

1777 SOUTH HARRISON STREET · PENTHOUSE ONE
TELEPHONE (303) 759-3303 · DENVER, COLORADO 80210

October 12, 1984

Bureau of Land Management
Oil and Gas Office
136 E. South Temple
Salt Lake City, UT 84111

ATTN: Edgar Guynn

RE: Cave Canyon Federal 3-2
NE SW 3-38S-24E
San Juan Co., UT

Dear Sir:

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

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

Raymond T. Duncan agrees to accept full responsibility for operations conducted in order to drill, complete and produce the above-captioned well.

Very truly yours,
RAYMOND T. DUNCAN

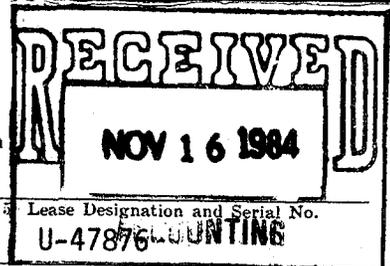
W. S. Fallin

W.S. Fallin
Production Manager

cl

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

(Other instructions on reverse side)



APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work
 DRILL DEEPEN PLUG BACK
 b. Type of Well
 Oil Well Gas Well Other
 Single Zone Multiple Zone
 2. Name of Operator: Raymond T. Duncan 303/759-3303
 3. Address of Operator: 1777 S. Harrison, Penthouse 1 Denver, CO 80210
 4. Location of Well (Report location clearly and in accordance with any State requirements.)*
 At surface: 1925' FSL and 1925' FWL
 At proposed prod. zone: NE SW

6. If Indian, Allottee or Tribe Name: N/A
 7. Unit Agreement Name: N/A
 8. Farm or Lease Name: Cave Canyon
 9. Well No.: #3-2
 10. Field and Pool, or Wildcat: Wildcat
 11. Sec., T., R., M., or Blk. and Survey or Area: Sec. 3, T38S - R24E

14. Distance in miles and direction from nearest town or post office*: 13 miles northwest of Hatch Trading Post
 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. line, if any): 605'
 16. No. of acres in lease: 1289.44
 17. No. of acres assigned to this well: 40
 18. Distance from proposed location* to nearest well, drilling, completed, or applied for, on this lease, ft.: 1900'
 19. Proposed depth: 6000'
 20. Rotary or cable tools: Rotary

21. Elevations (Show whether DF, RT, GR, etc.): 5227' GR
 22. Approx. date work will start*: April 1, 1985

23. PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
12-1/4"	8-5/8"	24#	2500'	1100 sx - circ. to surface.
7-7/8"	5-1/2"	15.5#	6000'	400 sx - or sufficient to cover zones of interest.

Raymond T. Duncan proposes to drill a well to 6000' to test the Ismay and Lower Desert Creek formations. If productive, casing will be run and the well completed. If dry, the well will be plugged and abandoned as per BLM and State of Utah requirements.

See Onshore Order No. 1 attached.

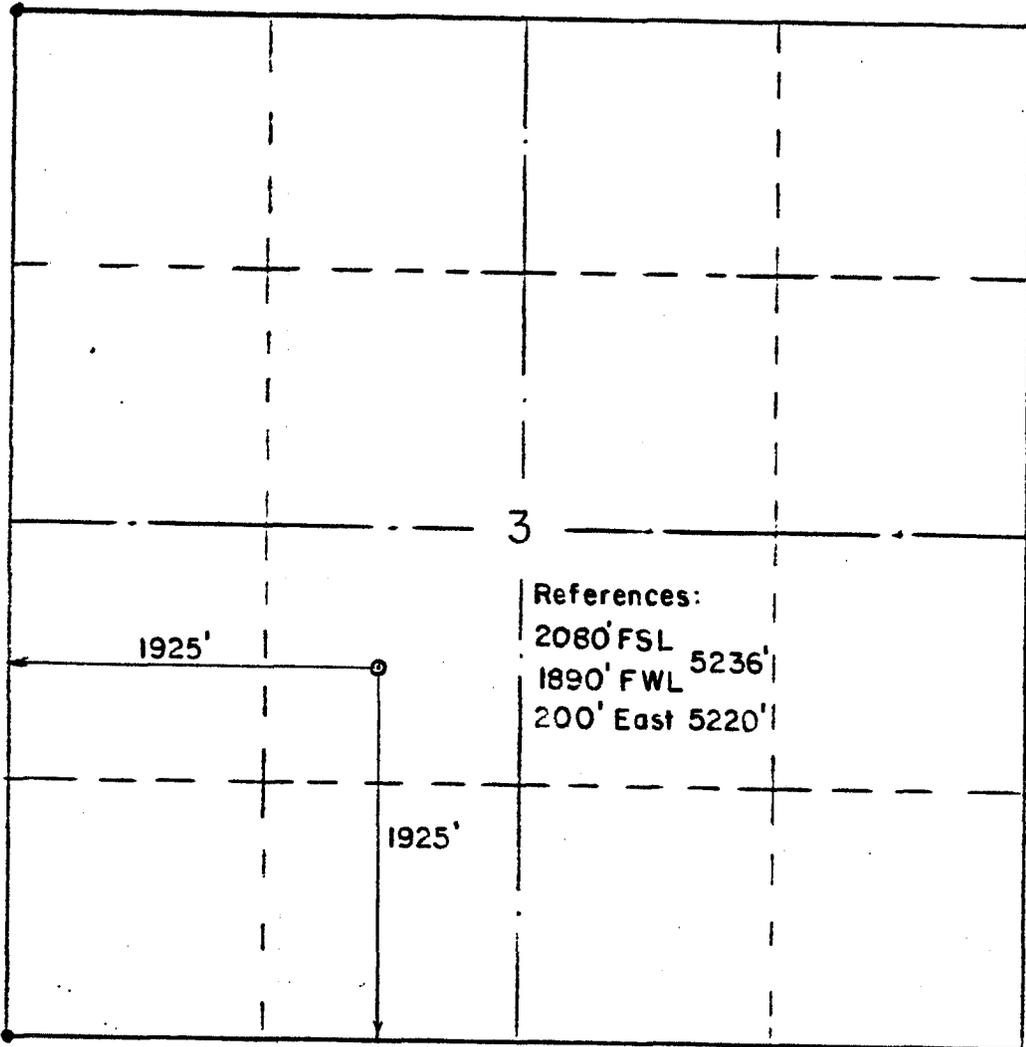
APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 11/4/85
BY: [Signature]

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

24. Signed: [Signature] Title: Consultant for: Raymond T. Duncan Date: 11/12/84
 (This space for Federal or State office use)

Permit No. Approval Date
 Approved by Title Date

WELL LOCATION AND ACREAGE DEDICATION PLAT



Operator R.T. Duncon		Well name 3-2 Cave Canyon	
Section 3	Township 38 South	Range 24 East	Meridian SLM
Footages 1925' FSL & 1925' FWL		County/State San Juan, Utah	Elevation 5227'
Formation	Dedicated Acreage	Requested by Lisa Green	
<p>The above plat is true and correct to the best of my knowledge and belief.</p> <p>12 Oct. 84</p> <p><i>Gerald G. Hudson</i> Gerald G. Hudson REGISTERED LAND SURVEYOR No. 5705 STATE OF UTAH</p>			

ONSHORE OIL & GAS ORDER NO. 1

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

CAVE CANYON #3-2
1925' FSL and 1925' FWL
Sec. 3, T38S - R24E
San Juan County, Utah

Prepared For:

RAYMOND T. DUNCAN

By:

PERMITCO
1020-15th Street, Suite 22-E
Denver, Colorado 80202

Copies Sent To:

- 4 - BLM - Moab, Utah
- 1 - BLM - Monticello, Utah
- 1 - Div. of Oil, Gas & Mining - SLC, Utah
- 3 - Raymond T. Duncan - Denver, Colorado

Permitco

A Petroleum Permitting Company

ONSHORE ORDER NO.
Raymond T. Duncan
Cave Canyon 3-2
1925' FSL and 1925' FWL
Sec. 3, T38S - R24E
San Juan County, Utah

CONFIDENTIAL - TIGHT HOLE

DRILLING PROGRAM

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

1. The surface formation and estimated formation tops to be encountered are as follows:

<u>Formation</u>	<u>Depth</u>	<u>Subsea</u>
Morrison	Surface	
DeChelly	1450'	+3800'
Hermosa	4550'	+ 700'
Ismay	5600'	- 350'
Lower Ismay	5780'	- 530'
Gothic Shale	5835'	- 585'
Desert Creek	5860'	- 610'
Lower Desert Creek	5925'	- 675'
Chimney Rock Shale	5950'	- 700'
T.D.	6000'	

2. The estimated depths at which oil, gas, water or other mineral bearing zones are expected to be encountered are as follows:

<u>Substance</u>	<u>Formation</u>	<u>Anticipated Depth</u>
Gas & Oil	Ismay	5600'
Gas & Oil	Lower Desert Creek	5925'

All fresh water and prospectively valuable minerals encountered during drilling, will be recorded by depth cased and cemented. All oil and gas shows will be tested to determine commercial potential.

3. Pressure control equipment will consist of a 10", 3000# BOP. (See BOP Diagram attached.)

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ONSHORE ORDER NO
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CONFIDENTIAL - TIGHT HOLE

DRILLING PROGRAM

Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventer controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.

4. a. Casing

The proposed casing program is as follows:

<u>Purpose</u>	<u>Depth</u>	<u>Hole Size</u>	<u>O.D.</u>	<u>Wt.</u>	<u>Grade</u>	<u>Type</u>	<u>New or Used</u>
Conductor	0-110'	17-1/2"	13-3/8"	48#	K-55	ST&C	New
Surface	0-2500'	12-1/4"	8-5/8"	24#	K-55	ST&C	New
Produc.	0-6000'	7-7/8"	5-1/2"	15.5#	K-55	ST&C	New

b. Cement

The cementing program will be as follows:

<u>Conductor</u>	<u>Type and Amount</u>
0-110'	Circulated to surface
<u>Surface</u>	<u>Type and Amount</u>
0-2500'	1100 sx Class B w/additives; or sufficient to circulate to surface.
<u>Production</u>	<u>Type and Amount</u>
	400 sx Class B with additives; or sufficient to cover zones of interest.

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CONFIDENTIAL - TIGHT HOLE

DRILLING PROGRAM

c. Auxiliary Equipment will be as follows:

1. Kelly cock.
2. Float above the bit.
3. A sub with a full opening valve will be on the floor when the kelly is not in use.
4. Monitoring of the system will be done visually.

5. Drilling fluid will be as follows:

<u>Interval</u>	<u>Mud Type</u>	<u>Mud Wt.</u>	<u>Visc.</u>	<u>F/L</u>	<u>PH</u>
0-4000'	Natural	9.0-9.2	35	10-20	
4000-T.D.	Chem Gel	9.5-12.0	45	5-10 through pays	

6. Coring, logging and testing programs are as follows:

- a. No cores are anticipated.
- b. The logging program will consist of the following:
Dual Induction 2500'-T.D.
BHC Acoustic & BHC Density/CNL 4400'-T.D.
Dipmeter (optional) 5500'-T.D.
- c. Drill Stem Tests will be run in the Ismay and Desert Creek formations.

Whether the well is completed as a dry hole or as a producer, "Well Completion or Recompletion Report and Log" (Form 3160-4) will be submitted not later than 15 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analysis, well-test data, geologic summaries, sample descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. Samples (cuttings, fluids, and/or gases) will be submitted when requested by the District Manager.

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CONFIDENTIAL - TIGHT HOLE

DRILLING PROGRAM

7. Abnormal conditions, bottom hole pressures and potential hazards.
 - a. The maximum bottom hole pressure to be expected is 3500 psi.
 - b. Raymond T. Duncan plans to spud the Cave Canyon Federal #3-2 on April 1, 1985 and intends to complete the well within approximately one month after the well has reached T.D.
 - c. The operator will contact the San Juan Resource Area at 801/587-2201, 48 hours prior to beginning any dirt work on this location.
 - d. No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the District Manager. If operations are to be suspended, prior approval of the District Manager will be obtained and notification given before resumption of operations.
 - e. The spud date will be reported orally to the San Juan Area Manager, a minimum of 24 hours before spudding. A Sundry Notice (Form 3160-5) will be sent within 24 hours of spudding, reporting the spud date and time. The Sundry will be sent to the District Manager.
 - f. In accordance with Onshore Oil and Gas Order No. 1, this well will be reported on Form 9-329 "Monthly Report of Operations", starting with the month in which operations begin and continue each month until the well is physically plugged and abandoned. This report will be sent to the Moab BLM District Office, P. O. Box 970, Moab, Utah 84532.
 - g. If a replacement rig is contemplated for completion operations, a "Sundry Notice" (Form 3160-5) to that effect will be filed, for prior approval of the District Manager. All conditions of this approved plan are applicable during all operations conducted with the replacement rig.

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CONFIDENTIAL - TIGHT HOLE

DRILLING PROGRAM

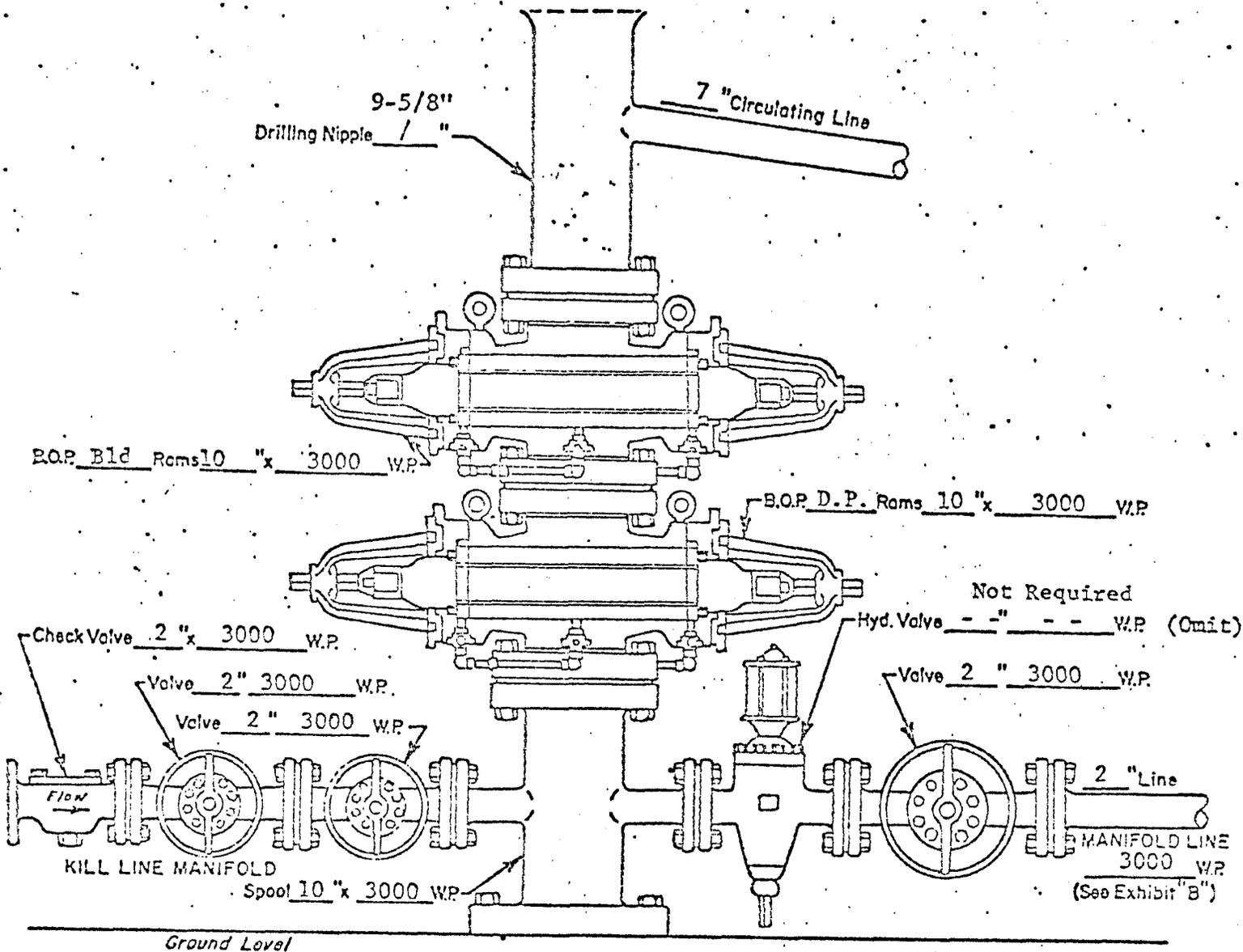
- h. If the well is successfully completed for production, then the District Manager will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, no later than the first business day following the date on which the well is placed on production.
- i. No well abandonment operations will begin without the prior approval of the District Manager. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the District Manager. A "Subsequent Report of Abandonment" (Form 3160-5), will be filed with the District Manager, within 30 days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration.
- j. Final abandonment will not be approved until surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the San Juan Area Manager or his representative, or the appropriate Surface Managing Agency.
- k. A first production conference will be scheduled within 15 days after receipt of the first production notice. The operator will schedule the conference with the San Juan Area Manager.

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WELL NAME: _____

LOCATION: _____



WELL HEAD B.O.P.
3000 #W.P.

Hydraulic

ONSHORE ORDER NO.
Raymond T. Duncan
Cave Canyon 3-2
1925' FSL and 1925' FWL
Sec. 3, T38S - R24E
San Juan County, Utah

CONFIDENTIAL - TIGHT HOLE

SURFACE USE PLAN

ONSHORE OIL & GAS ORDER NO. 1

Thirteen Point Surface Use Plan

1. Existing Roads

- a. The proposed well site is located 12.5 miles from Hatch Trading Post.
- b. Directions to the location from Hatch Trading Post are as follows:

Go north and west on the Perkins Road #206 for 9.2 miles to the intersection of the Montezuma Creek Road. Continue west on the Perkins Road #206 for 2.7 miles. Turn north onto existing lease road and proceed northwesterly for approximately 900 feet. The locations sits southeast of the existing lease road.

- c. For location of access roads within a 2-Mile radius, see Maps #1 and #2.
- d. Improvement to the existing access will not be necessary and will be limited to the total existing disturbed width. The maximum total disturbed width will be 26 feet.
- e. All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.
- f. An encroachment permit will be obtained from the San Juan County Road Department, 801/587-2231, ext. 43.

2. Planned Access Roads

- a. The maximum total disturbed width will be 26 feet. The running surface will be approximately 20 feet wide.
- b. The maximum grade will be 5%.

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SURFACE USE PLAN

2. Planned Access Roads (cont.)
 - c. No turnouts are planned.
 - d. The access road was centerline flagged at the time of staking.
 - e. Drainage will be installed as deemed necessary by the dirt contractor.
 - f. No gates, cattleguards or fence cuts will be necessary.
 - g. Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.
 - h. The access road will be water barred or brought to Class III Road Standards within 60 days of dismantling of the drilling rig. If this time frame cannot be met, the San Juan Area Manager will be notified so that temporary drainage control can be installed along the access road.
 - i. No culverts will be necessary.
 - j. Surfacing material will not be placed on the access road or location without prior BLM approval.

3. Location of Existing Wells Within a 1-Mile Radius of the Proposed Location. (See Map #3).
 - a. Water Wells - one artesian spring
 - b. Injection or disposal wells - none
 - c. Producing Wells - none
 - d. Drilling Wells - The Wells Federal #1 is currently being completed by Raymond T. Duncan.

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SURFACE USE PLAN

4. Location of Tank Batteries and Production Facilities.

- a. All permanent structures (onsite for six months or longer) constructed or installed (including oil well pump jacks) will be painted a flat, nonreflective, earthtone color to match the standard environmental colors, as determined by the Rocky Mountain Five-State Interagency Committee. All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The color will be a neutral color that will blend in with the environment.
- b. If a tank battery is constructed on this lease, it will be surrounded by a dike of sufficient capacity to contain 1-1/2 times the storage capacity of the battery.
- c. Tank batteries will be placed as shown on Diagram #1.
- d. All loading lines will be placed inside the berm surrounding the tank battery.
- e. Any necessary pits will be properly fenced to prevent any wildlife entry. The production pit will be flagged overhead.
- f. All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to.
- g. All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the District Manager.
- h. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.
- i. Gas meter runs for each well will be located within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and 500 feet downstream of the meter run or any production facilities. Meter runs will be housed and/or fenced.

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SURFACE USE PLAN

4. Location of Production Facilities (cont.)

- j. The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. The San Juan Area Manager will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the Moab District Office. All meter measurement facilities will conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

5. Location and Type of Water Supply

- a. All water needed for drilling purposes will be obtained from the Bonnie Dalton Artesian Well which is located in the NE/4 Sec. 1, T38S - R24E. Directions to the water source are shown on Map #2.
- b. Water will be trucked to location over the roads marked on Map #2.
- c. No water well is to be drilled on this lease.
- d. Use of water for this operation will approved by obtaining a temporary use permit from the Utah State Engineer, 801/637-1303, and by receiving permission from the land owner of surface management agency to use the land containing the water source.

6. Source of Construction Material

- a. Road surfacing and pad construction material will be obtained from a commercial source.
- b. The use of materials under BLM jurisdiction will conform with 43 CFR 3610.2.3. Construction material will not be located on lease.

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SURFACE USE PLAN

7. Methods of Handling Waste Disposal

- a. The reserve pit will not be lined unless deemed necessary by the dirt contractor. At least half of the capacity will be in cut.
- b. Three sides of the reserve pit will be fenced with four strands of barbed wire before drilling starts. The fourth side will be fenced as soon as the drilling is completed. The fence will be kept in good repair while the pit is drying.
- c. A trash pit will be constructed near the mud tanks and dug at least six feet into solid, undisturbed material. It will be totally enclosed with a fine wire mesh before the rig moves in. The road and pad will be kept litter free.
- d. Produced waste water will be confined to a unlined pit for a period not to exceed 90 days after initial production. During the 90-day period, an application for approval of a permanent disposal method and location, along with the required water analysis, will be submitted for the District Manager's approval. Failure to file an application within the time allowed will be considered an incident of noncompliance, and will be grounds for issuing a shut-in order.

8. Ancillary Facilities

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

9. Well Site Layout

- a. See Diagram #2 for rig layout. See Diagram #3 for cross section of drill pad. See Diagram #4 for cuts and fills.
- b. The location of mud tanks; reserve, burn and trash pits; pipe racks; living facilities and soil stockpiles will be shown on Diagram #2 and #4. The location will be laid out and constructed as discussed during the predrill conference.

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SURFACE USE PLAN

9. Wellsite Layout (cont.)

- c. The top 6 inches of soil material will be removed from the location and stockpiled separate from the trees on the southeast side. Topsoil along the access will be reserved in place.
- d. Access to the well pad will be from the north.

10. Reclamation

- a. Immediately upon completion of drilling, all trash and debris will be collected from the location and surrounding area. All trash and debris will be disposed of in the trash pit and will then be compacted and buried under a minimum of two feet of compacted soil.
- b. The operator or his contractor will contact the San Juan Resource Area office in Monticello, Utah (801/587-2201) 48 hours before starting reclamation work that involves earthmoving equipment and upon completion of restoration measures.
- c. Before any dirt work to restore the location takes place, the reserve pit must be completely dry.
- d. All disturbed areas will be recontoured to blend as nearly as possible with the natural topography. This includes removing all berms and refilling all cuts.
- e. The stockpiled topsoil will be spread evenly over the disturbed area. All disturbed areas will be ripped 12 inches deep with the contour.
- f. Water bars will be built as follows to control erosion.

Grade

2%
2-4%
4-5%
5+%

Spacing

Every 200 Feet
Every 100 Feet
Every 75 Feet
Every 50 Feet

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SURFACE USE PLAN

10. Plans for Reclamation of Surface (cont.)

- g. Seed will be broadcast between October 1 and February 28 with the following prescription. A harrow or similar implement will be dragged over the area to assure seed cover.

2 lbs/acre Curlygrass (*Hilaria Jamesii*)
2 lbs/acre Western Wheatgrass (*Agropyron Smithii*)
1 lbs/acre Fourwing Saltbush (*Atriplex Canescens*)
1/4 lb./acre Yellow Sweetclover

- h. After seeding is complete, the stockpiled trees will be scattered evenly over the disturbed areas. The access will be blocked to prevent vehicular access.

- i. The reserve pit and that portion of the location and access road not needed for production and production facilities will be reclaimed as described in the reclamation section. Enough topsoil will be kept to reclaim the remainder of the location at a future date. This remaining stockpile of topsoil will be seeded in place using the prescribed seed mixture.

