMATION NAME	SAMPLES		E-LOG			STRUCTURAL COMPARISON - SEGUNDO #2 SEC. 33-16S-21E
	MEASURED DEPTH	DATUM	MEASURED DEPTH	TRUE VERTICAL DEPTH	DATUM	
SEGO SS	5667'	2537	5674'	5674'	2530	-159
BUCK TONGUE SHL	5813'	2391	5810'	5810'	2394	-132
CASTLEGATE SS	5991'	2213	5986'	5986'	2218	-130
MANCOS TRASITION	6118'	2086	6114'	6114'	2090	---
MAIN MANCOS SHL	6225'	1979	6216'	6216'	1988	-94
MANCOS "B"	6705'	1499	6702'	6702'	1502	-99
BASE MANCOS	---	---	9916'	9916'	-1712	-132
COON SPR. SS "DAKOTA SILT"	9773'	-1569	9798'	9798'	-1594	-123
DAKOTA SS	9940'	-1736	9936'	9936'	-1736	-127
CEDAR MTN.	10,032'	-1828	10,012'	10,012'	-1808	-105
BUCKHORN CONGL.	10,049'	-1845	10,042'	10,042'	-1838	-115
MORRISON FM.	10,061	-1857	10,055'	10,055'	-1851	-108

# **GEOLOGICAL SUMMARY**

CONFIDENTIAL

## INTRODUCTION:

The Royale Energy, Moon Canyon #1 well was spud on October 2, 2003 on the southern flank of the Uinta Basin. The well was spud in the Green River Formation and reached a total measured depth of 10,220 feet on October 29, 2003 within the upper portion of the Morrison Formation.

Primary objectives of the Moon Canyon #1 well were the sandstones developed in the Dakota-Morrison section. The secondary objectives included the Castlegate Sandstone at the base of the Mesaverde and any sands developed in the Mancos "B". It was also requested by the operator to pay specific attention to the lithologies in the Lower Cretaceous, especially any occurrences of pedogenic limestones. Geological supervision began at 4000' within the Mesaverde section so as to monitor gas through the Castlegate Sandstone, and pick the top of the Mancos for intermediate casing.

The upper portion of the hole to approximately 5000 feet was drilled with a water and DAP/Polymer fluid system. Fluid losses ranging from 35 to 50 barrels per hour were encountered throughout the intermediate portion of the hole, which resulted in abundant recirculated cuttings and lost circulation material being present in the system. The hole was mudded up at 6150 feet prior to intermediate casing depth to condition hole for logs and casing. Below intermediate casing, the circulating fluid was again the DAP/polymer mud system. Water loss properties were targeted between 10 and 8 (cc's/30 min). This lower portion of the well was drilled with no downhole problems, and the DAP system appeared to do an excellent job stabilizing the Mancos shale section.

## ZONES OF INTEREST AND SHOWS:

The following are brief descriptions of the lithologies encountered while drilling. For detailed lithologic descriptions, the reader should refer to either the following section or the accompanying mud log.

### Mesaverde Formation

Geological supervision began at 4000 feet within the upper portion of the Mesaverde Formation. The interval from 4000 feet to 4750 feet exhibited abundant sandstone with thin interbedded shale horizons. The sandstones through this section were generally white to light gray, mottled dark gray to black (salt and pepper), were fine to medium grained with sub-angular to sub-rounded grains and moderately sorted. Most of these sands were composed of quartz, feldspar and lithic grains with quartz and minor calcite cement. They were also slightly pyritic in part, and exhibited common to abundant carbonaceous inclusions and shaly/coaly partings. No oil shows were noted in this section, however after beginning gas monitoring at 4550 feet, up to 41 units of gas were observed.

The interval from 4750 feet to 5000 feet was marked by an increase in varicolored shale and siltstone. The shale was light to medium to dark gray to brick red and yellow to maroon. They were blocky to sub platy, rarely micro-pyritic and slightly to non-calcareous, and exhibited common to abundant black carbonaceous inclusions. A few minor gas shows were noted through this section, but are of no commercial interest.

The interval from 5000 feet to 5375 feet was predominately sandstone, similar in appearance to that seen in the above interval, being white to light gray, speckled "salt and pepper", fine to medium grained, sub angular to sub rounded and moderately sorted. They were composed primarily of quartz with lessor amounts of feldspar and lithic grains. They were poorly to moderately cemented with quartz and minor amounts of calcite. A few minor shows were noted through this section and are summarized in the table below.

DEPTH	ROP	BG GAS	PEAK	C <sub>1</sub> (ppm)	C <sub>2</sub> (ppm)	C <sub>3</sub> (ppm)	C <sub>4</sub> (ppm)
5233'-40'	2.0/9/1.1	40 units	137 units	13,237	—	—	—
5244'-75'	1.2/1.1/1.1	50 units	118 units	11,458	323	Trace	—
5342'-46'	3.0/1.2/18	50 units	160 units	13,030	—	—	—
5405'-65'	2.5/2.5/10.0	85 units	277 units	25095	1418	1207	—

Another shaly section, likely equivalent to the Nelsen Formation, was drilled from 5375 feet to the top of the Sego at 5667 feet. This section was composed of varicolored shale with a few thin interbeds of sandstone. The shales were light to dark gray to gray green to red brown to yellow and maroon. They were blocky to sub laminated/sub platy, slightly firm to slightly soft and were non- to slightly calcareous. The red brown shale exhibited an earthy texture, and the gray and gray green shale exhibited a slightly waxy texture and was slightly micro-pyritic.

The sandstones were white to light gray to dark gray and brown in part, very fine to fine grained, sub angular to sub rounded to well rounded in part and moderately sorted. They were moderately cemented with quartz and calcite cement and exhibited common carbonaceous and lithic inclusions.

Three interesting gas shows were encountered in this section that are directly correlative to three coals or coaly zones drilled in the Segundo #23-4 well 1.5 miles to the east. After review of the logs, it was apparent that these gas shows were associated with coals, even though no coals were noted in the samples. These three gas shows are summarized in the table below.

DEPTH	ROP	BG GAS	PEAK	C <sub>1</sub> (ppm)	C <sub>2</sub> (ppm)	C <sub>3</sub> (ppm)	C <sub>4</sub> (ppm)
5535'-39'	2.5/7/3.5	105 units	2782 units	271,964	6276	—	—
5646'	3.2/1.0/8.1	120 units	2493 units	229,798	13,686	5717	—
5659'	8.0/1.0/3.5	95 units	2232 units	195,992	18,853	8429	—

#### Sego Sandstone 5667' (2537)

The Sego section was composed of interbedded sandstone and siltstone with a few shale stringers. The sandstones were white to light gray with a salt and pepper appearance, fine to very fine grained, sub-rounded to sub-angular in part and moderately well sorted. They were composed primarily of quartz with a minor constituent of lithic grains, and were moderately friable. Cement appeared to be primarily quartz with minor calcite. Rare spotty yellow gold fluorescence with a very weak cut in chlorothene was noted in the 5720 to 30 foot sample. The background gas dropped while drilling the Sego section.

#### Buck Tongue 5813' (2391)

The Buck Tongue appeared to represent a slight coarsening upwards sequence, as it was composed primarily of siltstone near the top, and became progressively more shaly toward the base. The siltstone was medium to dark brown in color, very fine grained, blocky and moderately to slightly firm. It included common micro-pyrite inclusions, possible dark gray shale or carbonaceous partings and was slightly to moderately calcareous.

The shales of the Buck Tongue were light to medium to dark gray with lesser amounts of red brown, yellow and cream colors. They were blocky to slightly laminated, soft to moderately soft, locally silty and slightly calcareous to non-calcareous. No shows of any significance were encountered in this interval.

Castlegate Sandstone 5991 (2213)

The Castlegate section was primarily sandstone with thin shale interbeds. The sandstone was white to clear with a salt and pepper appearance, fine to medium grained, sub-rounded and moderately well sorted. The composition of the sand was primarily quartz with a minor amount of dark lithic grains. Cementing ranged from moderate to poor, with much of the better-developed intervals being moderately friable. Carbonaceous inclusions, or possibly bitumen, were noted in some of the samples, and an increase in gas was noted while drilling the section. Two sands that exhibited the largest gas shows are summarized in the following table. These two sandstone intervals may actually be better identified as the Blackhawk Formation just below the Castlegate.

DEPTH	ROP	BG GAS	PEAK	C <sub>1</sub> (ppm)	C <sub>2</sub> (ppm)	C <sub>3</sub> (ppm)	C <sub>4</sub> (ppm)
6069'-72'	3.0/1.8/2.7	75 units	284 units	27,318	1111	---	---
6075'-83'	2.7/1.7/3.2	105 units	279 units	26,051	1879	---	---

Mancos Transition Zone 6118' (2086)

The Mancos "Transition Zone" was composed of interbedded siltstone and shale with a minor sandstone constituent. The shales seen through this section were medium to dark gray to black, red brown and yellow. They were sub blocky to laminated, soft to firm, non to slightly calcareous and locally carbonaceous. They were also slightly micro-pyritic. Due to the lost circulation problems encountered in the intermediate portion of the hole, much of the varicolored shale seen through this section may have been recycled cuttings from up the hole.

The siltstone in this section was dark brown to light brown to gray in color, was very fine grained, exhibited a blocky character and was non-calcareous. Minor amounts of sand size grains were incorporated within the siltstone.

Main Mancos Shale 6225' (1979)

The Mancos section from 6225 feet to 6705 feet was composed almost exclusively of a dark to medium gray shale that was sub platy to sub blocky, moderately soft and rarely micro-pyritic that exhibited a silty to grainy/earthy texture throughout. The background gas increased through this upper Mancos section, averaging around 95 to 125 units with the gas composed of C<sub>1</sub> through C<sub>3</sub>.

Mancos "B" 6705' (1499)

This section was characterized by an increase of silt size grains, and culminated in a section of fairly well developed sandstone between 7100 feet and 7160 feet. The siltstone through this section was light gray in color, displayed a blocky to platy appearance and was moderately soft to soft and moderately calcareous. The sandstone encountered at the base of the interval was light to medium gray to locally white in color, very fine grained, sub-rounded and moderately well sorted. They exhibited common dark gray lithic fragments and were moderately cemented with calcite cement. They displayed an argillaceous appearance, and effective permeability may be limited due to clay filled porosity. These two sandstones may be equivalent to the Emery Sandstone present in the section to the west (type section-Emery, Utah). Three gas shows were encountered, one at the top of the Mancos "B" section, and two shows from the sands at the base. The shows are summarized below:

DEPTH	ROP	BG GAS	PEAK	C <sub>1</sub> (ppm)	C <sub>2</sub> (ppm)	C <sub>3</sub> (ppm)	C <sub>4</sub> (ppm)
6705'-44'	1.0/1.0/1.0	175 units	475 units	38,621	6804	2135	---
7106'-18'	1.4/9/1.3	200 units	1459 units	119,816	21,350	4690	---
7128'-37'	1.3/8/1.2	115 units	1331 units	103,200	21,466	8424	---

The lower portion of the Mancos from 7565 feet to 9600 feet was an homogenous section of medium to dark gray shale that was moderately firm to slightly soft, blocky to sub-platy and moderately calcareous. The shale had a silty to grainy texture and displayed rare finely disseminated pyrite throughout.

Dakota Silt 9773' (-1569)

The lower portion of the Mancos section became progressively more silty in nature, with siltstone becoming the predominate lithology at the top of the Dakota Silt. The siltstone through this section was medium to dark gray, firm to slightly soft, moderately calcareous in part to non calcareous, and displayed varying amount of thin light gray sandstone stringers. These sandstones were very fine to occasionally fine-grained, sub angular to sub rounded, moderately sorted and moderately firm. They were also pyritic in part, slightly calcareous and clay filled. A fair gas show associated with the uppermost sandstone at 9800 feet is summarized in the following table.

DEPTH	ROP	BG GAS	PEAK	C <sub>1</sub> (ppm)	C <sub>2</sub> (ppm)	C <sub>3</sub> (ppm)	C <sub>4</sub> (ppm)
9798'-9810'	.7/9/7	350 units	2467 units	199,523	33,197	8507	1757

Dakota Sandstone 9940' (-1736)

Interbedded sandstone and shale characterized the upper Dakota Sandstone interval. The shales through the section were medium to dark gray in color, blocky and moderately firm and brittle with a grainy texture in part and a light gray streak. They were predominately non-calcareous to slightly calcareous in part and were slightly micro-pyritic in part. Common to abundant buff to light gray bentonite was also associated with the shale.

The sandstone intervals encountered were fine to medium to coarse grained, white to clear in color, angular to sub rounded and moderately sorted. Cementing was difficult to determine, as they were composed primarily of unconsolidated sand grains. The shows encountered in the Dakota sands are summarized in the table below.

DEPTH	ROP	BG GAS	PEAK	C <sub>1</sub> (ppm)	C <sub>2</sub> (ppm)	C <sub>3</sub> (ppm)	C <sub>4</sub> (ppm)
9966'-72'	6.5/1.8/6.7	35 units	408 units	37,500	3320	---	---
9987'-90'	6.5/2.5/7.0	65 units	1277 units	120,932	6768	---	---
10012'-15'	6.3/3.2/5.9	30 units	254 units	25,339	---	---	---

Cedar Mountain Fm. 10,032' (-1828)

The Cedar Mountain Formation was marked by a slight color change in the shale from the overlying Dakota section. In addition, there was a marked increase in the amount of bentonite. The shale was dark to medium to light gray to tan to pinkish in color, sub blocky, slightly firm to moderately soft with a waxy texture in part, and was slightly pyritic.

Buckhorn Member 10,049' (-1845)

The Buckhorn sandstone member of the Cedar Mountain was 10 feet thick and fairly well developed. It was light gray in color and slightly mottled dark gray in part due to lithic grain inclusions. It was fine to very fine-grained, sub angular, moderately well sorted and moderately firm. It appeared to be cemented primarily with quartz overgrowth cement with a minor constituent of calcite cement. The gas show in this sand is summarized in the next table.

DEPTH	ROP	BG GAS	PEAK	C <sub>1</sub> (ppm)	C <sub>2</sub> (ppm)	C <sub>3</sub> (ppm)	C <sub>4</sub> (ppm)
10050'-60'	8.0/1.9/10.0	28 units	219 units	20,055	1866	---	---

### Morrison Formation 10,061' (-1857)

Varicolored shale and an increase in bentonite characterized the Morrison Formation. The shales were red brown to pink to salmon to black and cream in color, platy in appearance with an earthy to slightly waxy texture. They were moderately soft to slightly firm and non to slightly calcareous. The bentonite through the section was a pale yellow to pale brown color and exhibited a bright yellow-orange mineral fluorescence.

### DISCUSSION & SUMMARY:

The Moon Canyon #1 was drilled to test the potential of the lower Cretaceous section, specifically the Dakota/Morrison section, which is productive in the Segundo Canyon area. A secondary objective was the Castlegate Sandstone at the base of the Mesaverde and any sand development in the Mancos "B" section. The Segundo #2 well, located 1½ miles to the east, was used for structural comparison.

The Castlegate Sandstone and underlying sands of the Blackhawk Formation were fairly well developed and displayed a minor amount of crossover on the Density Neutron logs. As no Rw values for these intervals were available for wells in this area, no Sw saturation calculations were performed. If this well is completed in a lower zone, the two sands in the Blackhawk at 6070 feet to 6085 feet may warrant testing before abandonment.

Two sands were encountered in the Mancos "B" section from 7100 feet to 7150 feet. They appeared to be clay filled with poor permeability based on sample examination, and log analysis indicates a very dirty character on the gamma ray, and a maximum of 9% porosity. It should be noted however, that many Mancos "B" wells in this southern end of the basin and along the Douglas Creek Arch have similar log characteristics.

The sandstone developed in the top of the Dakota Silt section, while having a fair associated gas show, was very fine-grained grading to a siltstone and displayed very little effective permeability on the logs. This zone is probably not prospective, but might warrant testing as casing is being run in the well.

The Upper Dakota Sandstone was poorly developed, being composed of light to dark gray argillaceous sandstone, and was fine grained, sub angular and moderately to poorly sorted. A fairly well developed coal was present at the base of the Upper Dakota sand interval. The two sands developed in the middle of the Dakota section appeared to have fair to good porosity in samples, and log analysis indicates they have reasonable permeability and cross-over on the density neutron log. These zones may be marginally commercial.

As is typical for wells in this area, the Buckhorn Member of the Cedar Mountain looks to be the most viable completion candidate. It shows on the density/neutron log to have about 5 feet of net 14% porosity, and an additional 5 feet of net 9% porosity.

The table below shows the result of a simplistic Archie evaluation of the sands through the Dakota and Morrison section. No shale correction was utilized in this evaluation, and for that reason, these numbers should be used only as a rough estimate of potential productivity. The  $R_w$  value utilized was from the Utah State database for produced waters, and is an average from 4 wells in the vicinity. Density porosity values were used in the calculations.

DEPTH	FORMATION	POR	Rt	$R_w$	Sw Sat.	Show
9965-72'	Middle Dakota	15%	110 $\Omega$	.08 $\Omega$	18%	408 units gas-no oil shows
9987-90'	Middle Dakota	11%	70 $\Omega$	.08 $\Omega$	31%	1277 units gas-no oil shows
10044-49'	Morrison	9%	50 $\Omega$	.08 $\Omega$	45%	219 units gas-no oil shows
10050'-54'	Morrison	14%	150 $\Omega$	.08 $\Omega$	17%	219 units gas-no oil shows

**CONCLUSIONS:**

The Buckhorn Conglomerate is the main producing interval in this area of the basin, and is the main candidate for commercial production in the Moon Canyon #1. The two thin sands in the Dakota section appear to have some potential, as do the sands in the Mancos "B" section, and could contribute additional reserves for the well.

Following log evaluation, and due to the desire of the operator to test the potential of the Mancos "B" in this area, the decision was reached to run 4½" production casing to total depth to attempt a completion in the Buckhorn. This will additionally result in a hole cased through the Mancos, allowing for a cased hole test of that horizon. Based on a comparison with production from surrounding wells, the Moon Canyon #1 will most likely result in a marginally economic well.