11. a. Surface Ownership

Federal

b. Mineral Ownership

Federal

12. Other Information

- a. There will be no change from the proposed drilling and/or workover program without prior approval from the District Manager. Safe drilling and operating practices must be used. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.2.
- b. "Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3164.

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SURFACE USE PLAN

12. Other Information (cont.)

- c. The dirt contractor will be provided with an approved copy of the surface use plan.
- d. If subsurface cultural materials are exposed during construction, work in that spot will stop immediately and the San Juan Resource Area Office will be contacted. All people who are in the area will be informed by the operator that they are subject to prosecution for disturbing archeological sites or picking up artifacts. Salvage or excavation of identified archeological sites will be done by a BLM approved archeologist only if damage occurs.
- e. This permit will be valid for a period of one year from the date of approval. After permit termination, a new application will be filed for approval for any future operations.
- f. An archeological study will be done by LaPlata Archaeological Consultants and clearance is recommended. A copy of this report is attached.
- g. A Deer Winter Range Stipulation is in effect on this lease. There will be no drilling operations between December 1st and March 31st, unless otherwise authorized by the District Manager.

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

Permit Matters

Permitco
Lisa L. Green
1020-15th Street
Suite 22-E
Denver, Co. 80202
303/595-4051

Drilling & Completion Matters

Raymond T. Duncan
1777 S. Harrison
Penthouse 1
Denver, CO 80210
Steve Fallin
303/759-3303 (W)
303/770-0705 (H)

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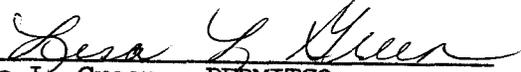
SURFACE USE PLAN

13. Lessee's or Operator's Certification (cont.)

Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Raymond T. Duncan and its contractors and subcontractors in conformity with the plan and the terms and conditions under which it is approved.

November 12, 1984
Date: _____



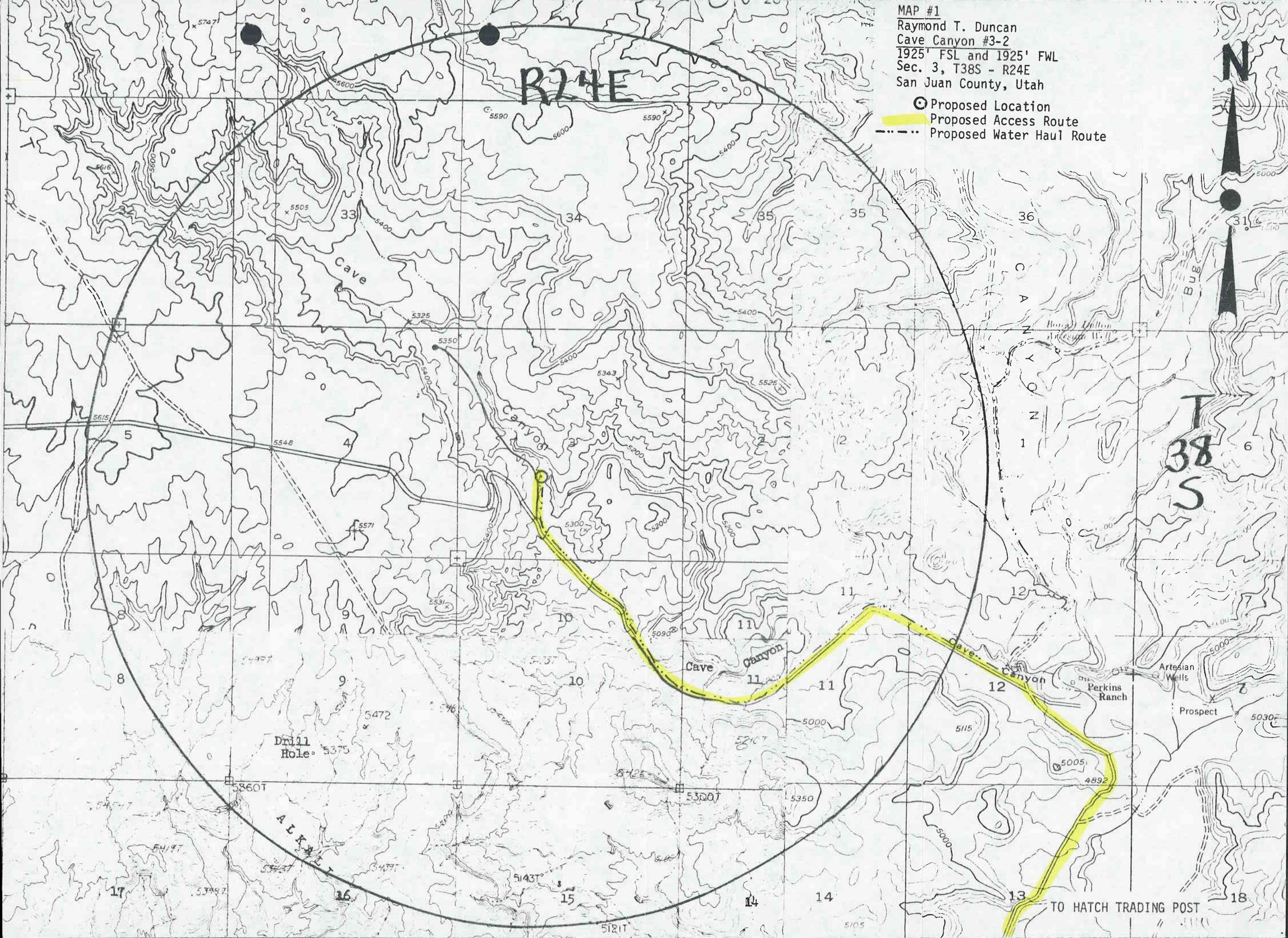
Lisa L. Green - PERMITCO
Authorized Agent for:
RAYMOND T. DUNCAN

Permitco

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MAP #1
Raymond T. Duncan
Cave Canyon #3-2
1925' FSL and 1925' FWL
Sec. 3, T38S - R24E
San Juan County, Utah

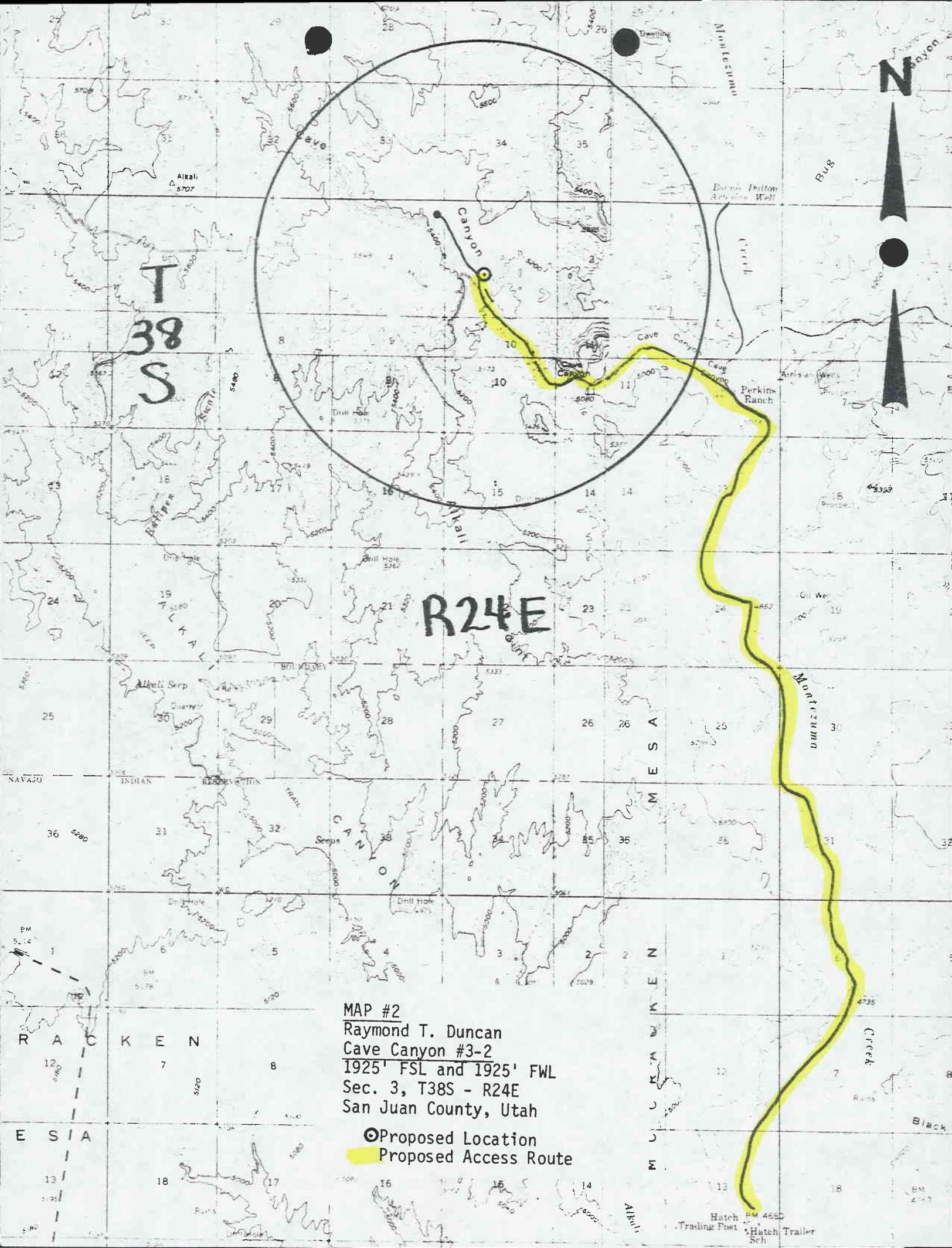
- ⊙ Proposed Location
- Proposed Access Route
- - - Proposed Water Haul Route



R24E

T
38
S

TO HATCH TRADING POST



T
38
S

R24E

MAP #2
 Raymond T. Duncan
 Cave Canyon #3-2
 1925' FSL and 1925' FWL
 Sec. 3, T38S - R24E
 San Juan County, Utah

⊙ Proposed Location
 Proposed Access Route

Hatch Trading Post
 Hatch Trailer Sch

Scale: 1" = 50'

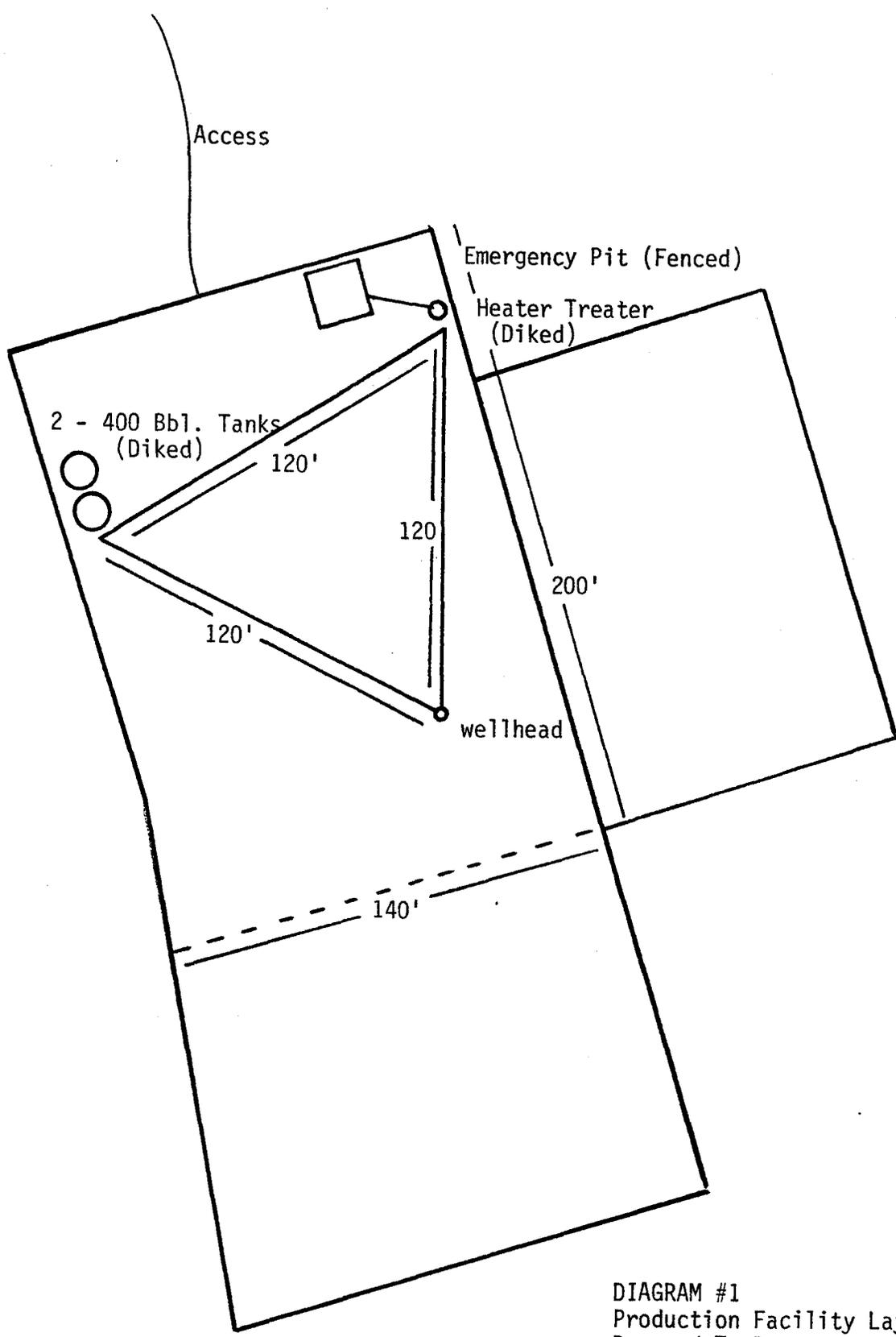


DIAGRAM #1
Production Facility Layout
Raymond T. Duncan
Cave Canyon #3-2
1925' FSL and 1925' FWL
Sec. 3, T38S - R24E
San Juan County, Utah

Scale: 1" = 50'

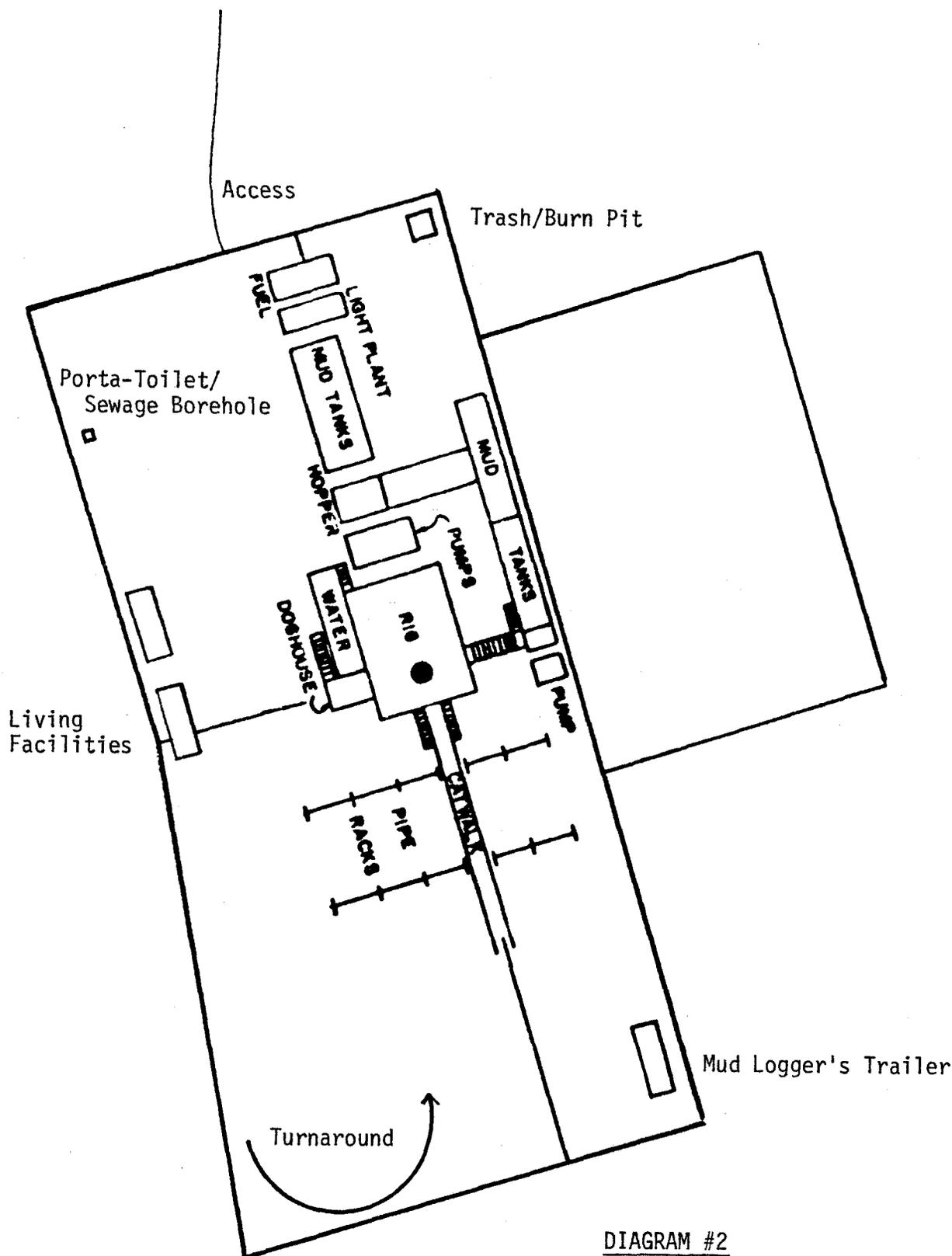


DIAGRAM #2
Rig Layout

Raymond T. Duncan
Cave Canyon #3-2
1925' FSL and 1925' FWL
Sec. 3, T38S - R24E
San Juan County, Utah

Raymond T. Duncan
Cave Canyon #3-2
1925' FSL and 1925' FWL
Sec. 3, T38S - R24E
San Juan County, Utah

DIAGRAM #3

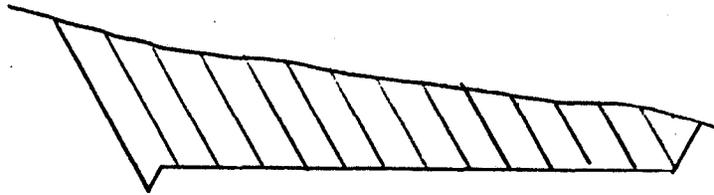
WELL PAD CROSS-SECTION

Well 3-2 Cave Canyon

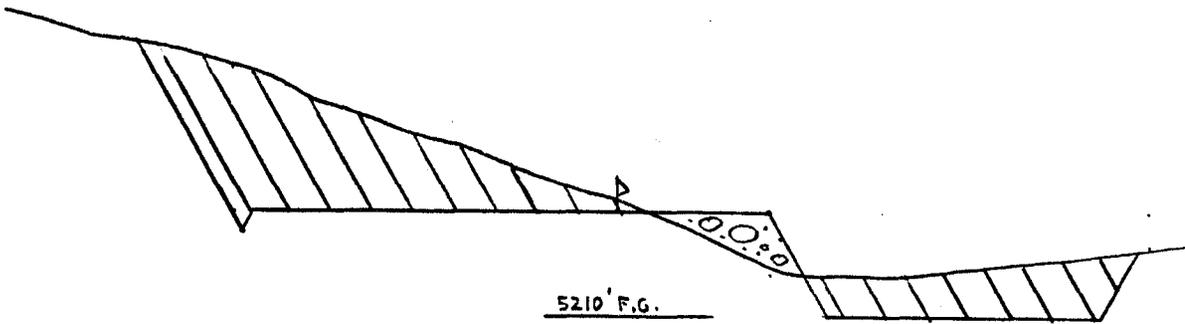
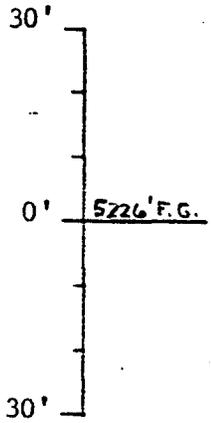
Cut /////
Fill

Scales: 1"=50' H.
1"=30' V.

1.7 Vertical Exaggeration

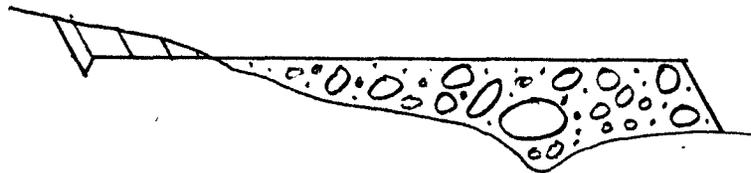
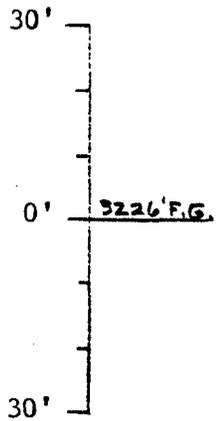


A-AA

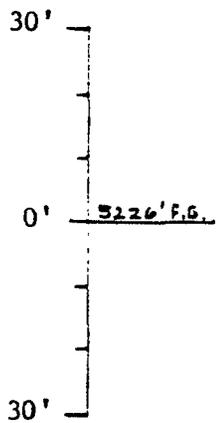


5210' F.G.

B-BB



C-CC



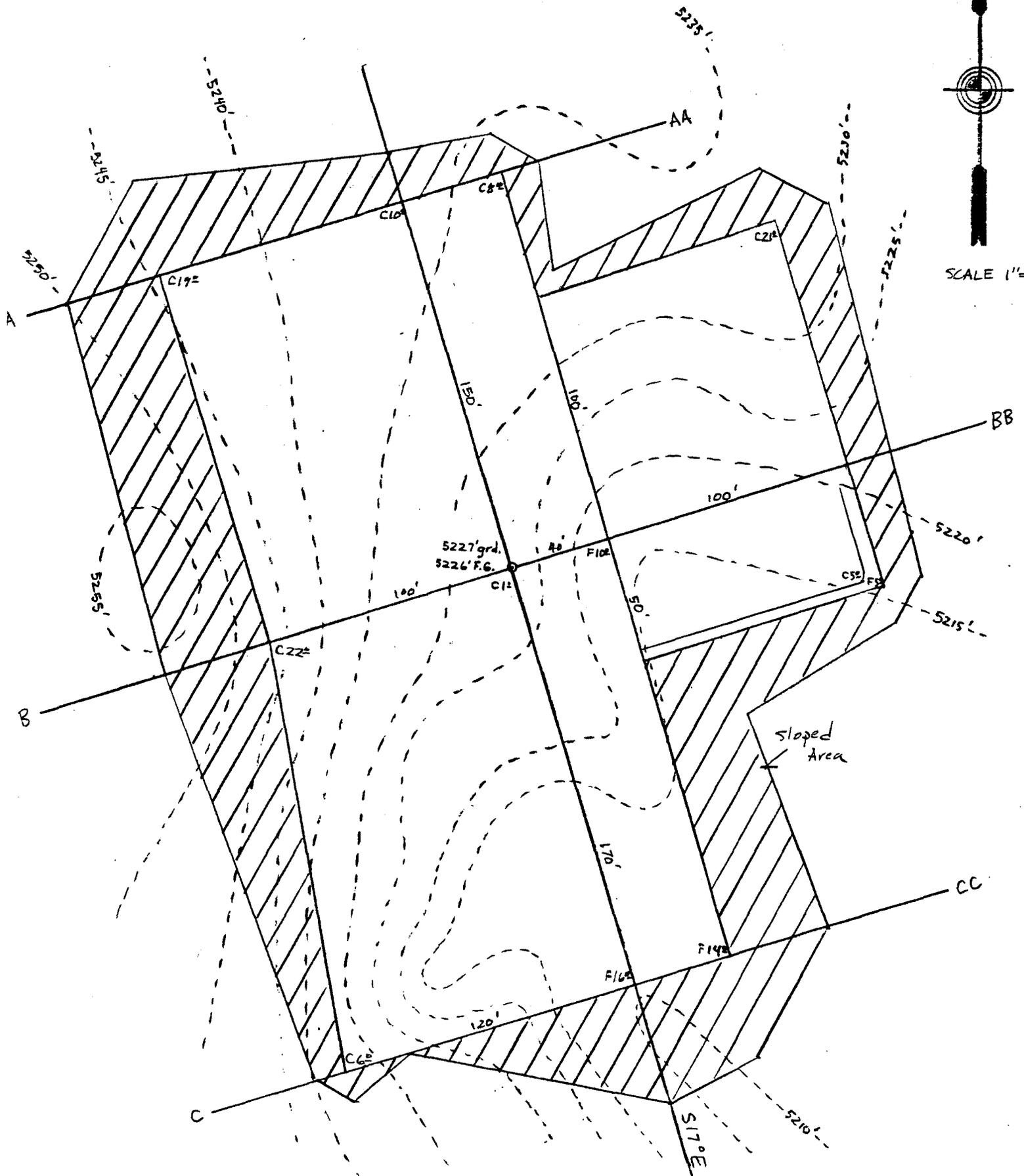
Raymond T. Duncan
Cave Canyon #3-2
1925' FSL and 1925' FWL
Sec. 3, T38S - R24E
San Juan County, Utah

DIAGRAM #4
Wellsite Layout

WELL PAD PLAN VIEW

Well 3-2 Cave Canyon

N



AN ARCHEOLOGICAL SURVEY OF
WALTER DUNCAN OIL PROPERTIES'
CAVE CANYON #3-2 WELL PAD,
SAN JUAN COUNTY, UTAH

LAC REPORT 84104

by
Patrick L. Harden

LA PLATA ARCHEOLOGICAL CONSULTANTS, INC.
P.O. BOX 783
DOLORES, COLORADO 81323
(303) 882-4933

OCTOBER 16, 1984

Federal Antiquities Permit
84-UT-54625

Prepared For:
Walter Duncan Oil Properties
Penthouse
1777 S. Harrison St.
Denver, Colorado 80210

ABSTRACT

An archeological survey of Walter Duncan Oil Properties' Cave Canyon #3-2 well pad was conducted by personnel of La Plata Archeological Consultants, Inc. on October 11 and 15, 1984. The project is located on lands administered by the Bureau of Land Management - San Juan Resource Area in San Juan County, Utah. An area 660 X 660 feet surrounding the pad center stake was inventoried. No cultural resources were found in the project area and archeological clearance for the project is recommended.

INTRODUCTION

The archeological survey for Walter Duncan Oil Properties' Cave Canyon #3-2 well pad was requested by Ms. Lisa Green, acting permit agent for Duncan Oil. The survey was conducted by Patrick Harden of La Plata Archeological Consultants, Inc. of Dolores, Colorado on October 11, 1984 and again visited on October 15th during the on-site pre-drill inspection. Persons attending the pre-drill were Ms. Green (Permitco), Rich McClure (BLM), Al Heaton (Urado Construction), Gerald Huddleston (land surveyor), and Harden (LAC).

The project consists of the construction of a single well pad ca. 275 X 325 feet in size. Access for the well will be off of an existing well access road (for Duncan's Wells Federal #1 well) and will be ca. 50-75' in length. The access route

is included in the 660'² area surveyed for the well pad.

The project is located in the NE¼, SW¼ of section 3, T38S, R24E, San Juan County, Utah. The area is included on the Blanding, Utah 15' series topographic map (1957). The Bureau of Land Management - San Juan Resource Area administers the land involved.

PHYSIOGRAPHY AND ENVIRONMENT

The project area is located along the central reaches of Cave Canyon and just to the southeast of the southern portion of Alkali Ridge. The terrain in the area is characterized by a series of benches and ridges along the canyon slopes bordering the narrow Cave Canyon wash and attendant floodplain. The well pad is located on the slopes of a low ridge and a small terrace adjacent to the wash.

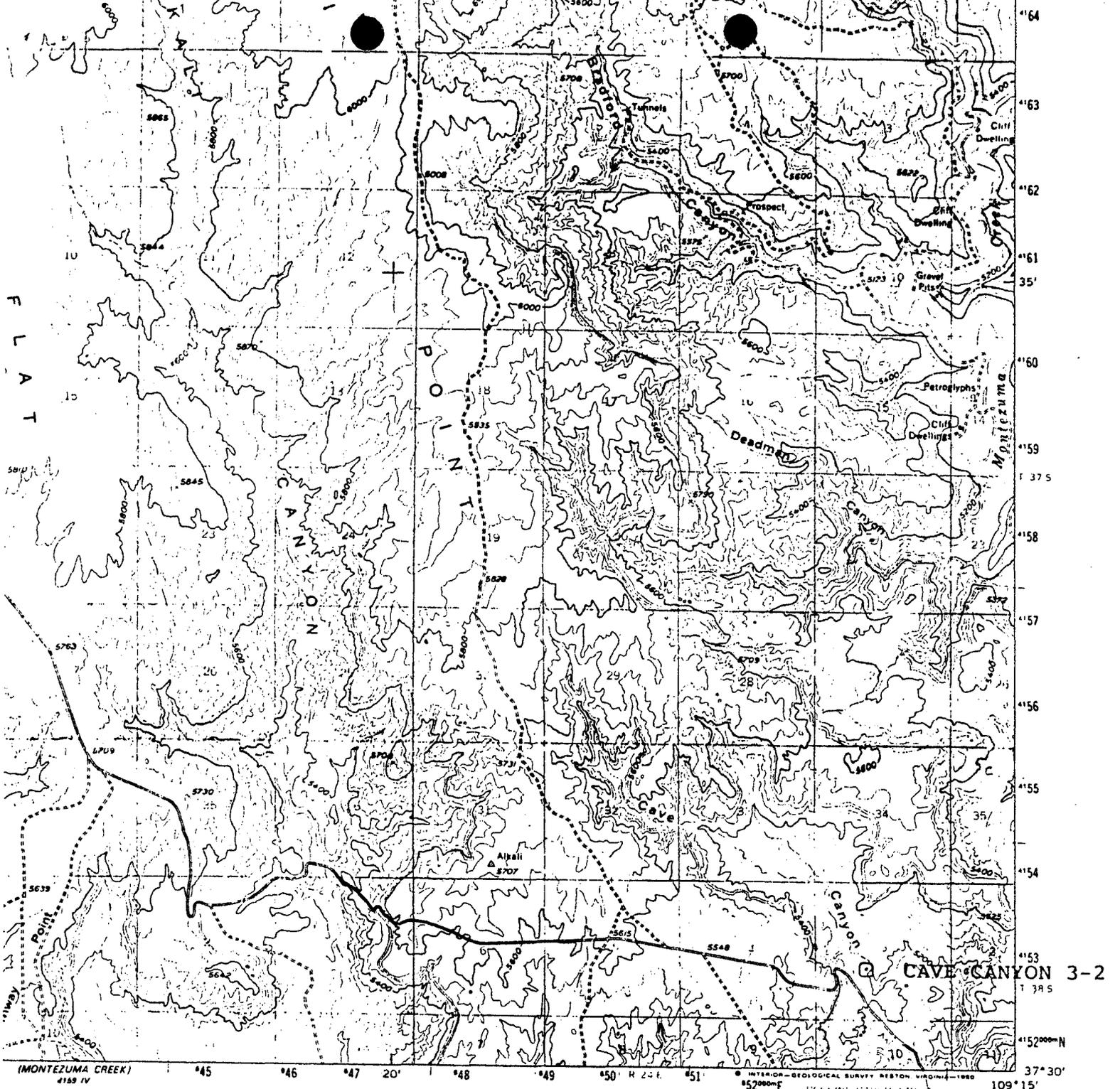
Sediments consist of residual and colluvial sand to small boulder sized sandstone. Shallow aeolian fine sandy loam is present in a few locations.

Vegetation is a salt-shrub association, with scattered juniper present on ridges and in sheltered areas. Greasewood, salt-bush, cheat grass, juniper, and snakeweed are represented.

The only source of permanent water is Cave Canyon Spring, located ca. 1000' to the northwest.

EXAMINATION PROCEDURES

A file and literature review was conducted at the Monticello



SCALE 1:62,500

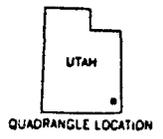
0 1 2 3 4 MILES

0 9000 12000 15000 18000 21000 FEET

0 2 3 4 5 KILOMETERS

CONTOUR INTERVAL 40 FEET

VERTICAL DATUM OF 1929



ROAD CLASSIFICATION

Heavy-duty ——— Light-duty ———

Medium-duty ——— Unimproved dirt - - - - -

State Route

CONFORMS WITH NATIONAL MAP ACCURACY STANDARDS

AVAILABLE FROM THE NATIONAL CENTER FOR GEOGRAPHIC INFORMATION, WASHINGTON, D.C. 20540

FOR MORE INFORMATION CONTACT THE NATIONAL CENTER FOR GEOGRAPHIC INFORMATION, WASHINGTON, D.C. 20540

BLANDING, UTAH

N3730—W10915/15

1957

DMA 4159 III—SERIES V797

BLM office prior to the field investigations. The results of the review indicated that no cultural resources had been recorded in the project area and that no National Register listed properties are in or near the area. The access road to be primarily used for the well has been previously surveyed (Hibbets 1984).

On-the-ground survey consisted of walking a series of transects spaced 15 meters apart across the well pad in a 660 X 660 foot area surrounding the pad center stake. The area where a small segment of access road is to be constructed was included in the pad survey area.

SURVEY RESULTS

No cultural resources were found in the project area. The nature of the sediments make the possibility of buried cultural deposits being present highly unlikely.

CONCLUSION

The archeological survey of Walter Duncan Oil Properties' Cave Canyon #3-2 well pad was conducted on October 11 and 15, 1984 by personnel of La Plata Archeological Consultants, Inc. Actual inventory for cultural resources was conducted on the 11th, with the on-site pre-drill inspection held on the 15th. An area 660 X 660' surrounding the well pad center stake (10 acres) was archeologically surveyed. No cultural resources were found in the area and archeological clearance for the pro-

ject is recommended.

REFERENCE CITED

Hibbets, Barry N.
1984 An Archeological Survey of Duncan Oil Properties'
Wells Federal #1 Well Site and Access Road, San
Juan County, Utah. LAC Report 8445. Manuscript
on file with the BLM, Monticello.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
 DRILL DEEPEN PLUG BACK

b. TYPE OF WELL
 OIL WELL GAS WELL OTHER
 SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR: Raymond T. Duncan
 303/759-3303

3. ADDRESS OF OPERATOR: 1777 S. Harrison, Penthouse 1 Denver, CO 80210

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
 At surface: 1925' FSL and 1925' FWL
 At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 13 miles NW of Hatch Trading Post

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 605'

16. NO. OF ACRES IN LEASE: 1289.44

17. NO. OF ACRES ASSIGNED TO THIS WELL: 40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 1900'

19. PROPOSED DEPTH: 6000'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5227' GR

22. APPROX. DATE WORK WILL START*: April 1, 1984/5

5. LEASE DESIGNATION AND SERIAL NO.: U-47876

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

7. UNIT AGREEMENT NAME: N/A

8. FARM OR LEASE NAME: Cave Canyon

9. WELL NO.: #3-2

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA: Sec. 3, T38S - R24E

12. COUNTY OR PARISH: San Juan
 13. STATE: Utah

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8"	24#	2500'	1100 sx or sufficient to circ to
7-7/8"	5-1/2"	15.5#	6000'	400 sx or suffic to cover /surf. zones of interest.

Raymond T. Duncan proposes to drill a well to 6000' to test the Ismay and Lower Desert Creek formations. If productive, casing will be run and the well completed. If dry, the well will be plugged and abandoned as per BLM and State of Utah requirements.

See Onshore Order No. 1 attached.

RECEIVED
NOV 23 1984

DIVISION OF
OIL, GAS & MINING

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

24. SIGNED: [Signature] TITLE: Consultant for: Raymond T. Duncan DATE: 11/12/84

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY: /S/ GENE NODINE TITLE: DISTRICT MANAGER DATE: 19 NOV 1984

CONDITIONS OF APPROVAL, IF ANY:

NOTICE OF APPROVAL

FLARING OR VENTING OF GAS IS SUBJECT OF NTL 4-A DATED 1/1/80

ONSITE

DATE: October 15, 1984

PARTICIPANTS:

TITLES:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Your contact with the District Office is: Robert (Bob) Graff

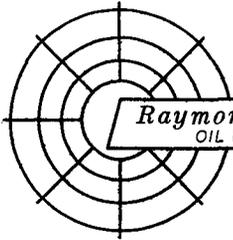
Office Phone: 801-259-6111 Ext 216 Home Phone: 801-259-6088
Address: 82 East Dogwood, P.O. Box 970
City: Moab State: Utah 84532

Resource Area Manager's address and contacts are: S an Juan Resource Area

Address: 480 South First West, P.O. Box 7, Monticello, Utah 84535

Your contact is: Rich McClure

Office Phone: 801-587-2201
Home Phone: 801-587-2874



Raymond T. Duncan
OIL PROPERTIES

1777 SOUTH HARRISON STREET - PENTHOUSE ONE
TELEPHONE (303) 759-3303 - DENVER, COLORADO 80210

November 30, 1984

State of Utah
Division of Oil, Gas & Mining
4241 State Office Building
Salt Lake City, UT 84114

**CONFIDENTIAL:
TIGHT HOLE**

ATTN: Dianne R. Nielson
Director

RE: Cave Canyon Fed. 3-2
NE SW 3-38S-24E
San Juan Co., UT

Gentlemen:

Duncan is requesting that all information for the above-captioned well be held in CONFIDENTIAL STATUS - TIGHT HOLE for the maximum period allowable. Thank you for your consideration in this matter.

Please contact our office if you have questions or need additional information.

Very truly yours,
RAYMOND T. DUNCAN

W.S. Fallin

W.S. Fallin
Production Manager

c1

CONFIDENTIAL

090304

OPERATOR Raymond T. Muncie

DATE 12-28-84

WELL NAME Carl Canyon #3-2

SEC NE SW 3 T 385 R 24E COUNTY San Juan

43-039-31120
API NUMBER

Fed.
TYPE OF LEASE

CHECK OFF:

PLAT

BOND

NEAREST WELL

LEASE

FIELD

POTASH OR OIL SHALE

PROCESSING COMMENTS:

No other wells within 100'

Water & - 09-1395 (T60440)

APPROVAL LETTER:

SPACING: A-3 _____ UNIT

C-3-a _____ CAUSE NO. & DATE

C-3-b

C-3-c

STIPULATIONS:



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dianne R. Nielson, Ph.D., Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

January 4, 1985

Raymond T. Duncan
1777 S. Harrison, Penthouse 1
Denver, Colorado 80210

Gentlemen:

Re: Well No. Cave Canyon #3-2 - NE SW Sec. 3, T. 38S, R. 24E
1925' FSL, 1925' FWL - San Juan County, Utah

Approval to drill the above referenced oil well is hereby granted in accordance with Rule C-3 (b), General Rules and Regulations and Rules of Practice and Procedure.

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

1. Spudding notification to the Division within 24 hours after drilling operations commence.
2. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.
3. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695 or R. J. Firth, Associate Director, (Home) 571-6068.
4. Compliance with the requirements and regulations of Rule C-27, Associated Gas Flaring, General Rules and Regulations, Oil and Gas Conservation.

Raymond T. Duncan
Well No. Cave Canyon #3-2
January 4, 1985
Page 2

5. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-037-31120.

Sincerely,



R. J. Firth
Associate Director, Oil & Gas

as
Enclosures
cc: Branch of Fluid Minerals

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well gas well other

2. NAME OF OPERATOR
Raymond T. Duncan

3. ADDRESS OF OPERATOR
1777 So. Harrison, P-1, Denver, CO 80210

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1925' FSL; 1925' FWL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: same

5. LEASE
U-47876

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME
Cave Canyon

9. WELL NO.
#3-2

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 3-38S-24E

12. COUNTY OR PARISH
San Juan

13. STATE
UTah

14. API NO.
43-037-31120

15. ELEVATIONS (SHOW DF, KDB, AND WD)
5227' Ungraded

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>		<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>		<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>		<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>		<input type="checkbox"/>
PULL OR ALTER CASING	<input checked="" type="checkbox"/>		<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>		<input type="checkbox"/>
CHANGE ZONES	<input type="checkbox"/>		<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>		<input type="checkbox"/>
(other)	<input type="checkbox"/>		<input type="checkbox"/>

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The amount of surface casing to be run was incorrectly stated in the previously submitted Application for Permit to Drill. 1900' of 8 5/8" casing will be run rather than 2500'.

RECEIVED

FEB 20 1985

DIVISION OF OIL
GAS & MINING

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

SIGNED W. S. Fallin TITLE Prod. Manager DATE 2/12/85
W. S. Fallin

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

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

CONFIDENTIAL:
TIGHT HOLE

SUNDRY NOTICES AND REPORTS ON WELLS
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
Raymond T. Duncan

3. ADDRESS OF OPERATOR
1777 So. Harrison, P-1 Denver, CO 80210

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
1925' FSL: 1925' FWL

14. PERMIT NO.
43-037-31120

15. ELEVATIONS (Show whether OF, RT, OR, etc.)

5. LEASE DESIGNATION AND SERIAL NO.
U-47876

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME
Cave Canyon Federal

9. WELL NO.
3-2

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., S., M., OR BLE. AND SURVEY OR AREA
Sec. 3-38S-24E

12. COUNTY OR PARISH 13. STATE
San Juan UT

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	FULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SMOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) _____	

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

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Duncan respectfully requests an extension of time for the TIGHT - HOLE CONFIDENTIAL STATUS for the above-captioned well for a period of one year beginning immediately. Duncan expects to spud the captioned well approximately 11/1/85. Our Application for Permit to Drill expires on 1/4/86.

CONFIDENTIAL:
TIGHT HOLE

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 9/18/85
BY: John R. Bay

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

SIGNED W. S. Fallon TITLE Production Manager DATE 9/12/85
W. S. Fallon

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:



STATE OF UTAH
 NATURAL RESOURCES
 Water Rights

1636 West North Temple • Suite 220 • Salt Lake City, UT 84116-3156 • 801-533-6071

file
 081813

Norman H. Bangerter, Governor
 Dee C. Hansen, Executive Director
 Robert L. Morgan, State Engineer

081812

RECEIVED

NOV 08 1985

DIVISION OF OIL
 GAS & MINING

October 15, 1985

Raymond T. Duncan
 1777 South Harrison, P-1
 Denver, CO 80210

Dear Applicant:

RE: TEMPORARY APPLICATION
 NUMBER 09-1441 (T61310)

Enclosed is a copy of approved Temporary Application Number 09-1441 (T61310). This is your authority to construct your works and to divert the water for the uses described.

While this approved application does give you our permission to divert and use water, it does not grant easements through public or private lands in order to gain access to the source nor to convey the water to the place of use, nor does this approval eliminate the need for such other permits as may be required by this Division or any other agency in implementing your diversion.

This application will expire February 28, 1986, and it is expected that no diversion or use of the water will be done after that date unless another proposal has been made and approved.

Your contact with this office, should you need it is with the Area Engineer, Mark Page. The telephone number is (801)637-1303.

Sincerely,

Robert L. Morgan, P.E.
 State Engineer

RLM:slm

Encl.: Copy of approved Temporary Application

MICROFILMED

REC-70

SEP 20 1985

WATER RIGHTS SALT LAKE

TEMPORARY

APPLICATION TO APPROPRIATE WATER STATE OF UTAH

Application No. 161310
09-1441
CONFIDENTIAL - TIGHT HOLE

NOTE: The information given in the following blanks should be free from explanatory matter, but when necessary, a complete supplementary statement should be made on the following page under the heading "Explanatory."

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, for uses indicated by (X) in the proper box or boxes, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah.

1. Irrigation Domestic Stockwatering Municipal Power Mining Other Uses

2. The name of the applicant is Raymond T. Duncan (303/759-3303)

3. The Post Office address of the applicant is 1777 S. Harrison, P-1, Denver, CO 80210

4. The quantity of water to be appropriated - second-feet and/or 8.00 acre-feet

5. The water is to be used for Oil/Gas Drlg. Opera. from 10/1/85 to 2/28/86
(Major Purpose) (Month) (Day) (Month) (Day)

other use period N/A from - to -
(Minor Purpose) (Month) (Day) (Month) (Day)

and stored each year (if stored) from - to -
(Month) (Day) (Month) (Day)

6. The drainage area to which the direct source of supply belongs is -
(Leave Blank)

7. The direct source of supply is* The Bonnie Dalton Artesian Well
(Name of stream or other source)

which is tributary to -, tributary to -

*Note. Where water is to be diverted from a well, a tunnel, or drain, the source should be designated as "Underground Water" in the first space and the remaining spaces should be left blank. If the source is a stream, a spring, a spring area, or a drain, so indicate in the first space, giving its name, if named, and in the remaining spaces, designate the stream channels to which it is tributary, even though the water may sink, evaporate, or be diverted before reaching said channels. If water from a spring flows in a natural surface channel before being diverted, the direct source should be designated as a stream and not a spring.

8. The point of diversion from the source is in San Juan County, situated at a point*

S. 10 ft. & W 720 ft. from NE cor. Sec. 1, T38S, R24E, SLB&M
(9 miles North of Hatch Trading Post) Monument Canyon Quad.

*Note. The point of diversion must be located definitely by course and distance or by giving the distances north or south, and east or west with reference to a United States land survey corner or United States mineral monument, if within a distance of six miles of either, or if at a greater distance, to some prominent and permanent natural object. No application will be received for filing in which the point of diversion is not defined definitely.

9. The diverting and carrying works will consist of a pump truck w/a capacity of 100 bbls
(Enclosed Tank)

10. If water is to be stored, give capacity of reservoir in acre-feet N/A height of dam -
area inundated in acres - legal subdivision of area inundated -

11. If application is for irrigation purposes, the legal subdivisions of the area irrigated are as follows:
N/A

12. Is the land owned by the applicant? Yes - No X If "No," explain on page 2.

13. Is this water to be used supplementally with other water rights? Yes - No X
If "yes," identify other water rights on page 2.

14. If application is for power purposes, describe type of plant, size and rated capacity. N/A

15. If application is for mining, the water will be used in N/A Mining District at the - mine, where the following ores are mined -

16. If application is for stockwatering purposes, number and kind of stock watered N/A

17. If application is for domestic purposes, number of persons N/A, or families -

18. If application is for municipal purposes, name of municipality N/A

19. If application is for other uses, include general description of proposed uses To be used as the water source for oil/gas drlg operations

20. Give place of use by legal subdivision of the United States Land Survey for all uses described in paragraphs 14 to 19, incl. See attached explanation

21. The use of water as set forth in this application will consume 8.0 second-feet and/or acre-foot of water and none second feet and/ or acre feet will be returned to the natural stream or source at a point described as follows: All water will be consumed by the drilling of this well.

EXPLANATORY

The following additional facts are set forth in order to define more clearly the full purpose of the proposed application:

#5 The estimated time to drill each oil/gas well will not exceed 30 days each from commencement of drilling. Spud date is pending BLM approval of the permit to drill, however, the preferred spud date is October 1, 1985.

#12 The surface is owned by the BLM, the Minerals owned by the Federal Government and the extraction rights to Federal Lease #U-47876 by Raymond T. Duncan.

#20 The proposed oil/gas well sites (Water Use Points) are listed as follows:

Cave Canyon #3-2	Cave Canyon #4-2
1925' FSL & 1925' FWL	1820' FNL & 1860' FEL
Sec. 3, T38S-R24E	Sec. 4, T38S-R24E

43-037-31120

✓ Cave Canyon Fed. 3-2: N. 1925 ft. & E. 1925 ft. from SW Cor. Sec. 3, T38S, R24E, SLB&M

Cave Canyon Fed. 4-2: S. 1820 ft. & W. 1860 ft. from NE Cor. Sec. 4, T38S, R24E, SLB&M

43-037-31096

(Use page 4 if additional explanatory is needed.)

The quantity of water sought to be appropriated is limited to that which can be beneficially used for the purpose herein described

W. J. Falli

Signature of Applicant*
for Raymond T. Duncan

*If applicant is a corporation or other organization, signature must be the name of such corporation or organization by its proper officer, or in the name of the partnership by one of the partners, and the names of the other partners shall be listed. If a corporation or partnership, the affidavit below need not be filled in. If there is more than one applicant, a power of attorney, authorizing one to act for all, should accompany the Application.

DECLARATION OF CITIZENSHIP

STATE OF UTAH, }
County of } ss

On the day of, 19....., personally appeared before me, a notary public for the State of Utah, the above applicant who, on oath, declared that he is a citizen of the United States, or has declared his intention to become such a citizen.