Jason G. Blake, CPG, RPG  
 Consulting Geologist

**SAMPLE DESCRIPTIONS**

**OPERATOR: ROYALE ENERGY, INC.**  
**WELL NAME: MOON CANYON #1**

DEPTH	LITHOLOGY
	4000-4030 SLTSTN grd to SS, lt gr-wht-mott dk gr, qtz, feld & lithic grns, fn grn, sb ang, md srt, qtz cem, sl pyr ip, cly fill, SHL, rd brn-gr-grn, sb blk, sl frm, bent tex ip, slty-grny ip, NFSOC
	4030-4060 SHL, brn-gr-oliv-wht, sl frm, sb blk-sb tab, non-sl calc, slty ip grd to sltstn, 30% LS, wht-crm, dens, sl frm, mic xln, argil grd to calc shl, min SS, wht-lt gr-mott dk gr, fn-md grn, ang, pr srt, lith grns, qtz cem, com mod yel min fluor, no shows
	4060-4090 pred SLTSTN, lt gr grn-gr, vfn grn, sb blk, sl frm-sft, sndy ip, non calc, com LS aa grd to calc SHL, crm-wht, sl frm, mic xln, dens-sl chky/rthy tex, scat dull yel min fluor, no shows, scat-com md-crs lse qtz grns
	4090-4120 SHL, varicol, rd brn-brn-gr grn-mar-yel-crm, sb blk, sl frm-md sft, rthy-grny tex ip, slty-sndy ip, sl-non calc
	4120-4150 SS, tn-lt gr-mott dk gr, S&P, fn-md grn, sb ang, md srt, sl fri ip, qtz-feld-lithic grns, qtz & minor calc cem, poss scat chlor, NFSOC
	4150-4180 SHL, varicol, rd brn-brn-gr grn-yel-mar, sb blk, sl frm, non-sl calc aa + SS aa, tn-lt gr-mott dk gr (S&P), fn-md grn, qtz & min calc cem, scat dull yel min FLUOR, no shows
	4180-4210 SHL, lt gr grn-gr, scat yel-rd-mar, sl frm-md sft, sb blk, slty-grny tex ip to bent tex ip,, mic pyr ip, pri non-calc
	4210-4240 SHL aa, varicol, pred gr grn-gr, sb blk, pri non calc + SS, congl, comp prim of crs-v crs grn ang CHT grd to md-crs grn qtz, clr-transl yel-tn-brn, occ blk, sl pyr ip, NFSOC
	4240-4270 50% SHL, lt gr-gr grn-scat brn-yel-mar, sb blk, sl bent tex ip to grny-rthy ip, non calc, 50% SS, lt gr-dk gr ip, vfn-fn grn, sb ang-sb rnd, md wl srt, com blk shl/coal ptgs, NFSOC, com CHT aa, transl yel, wht, gr, occ blk
	4270-4300 intrbd SHL & SS aa, SHL, lt gr-gr grn, sb blk, sl bent-rthy tex, non calc, SS, lt gr-tn, vfn-fn grn, sb ang-sb rnd, md wl srt, dk gr-blk inclus, pred non calc, NFSOC
	4300-4330 SS, lt-md gr-wht ip, mott dk gr-blk ip, fn-md grn, sb ang-sb rnd, pr-md srt, qtz, feld & lithic grns, scat dk gr shl and carb grn inclus, qtz cem, SHL grd to SLTSTN, lt gr-gr grn-rd-crm, sb blk, sl frm-md sft, sl-non calc, NFSOC
	4330-4360 SS aa, lt-md gr-wht ip, mott dk gr-blk, fn-md grn, sb ang-sb rnd, pr-md srt, qtz- feld & lithic grns, scat dk gr shl and carb inclus, qtz cem, NFSOC
	4360-4390 SLTSTN grd to SHL, tn-lt brn-gr ip, blk, sl frm, grny-rthy tex, com-abund blk carb inclus, scat pyr, mic ip, non calc, com-abund SS aa, NFSOC
	4390-4420 SS, wht-lt gr, mott dk gr-blk ip, S&P, fn-md grn, sb ang-sb rnd, md srt, qtz-feld & lithic grns, sl pyr ip, cly and sl calc cem, com SHL, gr-brk rd, blk, rthy ip, NFSOC

DEPTH	LITHOLOGY
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4420-4450 SS, wht-lt gr, mott dk gr-blk ip, S&P, fn-md grn, sb ang-sb rnd, md srt, qtz-feld & lithic grns, mnr pyr, cly and sl calc cem, com SHL, gr-brn-rd brn-blk, blkylam, sl-mod calc, grdg to SLTSTN, NFSOC

4450-4480 SS, wht-lt gr, mott dk gr-blk, S&P, md-fn grn, sb ang-sb rnd, md srt, qtz-feld & lithic grns, mnr pyr, cly and wk-mod calc cem, pr cmted, mnr SHL, gr-brn-rd brn-blk, blkyl, non- calc, grdg to SLTSTN, NFSOC

4480-4510 SHL grdg to SLTSTN, med-dk gr, rd brn-dk brn , blkyl-loc sublam, mod hd, com blk carb inclus, rr pyr, non calc, loc sandy, NFSOC

4510-4540 SS, wht-lt gr, dk gr-blk, trnslc-clr, S&P, md-fn grn, sb rnd-sb ang, md srt, qtz-feld, mnr lithic grns, mnr pyr, wk-mod calc cem, pr cmted, loc comm SLTSTN, gr-brn-gn, blkyl, v wk-non calc, NFSOC

4540-4570 SS, wht-lt gr, dk gr-blk, trnslc-clr, S&P, md-fn grn, sb rnd-sb ang, md srt, qtz-feld, mnr pyr, wk-loc mod calc cem, pr cmted, loc comm SLTSTN, gr-brn- gn, blkyl, v wk-non calc, loc SHL, NFSOC

4570-4600 SHL, med-dk gr-rd brn, blkyl- loc sublam, mod hd, com blk carb inclus, mnr fn grn pyr, non-v wk calc, grdg to SLTSTN

4600-4630 SS, wht-lt gr, mnr dk gr, trnslc-clr, fn-md grn, sb rnd-sb ang, md srt, qtz-feld, mnr pyr, wk-loc mod calc cem, pred pr cmted, loc comm SLTSTN, gr-brn- gn, blkyl, v wk-non calc, loc SHL, NFSOC

4630-4660 SLTSTN loc grdng to SHL, ltgry-gn-brn, blkyl-loc sublam, md hd-loc sft, abund blk carb inclus, mnr pyr, v wk-non calc

4660-4690 SS, wht-lt gr, mnr dk gr, trnslc-clr, fn-md grn, sb rnd-sb ang, md srt, qtz-feld, mnr pyr, wk-loc mod calc cem, mnr fluor msv calc, pred pr cmted, loc comm SLTSTN, gr-brn- gn, blkyl, v wk-non calc, NOC

4690-4710 SHL grdg to SLTSTN, rd brn-gr brn-gr, blkyl-loc poor lam, mod hd-sft, com blk carb inclus, rr fn grn pyr, non calc

4710-4730 SS, wht-lt gr, mnr dk gr-blk, trnslc-clr, md-fn grn, sb rnd-sb ang, md srt, qtz-feld, mnr pyr, mnr fluor msv calc, loc wk calc cem, comm SLTSTN, md-lt gr, blkyl, v wk calc, loc mnr SHL, NOC

4730-4750 SLTSTN, md-ltgry, blkyl, md pred sft, abund blk carb inclus, rr fn grn pyr, v wk calc

4750-4780 SHL, rd brn-brn, med-dk gr, poor lam- blkyl, mod hd-sft, com blk carb inclus, rr pyr, non-v wk calc, loc grdg to SLTST med gr-lt gn, mod hd-sft, non calc, com SS wht-lt gr, mnr cly and wk calc mtx

4780-4810 SLTSTN, md-ltgry-lt gn, sft- md hd, blkyl-sub lam, comm blk carb inclus, rr pyr, loc wk-non calc, loc grdg to SHL, red brn-brn, gy-blk, sublam blkyl, non calc

4810-4840 SHL, lt-md gr-occ yel-brk rd-mar, sb plty, sl frm-md sft, non calc + SLTSTN, md brn, blkyl, gmy-rthy tex, snd grn inclus, carb grn inclus, non calc, NFSOC

4840-4870 SHL aa, lt-md gr- yel-brk rd-mar, sb plty, sl frm-md sft, non calc, SLTSTN aa, md brn, blkyl, gmy-rthy tex, snd grn inclus, carb grn inclus, non calc, com SS, wht-lt gr, fn-vfn grn, sb ang, mod srt, com dk gr lithic grns, qtz & calc cem, NFSOC

4870-4900 pred SHL, lt gr grn-lt gr, occ rd brn, sb plty, md sft, sl bent tex, non calc

DEPTH	LITHOLOGY
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4900-4930 SHL aa, lt gr grn-lt gr, bcm more variocol, yel-brn-mar, sb plty, md sft, non calc + SS, wht-lt gr, sl S&P, fn-occ md grn, sb rnd-rnd ip, md sft, rr carb inclus, qtz & calc cem, NFSOC

4930-4960 SS, wht-lt gr, sl S&P, fn-md grn, sb ang-sb rnd, md srt, qtz-feld & lithic grns, qtz & mnr calc cem, SHL grd to SLTSTN, lt gr grn-gr-brn, sb blkly-sb plty, sl frm-md sft, rthy-grny tex ip, com dk gr-blk carb inclus, NFSOC

4960-4990 intrbd SS, SHL and SLTSTN aa, SS, wht-lt gr, fn-md grn, S&P ip, sb ang-sb rnd, md srt, SLTSTN, gr brn, blkly, sl frm-md sft, grny-rthy tex, sl-non calc, SHL, lt gr grn-gr, sb blkly, sl frm, sl mic pyr, non calc, NFSOC

4990-5020 SS, wht-lt gr, sl S&P, fn-md grn, sb ang-sb rnd, md srt, qtz-feld & lithic grns, qtz & mnr calc cem, SHL, lt gr grn-gr, sb tab, sl frm, non calc, sl bent tex, SLTSTN, gr brn, sb blkly-sb plty, sl frm-md sft, rthy-grny tex ip, com dk gr-blk carb inclus, NFSOC

5020-5050 SS, wht-lt gr, mott dk gr ip, fn-md grn, sb ang-sb rnd, md srt, com lse qtz grns, sl pyr ip, qtz & mnr calc cem, + SHL, lt gr grn-gr, sb tab, sl frm, non calc, sl bent tex, NFSOC

5050-5080 SS & SHL aa; SS, wht-lt gr, mott dk gr ip, fn-md grn, sb ang-sb rnd, md srt, com lse qtz grns, sl pyr ip, qtz & mnr calc cem, SHL, lt gr grn-gr, sb tab, sl frm, non calc, sl bent tex, NFSOC

5080-5110 SLTSTN, lt gr-dk gr brn, mssv- sb plty, md sft, pred wk calc, scat-com blk carb inclus loc grdg toSHL, rdbrn-dk brn, gr-dkgr-blk, sub lam-blky, frm- md sft, loc mnr carb inclus, NFSOC

5110-5140 SS, wht-lt gr, dk gr-blk, S&P, fn-md grn, sb ang-sb rnd, md srt, loc str-mod calc & cly mtx w/ comm carb inclus & lith frags, wk cmtd, com lse qtz grns, mnr pyr, NFSOC

5140-5170 SHL, med-dk gr, rd brn-brn, lt gn, sb lam, sft-mod hd, scat lith inclus, mnr fn grn pyr, non-wk calc, loc grdg to SLTSTN, NFSOC

5170-5190 SLTSTN, med-dk gr, rd brn, sub lam-blky, sft-mod hd, scat lith frags & carb inclus, rr pyr, non calc, NFSOC

5190-5210 SS, wht-lt gr, dk gr-blk, loc S&P, md-v fn grn, sb ang-sb rnd, md srt, loc mod-v wk calc & cly mtx w/ comm carb inclus & lith frags, wk cmtd, com lse qtz grns, mnr pyr, rr gyp, NFSOC

5210-5240 SS, wht-lt gr, dk gr-blk, md-fn grn, sb ang-sb rnd, md srt, locv fn-fn grn w/ mod-v wk calc & cly mtx, loc carb inclus & lith frags, wk cmtd, com lse qtz grns, mnr pyr, NFSOC

5240-5260 SS, med- lt gr, wht, dk gr-blk, v fn-fn grn, sb ang-sb rnd, pr-md srt, mod-v wk calc & cly mtx, loc carb inclus & lith frags, loc silty, wk cmtd, mnr pyr, com lse white-lt gr, med-fn grn qtz grns, NFSOC

5260-5280 SLTSTN grd tp SHL, med gr-gr brn, sub plty-blky, sft-frm, scat carb inclus, mnr- rrfn grn pyr, wk calc, NFSOC

5280-5300 SS, gr brn-lt gr, wht, dk gr-blk, v fn-fn grn, sb ang-sb rnd, pr-md srt, mod-non calc & cly mtx, loc carb inclus & lith frags, loc silty, wk cmtd, mnr pyr, com lse white-lt gr, med-fn grn qtz grns, NFSOC

5300-5325 SHL, med-dk gr, gr brn, lt gn, pr lam-blky, sft-mod hd, loc carb inclus, non-wk calc, loc grdg to SLTSTN, NFSOC

DEPTH	LITHOLOGY
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5325-5350 SS, wht-lt gr, dk gr-blk, fn-v fn loc med grn, sb ang-sb rnd, md srt, com lse grn, loc wk calc & cly mtx, scat carb inclus, carb lam & lith frags, wk cmted, mnr gr brn-gr, fn-v fn grn, pr srt, silty-sndy, NFSOC

5350-5380 SS, wht-lt gr, mnr dk gr-blk, fn-med grn, sb ang-sb rnd, md srt, com lse grn, mnr wk calc & cly mtx, scat carb inclus, wk cmted, v mnr gr brn-gr, fn-v fn grn, pr srt, silty-sndy, NFSOC

5380-5400 SHL, varicol, gr grn-gr-mar-yel, sb blk, sl frm-md sft, sl-non calc, bent/wxy tex ip, SLTSTN, dk brn, sl frm-md sft, grny/sndy tex, carb strks/shl ptgs, scat SS aa, NFSOC

5400-5420 varicol SHL grd to SLTSTN aa, gr grn-gr-mar-yel-rd, sb blk, sl frm-md sft, sl-non calc, bent/wxy tex ip, SLTSTN, dk brn, sl frm-md sft, grny/sndy tex, carb strks/shl ptgs, NFSOC

5420-5440 SHL, gr grn-gr-mar-yel-rd, sb blk, sl frm-md sft, sl-non calc, wxy tex ip, SLTSTN aa, dk brn, sl frm-md sft, grny/sndy tex, carb strks/shl ptgs, scat SS aa, NFSOC

5440-5460 SHL & SLTSTN aa + SS, wht-clr, md-occ fn grn, sb rnd, md srt, qtz ovrgrth cem, prob mod fri-abund lse qtz grns, NFSOC

5460-5480 SHL, pred lt gr grn-gr, sme brk rd-yel-brn-crm, sl-md frm-sl sft ip, sb blk-sb plty, wxy tex ip, pred non to sl calc, sl mic pyr ip, scat SLTSTN & SS aa, NFSOC

5480-5500 SHL, lt-dk gr, lt gnr, rd brn-yel brn, sft-md frm-loc md hd, sb blk-sb lam, v wk-non calc, mnr fn grn pyr, mnr sndy SLTSTN, mnr SS aa, NFSOC

5500-5520 SHL, rd brn-brn, lt gn, md hd-loc sft, sb blk-sb lam, non calc, rr fn grn pyr, mnr SS, v mnr sndy SLTSTN, NFSOC

5520-5540 SS stringers, wht-lt gr, mnr dk gr-blk-brn, v fn-fn grn, sb ang- sb rnd-loc well rnd, md srt, md hd, wk-mod calc cmted, com carb & lith inclus, gas susp from coal seam, NFSOC

5540-5560 SHL, rd brn-brn, lt gn, sft-loc md hd, sb blk-sb lam, non calc, loc slty & sndy, mnr SS aa, NFSOC

5560-5580 pred SHL, lt-md gr-rd brn-yel, blk, sl frm-sl sft, sl rthy tex ip (rd brn), sl mic pyr ip (gr shl), pred non calc-sl calc ip

5580-5600 SHL aa, lt-md gr-rd brn-yel, blk, sl frm-sl sft, sl rthy tex ip, sl mic pyr ip, pred non calc-sl calc ip

5600-5620 varicol SHL, gr-gr grn-brk rd-yel-brn, blk-sb plty, sl frm-md sft, sl rthy tex (rd shl), sl mic pyr (gr-gr grn shl), sl-non calc

5620-5640 SHL, varicol aa, gr-gr grn-brk rd-yel-brn, blk-sb plty, sl frm-md sft, sl rthy tex ip aa, sl mic pyr aa, sl-non calc

5640-5660 SHL, varicol, lt-md gr-gr grn-brk rd-yel-mar-brn, blk-sb plty, sl frm-sl sft, rthy tex ip, mic pyr ip, sl-non calc, gas from poss coal seams

5660-5680 SHL, varicol aa, lt-md gr-gr grn-brk rd-yel, incr dk brn, blk-sb plty, sl frm-md sft, mic pyr ip, dk brn shl-rthy tex, blk carb inclus-pos coaly, NFSOC

5680-5700 varicol SHL aa + SS, wht-lt gr, sl S&P, fn-vfn grn grd to SLTSTN ip, sb ang-sb rnd, md wl srt, qtz & lithic grns, md fri, qtz & sl calc cem, dul yel min FLUOR, no CUT

DEPTH	LITHOLOGY
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5700-5720 SS, wht-lt gr, clr, mnr dk gr-blk, v fn-fn grn, sb rnd-sb ang, md srt, mnr wk calc mtx, wk cmtd, scat carb inclus & lith frags, rr pyr, spotty org FLUOR, no CUT

5720-5740 SS, wht-lt gr, clr, mnr dk gr-blk, v fn-fn grn, sb rnd-sb ang, md srt, mnr wk calc mtx, wk cmtd, scat carb inclus & lith frags, spotty yel gld FLUOR, VSL CUT

5740-5760 SLTSTN, lt-md gr-gr gn, dk bnr-rd brn, blk-y-sb plty, md sft-fm, mnr-rr fn grn pyr, v wk-non calc, loc pos coaly, spotty org FLUOR, no cut

5760-5780 SHL, lt-md gn, md-dk gr, rd brn-yel, blk-y-sb lam, md sft-frm, rr fn grn pyr, mnr blk carb inclus + SS aa, lt gr, fn grn, md srt, spotty org-yel FLUOR, no CUT

5780-5800 SS, lt gr-wht-lt brn, S&P, pred fn-occ md grn, sb rnd, md wl srt, com dk gr lithic grns, scat blk carb ptgs, qtz & sl calc cem, v fnt yel-gld fluor, no cut

5800-5820 SS aa, lt-md gr-wht, mott blk ip, fn-occ md grn, sl-md fri, md srt, blk carb inclus, dul fluor aa + SHL, pred md gr-brn ip, sb blk-y, sl waxy tex, non calc

5820-5840 SLTSTN, md-dk brn, vfn grn, blk-y, md-sl frm, com mic pyr inclus, poss scat dk gr shl/carb ptgs, NFSOC, abund SS & SHL aa

5840-5860 SHL, lt-md gn, md-dk gr, rd brn-yel, blk-y-sb lam, md sft-frm, rr pyr, loc slty + SLTST aa md-dk brn, blk-y, md sft-frm, wk-loc str carb, spotty yel FLUOR, no CUT

5860-5880 SLTSTN, md-dk brn, pred sndy, blk-y, md-sft, scat dk gr-blk carb inclus, v scat yel-org FLUOR, no CUT, SS & mnr SHL aa

5880-5900 SHL, lt-md gn, md-dk gr, rd brn-yel, blk-y-sb lam, md sft-frm, loc fn grn pyr, loc mnr slty, loc mod calc, com SLTST aa, spotty yel-org FLUOR, no CUT

5900-5920 SLTSTN, md-dk brn, pred sndy, blk-y-sb plty, md-sft, scat blk carb inclus, v scat yel FLUOR, no CUT, SS & mnr SHL aa

5920-5940 SHL, md-dk gr, lt-md gr, rd brn-yel, blk-y-sb lam, sft-md sft, loc mnr slty, non-v wk calc, mnr SLTST aa, spotty yel-org FLUOR, no CUT

5940-5960 SHL, lt-md gr, md-dk gr, rd brn, blk-y-sb lam, sft-md hd, loc mnr slty, sl mic pyr ip, non-v wk calc, mnr SLTST aa, spotty yel-org FLUOR, no CUT

5960-5980 SHL, varicol, lt gr grn-gr-dk gr-brk rd-crm, blk-y-sb plty/lam ip, sl frm-sl sft, rthy tex ip, mic pyr ip, sl-non calc

5980-6000 SHL aa, varicol, blk-y-sl lam, sl-non calc + SS, wht-clr, S&P ip, fn-md grn, sb rnd, md wl srt, pred qtz w com lith grns, qtz ovrgrth cem-mnr calc, NFSOC