My commission expires:

(SEAL)

Notary Public

FEES FOR APPLICATIONS TO APPROPRIATE WATER IN UTAH

Flow rate — c.f.s.	Cost	
0.0 to 0.1	\$ 15.00	
over 0.1 to 0.5	30.00	
over 0.5 to 1.0	45.00	
over 1.0 to 15.0	45.00	plus \$7.50 for each cfs above the first cubic foot per second.
over 15.0	150.00	
Storage — acre-feet		
0 to 20	22.50	
over 20 to 500	45.00	
over 500 to 7500	45.00	plus \$7.50 for each 500 a.f. above the first 500 acre feet.
over 7500	150.00	

(This section is not to be filled in by applicant)

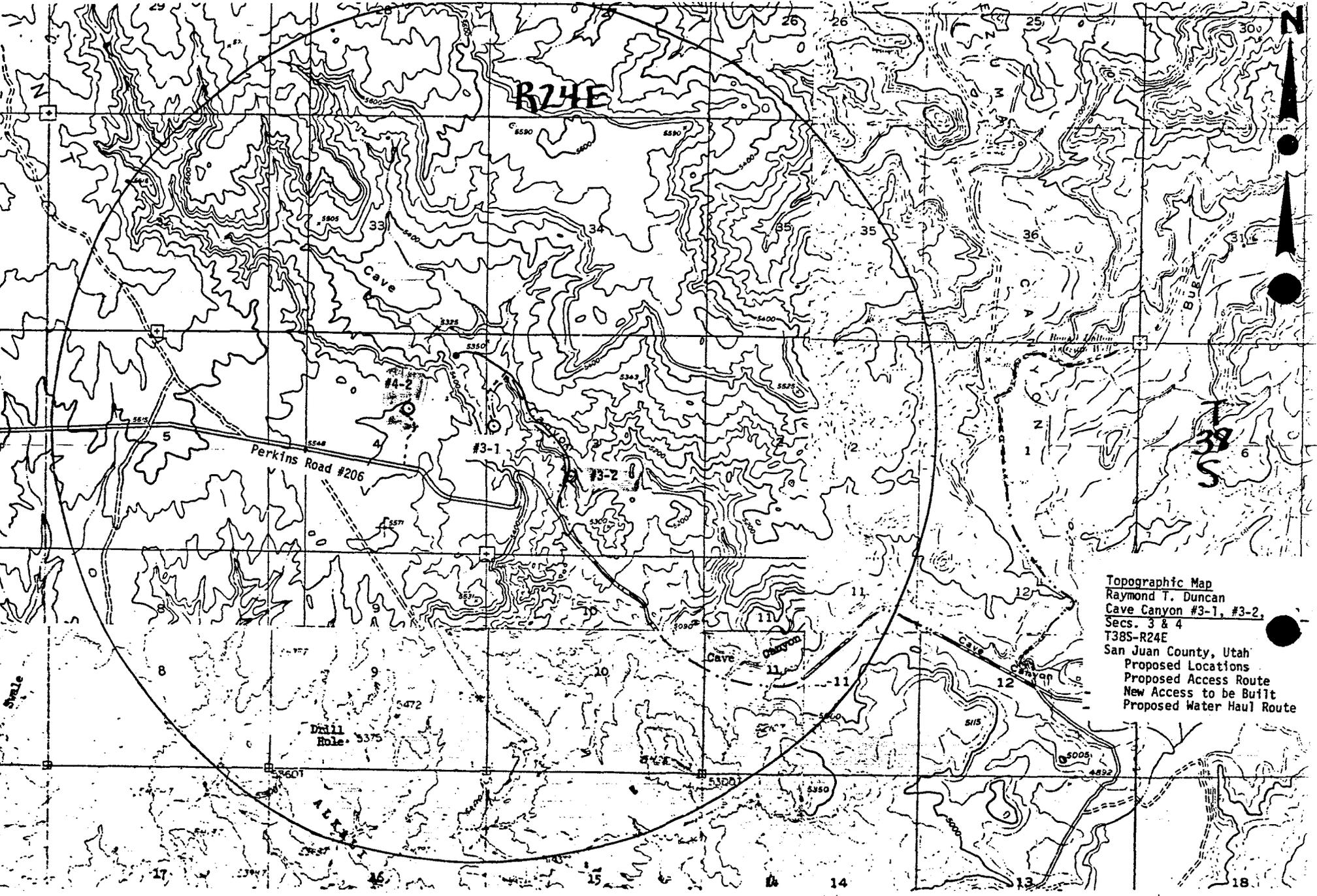
STATE ENGINEER'S ENDORSEMENTS

1. 9/20/85 Application received by mail over counter in State Engineer's office by CD
2. Priority of Application brought down to, on account of
3. 10-7-85 Application fee, \$ 15.00, received by ALD Rec. No. 19089
4. Application microfilmed by Roll No.
5. Indexed by Platted by
6. Application examined by
7. Application returned, or corrected by office
8. Corrected Application resubmitted by mail over counter to State Engineer's office.
9. Application approved for advertisement by
10. Notice to water users prepared by
11. Publication began; was completed
Notice published in
12. Proof slips checked by
13. Application protested by
14. Publisher paid by M.E.V. No.
15. Hearing held by
16. Field examination by
17. Application designated for approval rejection
18. 10-15-85 Application copied or photostated by LF proofread by
19. 10-15-85 Application approved ~~rejected~~
20. Conditions:
This Application is approved, subject to prior rights, as follows:
a. Actual construction work shall be diligently prosecuted to completion.
b. Proof of Appropriation shall be submitted to the State Engineer's office by 02-28-86
c.
21. Time for making Proof of Appropriation extended to
22. Proof of Appropriation submitted.
23. Certificate of Appropriation, No., issued

Robert L. Morgan
Robert L. Morgan, P.E., State Engineer

TEMPORARY

Application No.



R24E

T38S

Topographic Map
Raymond T. Duncan
Cave Canyon #3-1, #3-2,
Secs. 3 & 4
T38S-R24E
San Juan County, Utah
Proposed Locations
Proposed Access Route
New Access to be Built
Proposed Water Haul Route

Perkins Road #206

Drill Hole #375

#3-1

#3-2

#4-2

Cave Canyon

Cave Canyon

17

16

15

14

13

18



UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY DIVISION OF OIL & GAS & MINING

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well gas well other

2. NAME OF OPERATOR
Raymond T. Duncan

3. ADDRESS OF OPERATOR
1777 So. Harrison, P-1 Denver, CO 80210

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1925' FSL: 1925' FWL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>		<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>		<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>		<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>		<input type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>		<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>		<input type="checkbox"/>
CHANGE ZONES	<input type="checkbox"/>		<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>		<input type="checkbox"/>
(other) Spud			

5. LEASE U-47876
6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
7. UNIT AGREEMENT NAME N/A
8. FARM OR LEASE NAME Cave Canyon Federal
9. WELL NO. 3-2
10. FIELD OR WILDCAT NAME Wildcat
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 3-38S-24E
12. COUNTY OR PARISH San Juan
13. STATE UT
14. API NO. 43-037-31120
15. ELEVATIONS (SHOW DF, KDB, AND WD) 5239' KB

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Subject well spud @ 2:30 PM, 10/29/85. Duncan requests complete confidentiality on all records for the maximum period allowable.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

SIGNED W. S. Fallin TITLE Prod. Manager DATE 11/6/85

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

RECEIVED

DEC 04 1985

DIVISION OF OIL
GAS & MINING

RAYMOND T. DUNCAN
NO. 3-2 CAVE CANYON FEDERAL
NE SW SECTION 3, T38S-R24E
SAN JUAN COUNTY, UTAH

WELLSITE GEOLOGIST: Jim Holst
INTERMOUNTAIN WELLSITE GEOLOGISTS
P. O. Box 4007
Casper, Wyoming 82604
(307) 266-2009

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WELL DATA

OPERATOR: Raymond T. Duncan
1777 S. Harrison Street
Penthouse 1
Denver, CO 80210
(303) 759-3303
Geologist - Don Lehman

WELL NAME: No. 3-2 Cave Canyon Federal

WELL LOCATION: 1925' FSL; 1925' FWL NE SW Section 3
Township 38 South, Range 24 East
San Juan County, Utah

SPUD DATE: October 19, 1985

DATE DRILLING COMPLETED: November 3, 1985

ELEVATIONS: Ground Level - 5225'
Kelly Bushing - 5239'

SURFACE CASING: 8 5/8" set at 1902' KB
13 3/8" set at 132' KB

OPEN HOLE SIZE: 7 7/8"

TOTAL DEPTH: Driller - 6017'
Logger - 6015'

DRILLING CONTRACTOR: Coleman Drilling Company
Rig No. 4
P. O. Box 3337
Farmington, New Mexico 87401
(505) 327-4935
Toolpusher - Don Vestar

DRILLING SUPERVISION: J. A. "Arkie" Browning
P. O. Box 1058
Cortez, Colorado 81321
Home - (303) 565-8806
Mobile - (303) 562-3115

DRILLING MUD: Mustand Drilling Fluids
2557 East 3760 South
Vernal, Utah 84078
(801) 789-0533
Engineer - Carroll Hart

CORE NO. 1: Christensen Diamond Products, USA
1937 South 300 West
Salt Lake City, Utah 84110
Core No. 1: Upper Ismay Zone

Reservoirs, Inc.
Laboratory Services
2369 S. Trenton Way, Suite H
Denver, CO 80231
(303) 830-1986
Eric Struxness - Senior Technician

MUDLOGGING:

Energy Consulting Services
96 Inverness Drive East, Suite H
Englewood, CO 80112
(303) 792-9115
Engineer - Joe Runge

WIRELINE LOGS:

Schlumberger Well Services
P. O. Box 250
Farmington, New Mexico 87401
(505) 325-5006
Engineer - Tom Weaver

WELLSITE GEOLOGY:

Intermountain Wellsite Geologists
P. O. Box 4007
Casper, Wyoming 82604
(307) 266-2009
Geologist - Jim Holst

SAMPLES:

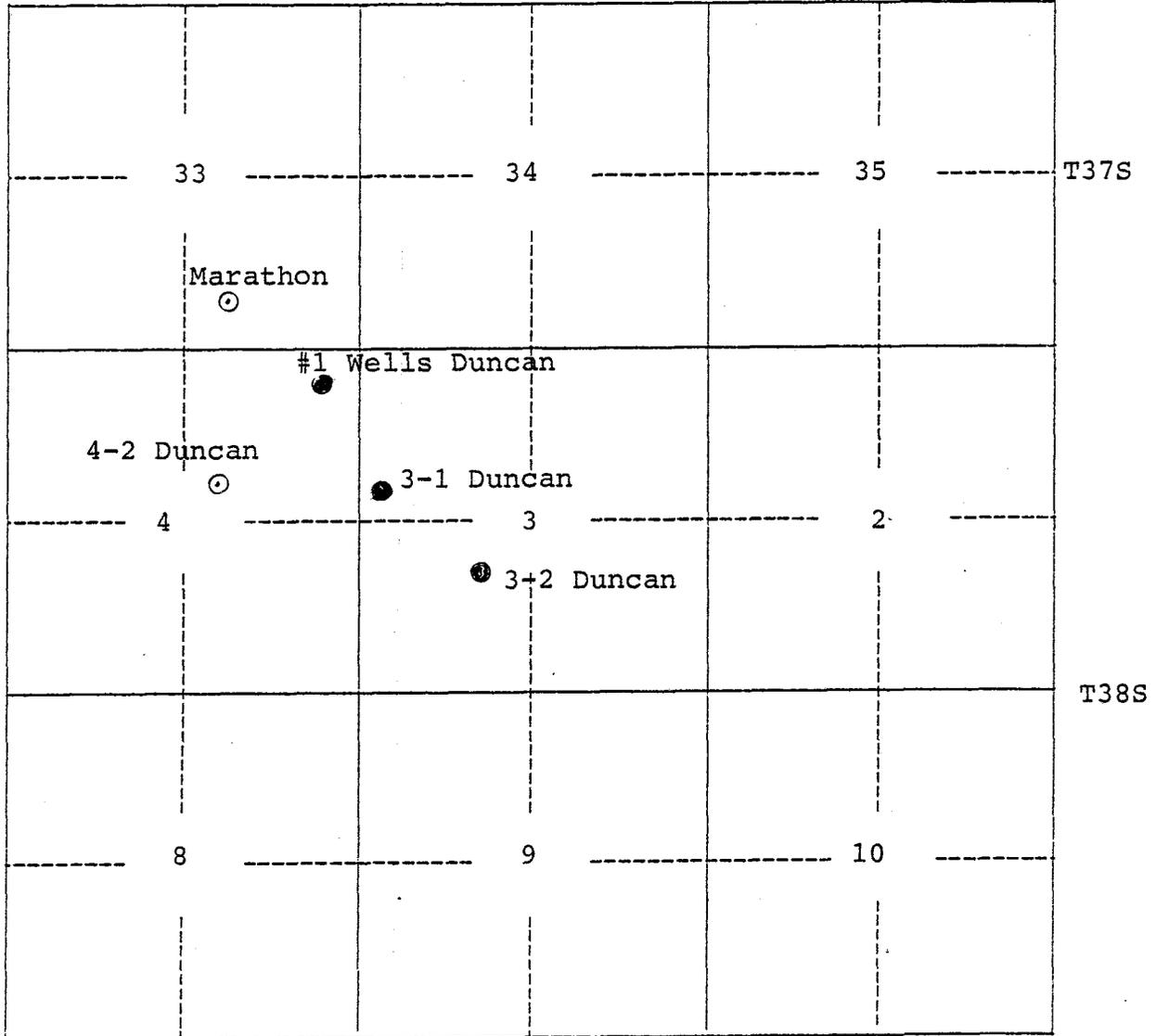
10' samples from 4000' to T.D.
2 sets dry cut 4000' to T.D.
One sent to Duncan, Denver, Colo.
and one sent to State of Utah.
Show samples to Duncan, Denver.

BOTTOM HOLE TEMPERATURE: 125°F

PRESENT WELL STATUS: Run 5 1/2" production casing

BASE MAP OF PROSPECT AREA

R24E



SAN JUAN COUNTY, UTAH

WELL DRILLING CHRONOLOGY

NOTE: Days are described here and on the following charts based on the I.A.D.C. Daily Drilling Report from 12:00 am to 12:00 am, MDT and MST. Footage drilled and cumulative footage per day is listed in parenthesis below the date.

October 19, 1985 (0'-132'/132')	Rig up and drill rat and mouse hole. Pick up bottom hole assembly. Spud well at 2:30 pm. Drilling 17 1/2" hole with surface bit 1A. Drilled from grass roots to 132'. Sweep hole.
October 20, 1985 (132'-380'/248')	Tip out of hole, lay down bottom hole assembly. Run 3 joints of 13 3/8" conductor casing and cement. Plug down at 3:00 am. Wait on cement. Trip into hole with surface bit 2A. Drilling 12 1/4" hole. Drilled from 132' to 380'.
October 21, 1985 (380'-1408'/1028')	Drilled from 380' to 1408'.
October 22, 1985 (1408'-1902'/494')	Drilled from 1408' to 1731'. Trip for new surface bit 3A. Drilled from 1731' to 1902'. Sweep hole and circulate. Drop survey. Trip out of hole, lay down 8" drill collars. Rig up casing crews. Run 46 joints of 8 5/8" surface casing, set at 1888'.
October 23, 1985 (1902'-2185'/283')	Finish running surface casing and cement casing. Wait on cement. Nipple up. Test blind rams and manifold to 1000 lbs for 30 minutes. Trip into hole with new bit no. 4. Pick up 7 drill collars. Pressure test pipe rams to 1000 lbs for 30 minutes, tested OK. Drilled cement and plug (60' cement on top of plug). Drilled 7 7/8" hole. Drilled from 1902' to 2185'.
October 24, 1985 (2185'-3116'/931')	Drilled from 2185' to 3116'.
October 25, 1985 (3116'-3816'/700')	Drilled from 3116' to 3816'.
October 26, 1985 (3816'-4308'/492')	Drilled from 3816' to 4308'.
October 27, 1985 (4308'-4711'/403')	Drilled from 4308' to 4692'. Trip for bit no. 5. Cut 100' drilling line. Ream 30' to bottom. Drilled from 4692' to 4711'. Start to mud up at 4500'. (light mud)
October 28, 1985 (4711'-5045'/334')	Drilled from 4711' to 5045'.

October 29, 1985 Drilled from 5045' to 5293'.
(5045'-5293'/248')

October 30, 1985 Drilled from 5293' to 5372'. Mix pill
(5293'-5460'/167') drop survey. Trip for new bit no. 6.
Work junk basket, wash 60' to bottom.
Drilled from 5372' to 5460'.

October 31, 1985 Drilled from 5460' to 5464'. Trip for hole
(5460'-5646'/186') in pipe. Drilled from 5464' to 5646'.

November 1, 1985 Drilled from 5646' to 5701'. Circulate
(5646'-5741'/95') samples, trip out of hole for core no. 1,
Upper Ismay zone. Core from 5701' to 5741'
with core bit C-201.

November 2, 1985 Cored from 5741' to 5761'. Trip out of hole
(5741'-5860'/119') with core. Lay down core, trip into hole with
rerun bit no. 6. Drilled from 5761' to 5860'.

November 3, 1985 Drilled from 5860' to 6017'. Circulate for
(5860'-6017'/157') E-logs. Drop survey. Trip out of hole for
electric logs. Run E-Logs.

November 4, 1985 Finish running electrical logs. Rig down
(6017' T.D.) e-loggers, trip into hole, circulate, trip
out of hole laying down drill pipe. Run 5 1/2"
production casing. Rig released.

BREAKDOWN OF RIG TIME

1985 Date	Drill	Wash/ Ream	Cond./ Circ.	Trips	Rig Serv	Rig Rep.	Survey	LOG	Other	Comments
10-19	8.0			1.5			.5		14.0	Rig up/spud
10-20	11.5			3.0			.5		9.0	cement csg
10-21	22.5				.5		1.0			
10-22	17.5		.5	4.5					1.5	surface csg
10-23	6.5	1.5					.5		15.5	WOC Bit #4
10-24	23.5						.5			
10-25	22.5				.5		1.0			
10-26	21.5				.5		2.0			
10-27	19.0	.5		3.5	.5				.5	cut drill line
10-28	23.5				.5					
10-29	23				.5		.5			
10-30	17			5.0	.5		.5		1	Bit trip
10-31	17.5			6.5						Hole in pipe
11-1	5.0		2.5	6.0					10.5	Core #1
11-2	16.0			5.0					4	
11-3	16.0		1.5	2.0	.5			4.0		E-Logs
11-4			2.0	2.0				9.5	10.5	E-Logs/casing

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SUMMARY DRILLING DATA

1985 Date	WOB	RPM	PP	Footage Drilled	Cmtve Ftg	Ft/Hr	Comments
10-19	All	80	800	0' - 132'	132'	16.5	Spud, conductor hole
10-20	All	80	1000	132' - 380'	248'	21.6	Run 13 3/8" csg
10-21	35/40	80	1000	380' - 1408'	1028'	45.7	
10-22	40/45	80	1000	1408' - 1902'	494'	28.2	Run 8 5/8" surf csg
10-23	40	60	1500	1902' - 2185'	283'	43.5	Trip bit #4
10-24	40	60	1500	2185' - 3116'	931'	39.6	
10-25	40	60	1500	3116' - 3816'	700'	31.1	
10-26	40	60	1500	3816' - 4308'	492'	22.9	
10-27	40/35	60	1500/1600	4308' - 4711'	403'	21.2	Bit trip
10-28	35/40	60/65	1600/1700	4711' - 5045'	334'	14.2	
10-29	40	65	1700/1800	5045' - 5293'	248'	10.8	
10-30	40/45	65/70	1800/1900	5293' - 5460'	167'	9.8	Bit trip
10-31	45	70	1900	5460' - 5646'	186'	10.6	Trip-hole in pipe
11-1	8/22/24	45/55/60	900	5646' - 5741'	95'	7.3	Core no. 1
11-2	45	60	1100	5741' - 5860'	119'	7.4	
11-3	45	60	1100	5860' - 6017'	157'	9.8	
11-4	Finish E-Logs; Run 5 1/2" Production Casing						

BIT RECORD

<u>Bit No.</u>	<u>Size</u>	<u>Manuf.</u>	<u>Type</u>	<u>Footage Run</u>	<u>Total Footage</u>	<u>Hrs Run</u>	<u>Ft/Hr</u>
1A	17 1/2	HTC	OSC1G	0'- 132'	132'	7.5	17.6
2A	12 1/4	STC	F-3	132'-1831'	1599'	38.5	41.5
3A	12 1/4	STC	F-3	1731'-1902'	171'	10.5	16.3
4	7 7/8	SANDVIK	CFS-30	1902'-4692'	2790'	91	30.7
5	7 7/8	SANDVIK	CFS-30	4692'-5372'	680'	57	11.9
6	7 7/8	VAREL	V537C	5372'-5701'	329'	30.5	10.8
7	7 7/8	Christ	C-201	5710'-5761'	60'	12	5
8	7 7/8	RR#6	V537C	5761'-6017'	256'	28	9.1

SURVEY DATA

<u>1985</u> <u>Date</u>	<u>Survey Depth</u>	<u>Survey Type</u>	<u>Degrees Deviation</u>
10-19	109'	Wireline	3/4°
10-20	198'	Wireline	3/4°
10-21	702'	Wireline	1/4°
10-21	1252'	Wireline	3/4°
10-22	1711'	Wireline	1°
10-23	2073'	Wireline	3/4°
10-24	2614'	Wireline	1°
10-25	3143'	Wireline	3/4°
10-25	3639'	Wireline	1 1/2°
10-26	4157'	Wireline	Misrun
10-26	4260'	Wireline	1 1/4°
10-27	4653'	Dropped	1°
10-29	5147'	Wireline	3/4°
10-30	5332'	Dropped	3/4°
11-1	5700'	Dropped	1 1/2°
11-3	6017'	Dropped	1 1/2°

DEPTH CORRECTIONS

<u>Date</u>	<u>Board Depth</u>	<u>S.L.M. Depth</u>	<u>Corrections/Comments</u>
11-1-85	5701	5700.77	No correction made

MUD DATA

1985 Date	6 am Depth	WT	FV	PV	YP	Gel Str	pH	Fil	FC	CL	CA	%SOL	Comments
10-19	0	Spud Mud											Spud
10-20	132	Water											Water
10-21	495	8.4	27				9.0			400			Water
10-22	1698	8.4	26	Water			8.5			220			Water
10-23	1902	Set 8 5/8" surface casing											Water
10-24	2370	8.35	27				10.0			400	80		Water
10-25	3279	8.35	27				9.0			900	120		Water
10-26	3940	8.35	27				8.5			800	90		Water
10-27	4570	8.5	32	6	2	0/0	10.5	36	2/32	800	80	TR	Mud up
10-28	4809	8.9	32	10	4	0/4	10	16.4	2/32	1000	160	4	Chem-gel
10-29	5100	9.1	35	8	2	1/6	9.0	16.6	2/32	1800	170	3.5	Gel-chem
10-30	5340	9.7	41	12	6	2/10	11.0	10.0	2/32	2000	240	6.5	Gel-chem
10-31	5466	9.8	46	12	10	2/12	11.5	10.8	2/32	2100	100	6.0	Dispersed
11-1	5701	10.1	51	10	13	6/22	12.5	10.2	2.32	2300	200	8.0	Dispersed
11-2	5761	10.1	44	10	5	4/18	12.8	10.0	2/32	2000	60	6.0	Dispersed
11-3	5910	10.3	47	14	6	3/12	12.5	12.4	2/32	2000	80	7.0	Dispersed
11-4	6015	Finish E-Logs - Run 5 1/2" production casing											

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FORMATION TOPS

KB = 5239'

<u>Formation</u>	<u>Sample Top</u>	<u>E-Log Top</u>	<u>Subsea</u>	<u>Thickness</u>
PENNSYLVANIAN PERIOD				
Hermosa Group (Honaker Trail Formation)	4656	4654	+ 585	984
PARADOX FORMATION				
Upper Ismay Zone	5642	5638	- 399	172
Lower Ismay Zone	5810	5810	- 571	46
Gothic Shale Zone	5860	5856	- 617	28
Desert Creek Zone	5887	5884	- 645	56
Lower Desert Creek Porosity	5943	5940	- 701	19
Chimney Rock Shale	5962	5959	- 720	24
Akah Zone	5985	5983	- 744	
T.D.	6017	6015	- 776	

STRUCTURAL/STRATIGRAPHIC COMPARISON WITH OFFSETS

Formation Tops	R. T. Duncan #3-2 Cave Canyon Fed Sec. 3-T38S-R24E San Juan Co., UT GL-5225'; KB-5239'			R. T. Duncan #3-1 Cave Canyon Fed Sec. 3-T38S-R24E San Juan Co., UT GL-5328'; KB-5342'			R. T. Duncan #1 Wells Sec. 4-T38S-R24E San Juan Co., UT GL-5330'; KB-5344'		
	Log Top	Subsea	h	Log Top	Subsea	h	Log Top	Subsea	h
PENNSYLVANIAN PERIOD									
Hermosa Group	4654	+585	984'	4730	+612	972'	4732	+612	960'
PARADOX FORMATION									
Upper Ismay Zone	5638	-399	172'	5702	-360	214'	5692	-348	182'
Lower Ismay Zone	5810	-571	46'	5916	-574	45'	5874	-530	54'
Gothic Shale Zone	5856	-617	28'	5961	-619	28'	5928	-584	24'
Desert Creek Zone	5884	-645	56'	5989	-647	54'	5952	-608	64'
Lower Desert Creek Zone	5940	-701	19'	6043	-701	18'	6016	-672	28'
Chimney Rock Shale Zone	5959	-720	24'	6061	-719	24'	6044	-700	25'
Akah Zone	5983	-744		6085	-743		6069	-725	

LOGS RUN

Dual Laterolog-MSFL with Gamma Ray and Caliper and SP (2" & 5" scales)	MSFL	1902' - 6015' 5600' - 6015'
Borehole Compensated Sonic with Gamma Ray and Caliper		4600' - 6015'
Lithodensity and Compensated Neutron with Gamma Ray and Caliper		4600' - 6015'
Dipmeter		5400' - 6015'
Cyberlook		5000' - 6015'

EVALUATION OF LOG QUALITY

Logs were of generally good quality.

LOG CALCULATIONS

UPPER ISMAY ZONE

Depth	ØS	ØD	ØN	Ave Ø	N/D X-P Ø	F ($\frac{1}{\bar{\phi}^2}$)	Rt	Rwa ($\frac{Rt}{F}$)	Rw	Ro (Frw)	% Sw
5694	.03	.04	.12	.063	.07	204.1	150	.735	.04	8.16	23
5697	.05	.01	.08	.047	.05	400	350	.875	.14	16	21
5699	.05	.01	.09	.05	.07	204.1	350	1.71	.04	8.16	15
5701	.04	0	.11	.05	.06	277.8	500	1.8	.04	11.11	15
5703	.04	.01	.05	.033	.04	625	1000	1.6	.04	25	16
5705	.05	.03	.03	.037	.035	816	2000	2.45	.04	32.7	13
5707	.03	.01	.03	.023	.03	1111.11	3000	2.7	.04	44.4	12
5721	.16	.15	.34	.217	.25	16	9	.56	.04	.64	27
5723	.08	.13	.20	.137	.15	44.4	150	3.38	.04	1.78	11
5725	.07	.05	.08	.067	.07	204.1	200	.98	.04	8.16	20
5727	.07	.07	.08	.073	.08	156.25	250	1.6	.04	6.25	16
5729	.06	.04	.07	.057	.06	277.8	500	1.8	.04	11.11	15
5731	.05	.01	.05	.037	.04	625	400	.64	.04	25	25
5733	.04	.01	.05	.033	.04	625	350	.56	.04	25	27
5745	.07	.08	.05	.067	.07	204.1	50	.245	.04	8.16	40
5747	.06	.04	.08	.06	.06	277.8	125	.45	.04	11.11	30
5749	.09	.09	.11	.097	.10	100	150	1.5	.04	4	16
5751	.09	.09	.12	.10	.11	82.6	175	2.12	.04	3.3	14
5753	.09	.07	.11	.09	.09	123.5	200	1.62	.04	4.9	16
5755	.09	.11	.15	.117	.12	69.4	115	1.66	.04	2.78	16
5757	.07	.07	.14	.093	.13	59.2	175	2.96	.04	2.37	12
5759	.05	.02	.06	.043	.05	400	200	.5	.04	16	28
5761	.03	0	.03	.03	.02	2500	225	.09	.04	100	66
5763	.04	.01	.04	.03	.03	1111.11	250	.23	.04	44.4	42
5765	.17	.18	.22	.19	.20	25	35	1.4	.04	1	17
5767	.16	.20	.31	.223	.26	14.8	27	1.8	.04	.592	15
5769	.05	.10	.12	.09	.11	82.6	45	5.45	.04	3.31	27

DESERT CREEK ZONE

5885	.09	.05	.16	.10	.10	100	75	.75	.03	3	20
5887	.07	.04	.04	.05	.05	400	60	.15	.03	12	45
5889	.09	.06	.10	.083	.09	123.5	20	.16	.03	3.7	43
5891	.11	.05	.10	.087	.08	156.23	17	.11	.03	4.69	53
5893	.14	.08	.18	.133	.13	59.2	12	.2	.03	1.78	39
5895	.15	.10	.23	.16	.17	34.6	11	.32	.03	1.04	31

LOWER DESERT CREEK ZONE

5945	.07	.05	.16	.093	.10	100	9	.09	.03	3	58
5947	.07	.01	.11	.063	.07	204.1	15	.07	.03	6.1	64
5949	.11	.01	.10	.073	.07	204.1	14	.07	.03	6.1	66
5951	.07	.03	.13	.077	.08	156.25	20	.13	.03	4.7	48
5953	.08	.04	.07	.063	.06	277.8	40	.14	.03	8.3	46
5955	.08	.03	.09	.067	.07	204.1	28	.14	.03	6.1	47
5957	.08	.02	.08	.06	.06	277.8	32	.12	.03	8.3	51

FORMULAS AND ASSUMPTIONS USED IN CALCULATIONS

1. Sonic Porosity, ϕ_S
 - a. $\phi_S = \frac{\Delta t - \Delta t_{ma}}{\Delta t_{ma} - \Delta t_f}$ where $\Delta t_{ma} = 47.6$ sec/ft and $\Delta t_f = 189.0$ sec/ft
 - b. Sonic porosity valid for clean formations

2. Density Porosity, ϕ_D
 - a. $\phi_D = \frac{p_{ma} - p_b}{p_{ma} - p_f}$ where $p_{ma} = 2.87$ for Desert Creek
 $p_{ma} = 2.71$ for Ismay
 p_b = formation bulk density
 p_f = fluid density = 1.0 gm/cc

3. Neutron Porosity, ϕ_N
 - a. Dolomite matrix used for Desert Creek Zones
 - b. Limestone matrix used for Ismay Zones

4. Formation Resistivity Factor, F
 - a. $F = 1/\phi^2$ (for carbonates)
 - b. F was neutron/density derived

5. True Formation Resistivity, R_t
 - a. R_t assumed to be equal to RLLD (valid for little or no invasion, thick beds, and clean formations)

6. Apparent Water Resistivity, R_{wa}
 - a. $R_{wa} = R_w$ in water bearing zone $S_w = 100\%$
 - b. R_{wa} is greater than R_w in Hydrocarbon zones
 - c. $R_{wa} = \frac{R_t}{F}$

7. Formation Water Resistivity, R_w
 - a. $R_w = 0.04$ was used for the Ismay zones
 - b. $R_w = 0.03$ was used for the Desert Creek zones

8. Wet Resistivity, R_o
 - a. $R_o = R_t$ in water bearing zones $S_w = 100\%$
 - b. $R_o = (F) \times (R_w)$
 - c. R_o is less than R_t in hydrocarbon zones

9. Water Saturation, S_w
 - a. $S_w = \sqrt{\frac{(F) \times (R_w)}{R_t}}$ or $S_w = \sqrt{\frac{R_w}{R_{wa}}}$ or $S_w = \sqrt{\frac{R_o}{R_t}}$

FORWARD TO SAMPLE DESCRIPTIONS

Samples are described based on a personal format which will be provided upon request.

Samples have been lagged to corresponding depths and matched as close as possible to electric log depths.

Sample quality has been noted in parentheses following each sample description. (1) denotes good samples, (2) denotes fair samples, and (3) denotes poor samples.

SAMPLE DESCRIPTIONS

10' samples (lagged)

4000 - 4100 80% Shale - varicolored red orange, blocky, soft, micaceous, calcareous, slightly limy.

10% Sandstone - light gray, white, light pink, very fine grained to fine grained, scattered medium grained, subangular to subrounded, clay filled, tight, calcareous.

5% Siltstone - reddish brown to reddish orange, blocky, calcareous.

5% Traces of Limestone - pink, blocky, moderately firm, shaly in part. (2)

4100 - 4160 80% Shale - medium gray to varicolored, blocky, soft, scattered medium firm, calcareous, slightly limy, micaceous, silty in part.

10% Sandstone - clear, pink, light red, very fine grained to scattered fine grained, subangular to subrounded, partially clay filled, tight.

10% Siltstone - red, brick red, blocky, soft, calcareous, shaly, micaceous. (2)

4160 - 4200 90% Shale - reddish brown, varicolored, medium gray, micaceous, blocky, soft to scattered moderately firm, silty in part.

10% Sandstone - clear, light gray, white to pink, very fine grained, silty in part, subangular to subrounded, calcareous. (2)

4200 - 4230 10% Sandstone - light gray, clear, light pink, very fine grained to fine grained, subrounded to subangular, partially clay filled, calcareous, scattered unconsolidated quartz grains.

90% Shale - red, brown, blocky, soft, micaceous. (2)

- 4230 - 4260 70% Shale - medium gray scattered red, brick red, orange, blocky, scattered splintery, soft to scattered moderately firm, calcareous, silty in part, micaceous in part.
- 20% Siltstone - red, blocky, soft, calcareous, micaceous.
- 10% Sandstone - light gray, light pink, clear, very fine grained to fine grained, subrounded to subangular, clay filled, tight.
- Traces of Limestone - light pink, light brown, shaly in part, moderately firm. (2)
- 4260 - 4290 80% Shale - reddish orange, red, medium gray, blocky, soft, calcareous, slightly limy, silty in part.
- 20% Sandstone - light gray, clear, light pink, very fine grained to fine grained, subrounded to subangular, clay filled, tight, calcareous. (3)
- 4290 - 4400 70% Shale - dark brown, dark reddish brown, red, blocky to splintery, soft to scattered moderately firm, calcareous to slightly limy, silty, micaceous, traces of scattered pyrite.
- 10% Siltstone - red, blocky, soft, mica flakes, shaly.
- 10% Limestone - light pink, light brown, shaly. (2)
- 4400 - 4500 80% Shale - brown, dark brown, dark reddish brown, blocky, slightly micaceous, soft to moderately firm, calcareous to slightly limy, silty.
- 10% Sandstone - clear, light gray, very fine grained to fine grained, clay filled, tight.
- 10% Siltstone - dark brown, micaceous, scattered pyrite, blocky, calcareous. (3)
- 4500 - 4590 70% Shale - red orange, dark brown, dark reddish brown, blocky to scattered splintery, soft to moderately firm, calcareous, scattered limy in part, traces of pyrite.
- 10% Limestone - light pink, light brown, cryptocrystalline, dense, argillaceous in part.
- 10% Sandstone - light gray, white, very fine grained, clay filled, tight, slightly calcareous, subrounded.
- 10% Siltstone - dark brown, blocky, micaceous, calcareous. (3)

- 4590 - 4620 10% Sandstone - light gray, light brown, clear, very fine grained to fine grained, partially clay filled, tight, poor to moderately sorted, calcareous, scattered unconsolidated quartz grains.
- 80% Shale - medium gray brown, red orange, blocky to scattered splintery, slightly calcareous, slightly micaceous, silty.
- 10% Siltstone - dark brown, brown, blocky, calcareous. (3)
- 4620 - 4660 70% Shale - brown, medium gray, blocky, slightly calcareous, slightly micaceous, silty.
- 20% Siltstone - dark brown, blocky, calcareous, slightly micaceous.
- 10% Sandstone - light gray, white to clear, very fine grained to fine grained, poorly sorted, scattered unconsolidated quartz grains.
- Hermosa Group (Sample top 4656'; E-log top 4654' [+585])
- 4660 - 4690 50% Limestone - light gray, light brownish gray, light brown, dense, cryptocrystalline, traces of scattered fossils, no visible porosity, slightly argillaceous to clean, scattered sandy.
- 40% Shale - gray brown, blocky, calcareous to slightly limy, soft to moderately firm.
- 10% Sandstone - white, light gray to clear, very fine grained, slightly calcareous, partially clay filled, tight, moderately sorted. (2)
- 4690 - 4710 60% Shale - medium gray, red orange, dark brown, blocky, soft to moderately firm, slightly calcareous.
- 20% Siltstone - light medium gray, blocky, moderately firm, calcareous.
- 10% Limestone - light brown, light grayish brown, dense, cryptocrystalline, no visible porosity.
- 10% Sandstone - light gray, light brown, very fine grained, subrounded, slightly calcareous, tight. (2)
- 4710 - 4730 50% Shale - medium gray, greenish gray, blocky, moderately firm, slightly calcareous.
- 40% Limestone - light brown, light grayish brown, dense, cryptocrystalline, slightly argillaceous.

- 10% Sandstone - green gray, micaceous, very fine grained, slightly calcareous, subrounded. (2)
- 4730 - 4770 50% Limestone - medium to dark brown, light grayish brown, dense, slightly argillaceous, cryptocrystalline, no porosity.
- 50% Shale - brown, dark brown, medium gray, blocky, soft to moderately firm, calcareous. (2)
- 4770 - 4800 60% Shale - medium to dark gray, brown red, blocky, moderately firm.
- 40% Limestone - light brown, light gray, slightly argillaceous, no visible porosity. (2)
- 4800 - 4830 50% Shale - dark reddish brown, medium gray, light gray, blocky, calcareous to scattered limy, silty to sandy in part.
- 30% Sandstone - clear, light gray, white, micaceous in part, silty to shaly in part, very fine grained, clay filled, tight.
- 20% Limestone - light gray, light brown, white, dense, cryptocrystalline, slightly argillaceous, no visible porosity, no shows.
- 4830 - 4850 30% Sandstone - light to medium gray, light brown, clear to white, very fine grained, silty to shaly in part, micaceous in part, calcareous, no shows.
- 50% Shale - medium gray, red, dark brownish gray, blocky, soft to moderately firm, slightly calcareous to scattered non-calcareous, silty in part.
- 20% Limestone - light brown, brownish gray, dense, silty to scattered sandy. (3)
- 4850 - 4880 80% Shale - dark brown, dark reddish brown, blocky, soft, scattered moderately firm, calcareous, slightly limy, scattered non-calcareous.
- 10% Sandstone - light gray, clear, light greenish gray, very fine grained, silty to argillaceous in part, no visible porosity, calcareous.
- 10% Limestone - light gray, light to medium brown, dense, slightly argillaceous, no shows. (3)
- 4880 - 4900 60% Limestone - light gray, light brown, brownish gray, dense, cryptocrystalline, slightly argillaceous, no visible porosity, scattered fossils.

- 30% Shale - medium to dark gray, blocky, soft to moderately firm, calcareous.
- 10% Sandstone - light gray, white, very fine grained, clay filled, tight. (3)
- 4900 - 4930 60% Shale - dark brown, medium gray, red, dark red, blocky to splintery, soft to scattered moderately firm, scattered limy to scattered non-calcareous, silty in part.
- 30% Limestone - light gray, light brown to brown, cryptocrystalline, dense, argillaceous in part, no visible porosity, no shows.
- 10% Sandstone - light greenish gray, light gray, white to clear, very fine grained, calcareous, tight, clay filled. (3)
- 4930 - 4950 30% Sandstone - light gray, light brown, brown, clear, very fine grained, calcareous, micaceous in part, clay filled, tight, no visible porosity.
- 60% Shale - brown, red, medium gray, blocky, calcareous, scattered limy in part.
- 10% Limestone - brown, light brown, light gray to white, dense, cryptocrystalline, no shows, slightly argillaceous. (3)
- 4950 - 4990 70% Shale - dark red, dark reddish brown, medium gray, scattered dark gray, blocky to splintery, soft, scattered moderately firm, calcareous, scattered slightly limy, scattered non-calcareous, slightly silty in part.
- 20% Limestone - light gray, light brown, dense, cryptocrystalline, slightly argillaceous, no shows.
- 10% Sandstone - white, light gray, clear, very fine grained, clay filled, tight. (3)
- 4990 - 5010 70% Limestone - white, light gray to brown, dense, cryptocrystalline, slightly argillaceous, no visible porosity, no shows, scattered fossils.
- 30% Shale - gray, blocky, soft to moderately firm, non-calcareous to slightly limy. (2)
- 5010 - 5030 90% Shale - dark reddish brown, brown, medium gray, blocky, moderately firm to soft, very silty, calcareous.
- 10% Limestone - white, light gray, dense, cryptocrystalline, no visible porosity, slightly argillaceous. (2)

- 5030 - 5050 90% Shale - dark brown, dark reddish brown, soft to moderately firm, subwaxy, non-calcareous to calcareous, scattered micaceous in part.
- 10% Limestone - light gray, light brown, dense, slightly argillaceous, no shows. (2)
- 5050 - 5060 60% Limestone - gray, light gray, light brown, light brownish gray, dense, cryptocrystalline, slightly argillaceous, no visible porosity, no shows, scattered fossils.
- 40% Shale - gray to reddish brown, blocky to splintery, soft, scattered moderately firm, slightly calcareous, scattered silty, micaceous in part. (2)
- 5060 - 5080 80% Shale - dark gray, dark brownish gray, moderately firm to firm, calcareous to limy.
- 20% Limestone - light to medium brown, dense, cryptocrystalline to microcrystalline, no visible porosity, no shows, slightly argillaceous. (2)
- 5080 - 5110 50% Limestone - white, light to medium brown, light grayish brown, dense, cryptocrystalline, no visible porosity, clean to slightly argillaceous, scattered fossils.
- 50% Shale - medium to dark gray, dark brown, dark reddish brown, slightly calcareous to limy in part, micaceous in part, soft to moderately firm. (2)
- 5110 - 5130 50% Sandstone - greenish gray, medium gray, clear white, very micaceous, very fine grained, subrounded to subangular, calcareous, clay filled, tight.
- 40% Shale - gray, greenish gray, blocky to splintery, moderately firm, slightly calcareous.
- 10% Limestone - light brown, medium brown, dense, cryptocrystalline, slightly argillaceous. (2)
- 5130 - 5160 70% Shale - gray, dark gray, greenish gray, red, dark reddish brown, blocky to splintery, non-calcareous, scattered limy in part, subwaxy, scattered silty.
- 20% Limestone - brown, light gray, dense, cryptocrystalline, slightly argillaceous, slightly sandy in part, no visible porosity.
- 10% Sandstone - gray, white, clear, greenish gray, very fine grained, subangular to subrounded, moderately sorted, calcareous, clay filled, tight. (2)

- 5160 - 5190 70% Shale - medium to dark gray, blocky, silty to sandy, limy in part, moderately firm to firm, slightly micaceous.
- 30% Limestone - medium to dark brown, blocky, firm, cryptocrystalline, slightly sandy in part, no visible porosity, no shows, scattered fossils. (3)
- 5190 - 5210 50% Limestone - medium to dark brown, light gray white, dense, cryptocrystalline to microcrystalline, no visible porosity, slightly argillaceous, scattered fossils.
- 50% Shale - medium to dark gray, blocky, moderately firm to firm, limy in part, silty to slightly sandy.
- 5210 - 5230 90% Shale - dark gray to black, carbonaceous, blocky, moderately firm to firm, slightly silty in part.
- 10% Limestone - light brown, light gray to medium brownish gray, dense, slightly argillaceous, cryptocrystalline to microcrystalline, no visible porosity, no stain. (3)
- 5230 - 5240 70% Limestone - white, light gray, light brown, brownish gray, slightly argillaceous, cryptocrystalline, scattered fossils, no visible porosity.
- 30% Shale - dark gray, black, medium gray, blocky to splintery, carbonaceous in part, moderately firm, scattered soft, slightly silty in part. (3)
- 5240 - 5280 50% Shale - medium gray, grayish brown, blocky to splintery, moderately firm, slightly limy in part.
- 40% Limestone - light gray, light brown, grayish brown, white, slightly sandy in part, dense, slightly argillaceous, slightly fossiliferous, no visible porosity, no shows.
- 10% Sandstone - clear, light gray, very fine grained, subrounded, slightly calcareous. (3)
- 5280 - 5290 70% Limestone - white, light gray, light brown, slightly sandy in part, dense, slightly argillaceous, moderately firm, no visible porosity, cryptocrystalline, slightly fossiliferous.
- 20% Shale - medium gray, blocky to splintery, slightly limy in part.
- 10% Sandstone - clear, light gray, light brown, very fine grained, no shows. (2)

- 5290 - 5300 60% Shale - medium gray, slightly limy, blocky to splintery, moderately firm to firm, slightly silty in part.
- 40% Limestone - brown, light brown, light gray, dense, slightly argillaceous to predominantly clean, slightly fossiliferous, scattered chert, cryptocrystalline. (3)
- 5300 - 5340 70% Shale - medium to dark gray, medium brownish gray, blocky to splintery, firm, slightly silty in part, slightly limy in part.
- 30% Limestone - light brownish gray, medium brown, dense, clean to slightly argillaceous, slightly fossiliferous, cryptocrystalline, scattered slightly sandy in part. (3)
- 5340 - 5350 80% Shale - medium gray, scattered black, blocky to splintery, scattered coal to carbonaceous, moderately firm to firm, slightly silty in part, slightly limy in part.
- 20% Limestone - white, light gray, light brown, slightly argillaceous, dense, cryptocrystalline to microcrystalline, scattered light brown chert. (3)
- 5350 - 5360 80% Limestone - light gray, white, light brown, clean to slightly argillaceous, cryptocrystalline to microcrystalline, no visible porosity, scattered slightly fossiliferous.
- 20% Shale - medium to dark gray, splintery to blocky, moderately firm, slightly silty in part. (2)
- 5360 - 5420 80% Shale - medium to dark gray, blocky to splintery, moderately firm to firm, calcareous to slightly limy, slightly silty in part, slightly carbonaceous.
- 20% Limestone - white, light gray, light to medium brown, cryptocrystalline to microcrystalline, dense, no visible porosity, no shows. (2)
- 5420 - 5440 80% Limestone - white, light gray, light to medium brown, cryptocrystalline to microcrystalline, dense, scattered slightly argillaceous, slightly fossiliferous, no visible porosity, no stain, no cut, cherty.
- 20% Shale - medium to dark gray, blocky to splintery, moderately firm, slightly silty in part, slightly limy in part. (2)

- 5440 - 5450 50% Limestone - light gray, brownish gray, white, microcrystalline, no visible porosity, no stain.
- 50% Shale - medium gray to dark gray, scattered black, splintery, scattered platy to blocky, soft to moderately firm, silty in part, scattered carbonaceous in part. (2)
- 5450 - 5460 70% Limestone - light to medium gray, white, light to medium brownish gray, microcrystalline, dense, slightly fossiliferous, scattered light to medium brown, no visible porosity.
- 30% Shale - medium to dark gray, splintery to platy, slightly silty in part. (2)
- 5460 - 5500 70% Shale - medium gray, scattered dark gray to black, splintery to blocky, moderately firm, slightly silty, subwaxy in part, slightly limy in part.
- 30% Limestone - light gray, light to medium brownish gray, dense, clean to slightly argillaceous, scattered slightly fossiliferous, no visible porosity. (2)
- 5500 - 5530 80% Limestone - light brown, light grayish brown, clean, cryptocrystalline to microcrystalline, no visible porosity, no stain, no shows, scattered light gray chert, scattered fossils.
- 20% Shale - medium gray, medium greenish gray, blocky, moderately firm, scattered firm, slightly limy in part, slightly silty in part. (2)
- 5530 - 5560 70% Shale - gray, blocky, moderately firm, slightly limy in part, slightly silty in part.
- 30% Limestone - light to medium grayish brown, cryptocrystalline to microcrystalline, dense, predominantly clean to slightly argillaceous, no visible porosity. (2)
- 5560 - 5620 70% Limestone - light to medium gray, medium brownish gray, cryptocrystalline to microcrystalline, dense, clean to scattered slightly argillaceous, no visible porosity, no stain, no fluorescence, no cut, cherty.
- 30% Shale - medium gray, scattered dark gray, blocky to splintery, moderately firm to firm, slightly silty in part. (2)

5620 - 5640 90% Shale - medium gray, blocky to splintery, moderately firm to soft, calcareous to slightly limy.

10% Limestone - light to medium grayish brown, dense, predominantly clean to slightly argillaceous in part, slightly fossiliferous. (2)

Upper Ismay Zone (Sample top 5642'; E-log top 5638' [-399])

5640 - 5650 10% Anhydrite - yellowish brown, white, soft.

30% Limestone - brownish gray, gray, cryptocrystalline to microcrystalline, dense, slightly anhydritic, no visible porosity, no stain, no fluorescence, no cut, scattered fossils.