6000-6020 SS aa, wht-clr, S&P ip, fn-md grn, sb rnd, md wl srt, qtz & lithic grns, qtz ovrgrth cem, poss rr blk bit btwn grns, scat pcs bcm cly filled, scat dull min fluor, no cut

6020-6040 pred SS aa, wht-clr, S&P, fn-md grn, sb rnd, md wl srt, sl fri ip, pred qtz ovrgrth cem, mnr calc cem, rr blk bit aa, SHL aa, varicol, gr-gr grn-brk rd-gr-brn, blk-y-sl lam ip, sl-non calc, NFSOC

DEPTH	LITHOLOGY
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6040-6060 SS aa, wht-clr, fn-md grn, sl fri w no show, incr SHL, varicol, gr-gr grn-blk-brn-rd-yel, blkyl-sl tab, sl frm-sl sft, sl rthy tex ip, sl mic pyr ip, slty ip grd to SLTSTN ip, non-sl calc

6060-6080 85% SS, wht-clr, sl S&P ip, cln, pred fn-occ md grn, md wl srt, sb rnd, pred qtz-mnr lith grns, md wl cem ip to md fri ip, qtz cem, poss rr blk bit? btwn grns ip, dull min FLUOR, no CUT

6080-6100 SHL lt-md gr, md-dk-rd brn, gry brn, sb lam, non-v wk calc, loc carb, scat pyr, loc mnr sndy- slty, NFSOC

6100-6120 SS clr-wht, loc S&P, v fn-md grn, sb rnd, md hd, pred qtz cmt, v wk-md calc, loc mnr pyr, comm carb inclus, sppty yel FLUOR, no cut

6120-6140 SHL lt-dk gr, lt-md gr, rd brn, yel, sb lam-blky, v wk-loc md calc, loc carb, mnr loc fn grn pyr, loc slty grdg to SLTSTN, dk brn, md gr, non calc, loc sndy, NFSOC

6140-6160 SHL md-dk gr-blk, lt-md gr, rd brn, sb lam-blky, sft-frm, non-v wk calc, loc carb, rr mic pyr, SLTSTN, lt-md gr, blkyl, sft, sl-non calc, sl carb ip, NFSOC

6160-6080 SHL aa, md-dk gr-rd brn-gr grn, blkyl-sb plty, sl-non calc + SS, lt gr, vfn grn grd to SLTSTN, sb rnd, md wl srt, scat lithic grns, NFSOC

6080-6200 SLSTN grd to vfn grn SS ip aa, lt gr-lt brn, blkyl, vfn grn, md sft, sl calc ip, SHL, varicol, lt-md gr-gr grn-brk rd-yel, blkyl-sb plty, non calc-md calc ip, NFSOC

6200-6220 pred SHL, varicol, gr grn-gr-brk rd-brn-mar, blkyl, md-sl frm, mic pyr ip, non-md calc ip, com SLTSTN grd to vfn grn SS aa, NFSOC

6220-60 SH w/ str slt, dk gr-dk gr brn, sb plty, wk calc, loc v fn grn snd, mnr plty mic, rr fn grn pyr, wk sppty yel fluor, v wk strm cut

6260-90 SH, dk gr, dk brn, sb plty, wk calc, str slty-loc v fn grn snd, mnr fn grn-plty mic, rr fn grn pyr, grdg to loc fn grn SS strngs, sppty yel fluor, v wk strm cut

6290-6320 SH, dk gr-dk gr brn, dk brn, sb plty, wk calc, str slty-loc v fn grn snd, mnr fn grn-plty mic, rr fn grn pyr, sppty org yel fluor, vv wk strm cut

6320-50 SH, dk gr-brn-dk gr, sb plty-plty, wk calc, str slty-loc v fn grn snd, mnr v fn grn, rr fn-v fn grn pyr, uncom sppty yel fluor, no cut

6350-80 SHL, md-dk gr, sb blkyl-plty, md sft, slty/grny tex, rr mic pyr, non calc-sl calc/dolo, NFSOC

6380-6410 SHL aa, dk-md gr, plty-sb blkyl, md sft, grny/slty tex, rr mic pyr, sl calc/dolo, NFSOC

6410-40 SHL, md-dk gr, sb blkyl-plty, md sft, slty/grny tex, rr mic pyr, non calc-sl calc/dolo, NFSOC

6440-70 SHL aa, md-dk gr, sb blkyl-plty, md sft, slty/grny tex, rr mic pyr, non calc-sl calc/dolo, NFSOC

6470-6500 SHL, md-dk gr-gr brn, plty-sb blkyl, md sft, slty/grny tex, rr mic pyr, rr carb inclus, sl calc/dolo, NFSOC

6500-30 SHL aa, md-dk gr-gr brn, plty-sb blkyl, md sft, slty/grny tex, rr mic pyr, rr carb inclus, sl calc/dolo, NFSOC

DEPTH	LITHOLOGY
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6530-60 SHL, md-dk gr, sb blkly-pty, md sft, slty/grny tex, rr mic pyr, rr carb inclus, non calc-sl calc/dolo, NFSOC

6560-90 SHL, md-dk gr-gr brn, pty-sb blkly, md sft, slty/grny tex, rr mic pyr, rr carb inclus, sl calc/dolo, NFSOC

6590-6620 SHL aa, md-dk gr-gr brn, pty-sb blkly, md sft, slty/grny tex, rr mic pyr, rr carb inclus, sl calc/dolo, NFSOC

6620-50 SHL, md-dk gr-gr brn, pty-sb blkly, md sft, slty/grny tex, rr mic pyr, rr carb inclus, sl calc/dolo, NFSOC

6650-80 SHL, md-dk gr-gr brn, bcm lt gr ip, pty-sb blkly, md sft, slty/grny tex, sl calc/dolo, rr mic pyr, rr dk carb inclus, NFSOC

6680-6710 SHL aa, md-dk gr-gr brn, sl incr lt gr, pty-sb blkly, md sft, slty/grny tex, sl calc/dolo, rr mic pyr, rr dk carb inclus, NFSOC

6710-40 SHL aa, md-dk gr-gr brn, pty-sb blkly, md sft, sl calc, incr lt gr shl, bcm mre slty grd to vfn grn SLTSTN ip, pty-sb blkly, md sft-sft, md calc, spty dull yel FLUOR, no shows, no cut

6740-70 abund lt gr SHL grd to SLTSTN aa, vfn grn, pty-sb blkly, md sft-sft, md calc, SHL aa, md-dk gr-gr brn, pty-sb blkly, md sft, sl calc spty dull yel FLUOR, no shows, no cut

6770-6800 SHL grd to SLTSTN ip, lt-md-dk gr-gr brn ip, pty-sb blkly, md sft-sft, md calc, spty dull yel FLUOR, no shows, no cut

6800-30 pred SHL, lt-md-dk gr-gr brn ip, pty-sb blkly, md sft-sft, md-sl calc, grny/sly tex, slty ip grd to vfn grn SLTSTN aa ip, NFSOC

6830-60 SH grd to SLTSTN, dk gr-dk gr brn, sb pty-pty, md calc, str slty-loc v fn grn snd, rr fn grn pyr alng frx, loc fn grn SS strngs, NFSOC

6860-90 SH, dk gr-dk gr brn, sb pty-pty, md calc, str slty-loc v fn grn snd, rr fn grn pyr alng frx, grd to SLTSTN, loc fn grn SS strngs, NFSOC

6890-6920 SH grd to SLTST, dk gr, sb pty, md calc, str slty-loc v fn grn snd, rr fn grn pyr alng frx, loc fn grn SS, NFSOC

6920-50 pred SH, md gr-gr brn, sb pty, md calc, str sndy-sly, SS strngs, wht-clr, md-lt gr, v fn grn, md hd, qtz, calc & lith frags

6950-80 SLTSTN grd to SHL, dk-md gr, loc wht-clr, v fn grn, md hd, blkly-sb pty, md-str mtrx calc, str slty-shly, qtz, calc & lith frags, NFSOC

6980-7010 SH, dk-md gr, md hd, sb pty, md calc, str slty-sndy, loc grd to SS, dk-md gr, loc wht-clr, v fn grn, md-str calc, blkly-sb pty, qtz calc & lith frags, NFSOC

7010-40 SH grd to SLTSTN, dk-md gr, sb pty-pty, md calc, str slty- v fn grn sndy, rr fn grn pyr, com fn grn SS strngs, NFSOC

7040-70 SH, dk-md gr, sb pty-pty, md calc, str slty-v fn grn sndy, rr dissem fn grn pyr, grd to SLTSTN, com fn grn SS strngs, NFSOC

DEPTH	LITHOLOGY
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7070-7100 SH grd to SLTSTN, dk-md gr, blk-y-sb plty, md calc, str slty- v fn grn sndy, com fn grn SS strngs, NFSOC

7100-30 SH grd to SLTSTN, dk-md gr, sb plty-plty, md calc, str slty- v fn grn sndy, rr fn grn pyr, com fn grn SS strngs, ltgr-wht, mod-str calc, qtz, calc & lith frags, com mod bri yel-grn min FLUOR, no show or cut

7130-60 SS, dk-md gr, loc wht-clr, v fn grn, md hd, blk-y-sb plty, md-str mtrx calc, str slty-shly, qtz, calc & lith frags, grd to SH strngs, com mod bri yel-grn min FLUOR aa, no show or cut

7160-90 SS grd to SLTSTN, lt gr-wht, mott dk gr ip, vfn grn, sb rnd, md wl srt, com dk gr lith grns, mod calc cem, cly fill, com FLUOR aa, no show.

7190-7220 SS grd to SLTSTN aa + incr SHL, md-dk gr, sb blk-y-plty, md sft-sft, grny/slty tex, calc, decr min FLUOR w no show aa

7220-50 SHL, md-dk gr, sb blk-y-plty, md sft-sft, grny/slty tex, mod calc, mic pyr, NFSOC

7250-80 SHL aa, md-dk gr, sb blk-y-plty, md sft-sft, grny/slty tex, mod calc, mic pyr, lt gr pwdry strk, NFSOC

7280-7310 SHL aa, md-dk gr, sb blk-y-plty, md sft-sft, grny/slty tex lt gr pwdry strk, mod calc, micro pyr, NFSOC

7310-40 SHL, md-dk gr, sb blk-y-plty, md sft-sft, lt gr strk, grny/slty tex, mod calc, mic pyr, NFSOC

7340-70 SHL aa, md-dk gr, sb blk-y-plty, md sft-sft, grny/slty tex, mod calc, mic pyr, lt gr pwdry strk, NFSOC

7370-7400 SHL aa, md-dk gr, sb blk-y-plty, md sft-sft, grny/slty tex, mod calc, mic pyr, lt gr pwdry strk, scat lt gr vfn grn SS, sb rnd, md wl srt, calc cem, NFSOC

7400-30 pred SHL, md-dk gr, sb blk-y-plty, md sft-sft, grny/slty tex, mod calc, mic pyr, lt gr pwdry strk, scat SS aa, lt gr, vfn grn, sb rnd, md wl srt, calc cem, NFSOC

7430-60 SHL, md-dk gr-gr brn, sb blk-y-sb plty, sl frm-md sft, slty/rthy tex, rr mic pyr, lt gr strk, sl-md calc, NFSOC

7460-90 SHL aa, md-dk gr-gr brn, sb blk-y-sb plty, sl frm-md sft, slty/rthy tex, rr mic pyr, lt gr strk, sl-md calc, NFSOC

7490-7520 SHL aa, md-dk gr-gr brn, sb blk-y-sb plty, sl frm-md sft, slty/rthy tex, rr mic pyr, lt gr strk, sl-md calc, NFSOC

7520-50 SHL aa, md-dk gr-gr brn, sb blk-y-sb plty, md sft, slty/rthy tex, rr dissem mic pyr, lt gr strk, wk-md calc, NFSOC

7550-80 SHL aa, md-dk gr, gr brn sb blk-y-sb plty, md sft, occ frm- md hd, slty/rthy tex, rr- loc mnr v fn grn-mic pyr, lt gr strk, md calc, spotty org yel min FLUOR, no cut

7580-7610 SHL aa, md-dk gr-gr brn, sb blk-y-sb plty, pred md sft, loc frm- md hd, slty/rthy tex, rr v fn grn-mic pyr, lt gr strk, md-str calc, spotty org yel min FLUOR assoc w/ gn gr bent SHL, no cut

7610-40 SHL aa, md-dk gr-gr brn, sb blk-y-sb plty, pred md sft-loc frm, slty/rthy tex, rr-loc mnr dissem-fn grn pyr, lt gr strk, md calc, spotty org yel min FLUOR, no show or cut

DEPTH	LITHOLOGY
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7640-70 SHL aa, gr brn, md-dk gr, sb blkly-sb plty, sft, slty/rthy tex, rr-loc mnr dissem-fn grn pyr, lt gr strk, md-str calc, loc mnr wht calc micrvng, spotty org yel min FLUOR assoc w/ gn gr SH, no show, no cut

7670-7700 SHL aa, md-dk gr-gr brn, sb blkly-sb plty, md sft, slty/rthy tex, rr dissem pyr, lt gr strk, md calc, spotty org yel min FLUOR , no cut

7700-30 SHL aa, md-dk gr-gr brn, sb blkly-sb plty, md sft, loc frm-md hd, slty/rthy tex, rr dissem pyr, lt gr strk, md-str calc, spotty org yel min FLUOR assoc w/ gn gr SH, no cut

7730-60 SHL aa, md-dk gr-gr brn, sb blkly-sb plty, frm-md hd, slty/ rthy tex, rr-loc mnr dissem pyr, lt gr strk, wk-md calc, NSFOC

7760-90 SHL aa, md-dk gr-gr brn, sb blkly-sb plty, frm, slty/ rthy tex, rr dissem pyr, lt gr strk, md calc , spotty org yel min FLUOR assoc w/ gn gr SH, no cut

7790-7820 SHL aa, md-dk gr-gr brn, sb blkly-sb plty, frm, slty/ rthy tex, rr dissem pyr, lt gr strk, md calc , NSFOC

7820-50 SHL aa, md-dk gr-gr brn, sb blkly-sb plty, frm, slty/ rthy tex, rr dissem pyr, lt gr strk, md calc , NSFOC

7850-80 SHL aa, md-dk gr-gr brn, sb blkly-sb plty, frm, slty/ rthy tex, rr mic pyr, lt gr strk, md calc , tr org yel min FLUOR assoc w/ gn gr bent SHL, no cut

7880-7910 SHL aa, gr brn, md-dk gr, sb blkly-sb plty, frm-loc md hd, slty/ rthy tex, rr mic-fn grn pyr, lt gr strk, md calc , spotty org yel min FLUOR, no cut

7910-40 SHL aa, md-dk gr-gr brn, sb plty-sb blkly, frm, slty/ rthy tex, rr mic pyr, lt gr strk, str-md calc , tr org yel min FLUOR assoc w/ gr-gn gr SH, no cut

7940-70 SHL aa, md-dk gr-gr brn, sb plty-sb blkly, frm-loc md hd, slty/ rthy tex, rr mic pyr, lt gr strk, md calc , tr org yel min FLUOR , no cut, rr v fn grn SS

7970-8000 SHL aa, md-dk gr-gr brn, sb plty-sb blkly, frm, slty/ rthy tex, rr mic pyr, lt gr strk, md calc , tr org yel min FLUOR , no cut

8000-30 SHL aa, md-dk gr-gr brn, sb plty-sb blkly, frm-loc md hd, slty/ rthy tex, rr mic- v fn grn pyr, lt gr strk, md calc , tr org yel min FLUOR , no cut, rr v fn gr SS

8030-60 SHL aa, md-dk gr-gr brn, sb plty-sb blkly, frm-loc md hd, slty/ rthy tex, rr mic pyr, lt gr strk, md-str calc , rr v fn gr SS, NFSOC

8060-90 SHL aa, gr brn, md-dk gr, sb plty-sb blkly, md hd-frm, slty/ rthy tex, rr mic pyr, lt gr strk, md calc , rr v fn gr SS, NFSOC

8090-8120 SHL aa, gr brn, md-dk gr, sb plty-sb blkly, md hd-frm, slty/ rthy tex, lt gr strk, md calc, NFSOC

8120-50 SHL aa, gr brn, md-dk gr, sb plty-sb blkly, frm, slty/ rthy tex, lt gr strk, md calc, NFSOC

8150-80 SHL aa, md-dk gr-gr brn, sb blkly-sb plty, frm, slty/ rthy tex, rr dissem pyr, lt gr strk, md calc , NSFOC

8180-8210 SHL aa, md-dk gr-gr brn, sb blkly-sb plty, frm, slty/ rthy tex, rr dissem pyr, lt gr strk, md calc , NSFOC

DEPTH	LITHOLOGY
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8210-40 SHL aa, md-dk gr-gr brn, sb blkly-sb plty, frm, slty/ rthy tex, rr dissemin pyr, lt gr strk, md calc , NSFOC

8240-70 SHL aa, md-dk gr-gr brn, sb blkly-sb plty, frm, slty/ rthy tex, rr dissemin pyr, lt gr strk, md calc , NSFOC

8270-8300 SHL aa, md-dk gr-gr brn, sb blkly-sb plty, frm, slty/ rthy tex, rr dissemin pyr, lt gr strk, md calc , rr wht mssv calc, tr org yel min FLUOR , no cut

8300-30 SHL aa, gr brn-md-dk gr, sb blkly-sb plty, sft-frm, slty/ rthy tex, rr dissemin pyr, lt gr strk, md calc , tr org yel min FLUOR , no cut

8330-60 SHL aa, gr brn-md-dk gr, sb blkly-sb plty, frm, slty/ rthy tex, rr dissemin pyr, lt gr strk, md calc , NSFOC

8360-90 SHL aa, gr brn, md-dk gr, sb blkly-sb plty, sft-frm, slty/ rthy tex, rr dissemin pyr, lt gr strk, md calc , NSFOC

8390-8420 SHL aa, gr brn, md-dk gr, sb blkly-sb plty, sft-frm, slty/ rthy tex, rr dissemin mic pyr, lt gr strk, md calc , NSFOC

8420-50 SHL aa, gr brn, md-dk gr, sb blkly-sb plty, frm, slty/ rthy tex, rr fn grn-dissemin pyr, lt gr strk, md calc, NSFOC

8450-80 SHL aa, gr brn, md-dk gr, sb blkly-sb plty, frm, slty/ rthy tex, rr dissemin pyr, lt gr strk, md calc , rr wht mssv calc, NFSOC

8480-8510 SHL aa, gr brn, md-dk gr, sb blkly-sb plty, frm, slty/ rthy tex, rr dissemin pyr, lt gr strk, md calc , rr wht mssv calc, NFSOC

8510-40 SHL, md-dk gr-gr brn, sb blkly-sb plty, sl frm-md sft ip, slty/rthy tex, rr mic dess pyr, lt gr pwdry strk, md calc, NFSOC

8540-70 SHL aa, md-dk gr-gr brn, sb blkly-sb plty, sl frm-md sft ip, slty/rthy tex, rr mic pyr, md calc, scat SS, gr-tn, vfn grn, sb rnd, mod wl srt, calc cem, argil, cly fill, NFSOC

8570-8600 SHL, md-dk gr-gr brn, sb blkly, md frm-md sft, calc, rthy/slty tex grd to SLTSTN ip, md gr brn, blkly, sl frm, calc, rr dk gr carb inclus, NFSOC

8600-30 SHL grd to SLTSTN ip aa, md-dk gr-gr brn, sb blkly, md frm-md sft, calc, rthy/slty tex, rr dk gr carb inclus, rr pcs SS, lt gr, vfn grn, sb rd, wl srt, cly filled, NFSOC