60% Shale - medium to dark gray, blocky to splintery, moderately firm. (2)

5650 - 5680 50% Anhydrite - white, cream, yellowish brown, soft.

30% Limestone - light to medium brownish gray, anhydritic, dense, cryptocrystalline to microcrystalline, no visible to spotty pin point porosity, traces of stain, predominantly no stain, fluorescence, or cut.

20% Shale - dark gray to black, splintery to blocky, moderately firm, slightly limy in part. (3)

5680 - 5690 70% Anhydrite - creamy white, yellowish brown, soft.

30% Limestone - gray, brownish gray, light gray, scattered brown, cryptocrystalline, anhydritic, no visible to spotty scattered very poor intercrystalline porosity with poor brown to black oil stain, yellow fluorescence and poor cuts, anhydritic filling abundant, scattered fossils. (3)

5690 - 5710 80% Limestone - brown, grayish brown, microcrystalline to microsugrosic, dolomitic, soft, granular to microcrystalline porosity, scattered pin point to very small vugs, fair to good greenish gold fluorescence with bleeding to streaming greenish yellow cut.

20% Anhydrite - creamy white. (1)

5710 - 5720 100% Limestone - white, light gray, brownish gray, microcrystalline to microsugrosic, tight, dense, anhydritic, very poor to no visible porosity, slightly argillaceous.

- 5720 - 5735 100% Limestone - brown, medium grayish brown, microcrystalline to slightly microsucrosic to sucrosic, dolomitic, abundant pin point to small vugs, dark brown oil stain, abundant yellowish gold fluorescence, scattered large 1/4" to 1/2" vugs, traces of scattered anhydritic crystalline line vugs. (1)
- 5735 - 5750 100% Limestone - medium gray, medium brownish gray, cryptocrystalline to microcrystalline, slightly anhydritic, no visible to very poor visible porosity, traces yellow fluorescence. (1)
- 5750 - 5760 100% Limestone - brown, microcrystalline to slightly sucrosic, scattered granular, slightly argillaceous, good visible porosity, pin point to small vugs, good dark brown to black oil stain, yellowish gold to bright yellow fluorescence with good yellow cut, scattered partially anhydritic inclusions, dolomitic. (1)
- 5760 - 5770 100% Dolomite - brown, microsucrosic to slightly sucrosic, good visible intercrystalline, pin point to small vuggy porosity, dark brown oil stain with bluish yellow fluorescence and bright yellow cut, very slightly argillaceous, limy. (2)
- 5770 - 5780 70% Limestone - light grayish brown, light brown to creamy white, cryptocrystalline to micro-sucrosic, anhydritic in part, slightly argillaceous, poor visible intercrystalline porosity with scattered light yellow to greenish yellow fluorescence with slight yellow to bright yellow cut.
- 30% Shale - medium to light gray, splintery to blocky, calcareous in part. (2)

Hovenweep Shale (Sample top 5780'; E-log top 5770' [-531])

- 5780 - 5810 90% Shale - dark gray to black, splintery to blocky, moderately firm to soft, slightly silty in part, slightly calcareous.
- 10% Limestone - light brown, cryptocrystalline scattered microsucrosic, very poor to no visible porosity, traces of scattered brown oil stain, traces slight fluorescence to no fluorescence, no cut, scattered fossils, slightly anhydritic.

Lower Ismay Zone (Sample top 5810'; E-log top 5810' [-571])

- 5810 - 5830 60% Limestone - medium gray, light gray, microcrystalline to microsucrosic, poor intercrystalline to no visible porosity, no stain, fair mineral fluorescence, no cut, slightly anhydritic.

- 10% Anhydrite - creamy white, soft, amorphous.
- 30% Shale - dark gray, black, moderately firm to soft, splintery to blocky, slightly silty in part, non-calcareous to slightly calcareous. (3)
- 5830 - 5850 40% Anhydrite - white, creamy white, soft, amorphous, to scattered crystalline.
- 30% Limestone - light to medium gray, white, anhydritic, microcrystalline to microsucrosic, no visible porosity, no stain, fair mineral fluorescence, no cuts.
- 30% Shale - dark gray, medium gray, blocky to splintery, moderately firm, non-calcareous to scattered limy in part. (3)
- 5850 - 5860 80% Limestone - light gray to medium gray, dolomitic in part, anhydritic in part, dense, argillaceous, microcrystalline, no visible porosity, no stain, fair mineral fluorescence, no cut.
- 20% Shale - gray, dark gray, blocky to scattered splintery, non-calcareous to scattered calcareous, soft to moderately firm. (3)
- Gothic Shale (Sample top 5860'; E-log top 5856' [-617])
- 5860 - 5890 70% Shale - dark gray, black, splintery to blocky, non-calcareous to slightly calcareous, soft to moderately firm, slightly silty in part, slightly carbonaceous in part.
- 30% Limestone - medium gray, medium to dark brownish gray, microcrystalline, argillaceous, slightly anhydritic, no visible porosity, no stain, no cuts. (3)
- Desert Creek Zone (Sample top 5887'; E-log top 5884' [-645])
- 5890 - 5900 40% Dolomite - brown, grayish brown, argillaceous, microcrystalline, poor to fair visible inter-crystalline porosity, scattered pin point porosity, no visible to traces brown oil stain, fair faint fluorescence, very light yellow slow cut, slightly limy in part.
- 60% Shale - medium gray to dark gray, blocky to splintery, calcareous to slightly calcareous, very slightly silty in part. (3)
- 5900 - 5910 10% Anhydrite - white, cream, light yellowish brown, soft, amorphous, scattered crystalline.

70% Dolomite - grayish brown, light brown, anhydritic, argillaceous, limy, microcrystalline, no visible porosity, no oil stain, no hydrocarbon fluorescence, no cuts.

20% Shale - dark gray, black, splintery to blocky, soft to moderately firm, carbonaceous in part. (3)

5910 - 5930 80% Dolomite - grayish brown, brown, argillaceous, anhydritic, limy, microcrystalline to micro-sucrosic, no visible to scattered traces poor intercrystalline porosity, no oil stain, no hydrocarbon fluorescence, no cut.

10% Anhydrite - creamy white, soft, crystalline in part.

10% Shale - gray, dark gray, splintery to blocky. (3)

5930 - 5940 30% Anhydrite - white, creamy white, soft, crystalline.

50% Dolomite - grayish brown, argillaceous, anhydritic, dense, limy, no visible porosity, no stain.

20% Shale - gray to black, splintery to blocky, soft to moderately firm, slightly calcareous. (3)

Lower Desert Creek Porosity (Sample top 5943'; E-log top 5940' [-701])

5940 - 5960 80% Dolomite - light gray, brown, light brownish gray, very anhydritic, slightly argillaceous, no visible porosity, no stain, no hydrocarbon fluorescence, no cut.

20% Shale - gray, dark gray, splintery to blocky, soft to moderately firm, slightly calcareous. (3)

Chimney Rock Shale (Sample top 5962'; E-log 5959' [-720])

5960 - 5980 90% Shale - brownish black, dark brown, splintery to blocky, soft, slightly calcareous to calcareous, carbonaceous in part.

10% Dolomite - brown, grayish brown, argillaceous, anhydritic, no visible porosity, no stain, no hydrocarbon fluorescence, no cut. (3)

Akah Zone (Sample top 5985'; E-log 5983' [-744])

5980 - 6017 40% Dolomite - medium to dark grayish brown, dark brown, dense, hard, argillaceous, microcrystalline, no visible porosity, no stain, no fluorescence, no cut.

50% Shale - dark brownish black, soft to moderately firm, calcareous, slightly silty in part.

10% Anhydrite - creamy white, soft, amorphorous to slightly crystalline. (3)

CORE DESCRIPTIONS

Core No. 1: Upper Ismay Zone 5701'-5761' (5699'-5759' E-log)
Cored 60'; Recovered 60'

- 5701 - 5712 Limestone - medium gray, brownish gray, micro-crystalline to microsugrosic to scattered granular, slightly anhydritic infilling, fair to good visible porosity, small vugs, good to fair brown to black oil stain, good greenish yellow fluorescence with bright yellow cut, dolomitic, scattered crystalline lined large (1/4") vugs with oil stain.
- 5712 - 5714 Limestone - white, light gray, brownish gray, microcrystalline to microsugrosic, tight, dense, anhydritic, slightly argillaceous, very poor to no visible porosity, traces of dark brown oil stain, traces of poor light yellow fluorescence, traces of light cut, scattered granular in part, with crystalline calcite and anhydrite infilling inclusions.
- 5714 - 5721 Limestone - dark brown, brownish gray, light gray, dense, tight, no visible porosity, traces of spotty light yellow fluorescence, traces of black to dark brown oil stain.
- 5721 - 5723 Limestone - brown, medium grayish brown, micro-crystalline to slightly microsugrosic, dolomitic, abundant pin point porosity to small vugs, dark brown oil stain, abundant yellowish gold fluorescence, yellow cut, slightly argillaceous in part.
- 5723 - 5724 Limestone - brown, microsugrosic to slightly sugrosic, dolomitic, slightly argillaceous, intercrystalline porosity, soft, very friable, good yellow fluorescence, good brown oil stain, bright yellow cut.
- 5724 - 5726 Limestone - medium gray, brownish gray, brown, microcrystalline to slightly sugrosic, fair to good visible pin point to vuggy porosity, good dark brown to black oil stain, good gold to bright yellow fluorescence with bright yellow cut, soft, friable.
- 5726 - 5732 Limestone - brownish gray, brown, slightly sugrosic, scattered large vugs, 1/4" to 1/2", black oil stain lined vugs, traces scattered slightly anhydritic, abundant good yellow gold fluorescence with good cut.

- 5732 - 5737 Limestone - brown, grayish brown, medium gray, microcrystalline to microsugrosic to slightly sugrosic, abundant pin point to small scattered large vugs, good abundant black to dark brown oil stain, good abundant yellow to bright yellow fluorescence with bright yellow cut.
- 5737 - 5738 Limestone - medium gray, medium brownish gray, cryptocrystalline to microcrystalline, dense, slightly anhydritic, no visible porosity, traces brown oil stain, poor to fair light yellow fluorescence, healed and unhealed fractures with oil stain, horizontal and traces of vertical.
- 5738 - 5745 Limestone - medium to dark gray, medium brownish gray, very argillaceous, fossils, firm, no visible porosity, traces of yellow fluorescence with slight oil stain, horizontal unhealed fractures, scattered anhydritic inclusions.
- 5745 - 5747 Limestone - brown, spotty black oil stain, very poor to no visible porosity, argillaceous in part, fair to poor yellow fluorescence, scattered anhydrite inclusions.
- 5747 - 5749 Limestone - brown, microsugrosic to sugrosic, abundant pin point to small vugs, good dark brown oil stain with good yellow fluorescence, bright yellow cut, dolomitic.
- 5749 - 5757 Limestone - brown, slightly sugrosic to microsugrosic, abundant pin point to vuggy porosity, good brown oil stain with yellow fluorescence, scattered partially anhydritic infilling to calcite lined vugs, scattered fossils (oolitic), dolomitic.
- 5757 - 5758 Limestone - brown, microcrystalline to microsugrosic, slightly argillaceous, fair visible porosity, good brown oil stain with good yellow fluorescence, dolomitic.
- 5758 - 5760 Limestone - gray, brownish gray, microcrystalline, abundant pin point to small vug porosity, good brown to black oil stain, good yellowish gold fluorescence with yellow cut, dolomitic.
- 5760 - 5761 Limestone - medium grayish brown, microcrystalline to microsugrosic to scattered slightly granular, good visible pin point to small vugs porosity, good brown to black oil stain, good abundant gold to bright yellow fluorescence, slightly partially anhydritic infilling, dolomitic.

SUMMARY

Prospect Overview

The primary objective of Raymond T. Duncan No. 3-2 Cave Canyon Federal was the porosity interval of the Upper Ismay zone of the Paradox Formation. The well was drilled to 6015' along the SE trend of a mound discovered by Duncan (No. 1 Wells Federal) and offset by Duncan (No. 3-1 Cave Canyon Federal). It was hoped that No. 3-2 Cave Canyon would follow along the same trend on the mound as No. 3-1 Cave Canyon Federal. The Lower Desert Creek Porosity zone was the secondary target, and Lower Ismay and Upper Desert Creek zones were tertiary targets.

The Upper Ismay zone of the Paradox Formation at this location (No. 3-2 Cave Canyon) existed stratigraphically lower than in 3-1 Cave Canyon. A rather thick anhydritic zone was present but a porosity zone did exist below this anhydrite. It also appears that a new mound may exist in the lower part of the Upper Ismay zone.

The Lower Desert Creek porosity zone at this location was tight with low porosity (5 to 10%) with anhydritic to argillaceous infilling. The Lower Ismay zone was also tight with very low porosity (5 to 7%). The Upper Desert Creek zone did exhibit an interval with fair to good porosity (5' interval with 10 to 16% porosity). The zone, however, is not a clean carbonate with partial argillaceous infilling.

Formation Summary

Hermosa Group - several small sand intervals existed in the Hermosa Group at this location. They were all partially clay filled with small gas shows observed. Larger gas shows were associated with highly carbonaceous shales.

Upper Ismay Zone (5694'-5770'; 76' mound buildup) - fair to good porosity with fair to good permeability through some zones of this 76' interval of the Upper Ismay, was present at this location. We cored 61' of this interval from 5699' to 5759' and observed fair to good porosity through three zones. Good oil stain was observed through the entire interval, even the tight zones, exhibited oil stain along horizontal and vertical fractures that were healed and unhealed. An average porosity value through the entire interval (76') was 9.1% and an average porosity value through the payzones (30') of this interval was 14%. Water saturation values all calculated very low with an average of only 22%.

Good gas shows were also observed through the drilling and coring of this interval. A significant amount of heavy gases was present indicating the presence of significant hydrocarbons. No indication of water was observed from drilling and coring this interval.

Lower Ismay Zone - no significant porosity was observed in this interval. The limestones of this zone were tight and anhydritic.

Upper Desert Creek zone - a good show existed from 5890' to 5897' in the Upper Desert Creek. A 130 unit gas kick and corresponding increases in chromatograph readings indicated some porosity with hydrocarbons present at this location. The samples did exhibit porosity in the dolomites of this interval. Poor to fair porosity with fair hydrocarbon fluorescence and fair slow yellow cuts were observed. The E-logs confirmed fair to good porosity (10 to 16%) through this interval. Water saturation values through this zone were less than 40%. The interval, however, was not a clean dolomite and a fair amount of argillaceous material is present in the dolomites.

Lower Desert Creek Zone - This zone was tight at this location and was not well developed. Poor porosity and poor shows were present in the dolomites of this interval. The dolomites were argillaceous and very anhydritic at this location. No mound indication was present.

Post Drilling Comments

It was decided to run 5 1/2" production casing to produce the hydrocarbons of the Upper Ismay zone of the Paradox Formation. This interval indicated smaller porosity values than was hoped but higher permeability values. Good oil saturation is present and a good acid frac job should enable this interval to produce a significant amount of hydrocarbons. The position of the mound at this location compared to No. 1 Wells Federal and No. 3-1 Cave Canyon, and indicates a down dip position on the top of the mound only; the bottom of the mound lies comparatively flat with the No. 3-1 Cave Canyon. A new mound may exist at this location in the bottom 25' of the Upper Ismay zone. Further drilling in the area may indicate the extent of this potentially new mound buildup.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

CONFIDENTIAL
INFORMATION

U. LEASE DESIGNATION AND SERIAL NO.

U-47876

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME

Cave Canyon Federal

9. WELL NO.

3-2

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec. 3-38S-24E

12. COUNTY OR PARISH

San Juan

13. STATE

UT

19. ELEV. CASINGHEAD

5239 KB

23. INTERVALS DRILLED BY

0-6017'

25. WAS DIRECTIONAL SURVEY MADE

No

27. WAS WELL CORED

Yes ✓

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL:

OIL WELL GAS WELL DRY Other _____

b. TYPE OF COMPLETION:

NEW WELL WORK OVER DEEP-EN PLUG BACK DIFF. RESVR. Other _____

2. NAME OF OPERATOR

Raymond T. Duncan

3. ADDRESS OF OPERATOR

1777 So. Harrison, P-1 Denver, CO 80210

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)

At surface 1925' FSL: 1925' FWL

NE SW

DIVISION OF OIL GAS & MINING

At top prod. interval reported below same

At total depth same

14. PERMIT NO.

API 43-037-31120

DATE ISSUED

11/19/84

15. DATE SPUDDED

10/19/85

16. DATE T.D. REACHED

11/4/85

17. DATE COMPL. (Ready to prod.)

12/9/85

18. ELEVATIONS (DF, RKB, RT, GR, ETC.)

5239 KB

20. TOTAL DEPTH, MD & TVD

6017'

21. PLUG, BACK T.D., MD & TVD

5961'

22. IF MULTIPLE COMPL., HOW MANY

23. INTERVALS DRILLED BY

ROTARY TOOLS

CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)

Upper Ismay 5690-5702'; 5718-5758'; 5764-5769'

26. TYPE ELECTRIC AND OTHER LOGS RUN

CNL-DC, Sonic, DLL, Dipmeter, CBL

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8"	54.5 #	132'	17 1/2"	125 sx Cl. B + Add.	
8 5/8"	24# J-55	1902'	12 1/2"	1125 sx. Class B+Add.	
5 1/2"	15.5# K-55	6017'	7 7/8"	400 sx. Class B + Add.	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
N/A					2 7/8"	5682'	5654'

31. PERFORATION RECORD (Interval, size and number)

5690-5702 w/2JSPF, 24 holes, 22 grams.
5718-5758' and 5764-5769' w/2JSPF, 22 grams.

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5690-5702	2000 gal 28% HCL
5718-5769	7000 gal 28% HCL

33. PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)					
11/14/85	Flowing	Producing					
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
12/9/85	24	48/64	→	325	247	0	760
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
120		→	325	247	0	44.5	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Sold

TEST WITNESSED BY

Robert Knuckles

35. LIST OF ATTACHMENTS

Geologist's Report (containing tops, etc.) Core Analysis

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

SIGNED

John A. Bertridge

TITLE

Operations Supt.

DATE

12/17/85

FORMATION TOPS

KB = 5239'

<u>Formation</u>	<u>Sample Top</u>	<u>E-Log Top</u>	<u>Subsea</u>	<u>Thickness</u>
PENNSYLVANIAN PERIOD				
Hermosa Group (Honaker Trail Formation)	4656	4654	+ 585	984
PARADOX FORMATION				
Upper Ismay Zone	5642	5638	- 399	172
Lower Ismay Zone	5810	5810	- 571	46
Gothic Shale Zone	5860	5856	- 617	28
Desert Creek Zone	5887	5884	- 645	56
Lower Desert Creek Porosity	5943	5940	- 701	19
Chimney Rock Shale	5962	5959	- 720	24
Akah Zone	5985	5983	- 744	
T.D.	6017	6015	- 776	

CORE DESCRIPTIONS

- Core No. 1: Upper Ismay Zone 5701'-5761' (5699'-5759' E-log)
Cored 60'; Recovered 60'
- 5701 - 5712 Limestone - medium gray, brownish gray, micro-crystalline to microsugrosic to scattered granular, slightly anhydritic infilling, fair to good visible porosity, small vugs, good to fair brown to black oil stain, good greenish yellow fluorescence with bright yellow cut, dolomitic, scattered crystalline lined large (1/4") vugs with oil stain.
- 5712 - 5714 Limestone - white, light gray, brownish gray, microcrystalline to microsugrosic, tight, dense, anhydritic, slightly argillaceous, very poor to no visible porosity, traces of dark brown oil stain, traces of poor light yellow fluorescence, traces of light cut, scattered granular in part, with crystalline calcite and anhydrite infilling inclusions.
- 5714 - 5721 Limestone - dark brown, brownish gray, light gray, dense, tight, no visible porosity, traces of spotty light yellow fluorescence, traces of black to dark brown oil stain.
- 5721 - 5723 Limestone - brown, medium grayish brown, micro-crystalline to slightly microsugrosic, dolomitic, abundant pin point porosity to small vugs, dark brown oil stain, abundant yellowish gold fluorescence, yellow cut, slightly argillaceous in part.
- 5723 - 5724 Limestone - brown, microsugrosic to slightly sugrosic, dolomitic, slightly argillaceous, intercrystalline porosity, soft, very friable, good yellow fluorescence, good brown oil stain, bright yellow cut.
- 5724 - 5726 Limestone - medium gray, brownish gray, brown, microcrystalline to slightly sugrosic, fair to good visible pin point to vuggy porosity, good dark brown to black oil stain, good gold to bright yellow fluorescence with bright yellow cut, soft, friable.
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- 5738 - 5745 Limestone - medium to dark gray, medium brownish gray, very argillaceous, fossils, firm, no visible porosity, traces of yellow fluorescence with slight oil stain, horizontal unhealed fractures, scattered anhydritic inclusions.
- 5745 - 5747 Limestone - brown, spotty black oil stain, very poor to no visible porosity, argillaceous in part, fair to poor yellow fluorescence, scattered anhydrite inclusions.
- 5747 - 5749 Limestone - brown, microsugrosic to sugrosic, abundant pin point to small vugs, good dark brown oil stain with good yellow fluorescence, bright yellow cut, dolomitic.
- 5749 - 5757 Limestone - brown, slightly sugrosic to microsugrosic, abundant pin point to vuggy porosity, good brown oil stain with yellow fluorescence, scattered partially anhydritic infilling to calcite lined vugs, scattered fossils (oolitic), dolomitic.
- 5757 - 5758 Limestone - brown, microcrystalline to microsugrosic, slightly argillaceous, fair visible porosity, good brown oil stain with good yellow fluorescence, dolomitic.
- 5758 - 5760 Limestone - gray, brownish gray, microcrystalline, abundant pin point to small vug porosity, good brown to black oil stain, good yellowish gold fluorescence with yellow cut, dolomitic.
- 5760 - 5761 Limestone - medium grayish brown, microcrystalline to microsugrosic to scattered slightly granular, good visible pin point to small vugs porosity, good brown to black oil stain, good abundant gold to bright yellow fluorescence, slightly partially anhydritic infilling, dolomitic.



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

September 10, 1986

Raymond T. Duncan
1777 South Harrison #1
Denver, Colorado 80210

Gentlemen:

Re: Well No. Cave Canyon 3-2 - Sec. 3, T. 38S., R. 24E.,
San Juan County, Utah - API #43-037-31120

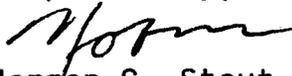
A review of our records indicates that the CNL-FDC, Sonic, DLL, Dipmeter and Cement Bond Log which were run on the referenced well as indicated on the Well Completion Report dated December 17, 1985 have not been received.

Rule 312, Oil and Gas Conservation General Rules, requires that copies of the well logs be submitted within 90 days of completion.

Please use the address listed below to provide the requested information at your earliest convenience, but not later than September 26, 1986.

Utah Division of Oil, Gas and Mining
Attention: Suspense File - Norm Stout
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

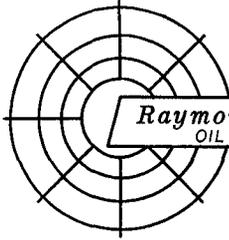
Respectfully,


Norman C. Stout
Records Manager

pk

cc: Dianne R. Nielson
Ronald J. Firth
John R. Baza
Well File
Suspense File

0431S/18



Raymond T. Duncan
OIL PROPERTIES

1777 SOUTH HARRISON STREET · PENTHOUSE ONE
TELEPHONE (303) 759-3303 · DENVER, COLORADO 80210

RECEIVED
JAN 29 1988

DIVISION OF
OIL, GAS & MINING

January 20, 1988

State of Utah
Division of Oil, Gas & Mining
3 Triad Center, Suite 350
Salt Lake City, Utah 84180

Re: Cave Canyon Federal 3-2
Sec. 3, T38S, R24E
San Juan County, Utah

Gentlemen:

Enclosed is the Sundry Notice for the Subsequent Report of
Acidizing on the above captioned well.

Please contact me if you have any questions or need additional
information.

Very truly yours,

RAYMOND T. DUNCAN

J. A. Bettridge
Operations Superintendent

JAB:nr
Enclosures

Pow-1 Smy

OIL & GAS CONSERVATION COMMISSION

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-47876	
2. NAME OF OPERATOR Raymond T. Duncan		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A	
3. ADDRESS OF OPERATOR 1777 So. Harrison St., PH-1, Denver, CO 80210		7. UNIT AGREEMENT NAME N/A	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 1925' FSL and 1925' FWL		8. FARM OR LEASE NAME Cave Canyon Federal	
14. PERMIT NO. 43-037-31120		9. WELL NO. 3-2	
15. ELEVATIONS (Show whether DF, RT, OR, etc.) 5239' KB		10. FIELD AND POOL, OR WILDCAT Wildcat	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 3-T38S-R24E	
		12. COUNTY OR PARISH San Juan	13. STATE UT

RECEIVED
JAN 29 1988

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input checked="" type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	
(Other) <input type="checkbox"/>		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Subject well was acidized on September 4, 1987 per the attached procedure.