8630-60 smp aa-SHL grd to SLTSTN ip, md-dk gr-gr brn, sb blkly, md frm-md sft, calc, rthy/slty tex, rr dk gr carb inclus, rr pcs SS, lt gr, vfn grn, sb rd, wl srt, cly filled, NFSOC

8660-90 SHL grd to SLTSTN aa, m-dk gr-gr brn, blkly-sb plty, md frm-md sft, calc + 35% SS, lt gr-dk gr, vfn grn, sb rnd, md wl srt, v argil ip grd to sndy SHL, calc cem, com blk argil ptgs, scat-rr crs xln calc frac fill, NFSOC

8690-8720 SHL grd to SLTSTN aa, m-dk gr-gr brn, blkly-sb plty, md frm-md sft, calc, decr SS aa, lt gr-dk gr, vfn grn, sb rnd, md wl srt, argil ip, calc cem, blk argil ptgs, rr calc frac fill aa, NFSOC

8720-50 pred SHL grd to SLTSTN ip, md-dk gr-occ lt gr, blkly-sub tab, md frm-sl sft, slty/sndy tex ip, sl pyr ip, calc, NFSOC

DEPTH	LITHOLOGY
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8750-80 pred SHL, md-dk gr-occ lt gr, blk-sub tab, md frm-sl sft, slty/sndy tex ip grd to vfn grn SLTSTN/SS ip, sl pyr ip, calc, NFSOC

8780-8810 SHL grd to SLTSTN aa, md-dk gr-occ lt gr, blk-sub tab, md frm-sl sft, slty/sndy tex ip, sl pyr ip, calc, NFSOC

8810-40 SHL, md-dk gr-occ lt gr, blk-sub tab, md frm-sl sft, slty/sndy tex ip grd to vfn grn SLTSTN/SS ip, sl pyr ip, calc, NFSOC

8840-70 SHL aa, md-dk gr-occ lt gr, blk-sub tab, md frm-sl sft, slty/sndy tex ip grd to vfn grn SLTSTN/SS ip, sl pyr ip, calc, NFSOC

8870-8900 SHL, md-dk gr-occ lt gr, blk-sub tab, md frm-sl sft, slty/sndy tex ip grd to vfn grn SLTSTN/SS ip, sl pyr ip, calc, NFSOC

8900-30 SHL grd to SLTSTN aa, m-dk gr-gr brn, blk-sb plty, md frm-md sft, calc + abund SS, lt gr-dk gr, vfn grn, sb rnd, md wl srt, argil ip, calc cem, cly fill por, NFSOC

8930-60 SHL & SLTSTN aa, m-dk gr-gr brn, blk-sb plty, md frm-md sft, calc, 40% SS aa, lt gr-dk gr, vfn grn, sb rnd, md wl srt, v argil ip, calc cem, cly fill, NFSOC

8960-90 SHL, md-dk gr-gr brn, blk-sb tab, sl frm-md sft, rthy/slty tex, calc, scat mic pyr, decr SS aa, lt-dk gr, vfn grn, argil, calc, cly fill, NFSOC

8990-9020 SHL, md-dk gr-gr brn, sl frm-md sft, blk-sb tab, rr fn dess pyr, rthy/slty tex, calc, NFSOC

9020-50 SHL aa, md-dk gr-gr brn, sl frm-md sft, blk-sb tab, rr fn dess pyr, rthy/slty tex, calc, NFSOC

9050-80 SHL, md-dk gr-gr brn, sl frm-md sft, blk-sb tab, rr fn dess pyr, rthy/slty tex, calc, rr xln calc frac fill, NFSOC

9080-9110 SHL aa, md-dk gr-gr brn, sl frm-md sft, blk-sb tab, rr fn dess pyr, rthy/slty tex, calc, NFSOC

9110-40 SHL, md-dk gr-gr brn, frm- md sft, blk-sb plty, rr dissem pyr, rthy/slty tex, md mtrx calc, NFSOC, loc SS, wht- ltgr, v fn grn, str calc & cly mtrx, org yel FLUOR, no cut

9140-70 SHL aa, md-dk gr-gr brn, frm- md sft, blk-sb plty, rr dissem pyr, rthy/slty tex, md mtrx calc, NFSOC, loc SS strngs, wht- ltgr, v fn grn, str calc & cly mtrx, org yel min FLUOR, no cut

9170-9200 SHL aa, br brn, md-dk gr, frm- md sft, blk-sb plty, rr dissem- v fn pyr, slty tex/rthy, md mtrx calc, NFSOC, loc SS strngs, wht- ltgr, fn grn, str calc & cly mtrx, org yel min FLUOR, no cut

9200-30 SHL aa, md-dk gr-gr brn, md hd-frm, blk-sb plty, rr fn grn- dissem pyr, rthy/slty tex, md mtrx calc, NFSOC, loc SS strngs, wht- ltgr, lt org brn, v fn grn, str calc & cly mtrx, org yel min FLUOR, no cut

9230-60 SHL aa, md-dk gr-gr brn, frm- md sft-loc md hd, blk-sb plty, rr dissem pyr, rthy/slty tex, md mtrx calc, NFSOC, loc SS strngs, wht- ltgr, lt org brn, v fn grn, str calc & cly mtrx, loc str fn grn pyr, org yel FLUOR, no cut

9260-90 SHL aa, md-dk gr-gr brn, frm- md sft-loc md hd, blk-sb plty, rr dissem pyr, rthy/slty tex, md-wk calc, NFSOC, mnr loc SS, wht- ltgr, lt org brn, v fn grn, str calc & cly mtrx, loc str fn grn pyr, org yel FLUOR, no cut

DEPTH	LITHOLOGY
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9290-9320 SHL, md-dk gr-gr brn, md hd-frm, blk-y-sb plty-loc sb lam, rr dissem-fn grn pyr, rthy/slty tex, md calc, tr org yel min FLUOR, no cut

9320-50 SHL aa, md-dk gr-gr brn, md hd-frm, blk-y-sb plty, rr fn grn pyr, rthy/slty tex, md calc, tr org yel min FLUOR (assoc w/ SS), no cut

9350-80 SHL aa, gr brn, md-dk gr, pred frm-md sft, blk-y-sb plty, rr pyr, rthy/slty tex, md calc, tr SS, NFSOC

9380-9410 SHL aa, md-dk gr-gr brn, pred sft-loc md hd, blk-y-sb plty, mnr fn grn pyr, rthy/slty tex, md calc, tr SS, NFSOC

9410-40 SHL aa, md-dk gr-gr brn, frm- md hd, blk-y-sb plty, rr dissem mic pyr, rthy/slty tex, md calc, NFSOC

9440-70 SHL, md-dk gr-gr brn, frm- sft, blk-y-sb plty, rr dissem fn grn-mic pyr, rthy/slty tex, md calc, rr wht calc vng, NFSOC

9470-9500 SHL aa, md-dk gr-gr brn, frm- md hd, sb plty-blky, rr dissem fn grn pyr, rthy/slty tex, md-str calc, rr-mnr wht calc vng, NFSOC

9500-30 SHL, md-dk gr, frm md hd, sb plty-blky, rr fn grn-mic pyr, rthy/slty tex, md-str calc, rr-mnr wht calc vng, NFSOC

9530-60 SHL aa, md-dk gr, frm-md hd, rr pyr dissem & alng frx, rthy/slty tex, str calc, NFSOC

9560-90 SHL, md-dk gr, md hd, blk-y-sb plty, rr dissem pyr, rthy/slty tex, md calc, mnr loc SS, wht- ltgr, lt org brn, v fn grn, str calc & cly mtrx, loc str fn grn pyr, org yel FLUOR, no cut

9590-9620 SHLaa, md-dk gr, frm-md hd, sb plty blk-y, rr pyr dssem & alng frx, rthy/slty tex, md calc, mnr calc vng, loc mnr bent, mnr loc SS, wht- ltgr, lt org brn, v fn grn, str calc & cly mtrx, loc str fn grn pyr, org yel FLUOR, no cut

9620-50 pred SHLaa, md-dk gr, frm-md hd, blk-y-sb plty, rr dissem pyr, rthy/slty tex, md calc, loc SS, wht- ltgr, lt org brn, md hd-brit, v fn grn, str calc & cly mtrx, rr fn grn pyr, loc org yel FLUOR (bent mtrx?), no cut, assoc w/ mnr-rr med gr SLTSTN,

9650-80 com SS aa, wht- ltgr, lt org brn, v fn grn, str calc & cly mtrx, loc mnr fn grn pyr, md hd-brit, loc org yel FLUOR (bent mtrx?), no cut, assoc w/ mnr, med-dk gr SLTSTN strngs, pred SHLaa

9680-9710 pred SHL, md-dk gr, frm-md hd, blk-y-sb plty, rr pyr, rthy/slty tex, md calc, com SS, wht-ltgr, lt org brn, v fn grn, str calc & cly mtrx, rr fn grn pyr, hd-brit, loc org yel FLUOR (bent mtrx?), no cut, assoc w/ mnr, med-dk gr SLTSTN,

9710-40 com SS aa, wht-ltgr, lt org brn, v fn grn, str calc & cly mtrx, rr fn grn pyr, hd-brit, loc org yel FLUOR (bent mtrx?), no cut, assoc w/ mnr, SLTSTN, med-dk gr, md-no calc, mnr mssv pyr, pred SHLaa

9740-70 SLTSTN, med-dk gr, com fn grn snd, frm-md hd, md-no calc, mnr fn grn pyr, scat SS, wht-occ lt gr, v fn grn, str calc & cly mtrx, rr fn grn pyr, hd-brit, loc org yel FLUOR (bent mtrx?), no cut

9770-9800 SLTSTN grd to SS ip, lt-md gr-occ wht, vfn-occ fn grn, sb ang-sb rnd, md srt, md frm, argil, cly fill, pyr ip, sl calc, com SHL, dk gr, blk-y, md frm, non calc, NFSOC



DEPTH	LITHOLOGY
9800-30	SLTSTN grd to SS aa, lt-md gr-occ wht, vfn-occ fn grn, sb ang-sb rnd, md srt, md frm, bcm v argil ip, cly fill, pyr ip, sl calc, com SHL, dk gr, blk, md frm, non calc, NFSOC
9830-60	SLTSTN grd to SS aa, lt-md gr-occ wht, vfn-occ fn grn, sb ang-sb rnd, md srt, md frm, argil ip, cly fill, pyr ip, sl calc, decr SHL, dk gr, blk, md frm, non calc, NFSOC
9860-90	SLTSTN grd to slty SHL, md-dk gr, blk, sl frm-sl sft, calc, SS strngs, lt-md gr, vfn grn, sb rnd, md srt, sl calc, sl pyr, NFSOC
9890-9910	CLYSTN, lt-dk gr, mott/strkd, sft, sl calc, sndy with abund snd grn inclus, SS, dk gr brn, vfn grn, sb rnd, md srt, v argil, no perm, cly fill, NFSOC
9910-30	scat SS, lt-md gr-erm, vfn grn, sb rnd, md wl srt, non calc, compl cly fill-bent?, abund SHL, md-dk gr, gny/sndy tex ip to sl wxy-bent tex, prim non-calc, NFSOC
9930-50	SS, lt-dk gr, fn-occ md grn, sb ang, md-pr srt, argil, cly fill, non calc + COAL, blk, sft, vit, NFSOC-coal w gd resid rng cut in chlor
9950-60	SHL, md-dk gr, blk, md frm, gny tex ip, britt, lt gr pwdry strk, com buff-lt gr pyr bent
9960-80	SS, wht-clr, md-occ crs grn, ang, md srt, abund lse qtz grns, abunt wht cly, sl calc ip, com yel-orgn min (bent) fluor, no shows
9980-10000	SHL, md-dk gr, blk, md frm, gny tex ip, britt, scat buff-lt gr pyr bent + SS, wht-clr, fn-md grn, sb ang-sb rnd, md srt, pred unconsol snd grns, scat yel-orgn min FLUOR from bent aa, no shows
10000-20	SHL, md-dk gr, blk, md frm, gny tex ip, britt, lt gr pwdry strk, com-abund BENT, buff-lt gr, sl pyr ip, sft
10020-30	SHL aa, md-dk gr, blk, md frm, gny tex ip, britt, lt gr pwdry strk, com BENT, buff-lt gr, pyr ip, sft
10030-50	SHL, dk-md-lt gr-tn-pnkish, sb blk, sl frm-md sft, wxy tex ip, bent, sl pyr ip, non-sl calc ip, slty/gny tex ip, FLUOR from bent aa
10050-70	SS, lt gr, fn-vfn grn, sl mott dk gr ip, sb ang, md wl srt, md frm-qtz ovrgrth cem, minor calc, scat lithic frags, orgn FLUOR-bent
10070-90	SHL, md-dk gr-loc blk, rd brn, wht-lt gr, sb blk-pty, frm- v sft, loc coaly, com bent, mnr fn gr pyr, non-wk calc, slty/gny tex, FLUOR from bent
10090-10110	SHL, rd brn, blk, dk-md gr, pty-sb pty, frm-sft, com carb, com bent, rr-loc mnr pyr, non- wk calc, slty/gny tex, orgn FLUOR from bent
10110-30	SHL, rd brn, blk, dk-md gr, lt gn, pty-sb pty, frm-sft, com carb, com bent, mnr fn grn pyr, non- v wk calc, slty/gny tex, mnr SLTSTN, orgn FLUOR from bent
10130-50	SHL, rd brn, blk, dk-md gr, lt gn-erm, pty-sb pty, frm-sft, abund bent, rr fn grn pyr, pri non- v sl calc, wxy tex ip, abund bent, orgn FLUOR from bent, scat SS, dk brn, fn grn, sb rnd, argil, md srt, NFSOC
10150-70	SHL, varicol, rd brn-pnk-wht blk-wht-lav, pty, md sft-sl frm, rthy tex ip, sl wxy tex ip, bent, sl calc ip to non calc, com orgn min fluor, no shows

DEPTH	LITHOLOGY
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10170-90 varicol SHL aa, varicol, rd brn-pnk-wht-blk-wht-lav, plty, md sft-sl frm, rthy tex ip, sl wxy tex ip, bent, sl calc ip to non calc, com org min fluor, no shows

10190-10210 SHL aa, varicol, rd brn-pnk-wht blk-wht-lav, plty, md sft-sl frm, rthy tex ip, sl wxy tex ip, bent, sl calc ip to non calc, com org min fluor, no shows

10210-20 SHL, pnk-salm-rd brn-gr-crm, plty, md sft, bent, sl calc ip to non calc, min fluor aa, no shows



# United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, UT 84145-0155



*FILE: Moon Canyon  
CC: Dale Hoffman, et al. N. 1.  
DUNN*

IN REPLY REFER TO  
UT-922

February 27, 2004

Royale Energy, Inc.  
Attn: Dale Hoffman  
7676 Hazard Center Drive, Suite 1500  
San Diego, California 92108

Re: Moon Canyon Unit  
Uintah and Grand Counties, Utah

Gentlemen:

On February 19, 2004, we received an indenture dated February 13, 2004, whereby National Fuel Corporation resigned as Unit Operator and Royale Energy, Inc. was designated as Successor Unit Operator for the Moon Canyon Unit, Uintah and Grand Counties, Utah.

This indenture was executed by all required parties and the signatory parties have complied with Sections 5 and 6 of the unit agreement. The instrument is hereby approved effective February 27, 2004. In approving this designation, the Authorized Officer neither warrants nor certifies that the designated party has obtained all required approval that would entitle it to conduct operations under Moon Canyon Unit Agreement.

Your Utah statewide oil and gas bond No. UTB000026 will be used to cover all operations within the Moon Canyon Unit.

It is requested that you notify all interested parties of the change in unit operator. Copies of the approved instruments are being distributed to the appropriate federal offices, with one copy returned herewith.

Sincerely,

Terry Catlin

Acting Chief, Branch of Fluid Minerals

Enclosure

RECEIVED

JUN 30 2004

DIV. OF OIL, GAS & MINING

**RESIGNATION OF UNIT OPERATOR**  
**Moon Canyon Unit Area**  
**Counties of Grand and Uintah**  
**State of Utah**  
Unit Agreement No. **Contract No. UTU80642X**

Under and pursuant to the provisions of Section 5 of the Unit Agreement for the Development and Operation of the Moon Canyon Unit Area, Grand and Uintah Counties, Utah, National Fuel Corporation, the designated Unit Operator under said Unit Agreement, does hereby resign as Unit Operator, effective upon the selection and approval of a successor Unit Operator.

Executed with effect as aforesaid the 13<sup>th</sup> day of January, 2004.

Attest:

Brenda K Mayhew  
Asst. Secretary

Liane Thompson  
PRESIDENT

**DESIGNATION OF SUCCESOR UNIT OPERATOR****Moon Canyon Unit Area****Counties of Grand & Uintah  
State of Utah****Unit Agreement No. UTU80642X**

**THIS INDENTURE**, dated on the 13<sup>th</sup> day of February 2004, by and between Royale Energy, Inc., hereinafter designated as "First Party," and the owners of unitized working interests, hereinafter designated as "Second Parties,"

**WITNESSETH:**

**WHEREAS**, under the provision of the Act of February 25, 1920, 41 Stat. 437, 30 U.S.C. Secs. 181, et. seq., as amended by the Act of August 8, 1946, 60 Stat 950, the Secretary of the Interior, on May 27, 2003, approved a Unit Agreement for Moon Canyon Unit area, wherein National Fuel Corporation is designated as Unit Operator, and

**WHEREAS** said, National Fuel Corporation has resigned as such Operator and the designation of a successor Unit Operator is now required pursuant to the terms thereon; and

**WHEREAS** the First Party has been and hereby is designated by Second Parties as Unit Operator, and said First Party desires to assume all the rights, duties and obligations of Unit Operator under the said Agreement:

**NOW, THEREFORE**, in consideration of the premises hereinbefore set forth and the promises hereinafter stated, the First party hereby covenants and agrees to fulfill the duties and assume the obligations of Unit Operator under and pursuant to all the terms of the Moon Canyon Unit Agreement, and the Second Parties covenant and agree that, effective upon approval of this indenture by the Chief, Branch of Fluid Minerals, Bureau of Land Management, First Party shall be granted the exclusive right and privilege of exercising any and all rights and privileges as Unit Operator, pursuant to the terms and conditions of said Agreement; said Unit Agreement being hereby incorporated herein by reference and made a part hereof as fully and effectively as though said Unit Agreement were expressly set forth in this instrument.

**IN WITNESS WHEREOF**, the parties hereto have executed this instrument as of the date hereinabove set forth.

**FIRST PARTY**  
Royale Energy, Inc.

BY

  
Stephen M. Hosmer

STATE OF CALIFORNIA

County of San Diego

On February 18, 2004, before me, the undersigned Notary Public, personally appeared **Stephen M. Hosmer**, personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

By   
Notary Public in and for said State



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

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		6. LEASE DESIGNATION AND SERIAL NUMBER: ML 48391
		8. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, re-enter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		7. UNIT or OA AGREEMENT NAME: Moon Canyon Unit
		5. WELL NAME and NUMBER: Moon Canyon #1
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		9. API NUMBER: 4301931398
2. NAME OF OPERATOR: Royale Energy, Inc. <u>N2465</u>		10. FIELD AND POOL, OR WILDCAT: Wildcat
3. ADDRESS OF OPERATOR: 7878 Hazard Center Dr, #150 CITY San Diego STATE CA ZIP 92108		PHONE NUMBER: (619) 881-2800

4. LOCATION OF WELL  
FOOTAGES AT SURFACE: 1390' FSL 927' FWL COUNTY: Grand  
QTR/CTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSW 32 16S 21E S STATE: UTAH

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

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

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

Effective Date is 10-6-2003

J. R. Thompson 7/1/04 N8060  
 Roy Thompson, National Fuel Corp. Date

NAME (PLEASE PRINT) Dale Hoffman TITLE Land & Government Relations  
 SIGNATURE [Signature] DATE 6/29/2004

(This space for State use only)

RECEIVED  
JUL 02 2004



7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM 2/27/2004 BIA

8. **Federal and Indian Units:**

The BLM or BIA has approved the successor of unit operator for wells listed on: 2/27/2004

9. **Federal and Indian Communization Agreements ("CA"):**

The BLM or BIA has approved the operator for all wells listed within a CA on: n/a

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: n/a

**DATA ENTRY:**

1. Changes entered in the Oil and Gas Database on: 8/31/2004
2. Changes have been entered on the Monthly Operator Change Spread Sheet on: 8/31/2004
3. Bond information entered in RBDMS on: 8/31/2004
4. Fee/State wells attached to bond in RBDMS on: 8/31/2004
5. Injection Projects to new operator in RBDMS on: n/a
6. Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

**FEDERAL WELL(S) BOND VERIFICATION:**

1. Federal well(s) covered by Bond Number: UTB000026

**INDIAN WELL(S) BOND VERIFICATION:**

1. Indian well(s) covered by Bond Number: n/a

**FEE & STATE WELL(S) BOND VERIFICATION:**

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number 3000428805-1401

2. The **FORMER** operator has requested a release of liability from their bond on: n/a  
The Division sent response by letter on: n/a

**LEASE INTEREST OWNER NOTIFICATION:**

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

**COMMENTS:**

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013



State of Utah

Department of  
Natural Resources

MICHAEL R. STYLER  
*Executive Director*

Division of  
Oil, Gas & Mining

MARY ANN WRIGHT  
*Acting Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

March 3, 2005

CERTIFIED MAIL NO. 7002 0510 0003 8602 5702

Mr. Dale Hoffman  
Royale Energy Inc.  
7676 Hazard Center, Suite 1500  
San Diego, California 92108

Re: Extended Shut-in and Temporarily Abandoned Well Requirements for Fee or State Leases.

Dear Mr. Hoffman:

As of March 2005, Royale Energy Inc. has one (1) State Lease Well (see attachment A) that is in non-compliance with the requirements for extended shut-in or temporarily abandoned (SI/TA) status. Wells SI/TA beyond twelve (12) consecutive months require the filing of a Sundry Notice in accordance with R649-3-36-1 for Utah Division of Oil, Gas & Mining ("Division") approval. Wells with five (5) years non-activity or non-productivity shall be plugged, unless the Division grants approval for extended shut-in time upon a showing of good cause by the operator (R649-3-36-1.3.3).

For extended SI/TA consideration the operator shall provide the Division with the following:

1. Reasons for SI/TA of the well (R649-3-36-1.1).
2. The length of time the well is expected to be SI/TA (R649-3-36-1.2), and
3. An explanation and supporting data if necessary, for showing the well has integrity, meaning that the casing, cement, equipment condition, static fluid level, pressure, existence or absence of Underground Sources of Drinking Water and other factors do not make the well a risk to public health and safety or the environment (R649-3-36-1.3).

43.019.31398  
165. 21E. 32

Page 2  
Mr. Dale Hoffman  
March 3, 2005

Submitting the information suggested below may help show well integrity and may help qualify your well for extended SI/TA. **Note: As of July 1, 2003, wells in violation of the SI/TA rule R649-3-36 may be subject to full cost bonding (R649-3-1-4.2, 4.3).**

1. Wellbore diagram, and
2. Copy of recent casing pressure test, and
3. Current pressures on the wellbore (tubing pressure, casing pressure, and casing/casing annuli pressure) showing wellbore has integrity, and
4. Fluid level in the wellbore, and
5. An explanation of how the submitted information proves integrity.

If the required information is not received within 30 days of the date of this notice, further actions may be initiated. If you have any questions concerning this matter, please contact me at (801) 538-5281.

Sincerely,



Dustin K. Doucet  
Petroleum Engineer

DKD:jc  
Attachment  
cc: John Baza  
Well File  
SITLA

## ATTACHMENT A

	<b>Well Name</b>	<b>Location</b>	<b>API</b>	<b>Lease Type</b>	<b>Years Inactive</b>
1	Moon Canyon 1	NWSW Sec 32-T16S-R21E	43-019-31398	State	1 Year 3 Months



**STONEGATE  
RESOURCES, L.L.C.**

**Eric Noblitt**

March 13, 2005

Mr. Dustin Doucet  
Utah Division of Oil, Gas and Mining  
1594 West Temple, Suite #1210  
Box 145801  
Salt Lake City, UT. 84114-5801

RE: Sundry Notice  
Royale Energy, Inc. / Moon Canyon #1  
NWSW Sec.32-T16S-R21E  
Grand Co. UT  
API# - 4301931398

Dear Dustin,

Enclosed, please find in duplicate a sundry notice requesting a extended shut-in for Royale Energy, Inc. Moon Canyon #1 well.

If you have any questions, please do not hesitate to contact me at any time. Thank you for your time in this matter.

Sincerely,

Eric Noblitt  
Agent, Royale Energy, Inc.

**RECEIVED**

**MAR 1 / 2005**

**DIV. OF OIL, GAS & MINING**

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

FORM 9

014

SUNDRY NOTICES AND REPORTS ON WELLS

5. LEASE DESIGNATION AND SERIAL NUMBER:

ML-48391

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

Moon Canyon

8. WELL NAME and NUMBER:

Moon Canyon #1

9. API NUMBER:

4301931398

10. FIELD AND POOL, OR WILDCAT:

Wildcat

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

1. TYPE OF WELL

OIL WELL

GAS WELL

OTHER \_\_\_\_\_

2. NAME OF OPERATOR:

Royale Energy, Inc.

3. ADDRESS OF OPERATOR:

7676 Hazard Center, #1500 CITY San Diego

STATE CA

ZIP 92108

PHONE NUMBER:

(619) 881-2800

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1,390' FSL, 927' FWL

COUNTY: Grand

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSW 32 16S 21E S

STATE:

UTAH

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

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

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

Royale Energy request that the Moon Canyon #1 be shut-in for a period not to exceed six months. Royale anticipates to perform a workover on this well as soon as adverse weather and road condition permit. This work was scheduled for last fall, but Royale was unable to secure a workover rig.

The shut-in pressure of the Moon Canyon #1 is: TBG-1650 psi and CSG-1650 psi. The well integrity is considered good. All casing and tubing were new condition when ran in October of 2003. The 7" intermediate was cemented to surface and 4-1/2" was cemented up into the 7" casing.

COPY SENT TO OPERATOR

Date: 3-23-05  
Initials: EN

NAME (PLEASE PRINT) Eric Noblitt

TITLE Agent

SIGNATURE *Eric Noblitt*

DATE 3/13/2005

(This space for State use only)

The well has been nonactive or nonproductive for 1 year 2 months. In accordance with R649-3-36, sufficient evidence has been provided for an extension of shut-in time until October 1, 2005.

(5/2000)

(See Instructions on Reverse Side)  
APPROVED BY: *[Signature]*

Utah Division of Oil, Gas and Mining

RECEIVED

MAR 11 2005

March 22, 2005  
DIV. OF OIL, GAS & MINING



STONEGATE  
RESOURCES, L.L.C.

Eric Noblitt

June 27, 2005

Ms. Diane Whitney  
Utah Division of Oil, Gas and Mining  
1594 West Temple, Suite #1210  
Box 145801  
Salt Lake City, UT. 84114-5801

RE: APD to Deepen  
Royale Energy, Inc. / Moon Canyon #1  
NWSW Sec.32-T16S-R21E  
Grand Co. UT  
API# - 4301931398

Dear Diane,

Enclosed, please find in duplicate an APD to Deepen for Royale Energy, Inc's. Moon Canyon #1 well. Evidence of Division of Water Right approval for use of water will be sent under a separate cover letter.

Royale Energy request that all information, i.e. completion sundries, reports, logs, gas analysis submitted to the Utah DOGM concerning this project, be held **CONFIDENTIAL** for the maximum period allowed under DOGM Rules and Regulations.

If you have any questions, please feel free to contact me at any time. Thank you for your time in this matter.

Sincerely,

Eric Noblitt  
Agent, Royale Energy, Inc.

RECEIVED

JUN 29 2005

DIV. OF OIL, GAS & MINING

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

CONFIDENTIAL

FORM 3

AMENDED REPORT   
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>			5. MINERAL LEASE NO: ML-48391	6. SURFACE: State
1A. TYPE OF WORK: DRILL <input type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input checked="" type="checkbox"/>	7. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>	8. UNIT or CA AGREEMENT NAME: Moon Canyon			
2. NAME OF OPERATOR: Royale Energy, Inc. 7676 Hazard Center Dr. Suite 1500			9. WELL NAME and NUMBER: Moon Canyon Unit #1	
3. ADDRESS OF OPERATOR: CITY San Diego STATE Ca ZIP 92108			PHONE NUMBER: (619) 881-2800	10. FIELD AND POOL, OR WILDCAT: Wildcat
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 1,390' FSL, 927' FWL 617873X 39.368998 AT PROPOSED PRODUCING ZONE: Same 4358399Y -109.631675			11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSW 32 16S 21E S	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 93 Miles North of Cresnet Junction, Utah.			12. COUNTY: Grand	13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) 927 feet	16. NUMBER OF ACRES IN LEASE: 640		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) NA	19. PROPOSED DEPTH: 10,720		20. BOND DESCRIPTION: SITLA Lease Bond	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 8,189 GR	22. APPROXIMATE DATE WORK WILL START: 7/18/2005		23. ESTIMATED DURATION: 10 days	

24. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT			
	Existing Wellbore							
14"	10-3/4"	J-55	40.5#	375	"G"	330 sxs	1.18	15.6
8-3/4"	7"	L-80	23#	6,220	"G" w/admixes/50/50 <input checked="" type="checkbox"/>	205sx/250sx	2.89/1.21	11.4/14.2
	DV Tool	3594'			"G" w/admixes/50/50 <input checked="" type="checkbox"/>	350sx/50sx	2.89/1.21	11.4/14.2
6-1/4"	4-1/2"	N-80	11.6#	10,220	50/50 POZ	610 sxs	1.23	14.2

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER	<input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Eric Noblitt TITLE Agent

SIGNATURE *Eric Noblitt* DATE 6/27/2005

(This space for State use only)

API NUMBER ASSIGNED: 43-019-31398

(11/2001)

COPY SENT TO OPERATOR  
Date: 7-18-05  
Initials: CNO

**CONFIDENTIAL**  
APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING  
DATE: 7/15/05  
BY: *[Signature]*

RECEIVED  
JUN 29 2005  
DIV. OF OIL, GAS & MINING

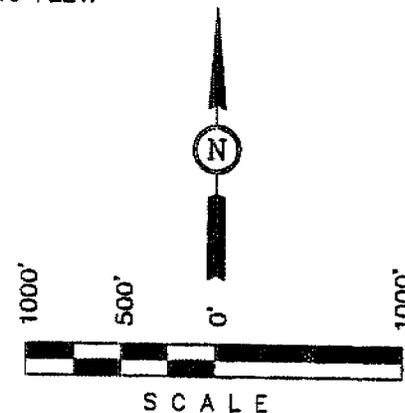
R16S, R21E, S.L.B.&M.

**ROYALE ENERGY, INC.**

Well location, MOON CANYON #32-1, located as shown in the NW 1/4 SW 1/4 of Section 32, T16S, R21E, S.L.B.&M., Grand County, Utah.

BASIS OF ELEVATION

SPOT ELEVATION LOCATED AT THE NORTHWEST CORNER OF SECTION 5, T17S, R21E, S.L.B.&M., TAKEN FROM THE SUPPLY CANYON QUADRANGLE, UTAH, GRAND COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 8113 FEET.

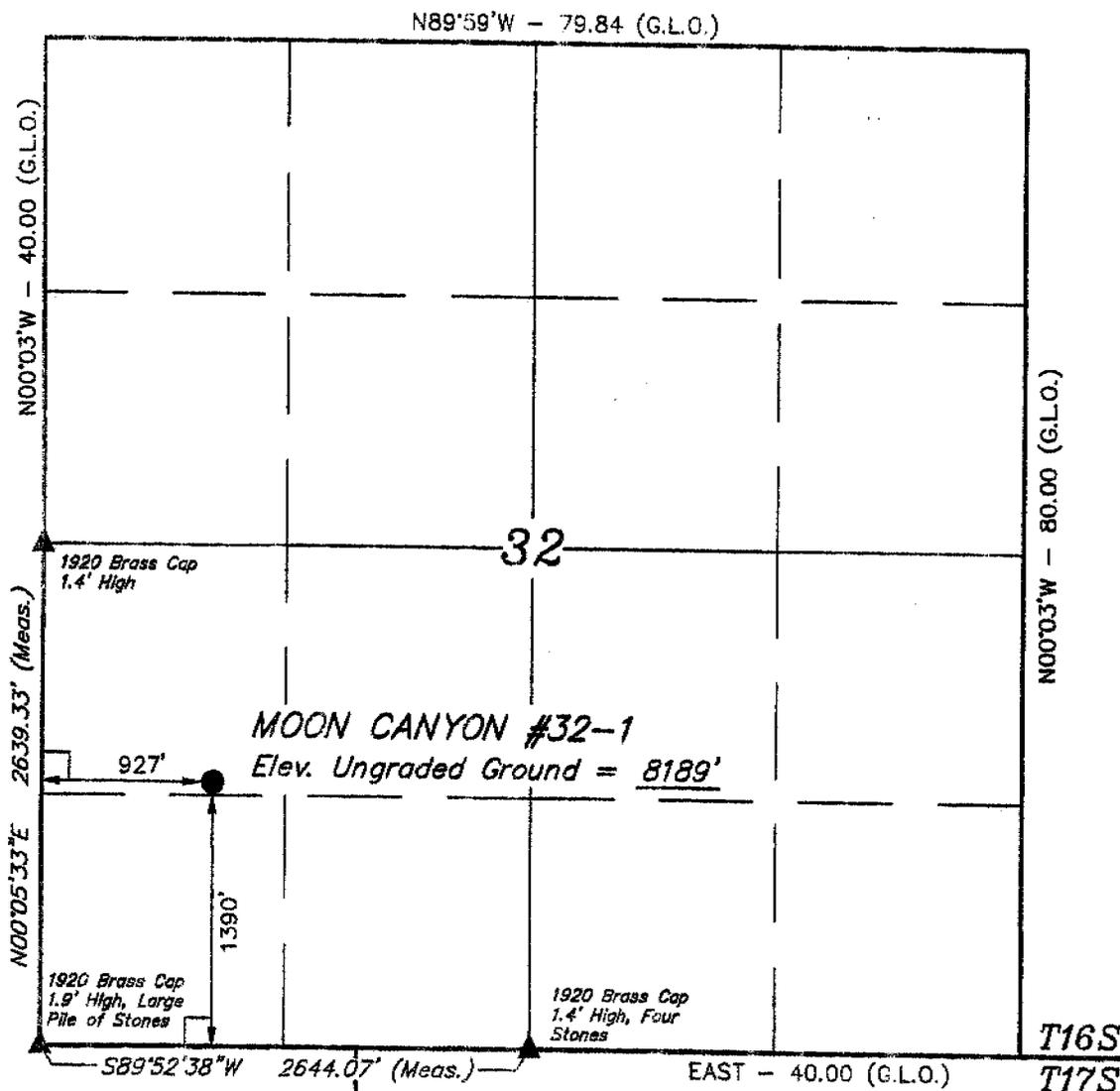


CERTIFICATE

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 H. Hayes*

REGISTERED LAND SURVEYOR  
REGISTRATION NO. 161319  
STATE OF UTAH



BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

(AUTONOMOUS NAD 83)

LATITUDE = 39°22'07.97" (39.368881)

LONGITUDE = 109°37'57.27" (109.632575)

LEGEND:

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

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

SCALE 1" = 1000'	DATE SURVEYED: 04-18-03	DATE DRAWN: 04-25-03
PARTY G.O. M.P. D.R.B.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE ROYALE ENERGY, INC.	

**ROYALE ENERGY, INC.  
PROPOSED DEEPENING PROCEDURE**

Moon Canyon Unit #1  
NWSW, Section 32-T16S-R21E  
API # 43-019-31398  
Grand County, Utah

June 27, 2005

**OBJECTIVE**

Royale Energy proposes to deepen the Moon Canyon #1 five hundred feet within the Morrison formation to see if the productive sand that is developed in the Moon Canyon #2 well (NESE Sec.9-T16S-R21E) is present in the Moon Canyon #1. Royale anticipates the sand (if present) to be at a depth of 10,220'-10,370'.

**WELL DATA**

Surface Location: 390' FSL and 927' FWL (SWSW) Section 32-T16S-R21E

Bottomhole Location: Same

Elevation: 8,204' KB, 8,189' GL (graded).

TD: 10,220' DTD

PBTD: Estimated at 10,174' (float collar)

Perforations: Mancos: 7,070'-7,140' and Dakota: 9,792'-9,820', 9,963'-9970', 9982'-9987', 10,042'-10,055'

Surface Casing: 10-3/4", 40.5#, J-55, STC casing set at 375' and cemented to surface w/ 330 sxs "G" w/ 2% CaCl and 1/4 pps Flocele.

Intermediate Casing: 7", 23#, L-80, LTC casing set at 6220' and cemented with 205 sx premium G cement followed by 250 sx 50/50 Poz cement (Stage 1) and 350 sx premium G cement followed by 50 sx 50/50 Poz cement (Stage 2). Stage cementing tool set at 3,579'.

Production Casing: 4-1/2", 11.6#, N-80, LTC casing set at 10,220' with 610 sx 50/50 Pozmix cement containing 2% gel and other admixes. Calculated TOC at approximately 5700'.

Production Tubing: 2-3/8" 4.7#, N-80, EUE Landed @ 9,739'

Casing, Tubing, ID/Capacity: 4-1/2" (11.6#) -- 4.000"/.0155 bbl per foot  
2-3/8" -- 1.995"/.00387 bbl per foot

Minimum Casing Drift Diameter: 3.875"

Annular Capacity: 4-1/2" (11.6#) x 2-3/8" -- .0101 bbl per foot

Minimum Casing Burst Pressure: 7,780 psi (6,224 psi at 80%)

Anticipated Bottomhole Pressure: 2996 psi (.28 gradient)

Present Status: Shut-in Gas Well

**PROPOSED PROCEDURE**

1. Move in and rig up completion unit. Blow down well.
2. Nipple-down 7-1/16" x 5000 psi WP upper tree assembly and nipple-up 7-1/16" x 3000 psi double-gate BOP dressed with blind rams and 2-3/8" pipe rams and 7-1/16" X 3,000 psi annular preventer. Rig up 3,000 psi choke manifold. Pressure test BOPE and choke manifold as per DOGM specifications. Notify DOGM 24 hrs prior to testing BOPE.
3. Rig-up power swivel. Pick up 3-7/8" mill tooth bit, 15 – 3-1/8" DC, X-over on 2-3/8", 4.7#, J-55, EUE tubing. Trip in hole and tag PBTB at 10,174'. Drill out float collar, cement in shoe joint and casing shoe to 10,220' +/- . Circulate hole clean and trip out of hole with tubing and BHA.
4. TIH w/ 3-7/8" PDC bit, 2-7/8" mud motor, 15 – 3-1/8" drill collars, X-over, 2-3/8" tbg. Drill with TIW valve in string at all times.
5. Drill new 3-7/8" hole from 10,220' to 10,700' utilizing a 3% KCL and Gel/Poly mud system.
6. Run Halliburton Triple Combo slimhole electric logs from 10,220' to TD.
7. If productive zones are discovered in the Morrison, TIH w/ PKR 1 jt tbg, "X-N" nipple and tbg. Set PKR at 10,200' and swab/flow test Morrison openhole. Swab/flow well to evaluate productivity. Record fluid levels, recovery rates, and oil cut of each swab run. Catch and save fluid samples for analysis.
8. If Morrison is commercial, Royale Energy will produce well as an openhole completion.
9. If well is non-commercial, notify DOGM for plugback orders. Plugback well as per DOGM orders
10. Nipple down BOPE. Nipple-up upper tree assembly. Swab well in if needed. Rig down well svc rig.
11. Construct production facilities and pipeline.

**Estimated Tops of Geological Markers**  
(From Ungraded GL)

<b>Formation</b>	<b>Top</b>	<b>Sub Surface</b>
Morrison	10,032'	-1828
<b>TD</b>	<b>10,720'</b>	<b>-2,516'</b>

### Estimated Depths of Anticipated Water, Oil , Gas or Mineral Formations

<u>Formation</u>	<u>Top</u>	<u>Possible Formation Content</u>
Morrison	10,220' to 10,720'	gas

### Pressure Control Equipment

- 1) Type: 7-1/16" X 3,000 psi WP, double-gate BOP and 7-1/16" X 3,000 psi WP annular BOP with hydraulic closing unit.

The blowout preventer will be equipped as follows:

- 1) One set of blind rams
  - 2) One set of pipe rams
  - 3) Drilling spool with two side outlet ( choke side: 3" minimum and kill side 2" minimum )
  - 4) Kill line: Two-inch minimum
  - 5) Two kill line valves, one of which will be a check valve ( 2" minimum )
  - 6) Choke line: Three-inch minimum.
  - 7) Two choke line valves: Three-inch minimum.
  - 8) One manually operated choke: Three-inch minimum.
  - 9) Pressure gauge on choke manifold.
  - 10) Upper TIW valve with handle readily available.
  - 11) TIW safety valve able to fit all connections.
  - 12) Fill-up line to be located above uppermost preventer.
- 2) PRESSURE RATING: 3,000 PSI
  - 3) TESTING PROCEDURE

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the approved BOP stack. (if isolated from the surface casing by means of a test plug) or 70% of the internal yield strength of the surface casing (if not isolated from the surface casing by means of a test plug). Pressure will be maintained for a period of at least ten minutes or until requirements of the test are met, whichever is longer.

At a minimum, this pressure test will be performed:

- 1) When the BOP is initially installed
- 2) Whenever any seal subject to test is broken.
- 3) Following related repairs.
- 4) At thirty day intervals.

In addition to the above, the pipe rams will be activated daily, and the blind rams will be activated on each trip (but not more frequently than once each day). All BOP tests and drills will be recorded in the IADC Driller's Log (tour sheet)

5) CHOKE MANIFOLD EQUIPMENT:

All choke lines will be straight lines, unless turns use tee-blocks, or are targeted with running tees. These lines will be anchored to prevent whip and vibration.

6) ACCUMULATOR:

The accumulator will have sufficient capacity to close all rams (plus the annular preventer, if applicable) and maintain a minimum of 200 psi above the precharge pressure without the use of the closing-unit pumps. The fluid reservoir capacity will be double the accumulator capacity and the fluid level will be maintain at the manufacturer's recommendation. The BOP system will have two independent power sources to close preventers. Nitrogen bottles (three minimum) will be considered one of these sources and will maintain a charge equal to the manufacturer's specifications.

The accumulator precharge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six months thereafter. The accumulator pressure will be corrected if the measured precharge pressure is found to be above or below the maximum or minimum limits of manufacturer's specifications.

1) MISCELLANEAUS INFORMATION:

The blowout preventer and related pressure-control equipment will be installed, tested, and maintained in compliance with the specifications in and requirements of DOGM's Drilling and Operating Practices #R649-3-7. The choke manifold and BOP extension rods will be located outside the rig sub-structure.

The hydraulic BOP closing unit will be located at least twenty-five feet from the wellhead, but will be readily accessible to the driller. Exact location and configuration of the hydraulic BOP closing unit will depend upon the particular drilling rig contracted to drill this hole.

### **Drilling Fluids Program**

PRODUCTION HOLE: 10,220' – 10,720'      3-7/8" hole"      CASING: NA

3% KCL w/ PolyPlus mud system. Keep trip speeds down to reduce surge/swab pressure. Keep hole full at all times. Monitor pit levels to detect loss circulation and gas kicks. Sweep hole as dictated by hole conditions and prior to running production casing, if appliclicable. Keep drill string moving at all times.

Recommended Fluid Properties: Weight      8.8 – 9.2 PPG  
Viscosity      As per mud engineer rec  
  
Water Loss      8-10 CC'

### **Evaluation Program**

MUDLOGGING: 10' samples will be caught from 10,220' to T.D. or as directed by geologist.

OPENHOLE LOGGING: 10,720 –10,220' GR/CNL/LDT w/ XY caliper and GR/ DLL

DRILLSTEM TESTING: None anticipated.

CORING: None anticipated.

# 3000 psi System

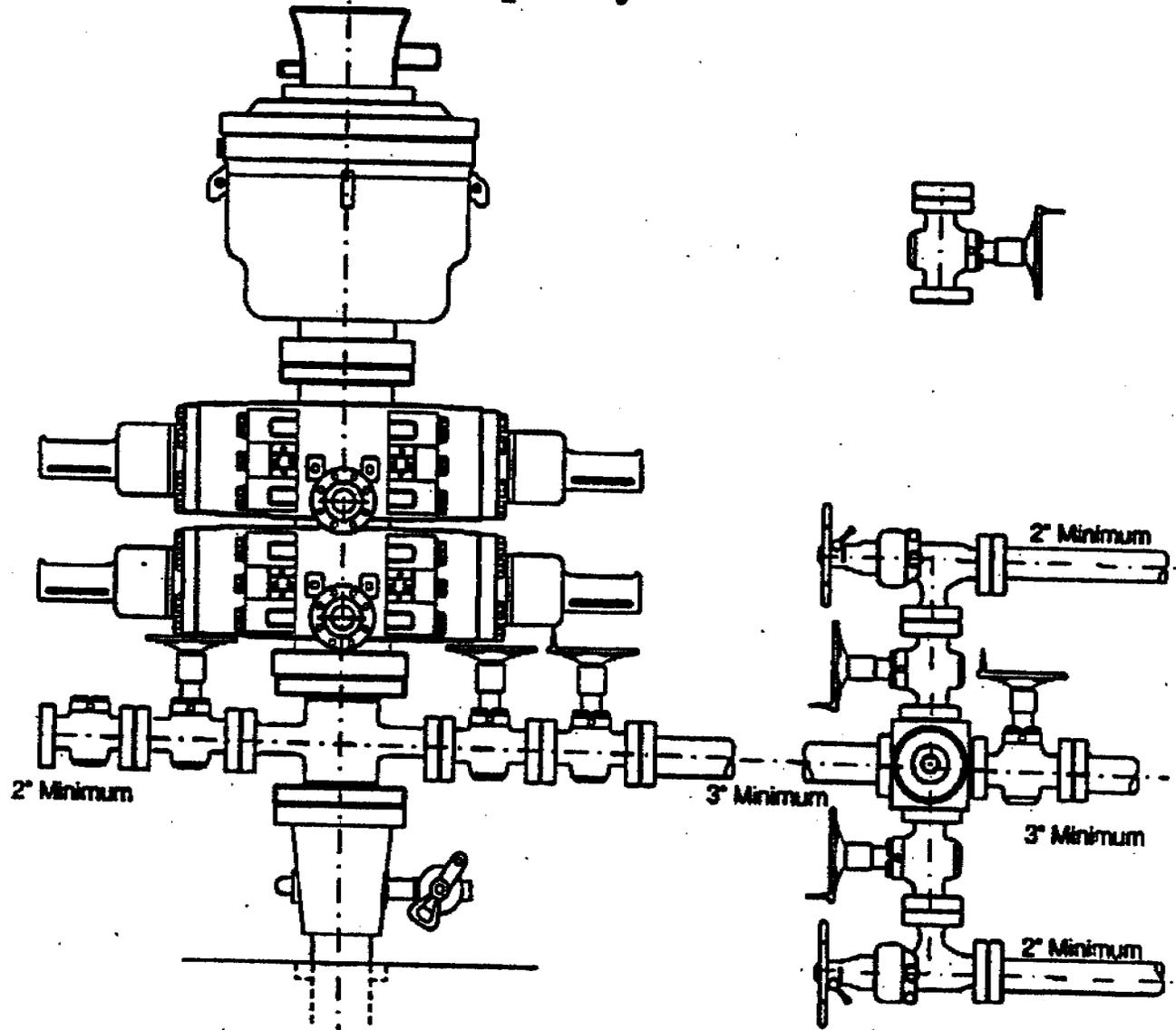


Figure 3-2

CONFIDENTIAL

**DIVISION OF OIL, GAS AND MINING**

**SPUDDING INFORMATION**

Name of Company: ROYAL ENERGY INC

Well Name: MOON CANYON 1 (DEEPENING)

Api No: 43-019-31398 Lease Type: STATE

Section 32 Township 16S Range 21E County GRAND

Drilling Contractor RED ROCK WELL SERVICE RIG # 2

**SPUDDED:**

Date 07/30/05

Time \_\_\_\_\_

How ROTARY

**Drilling will Commence:** \_\_\_\_\_

Reported by ERIC NOBLETT

Telephone # 1-970-245-3951

Date 08/01/05 Signed CHD



**STONEGATE  
RESOURCES, L.L.C.**

**Eric Noblitt**

September 30, 2005

Ms. Diane Whitney  
Utah Division of Oil, Gas and Mining  
1594 West Temple, Suite #1210  
Box 145801  
Salt Lake City, UT. 84114-5801

RE: Completion Report  
Royale Energy, Inc. / Moon Canyon #1  
NWSW Sec.32-T16S-R21E  
Grand Co. UT  
API# - 4301931398

Dear Diane,

Enclosed, please find in duplicate the completion report for the deepening of Royale Energy's Moon Canyon #1 well. Also enclosed are copies of the e-logs, geological report and mudlog.

Royale Energy request that all information concerning this well, i.e. sundries, reports, logs, gas analysis submitted to the Utah DOGM, be held **CONFIDENTIAL** for the maximum period allowed under DOGM Rules and Regulations.

If you have any questions, please feel free to contact me at any time.  
Thank you for your time in this matter.

Sincerely,

Eric Noblitt  
Agent, Royale Energy, Inc.

**RECEIVED**  
**OCT 33 2005**  
**Div. OF OIL, GAS & MINING**

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

AMENDED REPORT  FORM 8  
(highlight changes)

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  OTHER

b. TYPE OF WORK: NEW WELL  HORIZ. LATS.  DEEP-EN  RE-ENTRY  DIFF. RESVR.  OTHER

2. NAME OF OPERATOR:  
**Royale Energy, Inc. 7676 Hazard Center Drive, Suite 1500**

3. ADDRESS OF OPERATOR: CITY **San Diego** STATE **CA** ZIP **92108** PHONE NUMBER: **(619) 881-2800**

4. LOCATION OF WELL (FOOTAGES)  
AT SURFACE: **1,390' FSL, 927' FWL**  
AT TOP PRODUCING INTERVAL REPORTED BELOW: **Same**  
AT TOTAL DEPTH: **Same**

5. LEASE DESIGNATION AND SERIAL NUMBER:  
**ML-48391**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME  
**Moon Canyon**

8. WELL NAME and NUMBER:  
**Moon Canyon #1**

9. API NUMBER:  
**4301931398**

10. FIELD AND POOL, OR WILDCAT  
**Wildcat**

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:  
**NWSW 32 16S 21E S**

12. COUNTY **Grand** 13. STATE **UTAH**

14. DATE SPUNDED: **7/31/2005** 15. DATE T.D. REACHED: **8/16/2005** 16. DATE COMPLETED: **8/24/2005**  
ABANDONED  READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):  
**8189' GR, 8204' KB**

18. TOTAL DEPTH: MD **10,700** TVD **10,700** 19. PLUG BACK T.D.: MD **10,700** TVD **10,700**

20. IF MULTIPLE COMPLETIONS, HOW MANY? \* **1** 21. DEPTH BRIDGE MD **10,145** PLUG SET: TVD **10,145**

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)  
**Platform Express/Slim PEX, Array Induction,GR/SP, Slim BHC**

23. WAS WELL CORED? NO  YES  (Submit analysis)  
WAS DST RUN? NO  YES  (Submit report)  
DIRECTIONAL SURVEY? NO  YES  (Submit copy)

**24. CASING AND LINER RECORD (Report all strings set in well)**

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
15"	10.7" J-55	40.50	0	375		"G" 330	139	Surface	
8-3/4"	7" L-80	23#	0	6,220	3,594	G/poz 455		3594	1st stage
6-1/4"	4-1/2 N-80	11.6#	0	10,220		G/poz 400		surface	2nd stage
3-7/8"	NA	NA				50/50 610		6750	

**25. TUBING RECORD**

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-3/8" N-80	9.739							

**26. PRODUCING INTERVALS**

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) Morrison	10,218	10,700		
(B)				
(C)				
(D)				

**27. PERFORATION RECORD**

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

**28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.**

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL

**29. ENCLOSED ATTACHMENTS:**

ELECTRICAL/MECHANICAL LOGS  GEOLOGIC REPORT  DST REPORT  DIRECTIONAL SURVEY  
 SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION  CORE ANALYSIS  OTHER: \_\_\_\_\_

**30. WELL STATUS:**

**SI**

**RECEIVED**

**OCT 03 2005**

**DIV. OF OIL, GAS & MINING**

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE: 8/23/2005		HOURS TESTED: 5		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF: 0	WATER - BBL: 25	PROD. METHOD: Swab
CHOKE SIZE: NA	TBG. PRESS. 0	CSG. PRESS. 0	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 0	WATER - BBL: 120	INTERVAL STATUS: Abandoned

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
Morrison	10,356	10,384	Sandstone - Wet w/ show of gas.	Morrison Morrison	10.218 10.700

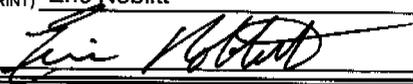
35. ADDITIONAL REMARKS (Include plugging procedure)

After swab testing 5-6 BWPH w/ sl show of gas f/ openhole 10,218'-10,270' A 4-1/2" CIBP was set @ 10,145' w/ 2 sxs cmt.

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

NAME (PLEASE PRINT) Eric Noblitt

TITLE Agent

SIGNATURE 

DATE 9/30/2005

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

**DESIGNATION OF AGENT OR OPERATOR**

The undersigned is, on record, the holder of oil and gas lease

RECEIVED

JUL 18 2008

DIV. OF OIL, GAS & MINING

LEASE NAME: Moon Canyon Unit

LEASE NUMBER: \_\_\_\_\_

and hereby designates

NAME: William "Bill" Ryan & Ginger Bowden

ADDRESS: 290 South 800 East

city Vernal state UT zip 84078

as his (check one) agent  / operator , with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the Division Director or Authorized Agent may serve written or oral instructions in securing compliance with the Oil and Gas Conservation General Rules and Procedural Rules of the Board of Oil, Gas and Mining of the State of Utah with respect to:

(Describe acreage to which this designation is applicable. Identify each oil and gas well by API number and name. Attach additional pages as needed.)

API: 4301931398 Moon Canyon #1 See 32 T16S R31E  
API: 4301931405 Moon Canyon #2  
API: 4301931526 Tenmile Canyon #22-1  
API: V Canyon 20-2

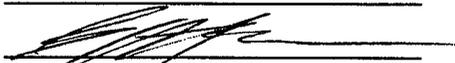
It is understood that this designation of agent/operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Oil and Gas Conservation General Rules and Procedural Rules of the Board of Oil, Gas and Mining of the State of Utah. It is also understood that this designation of agent or operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated agent/operator, the lessee will make full and prompt compliance with all rules, lease terms or orders of the Board of Oil, Gas and Mining of the State of Utah or its authorized representative.

The lessee agrees to promptly notify the Division Director or Authorized Agent of any change in this designation.

Effective Date of Designation: July 8, 2008

BY: (Name) Stephen Hosmer

(Signature) 

(Title) CFO/Executive Vice President

(Phone) (619) 881-2800

OF: (Company) Royale Energy, Inc

(Address) 7676 Hazard Center Dr, Suite 1500

city San Diego

state CA zip 92108



JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

September 2, 2008

CERTIFIED MAIL NO.: 7004 2510 0004 1824 6152

Mr. William Donaldson  
Royale Energy Inc.  
7676 Hazard Center, Suite 1500  
San Diego, CA 92108

Re: Moon Canyon 1 API 43-019-31398      16S    21E    32  
Second Notice of Extended Shut-in and Temporarily Abandoned Well Requirements for Wells on Fee or State Leases

Dear Mr. Donaldson:

As of July 2008, Royale Energy Inc. ("Royale") has one (1) State Mineral Lease Well (see attachment A) in non-compliance with the requirements for extended shut-in or temporarily abandoned (SI/TA) status. Wells SI/TA beyond twelve (12) consecutive months require the filing of a Sundry Notice in accordance with R649-3-36-1 for Utah Division of Oil, Gas & Mining ("DOG M" or "Division") approval. Wells with five (5) years non-activity or non-productivity shall be plugged, unless the Division grants approval for extended shut-in time upon a showing of good cause by the operator (R649-3-36-1.3.3).

In March 2005 the Division notified Royale by certified mail that well Moon Canyon 1 (API# 43-019-31398) was in non-compliance for extended SI/TA status. In response, Royale Agent Mr. Eric Noblitt sent a letter dated March 13, 2005, with an attached sundry requesting extended SI/TA status. The Division approved extended SI/TA for the Moon Canyon 1 well as requested, valid until October 1, 2005, to allow time for Royale to "perform a workover on this well as soon as adverse weather and road condition permit." The well was subsequently deepened, but never produced and remains SI/TA. The Division feels more than sufficient time has passed since your company's extension has expired, and we have not seen any further reporting. Please submit your plans to produce or plug this well to DOGM within 30 days of this notice or further actions will be initiated.



Page 2  
September 2, 2008  
Mr. Donaldson

For extended SI/TA consideration the operator shall provide the Division with the following:

1. Reasons for SI/TA of the well (R649-3-36-1.1).
2. The length of time the well is expected to be SI/TA (R649-3-36-1.2), and
3. An explanation and supporting data if necessary, for showing the well has integrity, meaning that the casing, cement, equipment condition, static fluid level, pressure, existence or absence of Underground Sources of Drinking Water and other factors do not make the well a risk to public health and safety or the environment (R649-3-36-1.3).

Submitting the information suggested below may help show well integrity and may help qualify your well for extended SI/TA. **Note: As of July 1, 2003, wells in violation of the SI/TA rule R649-3-36 may be subject to full cost bonding (R649-3-1-4.2, 4.3).**

1. Wellbore diagram, and Copy of recent casing pressure test, and
2. Current pressures on the wellbore (tubing pressure, casing pressure, and casing/casing annuli pressure) showing wellbore has integrity, and
3. Fluid level in the wellbore, and
4. An explanation of how the submitted information proves integrity.

If the required information is not received within 30 days of the date of this notice, further actions will be initiated. If you have any questions concerning this matter, please contact me at (801) 538-5281.

Sincerely,



Dustin K. Doucet  
Petroleum Engineer

JP/js  
Enclosure

cc: Jim Davis, SITLA  
Operator Compliance File  
Well File

## ATTACHMENT A

	<b>Well Name</b>	<b>API</b>	<b>Lease Type</b>	<b>Years Inactive</b>
1	Moon Canyon 1	43-019-31398	ML-48391	2 Years 11 Months

# ROYALE ENERGY, INC.



September 18, 2008

Dustin K. Doucet  
State of Utah; DOGM  
1594 West North Temple  
Suite 1210  
PO Box 145801  
Salt Lake City, UT 84114-5801

RE: Moon Canyon 1 API 43-019-31398

Dear Mr. Doucet

Enclosed is a State of Utah Form 9 requesting approval to workover the Moon Canyon # 1 API 43-019-31398. The Notice clarifies our plans to carry out work in the next 12 months and requests an extension of the SI/TA status of the well. This Notice is filed in reference to your letter of September 2, 2008 (copy enclosed).

At the present time, Royale has a service rig in the area and we have this work on our schedule to be completed.

If you require further information to grant the extension and approve the Sundry Notice, please advise.

Thank you  
Royale Energy, Inc.



W.G. Donaldson  
Chief Engineer

**RECEIVED**

**SEP 23 2008**

**DIV. OF OIL, GAS & MINING**

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

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>ML-48391A</b>
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME: <b>Moon Canyon Unit</b>
2. NAME OF OPERATOR: <b>Royale Energy, Inc</b>		8. WELL NAME and NUMBER: <b>Moon Canyon 1</b>
3. ADDRESS OF OPERATOR: 7676 Hazard Center Dr Ste 1 CITY San Diego STATE CA ZIP 92071		9. API NUMBER: <b>019-31398</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1390' FSL, 927' FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: 32 16S 21E		10. FIELD AND POOL, OR WILDCAT: COUNTY: <b>Grand</b> STATE: <b>UTAH</b>

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

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

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

Royale Energy requests that the Moon Canyon #1 remain shut in for no more than 12 months. Royale anticipates to move a service rig onto the location during this period to carry out the following:

Two major objectives in workover – fracture stimulate existing perforations in Buck Horn (10,042-10,056) and perforate the Castlegate (6070-6078) thru two strings of casing to confirm presence of hydrocarbons

A BHP survey taken in July 2007 showed a BHP at mid perforations (9924') of 2746 psi and a water column in the well from mid perforation to ~3400'. The tubing and casing pressure were recorded at 50 psi.

Royale would propose to cement squeeze the existing Mancos (7070-7140), Dakota Silt (9792-9828) and Dakota perforations (9963-9987), drill out and test squeezed perforations, fracture stimulate the Buckhorn perforations (10042-10056) and test same, isolate all perforations (squeezed and stimulated) below and including the Mancos with a temporary plug below the Castlegate and above the Mancos, perforate and test the Castlegate, squeeze, then drill out the Castlegate, prep surface facilities for Buckhorn production.

The 7" casing is cemented to surface and the 4 1/2" casing cemented into the 7" casing. Well integrity is considered good. During the proposed workover, the pressure integrity of the casing will be re confirmed."

COPY SENT TO OPERATOR  
Date: 10/14/2008  
Initials: KS

NAME (PLEASE PRINT) Glenn Donaldson TITLE Chief Engineer

SIGNATURE *Glenn Donaldson* DATE 9/15/2008

(This space for State use only)

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

DATE: 10/6/08

BY: *[Signature]*

**RECEIVED SEP 23 2008**

DIV. OF OIL, GAS & MINING

*\*TOC on 4 1/2" casing is at 6750' - will sig to ak DIV. OF OIL, GAS & MINING  
\*Should be extended 5174 be desired beyond the recompletion, The MIT and request should be submitted at that time.*

**Royale Energy, Inc.**

**WELLBORE SCHEMATIC**

Well Name: Moon Canyon # 1  
 API #: 4301931398  
 Location: Grand Co.Utah

Spud Date: 01-Oct-03

Rig Release Date: 02-Nov-03  
 Completion Date: 9 Dec. 20

**Surface Casing**

Size 10 3/4" in  
 Set at 362 ft  
 Wt. 24 ppf Grade J-55  
 Hole Size 12.25 in  
 Est. T.O.C. 0 ft

**Surface Cement**

Lead : \_\_\_\_\_  
 Tail : 330 sxs, Class G

**Intermediate Casing**

Size 7" in  
 Set at 6220 ft  
 Wt. 23 ppf Grade L-80  
 Hole Size 8 3/4" in  
 Est. T.O.C. 5950 ft

**Intermediate Cement**

Lead : \_\_\_\_\_  
 Tail : 455 sxs, Class G / POZ

**Production Tubing**

Size 2 3/8" in  New  Used  
 Wt. 4.7 ppf Grade N-80 from 0 to 9738 ft  
 Type EUE ppf  
 Nipples XN @ 9730'

**Perforations:**

- 1-Sq Perfs 6650-6652
- 2-Mancos 7070 - 7140
- 3-Dak. Silt 9792 - 9820
- 4-Dakota (Cdr. Mt) 9963-9987
- 5-Buck Horn 10042 - 10056

**Production Casing**

Size 4 1/2" in  New  Used  
 Wt. 11.6 ppf Grade N-80 from 0 to 10220 ft  
 Wt. \_\_\_\_\_ ppf Grade \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_ ft  
 PBTB 10105 (CIBP)  
 Hole Size 6 1/4" in  
 Est. T.O.C. 6880 ft

**Production Cement**

Lead : \_\_\_\_\_  
 Tail : 610 sxs Class G 50/50  
 Displacement Fluid: Water

4 1/2" Csg Shoe @ 10220 ft

CIBP \*\*

TD @ 10720 \*\* ft

2 3/8" XN Nipple  
9738' End of Tubing

Mud Wt. = 8.9 ppg @ TD

**Comments:**

Surface: \_\_\_\_\_  
 Intermediate: \_\_\_\_\_  
 Production: \*\* Well was deepened below 4 1/2" casing shoe to Morrison at 10720 but isolated with CIBP at 10105 inside 4 1/2" - 7/2005

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

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>ML-48391A</b>
2. NAME OF OPERATOR: <b>Royale Energy, Inc</b>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 7676 Hazard Center Dr Ste 1 CITY San Diego STATE CA ZIP 92071		7. UNIT or CA AGREEMENT NAME: <b>Moon Canyon Unit</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>1390' FSL, 927' FWL</b>		8. WELL NAME and NUMBER: <b>Moon Canyon 1</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>32 16S 21E</b>		9. API NUMBER: <b>019-31398</b>
COUNTY: <b>Grand</b>		10. FIELD AND POOL, OR WILDCAT:
STATE: <b>UTAH</b>		

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: <b>12/1/2008</b>	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

Royale Energy sent in a sundry notice in September of 2008, in October of 2008 Royale moved a rig on location to perforate two major objectives; Buck Horn and Castlegate. Attached is the workover history for the work that was performed.

Currently the well is shut in for further evaluation.

NAME (PLEASE PRINT) <u>Mohamed Abdel-Rahman</u>	TITLE <u>VP of Exploration &amp; Production</u>
SIGNATURE <u><i>Mohamed Abdel-Rahman</i></u>	DATE <u>2/19/09</u>

(This space for State use only)

**RECEIVED**  
**FEB 26 2009**  
**DIV. OF OIL, GAS & MINING**

## **Moon Canyon 1 – Workover Summary**

**10/4/08**

Moving in Rig.

**10/5/08**

Move in rig up. Blew well down. Well dead. ND wellhead. NU BOP. Trucked 72 jts 2 3/8" tbg. Will use to tag PBTD. Rigged up ready to RIH and tag PBTD.

**10/6/08**

Pick up 419' tbg. Tag soft bottom. POOH tallying. Tag PBTD @ 10142' using 8' KB. PU 3 3/4 bit 4 1/2 scraper. RIH tag @ 10142'. POOH 4 stands. RU pump and lines. SDFN.

**10/7/08**

Tbg had a puff of gas. No pressure on gauge. POOH with bit & scraper. PU RBP & packer & RIH. RBP @ 10105, pkr @ 9963 with 12000# compression. Perfs at 10042-10055'. Load hole with 15 bbls 3% KCL. Pressure to 2500 psi broke. Everytime had to shift gears on pump took a barrel to catch up. Inject approx 1.5 BPM @ 1000 psi. Well on vacuum. Pump 22.4 bbl LTR 47.4 bbl. RU swab. IFL 2000 FFL 7000. 9 runs rec 26.5 bbl, water, gas after 5<sup>th</sup> run. LTR 20.9. SWIFN.

**10/8/08**

Blow down tbg. Swab 9 run 57.93 bbl recovered. Move pkr to 10009. Load hole & break down zone 10042-10056. Broke @ 2600. Inject 9 bbl @ 2500 psi. Resume swabbing. LTR 51.1 bbl. IFL 2250 FFL 3800. Catassed swab line. SD.

**10/9/08**

SICP 100. IFL 2000 FFL 7100. Out of sand line. 19 swab runs. Recover 40 bw. LTR 1.5bbl.

**10/10/08**

Swab. IFL 6500' FFL 7100'. Rec 4.2bbl. Drop 2 soap sticks. SD wait on sand line.

**10/11/08**

No activity

**10/12/08**

No activity

**10/13/08**

Splice on & spool new sand line. Pour rope socket. Make up swivel stripped threads.

**10/14/08**

Start swabbing. IFL 7400' FFL 10000'. Last 10 swab runs pulled from seat nipple. Recovered 56 bbls over load. Pulling gas cut fluid. Blow after each run. Well will not sustain flow.

**10/15/08**

Start swabbing. IFL 4750 FFL 10000 pulling from SN. 6 runs recover 18.9bbl. Blow down csg release pkr. Lay down 14ft of subs. Land pkr @ 10008'. 20000 compression on pkr. ND BOP NU tree. Load out rig.

**10/18/08**

MO RU. Blew well down. Spot equip. Prep to NU BOP.

**11/19/08**

ND tree NU BOP. RU tbg tools. Release pkr RIH retrieve RBP. Reset RBP @ 6600. Test to 4500 psi okay. Swab well to 2000'. POOH with pkr. Pkr bad. Lay down. Drain pump.

**11/20/08**

Blow well down. RU cased hole solutions. Run correlation log. Tie into open hole log. TOC 5980. Bond 95 to 100%. **Perf 6060-6080' 6 SPF with 3 1/8 gun.** Hole size .24 penetration 23". No blow. No increase in pressure in fluid level. RD perforators. RU prk. RIH set @ 6003' with 15000# compression. Load hole break down zone. Broke @ 2400 psi. Inj rate 3 bpm @ 1800 psi 0 in 5 sec. RU swab IFL 1300' make 5 runs. Well drinking fluid between runs. Initial LTR 37.6 bbl. Recover 21 bbl 16.6 bbl left to recover. No blow after swab run.

**11/21/08**

Blow well down IFL 4300'. Initial run recover 4.2 bbl. 11 runs last 10 runs .25 bbl or less. Total for day 6.1 bw. No oil very slight blow.

**11/22/08- 11/28/08**

Shut down for Holiday.

**11/29/08**

Start transferring water and moving equipment to V Canyon 20-2 location.

**11/30/08**

Well had 30 psi. Get gas sample. Release packer. RIH retrieve RBP. POOH same. RIH with notched collar. 1 jt tbg PSN not profile. Land tbg @ 9734'. ND BOP NU tree. Prep to rig down.

**12/1/08**

Rig down. Move off location. Move BOP, rig tank and lights.

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

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

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		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>ML-48391A</b>
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
		7. UNIT or CA AGREEMENT NAME: <b>Moon Canyon Unit</b>
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		8. WELL NAME and NUMBER: <b>Moon Canyon 1</b>
2. NAME OF OPERATOR: <b>Royale Energy, Inc</b>		9. API NUMBER: <b>43-019-31398</b>
3. ADDRESS OF OPERATOR: <b>7676 Hazard Center Dr Ste 1</b> CITY <b>San Diego</b> STATE <b>CA</b> ZIP <b>92071</b>		10. FIELD AND POOL, OR WILDCAT:
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>1390' FSL, 927' FWL</b>		COUNTY: <b>Grand</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>32 16S 21E</b>		STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
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	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
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	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Extended Shut in</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

As a follow up to Royale Energy Sundry notices dated 9/15/08 and 2/19/09 and to an E-mail from Dustin Doucet to Mohamed Abdel-Rahman dated 11/17/09 and a phone conversation between them on 11/24/09. The Buckhorn formation was injected into but was not hydraulically fraced. No gas was recovered or pressure was indicated. The Castlegate was perforated and again no gas was indicated or pressure increase observed. Currently all previously perforated zones are open to well bore. Since the pressure on the well is very low and none of the swabbing showed any flow entry from gas or water we regard the risk of cross flow from one formation to another as minimal to nonexistent. Royale Energy is requesting Shut In/Temporarily Abandonment status on this well until such a time that Royale Energy resumes operations in the area. By such a time, Royale Energy undertakes to carry out the work that is necessary to abandon all zones in the well or plug it back to a depth that could be used to kick off for drilling a future deviated well.

Well integrity is considered good and there are no perforations above 6060'.

COPY SENT TO OPERATOR

Date: 12.3.2009

Initials: KS

NAME (PLEASE PRINT) <u>Mohamed Abdel-Rahman</u>	TITLE <u>VP of Exploration &amp; Production</u>
SIGNATURE <u>[Signature]</u>	DATE <u>11/24/09</u>

**APPROVED BY THE STATE**  
(This space for State use only) OF UTAH DIVISION OF OIL, GAS, AND MINING  
DATE: 12/1/09  
BY: [Signature]  
(See Instructions on Reverse Side)  
*\*See Conditions of Approval (Attached)*

**RECEIVED**

**NOV 30 2009**

DIV. OF OIL, GAS & MINING

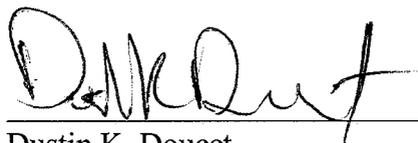
## ***CONDITIONS OF APPROVAL TO EXTEND SI/TA OF WELL***

Well Name and Number: Moon Canyon 1  
API Number: 43-019-31398  
Operator: Royale Energy, Inc.  
Reference Document: Original Sundry dated November 24, 2009, received by DOGM on November 30, 2009

The Division of Oil, Gas and Mining (Division) approves this well for extended shut-in until June 1, 2010 under the following conditions:

### Approval Conditions:

1. Approval is being given to allow time for Royale Energy, Inc. (Royale) to carry out the work that is necessary to abandon all zones in the well or plug it back to a depth that could be used to kick off for drilling a future deviated well or to plug and abandon the well.
2. At a minimum the well will require the following plugs to isolate the perforated intervals open to the wellbore as required by rules R649-3-24-3.2 and 3.7: Plug #1 – 10090' to 9990', Plug # 2 – 9750' to 9650', Plug #3 – 7000' to 6900' and Plug # 4 – 6000' to 5900'. Royale may propose an alternate plug back procedure that equally isolates the perforated intervals. This work must be done by the extension date.
3. Royale shall submit a sundry notice of intent with their proposed plans as soon as possible and gain Division approval prior to commencing work.
4. Extended SI/TA beyond this approval date will not be given without proper plug back as discussed above, a showing of casing integrity above the uppermost plug and good cause.
5. A well monitoring program should be in place to ensure that health, safety, and the environment are all protected (wellbore integrity).
6. Any changes in wellbore conditions or integrity; or sustained pressure on casing/casing annuli shall be reported to the Division immediately. A new monitoring program or remedial action may be necessary at that time.



Dustin K. Doucet  
Petroleum Engineer

December 1, 2009

Date



GARY R. HERBERT  
Governor

GREGORY S. BELL  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

March 16, 2011

CERTIFIED MAIL NO.: 7005 1820 0001 5562 8071

Mr. Mohamed Abdel-Rahman  
Royale Energy, Inc.  
7676 Hazard Center, Suite 1500  
San Diego, CA 92108

43 019 31398  
Moon Cym 1  
16S 21E 32

Subject: Extended Shut-in and Temporary Abandoned Well Requirements for Fee or State Leases

Dear Mr. Abdel-Rahman:

As of January 2011, Royale Energy, Inc. (Royale) has four (4) State Lease Wells (see Attachment A) that are currently in non-compliance with the requirements for extended shut-in or temporarily abandoned (SI/TA) status. One of the above listed wells (Attachment A) is past due on approved SI/TA extension, which ended September 1, 2009. Royale has not submitted necessary data with good reason for further extension on said well. Please submit the necessary data as outlined below to bring wells into compliance.

Wells SI/TA beyond twelve (12) consecutive months requires filing a Sundry Notice (R649-3-36-1). Wells with five (5) years non-activity or non-productivity shall be plugged, unless the Division grants approval for extended shut-in time upon a showing of good cause by the operator (649-3-36-1.3.3). For extended SI/TA consideration the operator shall provide the Utah Division of Oil, Gas & Mining with the following:

1. Reasons for SI/TA of the well (R649-3-36-1.1).
2. The length of time the well is expected to be SI/TA (R649-3-36-1.2), and
3. An explanation and supporting data if necessary, for showing the well has integrity, meaning that the casing, cement, equipment condition, static fluid level, pressure, existence or absence of Underground Sources of Drinking Water and other factors do not make the well a risk to public health and safety or the environment (R649-3-36-1.3).

Please note that the Divisions preferred method for showing well integrity is by MIT



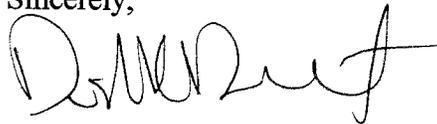
Page 2  
Royale Energy, Inc.  
March 16, 2011

Submitting the information suggested below may help show well integrity and may help qualify your well for extended SI/TA. **Note: As of July 1, 2003, wells in violation of the SI/TA rule R649-3-36 may be subject to full cost bonding (R649-3-1-4.2, 4.3).**

1. Wellbore diagram, and
2. Copy of recent casing pressure test, and
3. Current pressures on the wellbore (tubing pressure, casing pressure, and casing/casing annuli pressure) showing wellbore has integrity, and
4. Fluid level in the wellbore, and
5. An explanation of how the submitted information proves integrity.

If the required information is not received within 30 days of the date of this notice, further actions may be initiated. If you have any questions concerning this matter, please contact me at (801) 538-5281.

Sincerely,



Dustin K. Doucet  
Petroleum Engineer

DKD/JP/js  
Enclosure  
cc: Compliance File  
Well File  
LaVonne Garrison, SITLA

N:\O&G Reviewed Docs\ChronFile\PetroleumEngineer\SITA

# ATTACHMENT A

	Well Name	API	LEASE	Years Inactive
<b>1<sup>ST</sup> NOTICE</b>				
1	TRAIL CYN 1-2	43-019-31532	ML-47218	3 Years 5 Months
2	TRAIL CYN 1-3	43-019-31603	ML-47218	2 Years 2 Months
3	TEN MILE CYN 22-1	43-019-31526	ML-46542	1 Year 9 Months
<b>PAST DUE SI/TA EXTENSION as of 9/1/2009</b>				
→ 4	MOON CANYON 1	43-019-31398	ML-48391	5 Years 5 Months

UTAH DEPARTMENT OF NATURAL RESOURCES

Division of Oil, Gas & Mining

Oil and Gas Program

1594 West North Temple, Suite 1210, Box 145801

Salt Lake City, Utah 84114-5801

(801) 538-5340 Phone

(801) 359-3940 Fax

NOTICE OF VIOLATION
STATE OF UTAH
OIL AND GAS CONSERVATION ACT

\*\*\*\*\*

To the following operator:

Name: ROYALE ENERGY INC. 168 21E 32

- Well(s) or Site(s): 1.) MOON CANYON 1 API #: 43-019-31398
2.) TRAIL CYN 1-2 43-019-31532
3.) TALE CYN 1-3 43-019-31603
4.) TEN MILE CYN 22-1 43-019-31526

Date and Time of Inspection/Violation: September 21, 2012

Mailing Address: Attn: Mohamed Abdel-Rahman
7676 Hazard Center, Suite 1500
San Diego, CA 92108

Under the authority of the Utah Oil and Gas Conservation Act, Section 40-6 et. Seq., Utah Code Annotated, 1953, as amended, the undersigned authorized representative of the Division of Oil, Gas and Mining (Division) has conducted an inspection of the above described site and/or records on the above date and has found alleged violation(s) of the act, rules or permit conditions as described below.

Description of Violation(s):

Rule R649-3-36, Shut-in and Temporarily Abandoned Wells - According to Rule R649-3-36, the operator is required to supply the Division with reasons for extended SI/TA, the length of time for extended SI/TA and proof of well bore integrity for every well SI/TA over 12 consecutive months. After 5 years of continued SI/TA, the wells are to be plugged unless good cause is supplied to the Division for extended SI/TA in addition to the required information just mentioned.

The Division has initiated several contacts with Royale Energy Inc. (Royale) requesting required documents and action per R649-3-36. Royale has seven (7) wells located in Utah, all of which are currently shut in. Four (4) of the seven (7) have never produced. The above listed wells appear to be uneconomical based on production history or lack thereof. This causes concern considering these wells have been shut in for a period ranging from over three (3) to seven (7) years.

All of the above listed wells have previously been noticed as being in non-compliant SI/TA status. The most recent notice was sent out March 16, 2011. Royale responded on April 26, 2011, with a request for SI/TA extension for wells 2 - 4. This request was denied by the Division on August 3, 2011, due to insufficient data submitted by Royale. Well #1 had a first notice of non-compliance sent out via certified mail on March 3, 2005, to Royale. On March 13, 2005, Royale requested an extension in order to perform workover on this well. The Division approved this request on March 17, 2005, that expired on October 1, 2005. The well was deepened, yet never produced. A second notice of non-compliance was sent to Royale on September 2, 2008. Royale responded on September 15, 2008, with a request for extension based on intent to recomplete the well. This was approved by the Division on October 6, 2008, that expired on September 1, 2009. Royale submitted another extension request on November 24, 2009, to allow time for plug back to a depth to be used to kick off for drilling a future deviated well. The Division approved this request on December 1, 2009 that expired on June 1, 2010.

**UTAH DEPARTMENT OF NATURAL RESOURCES**

**Division of Oil, Gas & Mining**

**Oil and Gas Program**

1594 West North Temple, Suite 1210, Box 145801

Salt Lake City, Utah 84114-5801

(801) 538-5340 Phone

(801) 359-3940 Fax

To date our records indicate that no further work has been accomplished as planned or required documentation submitted by Royale to move these wells into compliance.

Action: For the wells subject to this notice, Royale Energy Inc, shall either submit the information required by R649-3-36, plug and abandon or place these wells on production.

This notice shall remain in effect until it is modified, terminated, or vacated by a written notice of an authorized representative of the director of the Division of Oil, Gas and Mining. Failure to comply with this notice will result in the Division pursuing further actions against said operator. Further actions may include initiation of agency actions to order full cost bonding and plugging and abandonment of wells and requests for bond forfeiture and civil penalties.

Compliance Deadline: November 5, 2012

Date of Service Mailing: October 10, 2012

CERTIFIED MAIL NO: 7011 0110 0001 3568 2400



Division's Representative

Operator or Representative

(If presented in person)

cc: Compliance File

Well Files

6/2005

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: ML-48391
	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: MOON CANYON 1
2. NAME OF OPERATOR: ROYALE ENERGY, INC.	9. API NUMBER: 43019313980000
3. ADDRESS OF OPERATOR: 7676 Hazard Center Dr Ste 1500 , San Diego, CA, 92108	PHONE NUMBER: 619 881-2800 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1390 FSL 0927 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 32 Township: 16.0S Range: 21.0E Meridian: S	9. FIELD and POOL or WILDCAT: UNDESIGNATED
	COUNTY: GRAND
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>5/31/2013</b>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
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	<input type="checkbox"/> OPERATOR CHANGE	<input checked="" type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
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	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Place cement plugs @ 10090'-9990', 9750'-9650', 7000'-6900', and 6000'-5900'. Perf 7" csg @ 375' and circulate cement to surface. Insure nondonductive fluid is placed in uncemented portions of well. Cut off well head and restore location.

**Approved by the Utah Division of Oil, Gas and Mining**  
**Date:** November 15, 2012  
**By:** *Derek Duff*

<b>NAME (PLEASE PRINT)</b> Rachele Wolchko	<b>PHONE NUMBER</b> 619 881-2874	<b>TITLE</b> Executive Assistant
<b>SIGNATURE</b> N/A	<b>DATE</b> 11/1/2012	



**The Utah Division of Oil, Gas, and Mining**

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Sundry Conditions of Approval Well Number 43019313980000**

- 1. Notify the Division at least 24 hours prior to conducting abandonment operations. Please call Dan Jarvis at 801-538-5338. 2. Plugs 1 through 4 will require a minimum of 8 sx neat Class G cement. Plugs 2 through 4 will require tagging the plug to ensure they remain at the depth indicated in the proposal.**
- 3. Add Plug #5: This plug shall be an inside/outside plug. RIH and perforate @ 4700'. Establish circulation down the 4½" casing back up the 4 ½" x 7" annulus. If injection into the perfs cannot be established a 150' plug (±12 sx) shall be balanced from ±4750' to 4600'. If injection is established: RIH with CICR and set at 4650'. M&P 24 sx cement, sting into CICR pump 20 sx, sting out and dump 4 sx on top of CICR. This will isolate the base of the Moderately Saline Groundwater as required by rule R649-3-24-3.3. This also helps isolate the stage collar at 3594'.**
- 4. All annuli shall be cemented from a minimum depth of 100' to the surface.**
- 5. Surface reclamation shall be done in accordance with R649-3-34 – Well Site Restoration.**
- 6. All requirements in the Oil and Gas Conservation General Rule R649-3-24 shall apply.**
- 7. If there are any changes to the procedure or the wellbore configuration, notify Dustin Doucet at 801-538-5281 (ofc) or 801-733-0983 (home) prior to continuing with the procedure.**
- 8. All other requirements for notice and reporting in the Oil and Gas Conservation General Rules shall apply.**

11/8/2012

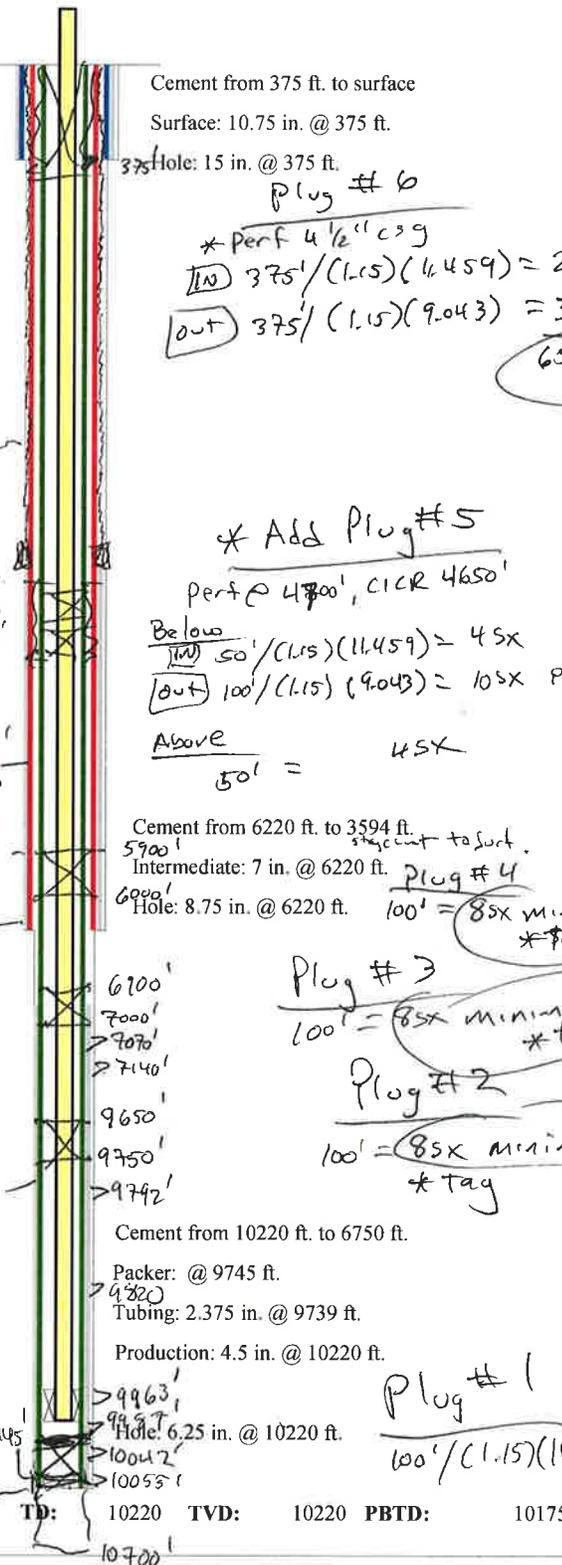
# Wellbore Diagram

r263

**API Well No:** 43-019-31398-00-00    **Permit No:**    **Well Name/No:** MOON CANYON 1  
**Company Name:** ROYALE ENERGY, INC.  
**Location:** Sec: 32 T: 16S R: 21E Spot: NWSW  
**Coordinates:** X: 617811 Y: 4358603  
**Field Name:** UNDESIGNATED  
**County Name:** GRAND

### String Information

String	Bottom (ft sub)	Diameter (inches)	Weight (lb/ft)	Length (ft)	Capacity (cf/cf)
HOL1	375	15			
SURF	375	10.75	40.5	375	
HOL2	6220	8.75			
II	6220	7	23	6220	
HOL3	10220	6.25			
PROD	10220	4.5	11.6	10220	11.459
T1	9739	2.375			
PKR	9745				



Cement from 375 ft. to surface  
 Surface: 10.75 in. @ 375 ft.  
 375' Hole: 15 in. @ 375 ft.  
 Plug # 6  
 \* Perf 4 1/2" CGR  
 $\frac{100}{10} 375' / (1.15) (11.459) = 295X$   
 $\frac{100}{10} 375' / (1.15) (9.043) = 365X$

65X total reqd.  
**Cement Information**

String	BOC (ft sub)	TOC (ft sub)	Class	Sacks
II	6220	3594	G	855
PROD	10220	6750	PC	610
SURF	375	0	G	330

\* Add Plug # 5  
 Perf @ 4700', CCR 4650'  
 Below  
 $\frac{100}{10} 50' / (1.15) (11.459) = 45X$   
 $\frac{100}{10} 100' / (1.15) (9.043) = 105X$   
 Above  
 50' = 45X

20 SX below  
 4 SX on top

### Perforation Information

Top (ft sub)	Bottom (ft sub)	Shts/Ft	No Shts	Dt Squeeze
7070	10055			
6060	6080			

Plug # 3  
 $100' = 85X \text{ minimum} * \text{tag}$

Plug # 2  
 $100' = 85X \text{ minimum} * \text{tag}$

### Formation Information

Formation	Depth
SEGO	5674
CSLGT	5986
MNCS	6216
DKTA	9798
MRSN	10055
BMSGW	± 4700'

Cement from 6220 ft. to 3594 ft.  
 5900' Intermediate: 7 in. @ 6220 ft. Plug # 4  
 6000' Hole: 8.75 in. @ 6220 ft. 100' = 85X minimum \* tag

Cement from 10220 ft. to 6750 ft.  
 Packer: @ 9745 ft.  
 Tubing: 2.375 in. @ 9739 ft.  
 Production: 4.5 in. @ 10220 ft.

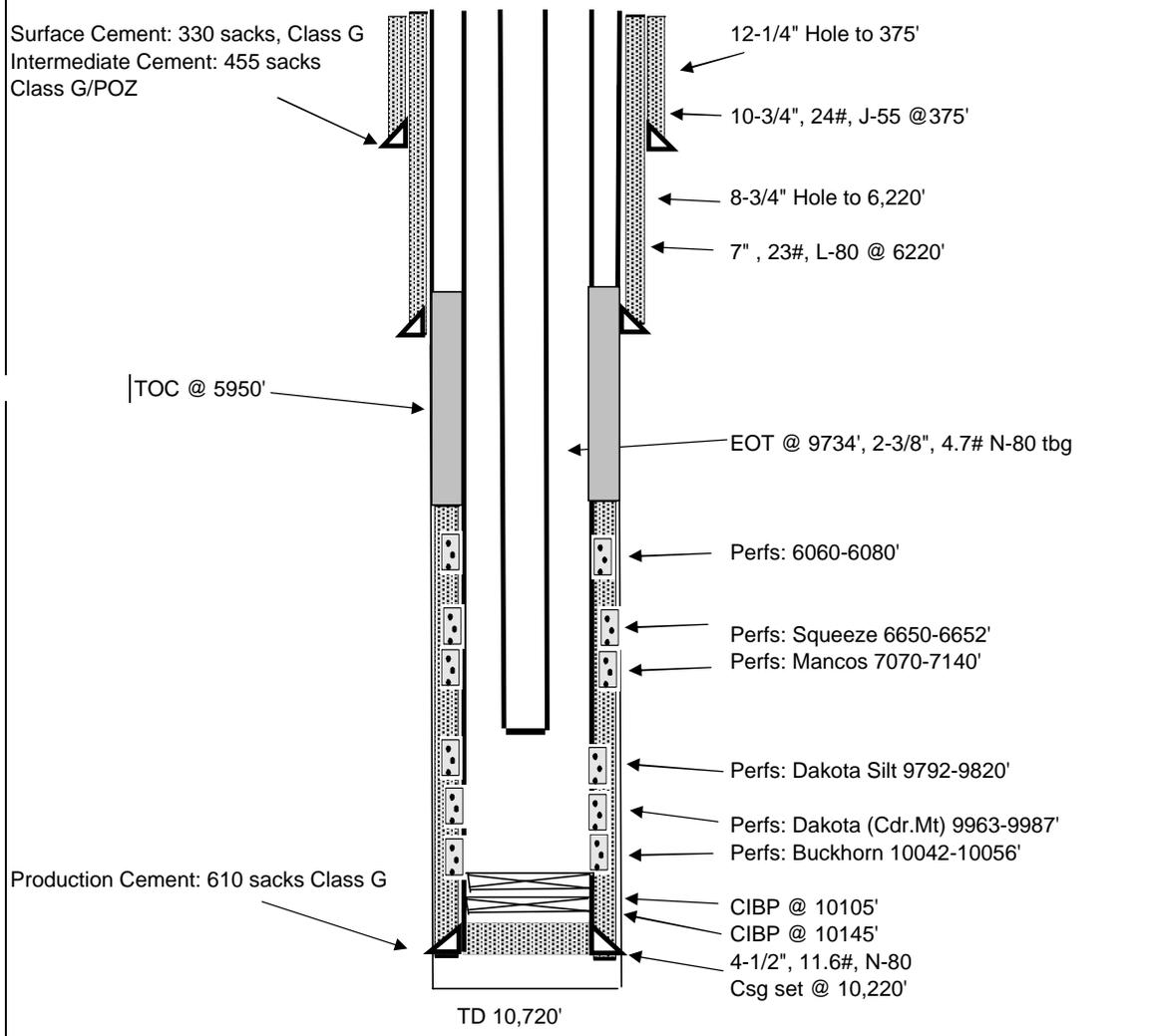
Plug # 1  
 $100' / (1.15) (11.459) = 85X \text{ min. reqd.}$

TD: 10220 TVD: 10220 PBD: 10175  
 10700'

# Royale Energy Inc.

## Moon Canyon 1

Date :	Perforations			Casing			
Lease :	Date	To	From	Size	Weight	Grade	Depth
Field : Undesignated	11/19/2003	10,042	10,055	10-3/4"	40.5#	J-55	375'
KB :	11/19/2003	9,987	9,970	7"	23#	L-80	6,220'
Legals : Sec. 32 T16S R21E	11/19/2003	9,792	9,820	4-1/2"	11.6#	N-80	10,220'
Directions to Location	12/3/2006	7,070	7,140				
	11/20/2008	6,060	6,080				
				Tubulars			
				Size	Weight	Grade	Depth
				2-3/8"	4.7#	N-80	9734'



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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.																																
Moon Canyon 1 was Plugged and Abandoned 5/5/2013 - 5/16/2013 Attached is the history																																
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY June 20, 2013</b>																																
<b>NAME (PLEASE PRINT)</b> Rachele Wolchko	<b>PHONE NUMBER</b> 619 881-2874	<b>TITLE</b> Executive Assistant																														
<b>SIGNATURE</b> N/A	<b>DATE</b> 6/19/2013																															

**Magna Energy Services, LLC**  
**17509 County Road 14,**  
**Ft. Morgan, CO 80701**  
**(970)-867-9007**  
**Fax (970)-867-8374**

**Job Log**

Date: 5/5/2013 – 5/16/2013

Operator: Royale Energy, Inc.

Well name: Moon Canyon 1

Location: NWSW, Sec: 32, T: 16 South, R: 21 East

Grand County, UT

MIRU, Blow well pressure down to tank, NDWH, NUBOP, TOH and tallied tubing, TIH to 10,096'  
Circulated wellbore with 55 bbl. of water, Pumped 20 sxs of cement, TOH to 9,750'  
Circulated wellbore with scale inhibitor, Pumped 15 sxs of cement, TOH to 8,746'  
Reverse circulated tubing clean with 40 bbl. of water, WOC overnight  
TIH and tag TOC at 9,550', TOH to 7,001', Circulated wellbore with 39 bbl. of water  
Pumped 14 sxs of cement with 2% CaCl, TOH, Reverse circulate tubing clean, WOC  
TIH and tag TOC at 6,802', TOH, NDBOP, NDWH, RU casing equipment, Stretched casing  
RU wireline, TIH and freepoint casing, (Utah approved casing cut), TIH and cut casing at 5,866'  
TOH and RD wireline, TOH and LD 4-1/2" casing, RD casing equipment, NUWH, NUBOP  
TIH with tubing to 5,925' (59' inside casing stub), Circulated wellbore with 35 bbl. of water  
Pumped 28 sxs of cement, TOH, Reverse circulate tubing clean, WOC  
TIH and tag TOC at 5,717', TOH to 4,702', Pumped 21 sxs of cement with 2% CaCl  
TOH to 3,700', Reverse circulate tubing clean, WOC, TIH and tag TOC at 4,632', TOH, NDBOP  
TIH to 376', Pumped 70 sxs of cement to surface, Dig out and cut off wellhead 4' below ground level  
Pumped 35 sxs of cement 94' to surface in annulus, WOC, Top off cement in annulus with 5 sxs  
Welded information onto casing, Back fill pit, Clean location  
RDMO, P&A complete

\*\*\*All cement is 15.9# class "G" with a 1.15 yield\*\*\*

Cementing Contractor: Magna Energy Services, LLC  
Cementing Contractor supervisor: Darie Roehm & Daniel Norton  
Operations Supervisor: Rachele Wolchko & James Frimodig  
Utah State Representative: Bart Kettle & Dan Jarvis  
Wireline Contractor: DLD Pipe Recovery Services