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

SIGNED *J. A. Bettridge* TITLE Operations Superintendent DATE 1/20/88
(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
 CONDITIONS OF APPROVAL, IF ANY:

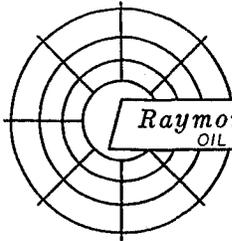
RECORDED
JAN 29 1988

DEPARTMENT OF
OIL, GAS & MINING

Cave Canyon 3-2
NE SW Sec. 3-T38S-R24E
San Juan County, Utah

Workover

- 9/2/87 MIRUSU. Release pkr & kill well. NU BOP. POOH w/ pkr. PU & RIH w/ 4-3/4" bit & 5-1/2" csg scraper on tbg to 5920'. RU circ. equip. Hole taking all fluid, could not circ. POOH w/ tbg, bit & scraper. PU & RIH w/ Halliburton. PPIP pkr on 55 stds. SDFN.
- 9/3/87 Blow well down. Finish RIH w/ pkr. Set pkr below bottom part @ 5800'. Pressure pkr held OK. Run RFC valve. Would not hold. SD & WO new valve. RIH w/ new RFC valve. Tested OK. SDFN.
- 9/4/87 Spot pkr across 1st interval 5767'-69'. Spot acid & pressure up. Lost tbg pressure. POOH; had split @ 150th jt. Redress tools & RIH. Set pkr @ 5800' & test. Held OK. Pu across perfs 5767'-69'. Spot acid. Pump 20 gals. 28% FE acid. Continued treating perfs @ 2' intervals w/ 120 gals. 28% FE. Total treatment 3600 gals. 28% FE acid. ATP 2800 psi. AIR 1.4 BEM. Flush tbg. Pu & set pkr @ 5600'. Flow/swab to frac tanks. Avg 10 BFPH.
- 9/5/87 Release pkr & POOH. Pu & RIH w/ 6 jts, Baker Model R pkr, SN, & remainder of 2-7/8" tbg. Set pkr @ 5620'. ND BOP. NU tree. Test annulus to 1200 psi, held OK. Swab well in & turn to battery. Well died.
- 9/6/87 RU swab & swab/flow well to test tank. Avg 15-20 BFPH. Turn well to battery.
- 9/7/87 Well flowing. SDFN.
- 9/8/87 Swab/flow well to test. Left well flowing to battery. Released rig.
- 9/9/87 Well flowing to battery. Avg 150 BOPD X 0 BHPD X 200 psi FTP.



Raymond T. Duncan
OIL PROPERTIES

1777 SOUTH HARRISON STREET - PENTHOUSE ONE
TELEPHONE (303) 759-3303 - DENVER, COLORADO 80210

RECEIVED
DEC 12 1988

DIVISION OF
OIL, GAS & MINING

December 9, 1988

Bureau of Land Management
P. O. Box 970
Moab, Utah 84532

Re: Cave Canyon Batttery
T38S-R24E
San Juan Co., Utah

Gentlemen:

Enclosed is the sundry notice regarding the installation of a IACT
Unit on the above captioned battery.

Please contact me if you have any questions or need additional
information.

Very truly yours,

RAYMOND T. DUNCAN

J. A. Betteridge

J. A. Betteridge
Operations Superintendent

JAB:nr
Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Form approved
Budget Bureau No. 104-0115
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED
DEC 12 1988

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Central Battery</u>		3. LEASE DESIGNATION AND SERIAL NO. U-47876
2. NAME OF OPERATOR <u>Raymond T. Duncan</u>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR <u>1777 So. Harrison St., PH-1, Denver, CO 80210</u>		7. UNIT AGREEMENT NAME N/A
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface <u>NE SW</u>		8. FARM OR LEASE NAME <u>Cave Canyon Federal</u>
14. PERMIT NO. N/A		9. WELL NO. <u>Central Battery</u>
15. ELEVATIONS (Show whether DF, NT, GR, etc.) N/A		10. FIELD AND POOL, OR WILDCAT <u>Wildcat</u>
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA <u>T38S-R24E</u>
		12. COUNTY OR PARISH <u>San Juan</u>
		13. STATE <u>UT</u>

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <u>Operations</u>	

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

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

LACT Unit has been installed on the main battery. LACT was proved and put into operation on December 2, 1988. Proving was witnessed by Mike Wade of the BLM. Updated site security diagram will be sent.

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

SIGNED J. A. Bettridge TITLE Operations Superintendent DATE Dec. 9, 1988

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY: _____

*See Instructions on Reverse Side

DUNCAN ENERGY COMPANY

PENTHOUSE ONE

1777 SOUTH HARRISON STREET

DENVER, COLORADO 80210-3925

TELEPHONE (303) 759-3303

FAX (303) 757-0252

RECEIVED
JAN 23 1991

January 21, 1991

Bureau of Land Management
P.O. Box 970
Moab, Utah 84532

DIVISION OF
OIL, GAS & MINING

Gentlemen:

Enclosed please find sundry notice for the change of operatorship from Raymond T. Duncan to Duncan Energy Company for the Cave Canyon Lease Waterflood.

If you require further data please contact Marie O'Keefe of this office.

Sincerely,

Marie O'Keefe

Marie O'Keefe
Engineering Technician

/mo

cc: State of Utah
3 Triad Center #350
Salt Lake City, UT 84180-1203

*Effective 6-21-90
per Marie O'Keefe*

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE

RECEIVED
JAN 23 1991

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	5. Lease Designation and Serial No. UTU40751
2. Name of Operator Raymond T. Duncan	6. If Indian, Allottee or Tribe Name NA
3. Address and Telephone No. 1777 S. Harrison St. P-1 Denver, CO 80210 303-759-3303	7. If Unit or CA, Agreement Designation Cave Canyon Lease Waterflood
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) T37S R24E Sec 33 SWSE	8. Well Name and No. Cave Canyon Fed. 1-33
	9. API Well No. 43-037-31276
	10. Field and Pool, or Exploratory Area Cave Canyon Ismay
	11. County or Parish, State San Juan, UT

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

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

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

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

Raymond T. Duncan was the previous operator of the referenced well. Duncan Energy Company is now the operator of record. Offices, personnel and all operations will continue to be the same for Duncan Energy Company as they were for Raymond T. Duncan. Duncan Energy Company is responsible under the terms and conditions of the lease for operations conducted on the leased lands. This referenced well is in the Cave Canyon Lease Waterflood.

cc: State of Utah

14. I hereby certify that the foregoing is true and correct
Signed W. S. Fallis Title Production Manager Date January 21, 1991

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE

RECEIVED
JAN 23 1991

1. Type of Well
 Oil Well Gas Well Other See Below

2. Name of Operator
Raymond T. Duncan

3. Address and Telephone No.
1777 S. Harrison St. P-1 Denver, Co. 80210 303-759-3303

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
See Below

5. Lease Designation and Serial No.
U-47876

6. If Indian, Allottee or Tribe Name
NA

7. If Unit or CA, Agreement Designation
Cave Canyon Lease
Waterflood

8. Well Name and No.
See Below

9. API Well No.
See Below

10. Field and Pool, or Exploratory Area
Cave Canyon Ismay

11. County or Parish, State
San Juan, Utah

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

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

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

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

Raymond T. Duncan was the previous operator of the Cave Canyon Lease Waterflood. Duncan Energy Company is now the operator of record for the Cave Canyon Lease Waterflood. Offices, personnel and all operations will continue to be the same for Duncan Energy Company as they were for Raymond T. Duncan. Duncan Energy Co. is responsible under the terms and conditions of the lease for operations conducted on the leased lands.

WELL NAME	LOCATION	WELL STATUS	API #
Cave Canyon 3-2	T38S R24E Sec 3	NESW Producing Oil Well	43-037-31120
Cave Canyon 4-3	" " " 4	NENE " " "	43-037-31414
Cave Canyon 3-3	" " " 3	SESW Shut in Oil Well	43-037-31413
Wells Federal 1-4	" " " 4	NENE Producing Oil Well	43-037-31028
Cave Canyon 3-1	" " " 3	SWNW Water Injection Well	43-037-31095
1-Cave-Canyon-WSW	" " " 3	NESW Water Supply Well	43-037-99998
Cave Canyon 4-4	" " " 4	NENE Producing Oil Well	43-037-31539
Cave Canyon 12-3	" " " 3	SWNW Completing Oil Well	43-037-31567
Cave Canyon 13-3	" " " 3	NWSW Approved Drlg Location	43-037-31570
Cave Canyon 3-4	" " " 3	NWNW " " "	43-037-31542
Cave Canyon 3-5	" " " 3	NWSE " " "	43-037-31541

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

Signed J. J. Fallon Title Production Manager Date January 21, 1991

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

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

Division of Oil, Gas and Mining
PHONE CONVERSATION DOCUMENTATION FORM

Route original/copy to:

Well File _____ Suspense _____ Other _____
(Location) Sec ___ Twp ___ Rng ___ (Return Date) _____ OPERATOR CHANGE
(API No.) _____ (To - Initials) _____ FILE.

1. Date of Phone Call: 1-28-91 Time: 10:00

2. DOGM Employee (name) L. ROMERO (Initiated Call)
Talked to:

Name MARIE O'KEEFE (Initiated Call) - Phone No. (303) 759-3303
of (Company/Organization) DUNCAN ENERGY COMPANY/N3370

3. Topic of Conversation: EFFECTIVE DATE OF OPERATOR CHANGE

4. Highlights of Conversation: EFFECTIVE DATE 6-21-90, ALSO NO DOCUMENTATION
REQUIRED FROM RAYMOND T. DUNCAN (DUNCAN ENERGY COMPANY & RAYMOND T. DUNCAN ARE
ONE IN THE SAME COMPANY).



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter
Governor

Dee C. Hansen
Executive Director

Dianne R. Nielson, Ph.D.
Division Director

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

January 30, 1991

Duncan Energy Company
PH 1, 1777 S. Harrison St.
Denver, Colorado 80210

Gentlemen:

RE: Transfer of Authority to Inject - Cave Canyon #3-1 Well, Sec. 3, T. 38S,
R. 24E - San Juan County, Utah

The Division has received a request of operator change for the Cave Canyon #3-1 Well, from Raymond T. Duncan to Duncan Energy Company.

Please complete and return to our office the enclosed UIC Form 5, as required by R615-8-21 of the Oil and Gas Conservation General Rules.

If I can be of assistance, please contact me at (801)538-5340.

Sincerely,

Gil Hunt
UIC Manager

lr
Enclosure

Routing:

1-
2-
3-
4-
5-
6-

Attach all documentation received by the division regarding this change.
 Initial each listed item when completed. Write N/A if item is not applicable.

- Change of Operator (well sold) Designation of Agent
 Designation of Operator Operator Name Change Only

The operator of the well(s) listed below has changed (EFFECTIVE DATE: _____)

TO (new operator) DUNCAN ENERGY COMPANY FROM (former operator) DUNCAN, RAYMOND T.
 (address) _____ (address) _____

 phone () _____ phone () _____
 account no. N 3370 account no. N 0360

Well(s) (attach additional page if needed):

Name: <u>CAVE CANYON FED 13-3/DRL</u>	API: <u>4303731570</u>	Entity: <u>99999</u>	Sec <u>3</u> Twp <u>38S</u> Rng <u>24E</u>	Lease Type: <u>U-47876</u>
Name: <u>CAVE CYN FED 3-4/DRL</u>	API: <u>4303731542</u>	Entity: <u>99999</u>	Sec <u>3</u> Twp <u>38S</u> Rng <u>24E</u>	Lease Type: <u>U-47876</u>
Name: <u>CAVE CYN FED 3-5/DRL</u>	API: <u>4303731541</u>	Entity: <u>99999</u>	Sec <u>3</u> Twp <u>38S</u> Rng <u>24E</u>	Lease Type: <u>U-47876</u>
Name: <u>CAVE CANYON #1-33/ISMY</u>	API: <u>4303731276</u>	Entity: <u>9775</u>	Sec <u>33</u> Twp <u>37S</u> Rng <u>24E</u>	Lease Type: <u>U-40751</u>
Name: <u>CAVE CANYON 1 (WSW)</u>	API: <u>(NOT ON SYS)</u>	Entity: _____	Sec <u>3</u> Twp <u>38S</u> Rng <u>24E</u>	Lease Type: <u>U-47876</u>
Name: <u>(Water Rights)</u>	API: _____	Entity: _____	Sec _____ Twp _____ Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____ Twp _____ Rng _____	Lease Type: _____

OPERATOR CHANGE DOCUMENTATION

1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form).
2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form).
3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) _____ If yes, show company file number: _____.
4. (For Indian and Federal Wells ONLY) The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of Federal and Indian well operator changes should take place prior to completion of steps 5 through 9 below.
5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above.
6. Cardex file has been updated for each well listed above.
7. Well file labels have been updated for each well listed above.
8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission.
9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

ENTITY REVIEW

- 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) ____ (If entity assignments were changed, attach copies of Form 5, Entity Action Form).
- 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

BOND VERIFICATION (Fee wells only)

- 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.
- 2. A copy of this form has been placed in the new and former operators' bond files.
- 3. The former operator has requested a release of liability from their bond (yes/no) ____ . Today's date _____ 19____. If yes, division response was made by letter dated _____ 19____.

LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

- 1. (Rule R615-2-10) The former operator/lessee of any fee lease well listed above has been notified by letter dated _____ 19____, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.
- 2. Copies of documents have been sent to State Lands for changes involving State leases.

MICROFILMING

- 1. All attachments to this form have been microfilmed. Date: _____ 19____.

FILED

- 1. Copies of all attachments to this form have been filed in each well file.
- 2. The original of this form and the original attachments have been filed in the Operator Change file.

REMARKS

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

Routing:	
1- LCR	✓
2- DTS	DTS
3- VLC	✓
4- RJF	✓
5- RWM	✓
6- LCR	✓

Attach all documentation received by the division regarding this change.
 Initial each listed item when completed. Write N/A if item is not applicable.

- Change of Operator (well sold) Designation of Agent
 Designation of Operator Operator Name Change Only

The operator of the well(s) listed below has changed (EFFECTIVE DATE: 6-21-90)

TO (new operator) <u>DUNCAN ENERGY COMPANY</u>	FROM (former operator) <u>DUNCAN, RAYMOND T.</u>
(address) <u>PH 1, 1777 S. HARRISON ST.</u>	(address) <u>1777 S. HARRISON ST., PH 1</u>
<u>DENVER, CO 80210</u>	<u>DENVER, CO 80210</u>
phone (303) <u>759-3303</u>	phone (303) <u>759-3303</u>
account no. <u>N 3370</u>	account no. <u>N 0360</u>

Well(s) (attach additional page if needed):

Name: <u>CAVE CANYON #3-2/ISMY</u>	API: <u>4303731120</u>	Entity: <u>9775</u>	Sec <u>3</u> Twp <u>38SRng24E</u>	Lease Type: <u>U-47876</u>
Name: <u>CAVE CYN FED 4-3/ISMY</u>	API: <u>4303731414</u>	Entity: <u>9775</u>	Sec <u>4</u> Twp <u>38SRng24E</u>	Lease Type: <u>U-47876</u>
Name: <u>CAVE CYN FED 3-3/ISMY</u>	API: <u>4303731413</u>	Entity: <u>9775</u>	Sec <u>3</u> Twp <u>38SRng24E</u>	Lease Type: <u>U-47876</u>
Name: <u>WELLS FED #1/ISMY</u>	API: <u>4303731028</u>	Entity: <u>9775</u>	Sec <u>4</u> Twp <u>38SRng24E</u>	Lease Type: <u>U-47876</u>
Name: <u>CAVE CANYON #3-1/ISMY</u>	API: <u>4303731095</u>	Entity: <u>9775/wlw</u>	Sec <u>3</u> Twp <u>38SRng24E</u>	Lease Type: <u>U-47876</u>
Name: <u>CAVE CANYON FED 4-4/ISMY</u>	API: <u>4303731539</u>	Entity: <u>9775</u>	Sec <u>4</u> Twp <u>38SRng24E</u>	Lease Type: <u>U-47876</u>
Name: <u>CAVE CANYON FED 12-3/DR</u>	API: <u>4303731567</u>	Entity: <u>9775</u>	Sec <u>3</u> Twp <u>38SRng24E</u>	Lease Type: <u>U-47876</u>

OPERATOR CHANGE DOCUMENTATION

1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form). (Rec. 1-23-91)
2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form). (Rec. 1-23-91)
3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) yes If yes, show company file number: # 110244. (1-28-91)
4. (For Indian and Federal Wells ONLY) The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of Federal and Indian well operator changes should take place prior to completion of steps 5 through 9 below.
5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. (1-31-91)
6. Cardex file has been updated for each well listed above.
7. Well file labels have been updated for each well listed above.
8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission.
9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

ENTITY REVIEW

- 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) NO (If entity assignments were changed, attach copies of Form 5, Entity Action Form). *Case Cyn. Unit / Isiny PA.*
- 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

BOND VERIFICATION (Fee wells only)

- 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.
- 2. A copy of this form has been placed in the new and former operators' bond files.
- 3. The former operator has requested a release of liability from their bond (yes/no) _____. Today's date _____ 19____. If yes, division response was made by letter dated _____ 19____.

LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

- 1. (Rule R615-2-10) The former operator/lessee of any fee lease well listed above has been notified by letter dated _____ 19____, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.
- 2. Copies of documents have been sent to State Lands for changes involving State leases.

MICROFILMING

1. All attachments to this form have been microfilmed. Date: February 5 1991

FILED

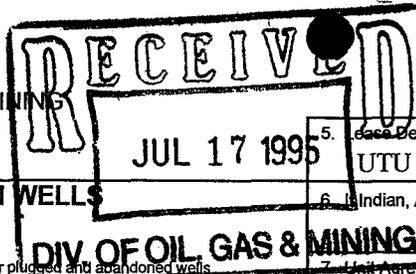
- 1. Copies of all attachments to this form have been filed in each well file.
- 2. The original of this form and the original attachments have been filed in the Operator Change file.

REMARKS

910128 Btm/meab Have received documentation, bonding looks ok. Is not approved as of yet. will call when approved.

910129 Btm Approved all wells eff. 6-21-90. (Unit Oper. Duncan Energy Company)

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING



SUNDRY NOTICES AND REPORTS ON WELLS

5. Lease Designation and Serial Number:

UTU 47876

6. Indian, Allottee or Tribe Name:

7. Unit Agreement Name:

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.

Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

1. Type of Well:

OIL GAS OTHER:

8. Well Name and Number:

Cave Canyon Federal 3-2

2. Name of Operator:

Giant Exploration & Production Company

9. API Well Number:

43-037-31120

3. Address and Telephone Number:

P.O. Box 2810, Farmington, New Mexico 87499 (505)326-3325

10. Field and Pool, or Wildcat:

Cave Canyon

4. Location of Well:

Footages: 1925' FSL, 1925' FWL

County: San Juan

QQ, Sec., T.,R.,M.: NE/4, SW/4, Sec. 3, T38S, R24E

State: Utah

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

NOTICE OF INTENT

(Submit in Duplicate)

- Abandonment
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Multiple Completion
- Other _____
- New Construction
- Pull or Alter Casing
- Recompletion
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Approximate date work will start _____

SUBSEQUENT REPORT

(Submit Original Form Only)

- Abandonment *
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Other Change of Operator
- New Construction
- Pull or Alter Casing
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Date of work completion _____

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

* Must be accompanied by a cement verification report.

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

Giant Exploration & Production Company purchased the above mentioned well from Duncan Energy Company effective 06-23-95.

13.

Name & Signature Jeffrey R. Vaughan

Title: Vice President/Operations

Date: JUL 14 1995

(This space for State use only)

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SUDDRY NOTICES AND REPORTS ON WELLS**

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

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

5. Lease Designation and Serial No.
UTU47876

6. Indian, Allottee or Tribe Name

7. If Unit or CA. Agreement Designation

8. Well Name and No.

9. API Well No.

10. Field and Pool, or Exploratory Area
Cave Canyon

11. County or Parish, State
San Juan, Utah

SUBMIT IN TRIPLICATE

1. Type of Well
 Oil Well Gas Well Other

2. Name of Operator
Giant Exploration & Production Company

3. Address and Telephone No.
P.O. Box 2810, Farmington, New Mexico 87499 (505)326-3325

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

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

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

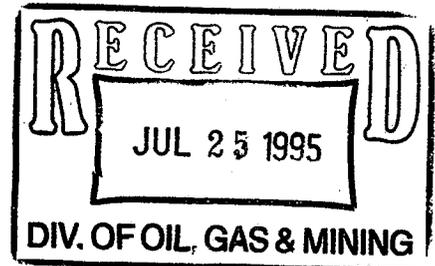
(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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

Giant Exploration & Production Company purchased the above mentioned lease from Duncan Energy Company effective 06-23-95. Giant's bond number is SLR 111 3289 3097.

Listed below is the purchased well and API # for Lease Number UTU47876:

- Cave Canyon Federal 3-1 - API # 43-037-31095
- Cave Canyon Federal 3-2 - API # 43-037-31120
- Cave Canyon Federal 3-3 - API # 43-037-31413
- Cave Canyon Federal 4-3 - API # 43-037-31414
- Cave Canyon Federal 4-4 - API # 43-037-31539
- Cave Canyon Federal 4-5 - API # 43-037-31695
- Cave Canyon Federal 12-3 - API # 43-037-31567
- Cave Canyon WSW 1 - API # 43-037-99998
- Wells Federal 1-4 - API # 43-037-31028



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

Signed Jeffrey R. Vaughan Title Vice President/Operations Date JUL 14 1995

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions of approval, if any:

Associate District Manager
CONDITIONS OF APPROVAL ATTACHED

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

*See Instruction on Reverse Side

Giant Exploration & Production Company
Several Wells
Secs. 3 & 4, T. 38 S., R. 24 E.
San Juan County, Utah
Lease UTU47876

CONDITIONS OF APPROVAL

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

Be advised that Giant Exploration & Production Company is considered to be the operator of the above wells and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for this well is provided by NM1759 (Principal - Giant Exploration & Production Company) via surety consent as provided for in 43 CFR 3104.2.

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

m OGCC-1 b.

STATE OF UTAH
OIL & GAS CONSERVATION COMMISSION

SUBMIT IN TRIPLICATE*
(Other instructions on re-verse side)

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. UTU47876	
2. NAME OF OPERATOR Duncan Energy Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
3. ADDRESS OF OPERATOR 1777 South Harrison Street, P-1, Denver, CO 80210		7. UNIT AGREEMENT NAME	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface See Below		8. FARM OR LEASE NAME	
14. PERMIT NO.		9. WELL NO.	
15. ELEVATIONS (Show whether DF, ST, GR, etc.)		10. FIELD AND POOL, OR WILDCAT Cave Canyon	
		11. SEC., T., R., M., OR B.L. AND SURVEY OR AREA	
		12. COUNTY OR PARISH San Juan	13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	(Other) <input type="checkbox"/>
(Other) <input type="checkbox"/>		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Effective 6-23-95, Giant Exploration & Production Company has taken over operations of the above-mentioned lease. Listed below are the purchased wells and API #s for Lease Number UTU47876:

- Cave Canyon Federal 3-1 - API #43-037-31095, Sec. 3-T38S-R24E
- Cave Canyon Federal 3-2 - API #43-037-31120, Sec. 3-T38S-R24E
- Cave Canyon Federal 3-3 - API #43-037-31413, Sec. 3-T38S-R24E
- Cave Canyon Federal 4-3 - API #43-037-31414, Sec. 4-T38S-R24E
- Cave Canyon Federal 4-4 - API #43-037-31539, Sec. 4-T38S-R24E
- Cave Canyon Federal 4-5 - API #43-037-31695, Sec. 4-T38S-R24E
- Cave Canyon Federal 12-3 - API #43-037-31567, Sec. 3-T38S-R24E
- Cave Canyon WSW 1 - API #43-037-99998, Sec. 3-T38S-R24E
- Wells Federal 1-4 - API #43-037-31028, Sec. 4-R38S-R24E

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

SIGNED Van C. Spence TITLE Sr. Production Engineer DATE 8/4/95

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

Routing:

1-LEC / GILNO
2-LWP 7-PL
3-DES-SJ
4-VL 9-FILE
5-RJF
6-LWP

Attach all documentation received by the division regarding this change.
 Initial each listed item when completed. Write N/A if item is not applicable.

- Change of Operator (well sold) Designation of Agent
 Designation of Operator Operator Name Change Only

The operator of the well(s) listed below has changed (EFFECTIVE DATE: 6-23-95)

TO (new operator) <u>GIANT EXPLOR & PROD CO</u>	FROM (former operator) <u>DUNCAN ENERGY COMPANY</u>
(address) <u>PO BOX 2810</u>	(address) <u>1777 S HARRISON ST PH #1</u>
<u>FARMINGTON NM 87499</u>	<u>DENVER CO 80210</u>
phone (<u>505</u>) <u>326-3325</u>	phone (<u>303</u>) <u>759-3303</u>
account no. <u>N 0075</u>	account no. <u>N3370</u>

Well(s) (attach additional page if needed): ***WIW (CAVE CANYON SECONDARY RECOVERY UNIT)**

- Name: CAVE CANYON 1-33/ISMY API: 43-037-31276 Entity: 9775 Sec 33 Twp 37S Rng 24E Lease Type: U40751
 - Name: *CAVE CANYON 3-1/ISMY API: 43-037-31095 Entity: 9775 Sec 3 Twp 38S Rng 24E Lease Type: U47876
 - Name: CAVE CANYON 3-2/ISMY API: 43-037-31120 Entity: 9775 Sec 3 Twp 38S Rng 24E Lease Type: U47876
 - Name: CAVE CANYON 3-3/ISMY API: 43-037-31413 Entity: 9775 Sec 3 Twp 38S Rng 24E Lease Type: U47876
 - Name: CAVE CANYON FED 4-3/IS API: 43-037-31414 Entity: 9775 Sec 4 Twp 38S Rng 24E Lease Type: U47876
 - Name: CAVE CANYON FED 4-4/IS API: 43-037-31539 Entity: 9775 Sec 4 Twp 38S Rng 24E Lease Type: U47876
 - Name: CAVE CANYON FED 4-5/IS API: 43-037-31695 Entity: 9775 Sec 4 Twp 38S Rng 24E Lease Type: U47876
- CONT...

OPERATOR CHANGE DOCUMENTATION

- Le 1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form). *(Reg. 7-18-95) (Reg. 7-26-95) (Rec'd 8-4-95)*
- Le 2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form). *(Rec'd 7-17-95)*
- N/A 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) ____ If yes, show company file number: _____.
- Le 4. (For Indian and Federal Wells ONLY) The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of Federal and Indian well operator changes should take place prior to completion of steps 5 through 9 below.
- Le 5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. *(8-8-95)*
- Le 6. Cardex file has been updated for each well listed above. *8-14-95*
- Le 7. Well file labels have been updated for each well listed above. *8-14-95*
- Le 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission. *(8-8-95)*
- Le 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

ENTITY REVIEW

- Yes 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) ____ (If entity assignments were changed, attach copies of Form 6, Entity Action Form).
- N/A 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

BOND VERIFICATION (Fee wells only)

- N/A 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.
- ____ 2. A copy of this form has been placed in the new and former operators' bond files.
- ____ 3. The former operator has requested a release of liability from their bond (yes/no) ____.
Today's date _____ 19____. If yes, division response was made by letter dated _____ 19____.

LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

- N/A 1. (Rule R615-2-10) The former operator/lessee of any fee lease well listed above has been notified by letter dated _____ 19____, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.
DTB 8/15/95
- N/A 2. Copies of documents have been sent to State Lands for changes involving State leases.

FILMING

1. All attachments to this form have been microfilmed. Date: August 21 1995.

FILING

- ____ 1. Copies of all attachments to this form have been filed in each well file.
- ____ 2. The original of this form and the original attachments have been filed in the Operator Change file.

COMMENTS

950718 Reg. "VICF5" (Rec'd 7-31-95)
950725 Blm/Moab Appr. eA. 6-23-95.

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

DIANE G JARAMILLO
 GIANT EXPLOR & PROD CO
 PO BOX 2810
 FARMINGTON NM 87499

UTAH ACCOUNT NUMBER: N0075

REPORT PERIOD (MONTH/YEAR): 8 / 96

AMENDED REPORT (Highlight Changes)

Well Name API Number	Entity	Location	Producing Zone	Well Status	Days Oper	Production Volumes		
						OIL(BBL)	GAS(MCF)	WATER(BBL)
CAVE CANYON 3-2								
4303731120	09775	38S 24E 3	ISMY			u 47876	Cave Cyn Unit	
CAVE CANYON 1-33								
4303731276	09775	37S 24E 33	ISMY			u 40751	"	
CAVE CANYON 3-3								
4303731413	09775	38S 24E 3	ISMY			u 47876	"	
CAVE CANYON FED 4-3								
4303731414	09775	38S 24E 4	ISMY			"	"	
CAVE CANYON FED 4-4								
4303731539	09775	38S 24E 4	ISMY			"	"	
CAVE CANYON FEDERAL 12-3								
4303731567	09775	38S 24E 3	ISMY			"	"	
CAVE CANYON FEDERAL 4-5								
4303731695	09775	38S 24E 4	ISMY			"	"	
CAVE CANYON 13-3								
4303731766	09775	38S 24E 3	ISMY			"	"	
GAGE FOSTER #1								
4303731463	10991	37S 23E 32	DSCR			mL43698		
HATCH POINT #1								
4303731658	11356	29S 21E 14	LDLL			u 61791		
Gothic Mesa 16-11								
43037315042	6008	41S 23E 16	DSCR / w/w			1420602243	Gothic Mesa Unit / New.	
Cave Canyon 3-1								
4303731095	9775	38S 24E 3	Ismy / w/w			u 47876	Cave Cyn Unit	
TOTALS								

COMMENTS: _____

I hereby certify that this report is true and complete to the best of my knowledge.

Date: _____

Name and Signature: _____

Telephone Number: _____

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number:
U-47876

6. If Indian, Allottee or Tribe Name:
NA

7. Unit Agreement Name:
NA

8. Well Name and Number:
Cave Canyon Fed. 3-2

9. API Well Number:
43-037-31120

10. Field and Pool, or Wildcat:
Cave Canyon, Ismay

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. Type of Well:
OIL GAS OTHER:

2. Name of Operator:
Central Resources, Inc.

3. Address and Telephone Number:
1775 Sherman Street, Suite 2600 Denver, CO 80203 303-830-0100

4. Location of Well:

Footages: 1925' FSL & 1925' FWL
County: San Juan
QQ, Sec., T.,R.,M.: NE SW Sec. 3-T38S-R24E
State: Utah

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

NOTICE OF INTENT
(Submit in Duplicate)

- Abandonment
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Multiple Completion
- Other
- New Construction
- Pull or Alter Casing
- Recompletion
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Approximate date work will start _____

SUBSEQUENT REPORT
(Submit Original Form Only)

- Abandonment *
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Other Change of Operator
- New Construction
- Pull or Alter Casing
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

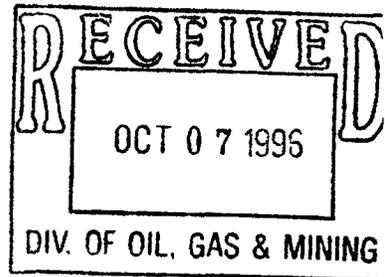
Date of work completion _____

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

* Must be accompanied by a cement verification report.

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

Effective 9/1/96 operations of the subject well were transferred from Giant Exploration & Production Company to Central Resources, Inc.



Giant Exploration & Production Company
Name & Signature Daniel J. Piumillo

Title: Production/Regulatory Manager Date: August 30, 1996

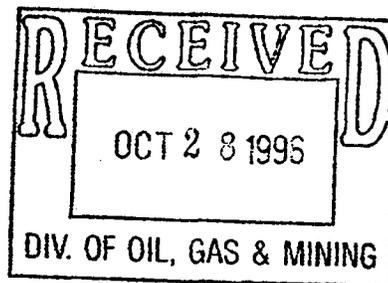
13. Central Resources, Inc.
Name & Signature Gene Morley

Title: Engineering Technician Date: August 30, 1996

CENTRAL

RESOURCES, INC.

October 23, 1996



Ms. Lesha Cordova
State of Utah
Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Re: Monthly Oil & Gas Production Report

Dear Ms. Cordova:

Central Resources, Inc. purchased all assets from Giant Exploration & Production Company effective September 1, 1996.

Central is in the process of acquiring a Utah Account Number. However, to avoid mailing the enclosed Monthly Oil and Gas Production Report late, the account number on the report has been left blank.

If you have any questions regarding this matter, please contact Edna Wageman or myself at (505) 326-3325.

Sincerely,

Diane G. Jaramillo by EW

Diane G. Jaramillo
Office Supervisor

DGJ/

Enclosure

** 9/6/028 Notified Op. NL935 "Central Res. Inc."
(Clg. not finalized yet!)*

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

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE

1. Type of Well
 Oil Well Gas Well Other

2. Name of Operator
 Central Resources, Inc.

3. Address and Telephone No.
 1775 Sherman Street, Suite 2600, Denver, Colorado 80203 (303)830-0100

4. Location of Well (Footage, T, R, M, or Survey Description)
 1925' FSL & 1925" FWL
 NE SW Sec. 3-T28S-R24E

5. Lease Designation and Serial No.
 UTU47876

6. If Indian, Allotte or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.
 Cave Canyon 3-2

9. API Well No.
 43-037-31120

10. Field and Pool, or Exploratory Area
 Cave Canyon, Ismay

11. County or Parish, State
 San Juan, UT

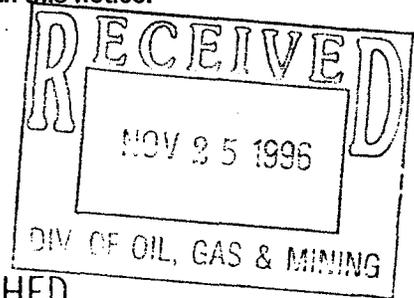
12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

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

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

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

Please be advised that effective September 1, 1996, Central Resources, Inc. assumed operatorship of the referenced well. Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Central Resources, Inc. under their statewide bond, BLM Bond No. B06175. They will be responsible for compliance under the lease terms and conditions for that portion of the lease associated with this notice.



CONDITIONS OF APPROVAL ATTACHED

14. I hereby certify that the foregoing is true and correct.
 Signed: Brad D. Palmer Title: Engineering Technician Date: November 1, 1996

(This space for Federal or State office use)
 Approved by: /s/ Brad D. Palmer Assistant Field Manager, Resource Management Date: NOV 19 1996

Conditions of approval, if any:

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

Central Resources, Inc.
Well No. Cave Canyon 3-2
NESW Sec. 3, T. 38 S., R. 24 E.
San Juan County, Utah

CONDITIONS OF APPROVAL

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

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

Bond coverage for this well is provided by BLM Bond UT1053 (Principle - Central Resources, Inc.) as provided for in 43 CFR 3104.2.

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

ENTITY REVIEW

- Yes 1. (r649-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) no If entity assignments were changed, attach copies of Form 6, Entity Action Form.
- N/A 2. Trust Lands, Sovereign Lands, Tax Commission, etc., have been notified through normal procedures of entity changes.

BOND VERIFICATION - (FEE WELLS ONLY)

- N/A 1. (r649-3-1) The NEW operator of any fee lease well listed above has furnished a proper bond.
- Yes 2. A copy of this form has been placed in the new and former operator's bond files.
3. The FORMER operator has requested a release of liability from their bond (yes/no) , as of today's date . If yes, division response was made to this request by letter dated .

LEASE INTEREST OWNER NOTIFICATION OF RESPONSIBILITY

- N/A 1. Copies of documents have been sent on to at Trust Lands for changes involving State leases, in order to remind that agency of their responsibility to review for proper bonding.

FILMING

- Yes 1. All attachments to this form have been microfilmed. Today's date: 12-30-96.

FILING

1. Copies of all attachments to this form have been filed in each well file.
2. The original of this form, and the original attachments are now being filed in the Operator Change file.

COMMENTS

9/6/11/25 BLM/Moab Apr. 11-19-96.

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. Type of Well: OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> OTHER:	5. Lease Designation and Serial Number: U-47876
2. Name of Operator: Elm Ridge Resources, Inc.	6. If Indian, Allottee or Tribe Name: N/A
3. Address and Telephone Number: 312 W. LaPlata Street, Farmington, New Mexico (505) 326-7099	7. Unit Agreement Name: N/A
4. Location of Well: Footages: 1925' FSL & 1925' FWL County: San Juan QQ, Sec., T., R., M.: NE SW Sec. 3-T38S-R24E State: Utah	8. Well Name and Number: Cave Canyon Fed. 3-2
	9. API Well Number: 43-037-31120
	10. Field and Pool, or Wildcat: Cave Canyon, Ismay

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

NOTICE OF INTENT
(Submit in Duplicate)

- Abandonment
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Multiple Completion
- Other
- New Construction
- Pull or Alter Casing
- Recom
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Approximate date work will start _____

SUBSEQUENT REPORT
(Submit Original Form Only)

- Abandonment *
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Other Change of Operator
- New Construction
- Pull or Alter Casing
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Date of work completion _____

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

* Must be accompanied by a cement verification report.

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

Effective October 1, 2000, operations of the subject well were transferred from Central Resources, Inc. to Elm Ridge Resources, Inc.

RECEIVED

OCT 10 2000

DIVISION OF
OIL, GAS AND MINING

Central Resources, Inc.
Name & Signature *Jane Martinez* Title: Engineering Technician Date: 09/29/00

13. Elm Ridge Resources, Inc.
Name & Signature *Dary Luley* Title: Operations Manager Date: 09/29/00

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

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE

1. Type of Well
 Oil Well Gas Well Other

2. Name of Operator
 Elm Ridge Resources, Inc.

3. Address and Telephone No.
 312 W. LaPlata Street, Farmington, New Mexico (505) 326-7099

4. Location of Well (Footage, T, R, M, or Survey Description)
 1925' FSL & 1925" FWL
 NE SW Sec. 3-T26S-R24E

5. Lease Designation and Serial No.
 UTU47876

6. If Indian, Allocated or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.
 Cave Canyon 3-2

9. API Well No.
 43-037-31120

10. Field and Pool, or Exploratory Area
 Cave Canyon, Ismay

11. County or Parish, State
 San Juan, UT

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

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

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

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

Please be advised that ~~effective October 1, 2000~~, Elm Ridge Resources, Inc. assumed operatorship of the referenced well. Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Elm Ridge Resources, Inc. under their statewide bond, BLM Bond No. ~~508706~~. They will be under the lease terms and conditions for that portion of the lease associated with this notice.

*Bond obtained 3/6/01.
 Change of operator effective 4/1/01.
 BLM Bond # UT1216*

RECEIVED
ROAD FIELD OFFICE
2000 OCT 17 P
DEPT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
FARMINGTON, NM
OCT 10 PM 2:36

JUN 1 1 2001

DIVISION OF
OIL, GAS AND MINING

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

Signed: *Dary Ludeley*

Title: Operations Manager

Date: September 29, 2000

(This space for Federal or State office use)

Approved by: *William Hunter*

Title: Assistant Field Manager,
Division of Resources 6/6/01

Conditions of approval, if any:

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

cc: u DCS, m. 6/6/01

Elm Ridge Resources, Inc.
Well No. Cave Canyon 3-2
NESW Sec. 3, T. 38 S., R. 24 E.
Lease UTU47876
San Juan County, Utah

CONDITIONS OF APPROVAL

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

Be advised that Elm Ridge Resources, Inc. is considered to be the operator of the above well and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for this well is provided by UT1216 (Principal - Elm Ridge Resources, Inc.) via surety consent as provided for in 43 CFR 3104.2.

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

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JUN 11 2001

**DIVISION OF
OIL, GAS AND MINING**

OPERATOR CHANGE WORKSHEET

ROUTING

1. GLH		4-KAS ✓
2. CDW		5-LPV 6/25
3. JLT		6-FILE

Enter date after each listed item is completed

X Change of Operator (Well Sold)

Designation of Agent

Operator Name Change (Only)

Merger

The operator of the well(s) listed below has changed, effective: **04-01-2001**

FROM: (Old Operator):
CENTRAL RESOURCES INC
Address: P. O. BOX 189
FARMINGTON, NM 87499-189
Phone: 1-(505)-632-3476
Account N6935
CA No.

TO: (New Operator):
ELM RIDGE RESOURCES INC
Address: P. O. BOX 189
FARMINGTON, NM 87499-189
Phone: 1-(505)-632-3476
Account N1440
Unit: CAVE CANYON PROJECT

WELL(S)

NAME	API NO.	ENTITY NO.	SEC. TWN RNG	LEASE TYPE	WELL TYPE	WELL STATUS
CAVE CANYON 1-33	43-037-31276	9775	33-37S-24E	FEDERAL	OW	P
CAVE CANYON 3-2	43-037-31120	9775	03-38S-24E	FEDERAL	OW	P
CAVE CANYON 3-3	43-037-31413	9775	03-38S-24E	FEDERAL	OW	S
CAVE CANYON 12-3	43-037-31567	9775	03-38S-24E	FEDERAL	OW	S
CAVE CANYON 13-3	43-037-31766	9775	03-38S-24E	FEDERAL	OW	S
CAVE CANYON 1-4	43-037-31028	9775	04-38S-24E	FEDERAL	OW	P
CAVE CANYON 4-3	43-037-31414	9775	04-38S-24E	FEDERAL	OW	S
CAVE CANYON 4-4	43-037-31539	9775	04-38S-24E	FEDERAL	OW	P
CAVE CANYON 4-5	43-037-31695	9775	04-38S-24E	FEDERAL	OW	P

OPERATOR CHANGES DOCUMENTATION

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 10/10/2000
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 10/10/2000
- The new company has been checked through the **Department of Commerce, Division of Corporations Database** on: 06/12/2001
- Is the new operator registered in the State of Ut YES Business Number: 4830075-1150
- If **NO**, the operator was contacted on: _____
- 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: 06/06/2001
- Federal and Indian Units:** The BLM or BIA has approved the successor of unit operator for wells listed on: N/A

8. **Federal and Indian Communization Agreements ("CA"):** The BLM or the BIA has approved the operator change for all wells listed involved in a CA on: N/A

9. **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** 06/12/2001
- 2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 06/12/2001
- 3. Bond information entered in RBDMS on: N/A
- 4. Fee wells attached to bond in RBDMS on: N/A

STATE BOND VERIFICATION:

- 1. State well(s) covered by Bond No.: N/A

FEE WELLS - BOND VERIFICATION/LEASE INTEREST OWNER NOTIFICATION:

- 1. (R649-3-1) The **NEW** operator of any fee well(s) listed has furnished a bond: N/A
- 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
- 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

FILMING:

- 1. All attachments to this form have been **MICROFILMED** on: 7/12/01

FILING:

- 1. **ORIGINALS/COPIES** of all attachments pertaining to each individual well have been filled in each well file on: _____

COMMENTS:

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 type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER:
2. NAME OF OPERATOR: Elm Ridge Exploration Company, LLC <i>N2985</i>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 12225 Greenville, Suite 950 CITY Dallas STATE TX ZIP 75243		7. UNIT or CA AGREEMENT NAME:
4. LOCATION OF WELL FOOTAGES AT SURFACE: _____ COUNTY: _____ QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: _____ STATE: UTAH		8. WELL NAME and NUMBER: See attached Exhibit "A"
PHONE NUMBER: (972) 889-2100		9. API NUMBER:
		10. FIELD AND POOL, OR WILDCAT:

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 checked="" 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 February 18, 2005, Elm Ridge Resources, Inc. transferred all responsibility of Operations for the wells described on the attached Exhibit "A" to Elm Ridge Exploration Company, LLC.

Current Operator:
Name Elm Ridge Resources, Inc. N1440 Title Land Manager
Signature Cathleen Colby Date December 1, 2005

New Operator:
NAME (PLEASE PRINT) Elm Ridge Exploration Company, LLC TITLE Land Manager
SIGNATURE Cathleen Colby DATE December 1, 2005

(This space for State use only)

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Exhibit "A"
Operator Change
Effective February 18, 2005

Old Operator:	Elm Ridge Resources, Inc.									
New Operator:	Elm Ridge Exploration Company, LLC									
Lease Designation / Serial Number	Indian, Allottee or Tribe Name	Unit or CA Agreement	Well Name and Number	API Number	Type Well	Field and Pool or Wildcat	Location of Well Footages at Surface	1/41/4 Section Township, Range	County	State
14-20-603-239A	Navajo	Gothic Mesa Unit	Gothic Mesa 7-41	43-037-15032	Oil Well	Gothic Mesa	625' FNL, 710' FEL	NENE-7-41S-23E	San Juan	UT
14-20-603-239A	Navajo	Gothic Mesa Unit	Gothic Mesa 6-34	43-037-15034	Oil Well	Gothic Mesa	660' FSL, 1980' FEL	SWSE-6-41S-23E	San Juan	UT
14-20-603-240	Navajo	Gothic Mesa Unit	Gothic Mesa 17-31	43-037-15040	Oil Well	Gothic Mesa	820' FNL, 2140' FEL	NWNE-17-41S-23E	San Juan	UT
UTU-47876	N/A	N/A	Wells Federal 1-4	43-037-31028	Oil Well	Cave Canyon	500' FNL, 500' FEL	NENE-4-38S-24E	San Juan	UT
UTU-47876	N/A	N/A	Cave Canyon 3-2	43-037-31120	Oil Well	Cave Canyon	1925' FSL, 1925' FWL	NESW-3-38S-24E	San Juan	UT
UTU-47876	N/A	N/A	Cave Canyon 1-33	43-037-31276	Oil Well	Cave Canyon	535' FSL, 2025' FEL	SWSE-33-37S-24E	San Juan	UT
UTU-47876	N/A	N/A	Cave Canyon 3-3	43-037-31413	Oil Well	Cave Canyon	2635' FNL, 1390' FWL	SENW-3-38S-24E	San Juan	UT
UTU-47876	N/A	N/A	Cave Canyon Federal 4-3	43-037-31414	Oil Well	Cave Canyon	1310' FNL, 200' FEL	NENE-4-38S-24E	San Juan	UT
ST of UT ML-43698	N/A	N/A	Gage Foster 1	43-037-31463	Oil Well	Road Canyon	2180' FNL, 1780' FWL	SENW-32-37S-23E	San Juan	UT
UTU-47876	N/A	N/A	Cave Canyon 4-4	43-037-31539	Oil Well	Cave Canyon	1150' FNL, 1070' FEL	NENE-4-38S-24E	San Juan	UT
UTU-47876	N/A	N/A	Cave Canyon Federal 12-3	43-037-31567	Oil Well	Cave Canyon	1610' FNL, 1300' FWL	SWNW-3-38S-24E	San Juan	UT
14-20-603-239	Navajo	Gothic Mesa Unit	Gothic Mesa 6-43	43-037-31643	Oil Well	Gothic Mesa	1900' FSL, 500' FEL	NESE-6-41S-23E	San Juan	UT
UTU-47876	N/A	N/A	Cave Canyon Federal 4-5	43-037-31695	Oil Well	Cave Canyon	50' FNL, 1800' FEL	NWNE-4-38S-24E	San Juan	UT
UTU-47876	N/A	N/A	Cave Canyon 13-3	43-037-31766	Oil Well	Cave Canyon	2045' FSL, 1180' FWL	NWSW-3-38S-24E	San Juan	UT
UTU-47876	N/A	N/A	WSW. No. 1	43-037-31820	Water Source	Cave Canyon	1800' FSL, 1845' FWL	NESW-3-38S-24E	San Juan	UT
UTU-47876	N/A	N/A	Cave Canyon 3-1	43-037-31095	Water Injection	Cave Canyon	2140' FNL, 200' FWL	SWNW-3-38S-24E	San Juan	UT
14-20-603-243	Navajo	Gothic Mesa Unit	Gothic Mesa 16-11	43-037-15042	Water Disposal	Gothic Mesa	500' FNL, 500' FWL	NWNW-16-41S-23E	San Juan	UT

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: not yet

8. **Federal and Indian Units:**

The BLM or BIA has approved the successor of unit operator for wells listed on: not yet

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: 12/7/2005

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database** on: 12/8/2005
2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 12/8/2005
3. Bond information entered in RBDMS on: 12/8/2005
4. Fee/State wells attached to bond in RBDMS on: 12/8/2005
5. Injection Projects to new operator in RBDMS on: 12/8/2005
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: UT00126

INDIAN WELL(S) BOND VERIFICATION:

1. Indian well(s) covered by Bond Number: 886936C

FEE & STATE WELL(S) BOND VERIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number 1116000107

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

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:

