ROCKY MOUNTAIN DIVISION

Trinity Place, Suite 500
1801 Broadway
P.O. Box 1407
Denver, Colorado 80201
Phone 303 292 3323

Energy Reserves Group

27 October 1983

Bureau of Land Management
University Club Building
136 East South Temple
Salt Lake City, Utah 84111

Re: Approval of Well Exception Location
Township 26 South, Range 19 East
Section 3: 3,364' FSL, 1,212' FEL
Grand County Utah

Gentlemen:

Please be advised that Energy Reserves Group, Inc. has no objection to Enserch Exploration Inc.'s proposed location, to wit:

Township 26 South, Range 19 East
Section 3: 3,364' FSL, 1,212' FEL

Grand County, Utah

For your reference, Energy Reserves is Record Title owner on U-24528, U-21540 and U-24530-A.

If I can be of any further assistance in this regard, please do not hesitate to contact me.

Yours very truly,

Jerry W. Bair
District Landman
Western Region

JWB:kkd

cc: Jeff Jones/Enserch Exploration, Inc.

ADDITIONAL STIPULATIONS FOR PRODUCTION FACILITIES

Your Application for Permit to Drill also included a submittal for production facilities. These production facilities are approved for the lessee and his designated operator under Section 1 of the Oil and Gas Lease with the following conditions:

(1) The oil and gas measurement facilities must be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy are to be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. Please provide this office with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports are to be submitted to the Salt Lake City District Oil and Gas Supervisor. Royalty payments will be made on all production volume as determined by the meter measurements or the tank measurements. All measurement facilities must conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

(2) 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 must be housed and/or fenced.

(3) All disturbed areas not required for operations will be rehabilitated.

(4) All produced liquids must be contained including the dehydrator vent/condensate line effluent. All production pits must be fenced.

(5) The well activity, the well status and the date the well is placed on production must be reported on Lessee's Monthly Report of Operations, Form 9-329.

(6) All off-lease storage, off-lease measurement, or commingling on lease or off-lease must have written approval.

(7) All product lines entering and leaving hydrocarbon storage tanks must be locked/sealed.

(8) You are reminded of the requirements for handling, storing, or disposing of water produced from oil and gas wells under NTL-2B.

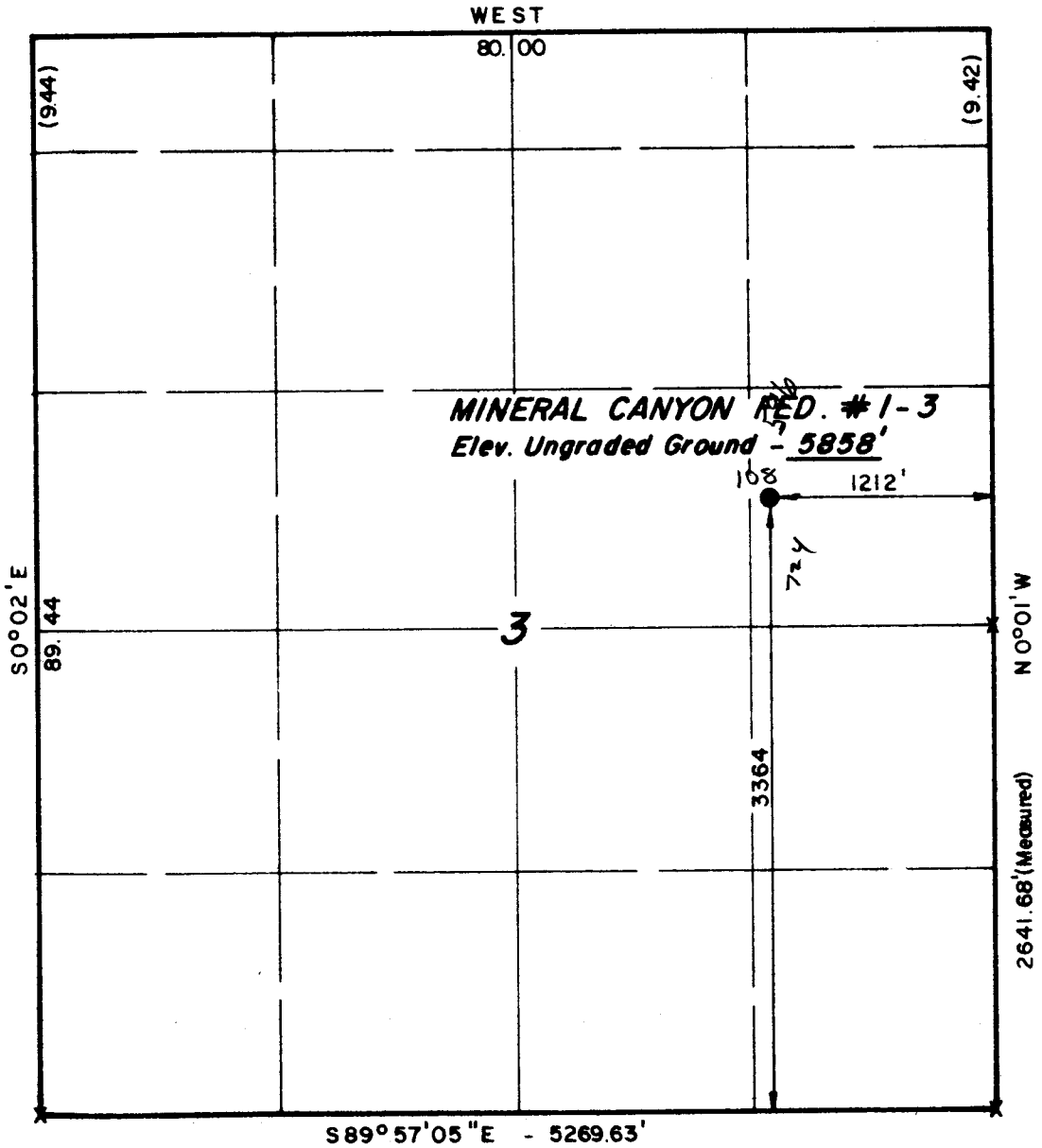
(9) All materials, trash, junk, debris, etc. not required for production must be removed from the well site and production facility site at the completion of these operations.

(10) A copy of the Gas Sales Contract will be provided to this office and the Royalty Accounting Department as directed.

(11) Construction and maintenance for surface use approved under this plan should be in accordance with the surface use standards as set forth in the BLM/GS Oil and Gas Brochure entitled, "Surface Operating Standards for Oil and Gas Exploration and Development." This includes, but is not limited to, such items as road construction and maintenance, handling of top soil and rehabilitation.

(12) "Sundry Notice and Reports on Wells" (form 9-331) will be filed for all changes of plans and other operations in accordance with 30 CFR 221.58. Emergency approval may be obtained verbally, but such approval does not waive the written report requirement. Any additional construction, reconstruction, or alternations of facilities, including roads, gathering lines, batteries, measurement facilities, etc., will require the filing of a suitable plan and prior approval by the survey.

T 26 S , R 19 E , S.L.B.&M.



X = Section Corners Located

PROJECT

ENSERCH EXPLORATION, INC.

Well location, *MINERAL CANYON FED. # 1-3*, located as shown in the SE 1/4 NE 1/4 Section 3, T26S, R19E, S.L.B.&M. Grand County, Utah.

CERTIFICATE

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

Gene Stewart

REGISTERED LAND SURVEYOR
REGISTRATION NO 3154
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
P.O. BOX Q – 85 SOUTH - 200 EAST
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE October 11, 1983
PARTY GS RT RP	REFERENCES GLO Plat
WEATHER Clear / Warm	FILE ENSERCH

Grand River Institute

1 November 1983

Enserch Exploration Inc.
1230 River Bend Drive
Suite 136
Dallas, Texas 75247

Attn: Dennis A. Cox, Drilling Engineer

Re: GRI Project No. 8367 (Cultural resources inventory of proposed Mineral Canyon #1-3 and access in Grand County, Utah for Enserch Exploration Inc.)

Dear Mr. Cox:

Enclosed are two copies of our report on the project cited above. Copies have been sent to the appropriate BLM District and Area offices as well.

Also enclosed is a statement for this work.

Please give me a call if you have any questions or if we can be of assistance on future projects.

Sincerely,

Dannie L. Langdon
for

Carl E. Conner
Director

CEC:dll

Enclosures

ENSERCH EXPLORATION INC

1230 River Bend Drive
Suite 136
Dallas, Texas 75247
214/630-8711

C. H. Peeples
Regional Drilling Manager
Western Region
Drilling Department

November 2, 1983

Bureau of Land Management
Utah State Office
136 East South Temple
Salt Lake City, Utah 84111
Attn: Chief, Branch of Fluid Minerals

Re: Application for Permit to Drill
Enserch Exploration, Inc.
Mineral Canyon Federal Well No. 1-3
SE¼ - NE¼ Section 3 - T26S-R19E
Grand County, Utah
Lease No. U-24529

Dear Sir:

Please find enclosed four (4) copies of the Application for Permit to Drill for the captioned well. A copy has also been sent to Mr. Wayne Svejnoha, Environmental Scientist, Grand Resource Area, for review and further handling at the District level.

Enserch Exploration, Inc. is currently in the process of forming a federal unit in this area, encompassing 9,250 acres which is to be named "The Mineral Canyon Unit". A portion of the acreage that is proposed to be included in the unit has a lease expiration date of November 30, 1983. We therefore request that this application be expedited as soon as possible so that we have enough time to build the location, secure a drilling rig, and spud the well prior to November 30, 1983.

We also ask, that if in the course of your review, you find a need to change or include additional information on any aspect of the application, that you contact Mr. R. S. Brashier or myself so that the permit approval is not delayed. Your help with this application is greatly appreciated. We will look forward to hearing from you soon.

Very truly, yours,

C. H. Peeples

C. H. Peeples
Regional Drilling Manager
(214)630-8711

RSB/hrs
Attach

cc: Mr. Wayne Svejnoha - B.L.M., Moab
State of Utah

ENSERCH EXPLORATION INC.

1230 River Bend Drive
Suite 136
Dallas, Texas 75247
214/630-8711

C. H. Peeples
Regional Drilling Manager
Western Region
Drilling Department

November 2, 1983

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

Re: Application for Permit to Drill
Enserch Exploration, Inc.
Mineral Canyon Federal No. 1-3
SE¼ - NE¼ - Section 3 - T26S-R19E
Grand County, Utah
Lease No. - U-24529

Gentlemen,

Please find enclosed two (2) copies of the Application for Permit to Drill for the captioned well as submitted to the Bureau of Land Management on this date. As we hope to be drilling prior to November 30, 1983, your timely approval of this application would be greatly appreciated.

If there are any questions or if additional information is required, please advise.

Very truly yours,

C. H. Peeples
Regional Drilling Manager
(214)630-8711

RSB/hrs
Attach

Enserch Exploration, Inc.
Mineral Canyon Federal No. 1-3
Section 3 - T26S-R19E- S.L.B.&M.
Grand County, Utah

BONDING

Enserch Exploration, Inc. holds a nationwide oil and gas bond in the amount of $150,000 filed with the United States Department if the Interior, Bureau of Land Management. The bond was approved August 18, 1981. The bond number is: 037857

OPERATOR ENSEARCH EXPLORATION INC DATE 11-8-83

WELL NAME MINERAL CANYON FED 1-3

SEC SENE 3 T 26S R 19E COUNTY GRAND

43-019-31119
API NUMBER

FED
TYPE OF LEASE

POSTING CHECK OFF:

☐ INDEX ☐ MAP ☐ HL

☐ NID ☐ ☐ PI

PROCESSING COMMENTS:

NO OIL WELLS WITHIN 1000'

POTASH AREA (RULE C-7)

11-23-83

✓

CHIEF PETROLEUM ENGINEER REVIEW:

12/1/83

APPROVAL LETTER:

SPACING: ☑ A-3 MINERAL CANYON UNIT ☐ c-3-a CAUSE NO. & DATE

☐ c-3-b ☒ c-3-c

SPECIAL LANGUAGE: (SEE ATTACHMENT)

[✓] RECONCILE WELL NAME AND LOCATION ON APD AGAINST SAME DATA ON PLAT MAP.

[✓] AUTHENTICATE LEASE AND OPERATOR INFORMATION

[✓] VERIFY ADEQUATE AND PROPER BONDING

[✓] AUTHENTICATE IF SITE IS IN A NAMED FIELD, ETC.

[ ] APPLY SPACING CONSIDERATION

[ ] ORDER NO

[X] UNIT ~~NO~~

[ ] c-3-b

[X] c-3-c

BY: _____

DATE: _____

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS AND MINING

[✓] CHECK DISTANCE TO NEAREST WELL.

[✓] CHECK OUTSTANDING OR OVERDUE REPORTS FOR OPERATOR'S OTHER WELLS.

[X] IF POTASH DESIGNATED AREA, SPECIAL LANGUAGE ON APPROVAL LETTER

[✓] IF IN OIL SHALE DESIGNATED AREA, SPECIAL APPROVAL LANGUAGE.

[✓] VERIFY LEGAL AND SUFFICIENT DRILLING WATER

The following stipulations shall receive full compliance, otherwise this letter of approval is void:

1- Prior to spudding, a copy of the Utah Division of Water Rights (tel 801-533-6071) approval for use of water at the drilling site shall be submitted to this office.

~~2- Prior to spudding, notify by registered mail, a copy of the notice of intention to drill plus a copy of the plat or map, to all potash owners and/or lessees whose interests are within a 1/2 mile radius of the proposed well.~~

2 3- Gamma Ray-Neutron, Gamma Ray-Sonic, or other appropriate logs shall be run promptly through the Salt Section, and a field copy of such logs shall be submitted to this office within 10 days.

3 4- a directional survey shall be run from a point at least 20 feet below the Salt Section to the surface, and shall be submitted to this office prior to well completion or plugging.

4 5- The submitted cementing program shall be modified to cement solidly through the Salt section using salt saturated cement

ENSERCH EXPLORATION INC

1230 River Bend Drive
Suite 136
Dallas, Texas 75247
214/630-8711

C. H. Peeples
Regional Drilling Manager
Western Region
Drilling Department

November 9, 1983

State of Utah
Department of Natural Resources
Oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84114
Attn: Mr. Norman C. Stout
Holding File

Re: Enserch Exploration, Inc.
Mineral Canyon Federal Well No. 1-3
SE¼ - NE¼ - Section 3 - T26S-R19E
Grand County, Utah
State Lease C-23 Compliance
Lease No. U-24529

Dear Mr. Stout,

In response to our telephone conversation on November 8, 1983 concerning the Application for Permit to Drill for the captioned well and the need to comply with Rule C-23 Procedure for Wells Drilled in Designated Potash Areas, Section (9) Notice Requirements; we have determined that there are no potash owners and/or lessees whose interests are within a radius of 1/2 mile of the proposed well.

The attached plat shows a 1/2 mile radius of the proposed well. The Bureau of Land Management, Moab District, was contacted to determine the potash lessees/owners in Section 3-T26S-R19E and Section 34-T25S-R19E. The BLM indicated that no owners or leases were assigned in these sections. The Utah State Land Office was contacted to determine potash lessees and/or owners in Section 2 - T26S-R19E. The State Land Office also stated that this section was not assigned and available for leasing. Therefore, no notifications will be required to potash lessees and/or owners within a 1/2 mile radius of the proposed wells.

If additional information is required please advise.

Very truly yours,

C. H. Peeples

C. H. Peeples
Regional Drilling Manager

RSB/hrs
Attach
cc: Branch of Fluid Minerals
State Land Office

Form 9-331 C
(May 1963)

SUBMIT IN DUPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: Enserch Exploration, Inc.

3. ADDRESS OF OPERATOR: 1230 River Bend Drive - Suite 136 - Dallas, Texas 75247

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 3364' FSL & 1212' FEL of Section 3 - T26S-R19E (SE/4 - NE/4)
At proposed prod. zone: Same

5. LEASE DESIGNATION AND SERIAL NO.: U-24529

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

7. UNIT AGREEMENT NAME: N/A

8. FARM OR LEASE NAME: Mineral Canyon Federal

9. WELL NO.: 1-3

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 3 - T26S-R19E S. L. B. & M.

12. COUNTY OR PARISH: Grand

13. STATE: Utah

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 9 miles North-West of Potash, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): *108'

16. NO. OF ACRES IN LEASE: 2,405

17. NO. OF ACRES ASSIGNED TO THIS WELL: 80

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: None

19. PROPOSED DEPTH: 8200'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5858' GR

22. APPROX. DATE WORK WILL START*: November 21, 1983

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8"	48#	300'	325 sacks
12-1/4"	9-5/8"	40#	4200'	700 sacks
8-3/4"	5-1/2"	15.5# & 17#	8200'	600 sacks

Propose to drill a 17-1/2 inch hole to 300 feet, set 13-3/8 inch casing and cement to surface. Drill a 12-1/4 inch hole to 4200 feet, set 9-5/8 inch casing and cement back to 2000 feet. Drill an 8-3/4 inch hole to 8200 feet (T.D.), log and run 5-1/2 inch production casing and cement back to 6000 feet.

EXHIBITS ATTACHED

(a) 10 Point Drilling Plan
(b) Blowout Preventer Diagram Exhibit A
(c) 13 Point Surface Use Plan
(d) Location and Elevation Plat
(e) Drilling Rig Layout and Cross Sections
(f) Existing Roads - Topographic Map A
(g) Planned Access Road - Topographic Map B
(h) Existing Wells - Topographic Map C
(i) Production Facilities - Exhibit B
(j) Cultural Resources Inventory
(k) Designation of Operator
(l) Bonding Requirements
*(m) Spacing Agreement Letter From Energy Reserve Group

RECEIVED
NOV 3 - 1983
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 C. H. Peeples TITLE Regional Drilling Manager DATE November 2, 1983
C. H. Peeples

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY DISTRICT MANAGER TITLE DISTRICT MANAGER DATE 11-17-83

CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED

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

*See Instructions On Reverse Side

DOGM

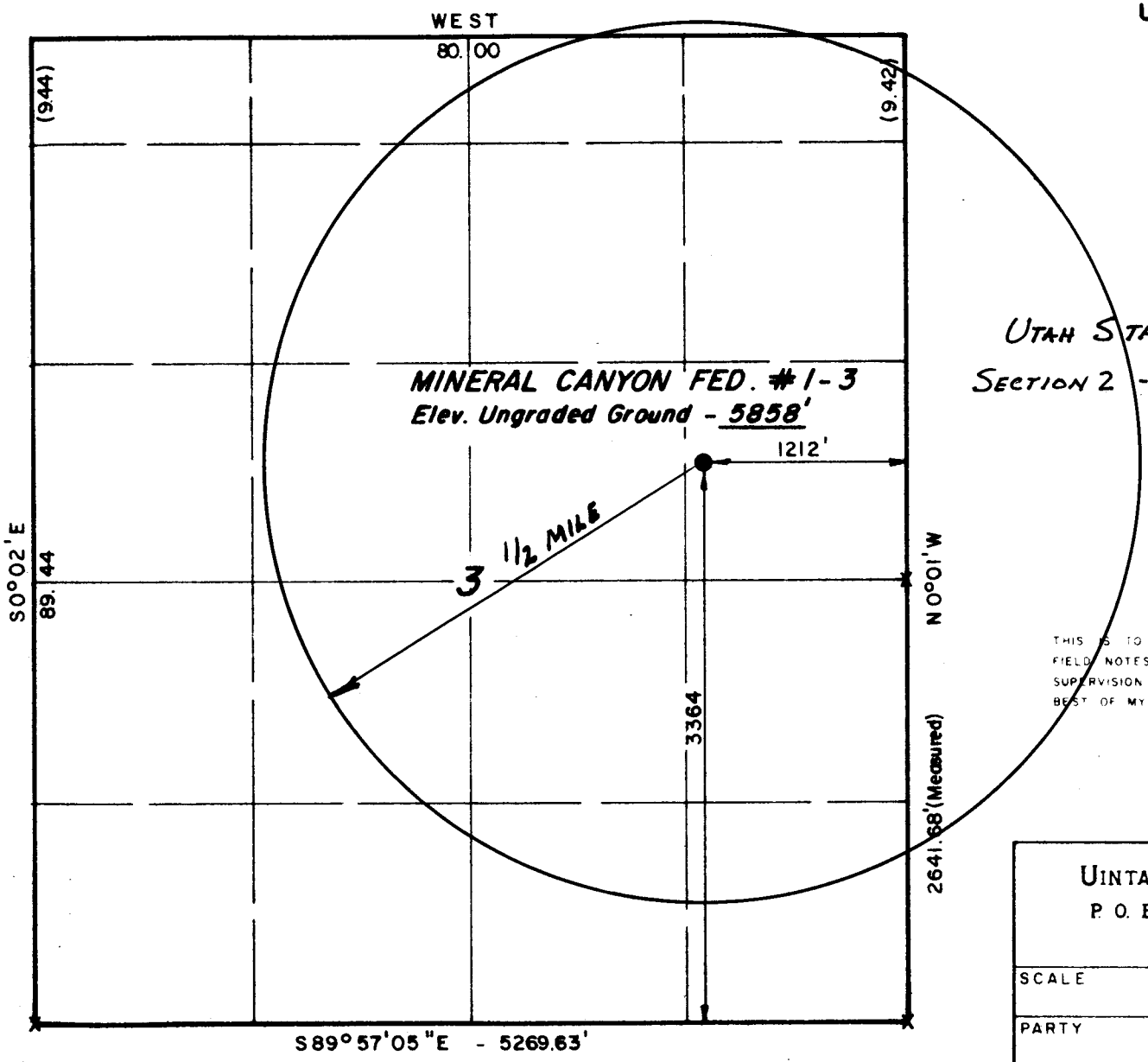
PROJECT

ENSERCH EXPLORATION, INC.

Well location, *MINERAL CANYON FED. # 1-3*, located as shown in the SE 1/4 NE 1/4 Section 3, T26S, R19E, S.L.B. &M. Grand County, Utah.

T 26 S , R 19 E , S.L.B.&M.

Section 34 - T25S - R19E



Utah State Lease
Section 2 - T26S - R19E

N

X = Section Corners Located

CERTIFICATE

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

Gene Stewart

REGISTERED LAND SURVEYOR
REGISTRATION Nº 3154
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
P. O. BOX Q – 85 SOUTH - 200 EAST
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE October 11, 1983
PARTY GS RT RP	REFERENCES GLO Plat
WEATHER Clear / Warm	FILE ENSERCH

CONDITIONS OF APPROVAL FOR NOTICE TO DRILL

Company Enserch Exploration, Inc. Well No. 1-3

Location Sec. 3 T26s, R19E Lease No. U-24529

A COPY OF THESE CONDITIONS SHOULD BE FURNISHED YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (30 CFR 221), and the approved plan of operations. The operator is considered fully responsible for the actions of his subcontractors. The following items are emphasized:

1. There shall be no deviation from the proposed drilling and/or workover program as approved. Safe drilling and operating practices must be observed. All wells, whether drilling producing, suspended, or abandoned shall be identified in accordance with 30 CFR 221.22. Any changes in operations must have prior approval of this office. Pressure tests are required before drilling out from under all casing strings set and cemented in place. Blowout preventer controls must 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 insure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs. All BOP pressure tests must be recorded on the daily drilling report.

2. All shows of fresh water and minerals will be reported and protected. A sample will be taken of any water flows and furnished this office for analysis. All oil and gas shows will be adequately tested for commercial possibilities, reported and protected.

3. 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 this office. If operations are to be suspended, prior approval of this office must be obtained and notification given before resumption of operations.

In the event abandonment of the hole is desired, an oral request may be granted by this office, but must be timely followed within 15 days with a "Notice of Intention to Abandon" (Form 9-331). Unless the plugging is to take place immediately upon receipt of oral approval, the District Manager must be notified at least 48 hours in advance of the plugging of the well in order that a representative may witness plugging operation. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form 9-331) must be submitted within 15 days after the actual plugging of the well bore, reporting where the plugs were placed, and the current status of the surface restoration. If surface restoration has not been completed at that time, a follow-up report on form 9-331 should be filed when all surface restoration has been completed and the location is considered ready for final inspection.

4. The spud date will be reported orally to the respective District Manager's office within 48 hours after spudding. If the spudding occurs on a weekend or holiday, wait until the following regular workday to make this report.

Periodic drilling progress reports must be filed directly with the District Manager's office on a frequency and form or method as may be acceptable to the District Manager.

In accordance with NTL-1, this well must be reported on Form 9-329 "Monthly Report of Operations", starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report should be filed, in duplicate, directly with Royalty Management Accounting Center, Minerals Management Service, P. O. Box 2859, Casper, Wyoming 82602.

Any change in the program must be approved by the District Manager. "Sundry Notices and Reports on Wells" (form 9-331) must be filed for all changes of plans and other operations in accordance with 30 CFR 221.58. Emergency approval may be obtained orally, but such approval does not waive the written report requirement. Any additional construction, reconstruction, or alteration of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground will require the filing of a suitable plan pursuant to NTL-6, and prior approval by the District Manager.

5. Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (form 9-330) will be submitted not later than 15 days after completion of the well or after completion of operations being performed, in accordance with 30 CFR 221.59. Two copies of all logs run, core descriptions, core analyses, well-test data, geologic summaries, sample descriptions, and all other surveys or data obtained and complied during the drilling, workover, and/or completion operations, will be filed with form 9-330. Samples (cuttings, fluid, and/or gas) will be submitted only when requested by this office.

6. Significant surface values (are) (are not) involved at this location. Accordingly, you (must) (need not) notify at least (24) (48) hours prior to commencing field operations to allow this office to have personnel present for consultation during the construction of roads and locations.

Your contact with the District Office is: Lynn Jackson

Office Phone: 801-259-6111 Home Phone: _____

City: Moab State: Utah

Resource Area Manager's Address and contacts are:

Address: Moab, Ut.

Your contact is: Wayne Svejnoha

Office Phone: 801-259-8193 Home Phone: _____

7. SURFACE OPERATING STANDARDS

Unless otherwise specified herein, construction and maintenance of surface facilities approved under this plan shall be in accordance with the guidelines set forth in the BLM/FS/GS Oil and Gas Brochure entitle, "Surface Operating Standards for Oil and Gas Exploration and Development". This includes but is not limited to such items as road construction and maintenance, handling of top soil and rehabilitation.

8. If a replacement rig is contemplated for completion operations, a "Sundry Notice" to that effect must be filed, for prior approval of the District Manager, and all conditions of this approved plan are applicable during all operations conducted with the replacement rig.

9. Pursuant to NTL-2B requirements regarding disposal facilities for new wells, this is authorization for unlined pit disposal of the water produced from this well for a period of 90 days from the date of initial production for sales purposes. During this period, an application for approval of the permanent disposal method, along with the required water analysis and other information must be submitted for the District Manager's approval. Failure to timely file an application within the time allowed will be considered an incident of noncompliance, and will be grounds for issuing a shut-in order until the application is submitted.

10. This permit is valid for a period of one year from the date of approval. If construction does not commence within 90 days from approval, the operator must contact this office 15 days prior to beginning construction. Construction under adverse conditions may require additional stipulations. If the permit terminates, any surface disturbance created under the application must be rehabilitated in accordance with the approved plan. After termination, it is required that a new application be filed for approval for any future operations.

11. If a tank battery is constructed on this lease, it must be surrounded by a fire wall of sufficient capacity to adequately contain the storage capacity of the battery.

12. This Application for Permit to Drill is approved subject to the requirement that, should the well be successfully completed for production, this office must be notified when it is placed in a producing status. Such notification will be by telegram or other written communication, and must be received in this office by not later than the first business day next following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:

    a. Operator name, address and telephone number.

    b. Well name and number.

    c. Well location (1/4, 1/4, Section, Township, Range and Prime Meridian).

    d. Date was placed in a producing status.

    e. The nature of the well's production, i.e. crude oil, or crude oil and casinghead gas, or natural gas and entrained liquid hydrocarbons.

f. The OCS, Federal or Indian lease prefix and number on which the well is located. Otherwise, the non-Federal or non-Indian land category, i.e. State or private.

g. If appropriate, the unit agreement name, number and participating area name.

h. If appropriate, the communitization agreement number.

13. _____

SUPPLEMENTAL STIPULATIONS OF APPROVAL ATTACHED

RECOMMENDED
SEED MIXTURE

Species		lbs/acre
Grasses		
Oryzopsis hymenoides	Indian ricegrass	2
Stipa comata	Needle & Thread grass	1
Forbs		
Melilotus officinalis	Yellow Sweetclover	1
Shrubs		
Cowenia mexicana	Cliffrose	2
		6 lbs/acre

Broadcast seed will be applied at double the rate. Seeding will be done in the fall of the year (Oct.-Dec.)

ENSERCH EXPLORATION, INC.
10 POINT DRILLING PLAN
FOR
MINERAL CANYON FEDERAL NO. 1-3
LOCATED IN
SECTION 3 - T26S-R19E - S. L. B. & M.
GRAND COUNTY, UTAH

Enserch Exploration, Inc.
Mineral Canyon No. 1-3
Section 3 - T26S-R19E - S.L.B.&M.
Grand County, Utah

1. GEOLOGICAL SURFACE FORMATION

Formation: Kayenta Sandstone
Period: Triassic
Era: Mesozoic

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS

FORMATION	DEPTH
Kayenta	Surface
Wingate	220'
Chinle	540'
Moenkopi	920'
Cutler	1425'
Hermosa	2040'
Paradox Salt	4100'
Cane Creek	7233'
Base of Salt	7290'
Mississippian Leadville	7490'
Mississippian Madison	7575'
Devonian Ouray	7925'
Devonian Elbert	8055'

3. ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERALS

FORMATION	DEPTH	REMARKS
Chinle	540'	Uranium Bearing
Paradox Salt	4100'	Salt and/or Salt Water, Potash
Cane Creek	7233'	Oil
Mississippian Leadville	7490'	Oil
Mississippian Madison	7575'	Oil
Devonian Ouray	7925'	Oil
Devonian Elbert	8055'	Oil

4. PROPOSED CASING PROGRAM - MINIMUM REQUIREMENTS

SIZE	GRADE	WEIGHT/FOOT	CONDITION	SETTING DEPTH
13-3/8"	H-40	48#	New	0 - 300'
9-5/8"	K-55	40#	New	0 - 4200'
5-1/2"	K-55	15.5#	New	0 - 3900'
5-1/2"	S-95	17#	New	3900 - 7400'
5-1/2"	N-80	17#	New	7400 - 8200'

If a salt water flow occurs when drilling the interval below 4500 feet, then the following casing will be run instead of the 5-1/2 inch casing:

7"	S-95	26#	New	3900 - 7400'
4-1/2"	N-80	11.6#	New	7200 - 8200'

Enserch Exploration, Inc.
Mineral Canyon Federal No. 1-3
Section 3 - T26S-R19E - S.L.B.&M.
Grand County, Utah

5. BLOWOUT PREVENTION EQUIPMENT

Exhibit "A" is a schematic diagram of the minimum blow-out preventer requirements. The BOP's will be hydraulically tested to the full working pressure after nippling up and after any use under pressure. Pipe rams will be operationally checked each 24-hour period and blind rams checked each time pipe is pulled out of the hole.

Accessories to the BOP's include an upper and lower kelly cock, full opening safety valve and choke manifold with a pressure rating equivalent to the BOP stack. A rotating head will also be used when drilling the interval from 300 feet to 4200 feet.

6. PROPOSED CIRCULATING MEDIUM

The mud system will be gel-chemical with adequate stocks of sorptive agents and weight materials on site to handle any anticipated down-hole problems as well as possible spills of fuel and oil on the surface. Specifically, the following mud types are anticipated through the intervals indicated:

DEPTH INTERVAL	MUD TYPE	MUD WEIGHT	VISCOSITY SEC/QT	WATER LOSS cc
0 - 300'	Water, Gel-Lime	8.4 - 9.0	28-50	NC
300 - 4200'	Air-Mist/Stable Foam			
4200 - 8200'	Salt Saturated Starch and Salt Gel	10.0 - 12.0	35-45	15

should start at 4050

7. AUXILIARY EQUIPMENT

(a) A lower kelly cock will be kept in the string.
(b) A float will not be used at the bit.
(c) A full opening safety valve will be kept on the floor to be stabbed into the drill pipe when the kelly is not in the string.
(d) A mud logging unit and gas detecting device will be used from 2500 feet to T.D. to monitor the mud system.
(e) A pit level recorder and flow sensor will be used from 4200 feet to total depth.
(f) An H_2S gas detection and monitoring system will be installed at 300' and will be operational for the completion of drilling operations of this well.
(g) During air drilling operations a blooie line will be used. The line will be directed into a soil bank in the reserve pit at a point not less than 125 feet from the wellhead. A mist system will also be used so that dust cuttings will not cloud and disperse outside of the reserve pit area.

Enserch Exploration, Inc.
Mineral Canyon Federal No. 1-3
Section 3 - T26S-R19E - S.L.B.&M.
Grand County, Utah

8. TESTING AND LOGGING PROGRAMS TO BE FOLLOWED

(a) Drill Stem Tests will be run if shows are present in the Mississippian Leadville at ~ 7550' and the Mississippian Madison at ~ 7700'.

(b) The logging program will consist of DLL/MSFL/GR, FDC/CNL/GR, and Sonic /GR from total depth to 4200'. Other logs will be determined at the well site to best evaluate any shows.

(c) One conventional 60' core will be cut in the Mississippian Leadville formation.

9. ANTICIPATED ABNORMAL PRESSURES OR HAZARDS

High pressure salt water or oil-flows in the Paradox Salt are a common drilling problem in the area. These are extremely local in nature being related to the vagaries of fracturing and oil formation in what are generally almost impermeable shales confined between impermeable salt beds.

The pressures in these zones are ultimately unpredictable since most of the zones are very localized and the pressures are probably the result of in-situ petragenesis. Most of the pressures have been such that they could be controlled with mud weights between 14 and 18 ppg.

No hydrogen sulfide or other hazardous fluids or gases have been found, reported or known to exist at these depths in the area. However, an H_2S gas detection and monitoring devise will be in place and working from a depth of 300 feet to total depth. In the unlikely event that H_2S is encountered, the drilling operations will be stopped and a complete H_2S safety system and warning signs will be installed. An H_2S contingency plan will also be submitted to the M.M.S. and B.L.M., and approval obtained before drilling operations will continue.

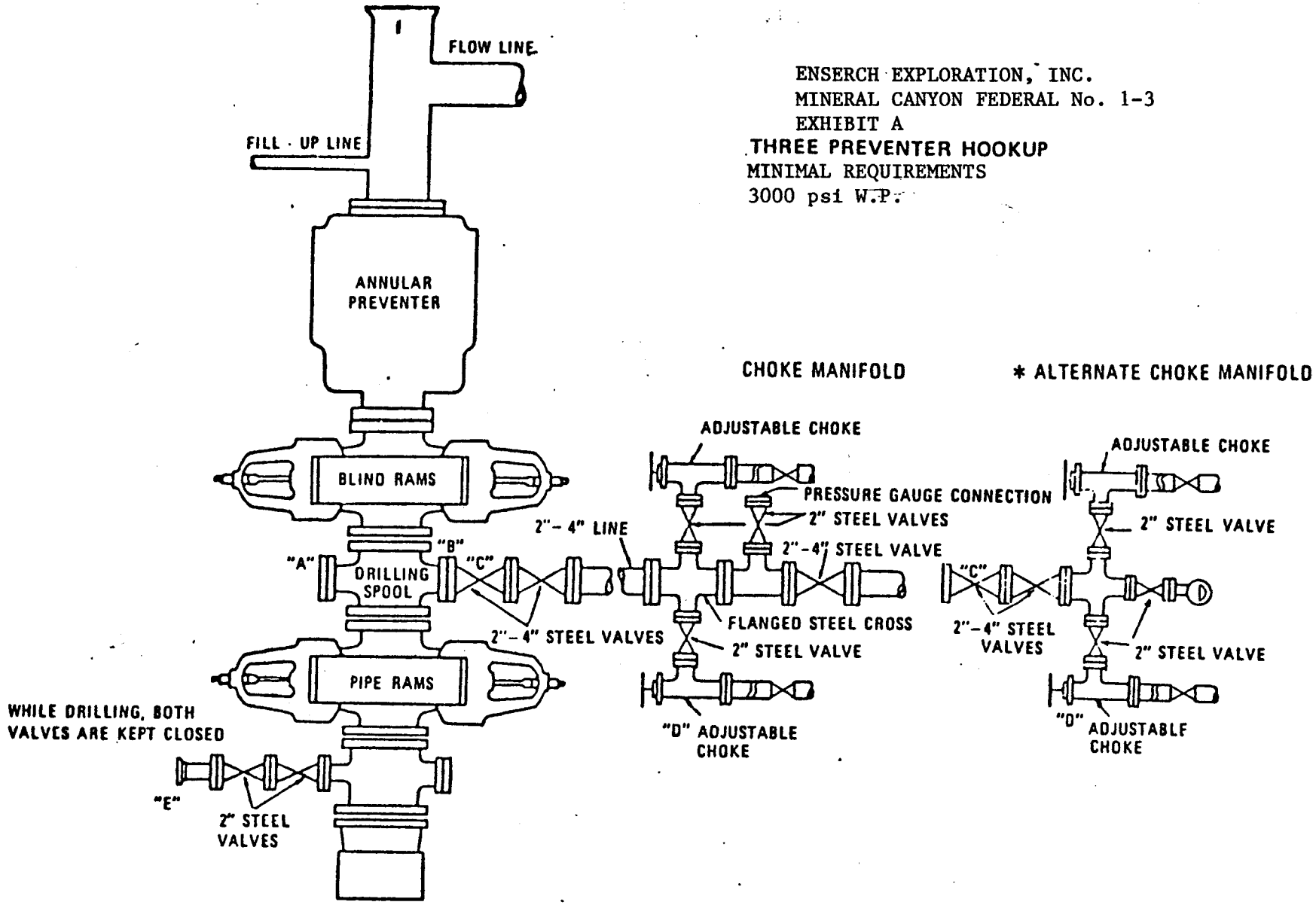
10. THE ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS

The anticipated starting day is approximately November 21, 1983. Due to the rugged terrain, the building of the proposed drillsite should commence as soon as possible after the approval of the A.P.D.-NTL6. The drilling operations should be completed within 60 days from spud, and the completion operations 30 days thereafter.

ENSERCH EXPLORATION, INC.
MINERAL CANYON FEDERAL No. 1-3
EXHIBIT A

THREE PREVENTER HOOKUP

MINIMAL REQUIREMENTS
3000 psi W.P.



ENSERCH EXPLORATION, INC.
13 POINT SURFACE USE PLAN
FOR
MINERAL CANYON FEDERAL NO. 1-3
LOCATED
SECTION 3 - T26S-R19E - S.L.B. & M.
GRAND COUNTY, UTAH

Enserch Exploration, Inc.
Mineral Canyon Federal No. 1-3
Section 3 - T26S-R19E - S.L.B.&M.
Grand County, Utah

1. EXISTING ROADS

See attached Topographic Map "A" & "B"

To reach the Enserch Exploration, Inc. drillsite for the Mineral Canyon Federal No. 1-3 well, located in the SE¼-NE¼ of Section 3 - T26S-R19E - S. L. B. &. M., Grand County, Utah:

Proceed north out of Moab, Utah along U. S. Highway 163, - 10.7 miles to the junction of this highway and Utah State highway 313 to the west; proceed west along Utah State Highway 313, - 11.6 miles (towards Dead Horse Point State Park) to an existing county dirt road. Proceed on the county road approximately 0.8 miles southwesterly to the proposed access road entrance.

The Highways 163 and 313 mentioned above are asphalt surfaced roads and are maintained by state crews. The existing dirt road to the access entrance is a county road and is maintained by the county.

There is no anticipated improvement on any portion of the above described roads. They will meet the necessary standards required to facilitate an orderly flow of traffic during the drilling phase, completion phase, and production phase of this well. (At such time that production is established).

The road that is required for access during the drilling phase, completion phase, and production phase of the well, will be maintained at the standards required by the Bureau of Land Management or other controlling agencies.

2. PLANNED ACCESS ROAD

See attached Topographic Map "B"

The proposed access road is to be constructed, leaving the county maintained dirt road in the NE¼ of section 3 - T26S-R19E - S.L.B.&M. and proceeds westerly from the dirt road. The access road will have a gradual southwesterly turn into the location. The total access road will be approximately 900 feet in length.

The access road will have a road path width of 18 feet. Proper drainage on each side of the road path will involve a maximum of disturbance being 24 feet. All vegetation taken from the access road surface, will be stockpiled at the uphill side of the road. No more than a 6% grade will exist on any portion of the access road. Due to the surface rock, a minimal amount of cut and fill will be required for road construction. No culverts, gates, cattleguards, fence cuts or turnouts will be needed.

Road upgrading will be necessary only in the event that production is established on lease U-24529. The construction design will be to Class III road standards. All construction material for this road will be from native borrow accumulated during its construction.

2. PLANNED ACCESS ROAD - cont'd

A warning sign will be placed at the junction of Utah State Highway 313 and the county road leading to the access. The warning sign will indicate "Slow-Heavy Oil Field Traffic" or other verbage deemed appropriate by the Department of Transportation and the B.L.M. These signs will be placed during dirt work, drilling and rehabilitation.

3. LOCATION OF EXISTING WELLS

There are wells located within a two mile radius of the proposed location for this exploratory well. See Topographic Map "C" for the location of these wells relative to the proposed location site. (See location plat for placement of the Enserch Exploration, Inc. Mineral Canyon Federal No. 1-3 well location within the section).

(1) Water Wells - None
(2) Abandoned Wells - Six shown on Map "C"

Glen Ruby - Unit No. 1
4189' FSL & 944' FWL - Section 11 - T26S-R19E
Plugged and Abandoned: May 26, 1952

Tidewater Oil Company - "74" No. 11
2310' FNL & 2310' FWL - Section 11 - T26S-R19E
Plugged and Abandoned: October 10, 1959

King Oil Company - Ruby No. 2
340' FSL & 1369' FEL - Section 11 - T26S-R19E
Plugged and Abandoned: July 9, 1956

Pure Oil Company - Big Flat No. 5
1980' FSL & 1980' FEL - Section 27 - T25S-R19E
Plugged and Abandoned: January 29, 1963

Supron Energy - Husky No. 1
2135' FSL & 2135' FEL - Section 27 - T25S-R19E
Plugged and Abandoned: December 8, 1977

Calvert Western Exploration - Big Flat No. 6
1980' FSL & 1650' FEL - Section 27 - T25S-R19E
Plugged and Abanonded: December 22, 1963

(3) Temporarily Abandoned Wells - None
(4) Disposal Wells - None
(5) Drilling Wells - None
(6) Producing Wells - None
(7) Shut-in Wells - None
(8) Injection Wells - None
(9) Observation Wells - None

4. LOCATION OF EXISTING AND PROPOSED FACILITIES

A. There are no existing production facilities located within a one-mile radius of the proposed location.

B. In the event production is established, all new facilities will be contained within the proposed location site and will be located on the NE corner of the location.

Exhibit "B" is a proposed location layout showing the production facilities which are anticipated for this well. Sizes of the facilities are approximate and will be determined by the well's productivity and produced fluid properties. Anticipated equipment required is:

(1) Two (2), 400 barrel production tanks
(2) One (1), three phase separator
(3) One (1), heater treater
(4) One (1), pumping unit maybe required six months after production is established.

All above ground production facilities including tanks, heater treaters, etc. will be painted using Kansas Paint Company Juniper Green.

In the unlikely event that a spill should occur, the area surrounding the production tanks will be bermed 3' x 30' x 55' and will be low profile in nature. No tank grades, etc. will be allowed.

Pipelines if required will follow existing access routes where feasible. Any burning will require a permit from the State Land Forestry and Fire Control Office in Moab. Permit can be obtained from Mr. Paul Pratt at (801)259-6316.

C. The reserve pit and that portion of the location not needed for production or production facilities will be reclaimed in the methods described in the rehabilitation section - Point #10. All of the stockpiled topsoil will be used in reclaiming the unused areas. This will be done and approved before any production equipment is installed.

5. LOCATION AND TYPE OF WATER SUPPLY

(a) Fresh water to be used for the drilling and production of this well will be hauled from the Colorado River in Section 26-T25S-R21E. This source is located on BLM land and the water haulers used will be required to have permits to obtain the water. Brine water will be obtained from private sources within the City of Moab.

(b) This water will be hauled by truck over existing roads and the proposed access road.

(c) There will be no water well drilled at this location site.

6. SOURCE OF CONSTRUCTION MATERIALS

All construction material for this location site and access road shall be borrow material accumulated during construction of the location site and access road. No additional road gravels or pit lining materials from other sources are anticipated at this time, but if they are required, the appropriate actions will be taken to acquire them from private sources.

7. METHODS OF HANDLING WASTE DISPOSAL

See rig layout for locations of proposed facilities.

The reserve pit will extend 50 feet from the drill pad in the eastern direction and will be 350' in length along the edge of the drill pad. The reserve pit will be lined in a manner sufficient to prevent seepage. The reserve will be of sufficient size to contain all drilling fluids and cuttings during drilling.

The reserve pit will be approximately 8' deep and at least one half of this depth shall be below the surface of the existing ground.

The pits will have overhead wire with flagging installed at such a time as deemed necessary to protect the water fowl, wildlife, and domestic animals.

Before drilling starts, the reserve pit will be fenced on three sides and at the time drilling activities are completed, it will be fenced on the fourth side and allowed to dry completely prior to the time that backfilling and reclamation are attempted.

When the reserve pit dries and reclamation activities commence, the pits will be covered with a minimum of four feet of soil and all requirements in Item #10 will be followed.

A temporary trash basket will be supplied and will be placed on the location site. This trash basket will be used to contain trash accumulated at the sight. The trash will be hauled to the nearest sanitary land fill.

A portable chemical toilet will be supplied for human waste. Grey water will be drained into a rathole alongside the trailers.

8. ANCILLARY FACILITIES

There are no ancillary facilities planned for at the present time and none foreseen in the near future.

During the drilling operation trailers will be on location to house Enserch Exploration, Inc. personnel, the drilling contractor's tool pusher and the mud loggers.

Enserch Exploration, Inc.
Mineral Canyon Federal No. 1-3
Section 3 - T26S-R19E - S.L.B.&M.
Grand County, Utah

9. WELL SITE LAYOUT CONSTRUCTION

See attached location layout of drilling rig and cross sections.

An Enserch Exploration, Inc. representative or the dirt contractor will contact the B. L. M. Grand Resource Area Office in Moab, Utah (Phone: 801/259-8193) forty-eight (48) hours prior to beginning any work on public land. The dirt contractor will also notify the B. L. M. and all pertinent agencies prior to blasting. The contractor will be furnished with an approved copy of the surface use plan and any additional B.L.M. stipulations prior to the commencement of any work.

The location size will be no larger than 350 feet wide and 245 feet long. However, depending on the drilling rig contracted, the drill pad size will be reduced as much as possible to minimize the disturbed area.

All soil material will be removed from the location and will be stockpiled separate from the trees and vegetation on the east side of the location. The trees and vegetation will be bladed and stockpiled at the north end of the location.

The reserve pit will be located on the east side of the location and will be lined to prevent seepage. The method used for lining the pits will be determined when the reserve pit is dug. If a plastic liner is deemed necessary to be used in lining the pit, a plastic of 20 mil or heavier will be used. As mentioned in Point No. 7, three sides of the reserve pit will be fenced before drilling starts, and the fourth side will be fenced as soon as drilling is completed. The fence will be kept in good repair while the pit is drying. The fence will be made of a four (4) strand barbed wire.

A back stop, water mist and knockdown will be installed for the air mist blooie line.

If subsurface cultural material is exposed during construction, work in that spot will stop immediately and the B.L.M. Grand Resource Area office will be contacted. All employees working in the area will be informed by Enserch Exploration, Inc. that they will be subject to prosecution if they are caught disturbing archaelogical sites or picking up artifacts. Salvage or excavation of identified archaelogical sites will only be done if damage occurs.

A temporary sign will be placed at the drill site before the commencement of drilling operations to identify the location. The sign will include such information as:

Operator
Well Name and Number
Legal Description of the Location
County and State

10. PLANS FOR REHABILITATION OF SURFACE

Immediately upon completion of drilling, the location and surrounding area will be cleared of all debris resulting from the operation. All trash will be disposed of in the portable trash cage and will be hauled to a local town dump site. Do not leave any trash in pits.

The operator or his contractor will contact the Grand Resource Area B.L.M. office in Moab, Utah, Phone (801)259-8193, forty-eight hours prior to starting rehabilitation work that involves earthmoving equipment and upon completion of restoration measures.

Before any dirt work to restore the location takes place, the reserve pit will be completely dry and any trash (barrels, metal etc.) it contains will be removed from public lands.

All disturbed areas will be recontoured to blend as nearly as possible with the surrounding area.

The stockpiled/windrowed topsoil will be evenly distributed over the disturbed area.

Seed will be broadcast with a seed prescription and at a time to be specified by the B.L.M. When broadcast seeding, a harrow or some such implement will be dragged over the seeded area to assure seed cover.

After seeding is complete the stockpiled trees and vegetation will be scattered evenly over the disturbed areas and walked down with a dozer. The access will be blocked to prevent any use/vehicle use.

Waterbars will be used as needed on all sloping surfaces as shown below:

GRADE	SPACING
2%	200 ft. spacing
2-4%	100 ft. spacing
4-5%	75 ft. spacing
+5%	50 ft. spacing

Pit material will be removed and all rehabilitation completed within thirty (30) days of completion or plugging.

Pits will be fenced as indicated in Point No. 9.

11. OTHER INFORMATION

(1) Topography: The proposed location is just to the northwest of a portion of a mesa known as Big Flat. This area borders the canyons formed by the Colorado River through the Moab Valley to the east and the Green River to the west. The terrain in the immediate vicinity consists of mostly surface rock being of the Kayenta sandstone formation. Very little

11. OTHER INFORMATION - cont'd

top soil exists. Runoff from this area flows south to south-west into the North Fork of Mineral Canyon which in turn feeds into the Green River at a point approximately 10.5 miles south-west from the drill site.

Geologic Features: The geological structures of the area that are visible are of the Kayenta Formation, Triassic Period. Visible canyon erosion consists of Jurassic, Triassic, Permian and Upper Pennsylvanian period formations.

Flora: Vegetation surrounding the proposed location includes Four Winged Saltbrush, Shadscale, Big Sagebrush, Morman Tea, Seed Lily, Prickly Pear Cactus and Bunch Grass. Trees located in the area consist of Pinyon Pine and Utah Juniper.

Fauna: Mule deer, coyotes, rabbits, and varieties of small ground squirrels and other types of rodent, and various reptiles are common to the area.

2. Due to the roughness of the terrain, surface use activities are limited. The total surface ownership affected by this location is administered by the Bureau of Land Management.

3. The nearest permanent water from the proposed location is the Colorado River 8.5 miles to the east.

The closest occupied dwelling is the Dead Horse Point State Park Visitor's Center 7.5 miles to the south-east.

There are no visible archeological, historical, or cultural sites within the boundaries of the proposed location. See Archeological Cultural Resources Inventory attached.

4. No hydrogen sulfide or other hazardous fluids or gases have been found, reported or known to exist at these depths in the area. However, an H_2S gas detection and monitoring devise will be in place and working from a depth of 300' to total depth. In the unlikely event that H_2S is encountered, the drilling operations will be stopped and a complete H_2S safety system and warning signs will be installed. An H_2S contingency plan will also be submitted to the M.M.S. and B.L.M., and approval obtained before drilling operations will continue.

5. The B.L.M., Moab, Utah District Office will be notified a minimum of twenty-four (24) hours prior to spud of the well. B.L.M. District Office - Moab, Utah - Phone: (801)259-6111

Enserch Exploration, Inc.
Mineral Canyon Federal No. 1-3
Section 3 - T26S-R19E - S.L.B.&M.
Grand County, Utah

12. OPERATOR'S REPRESENTATIVES

R. S. Brashier
Regional Drilling Engineer
Enserch Exploration, Inc.
1230 River Bend Drive - Suite 136
Dallas, Texas 75247
Office: (214)630-8711
Home: (214)492-3616

C. H. Peeples
Regional Drilling Manager
Enserch Exploration, Inc.
1230 River Bend Drive - Suite 136
Dallas, Texas 75247
Office: (214)630-8711
Home: (214)223-7879

13. CERTIFICATION

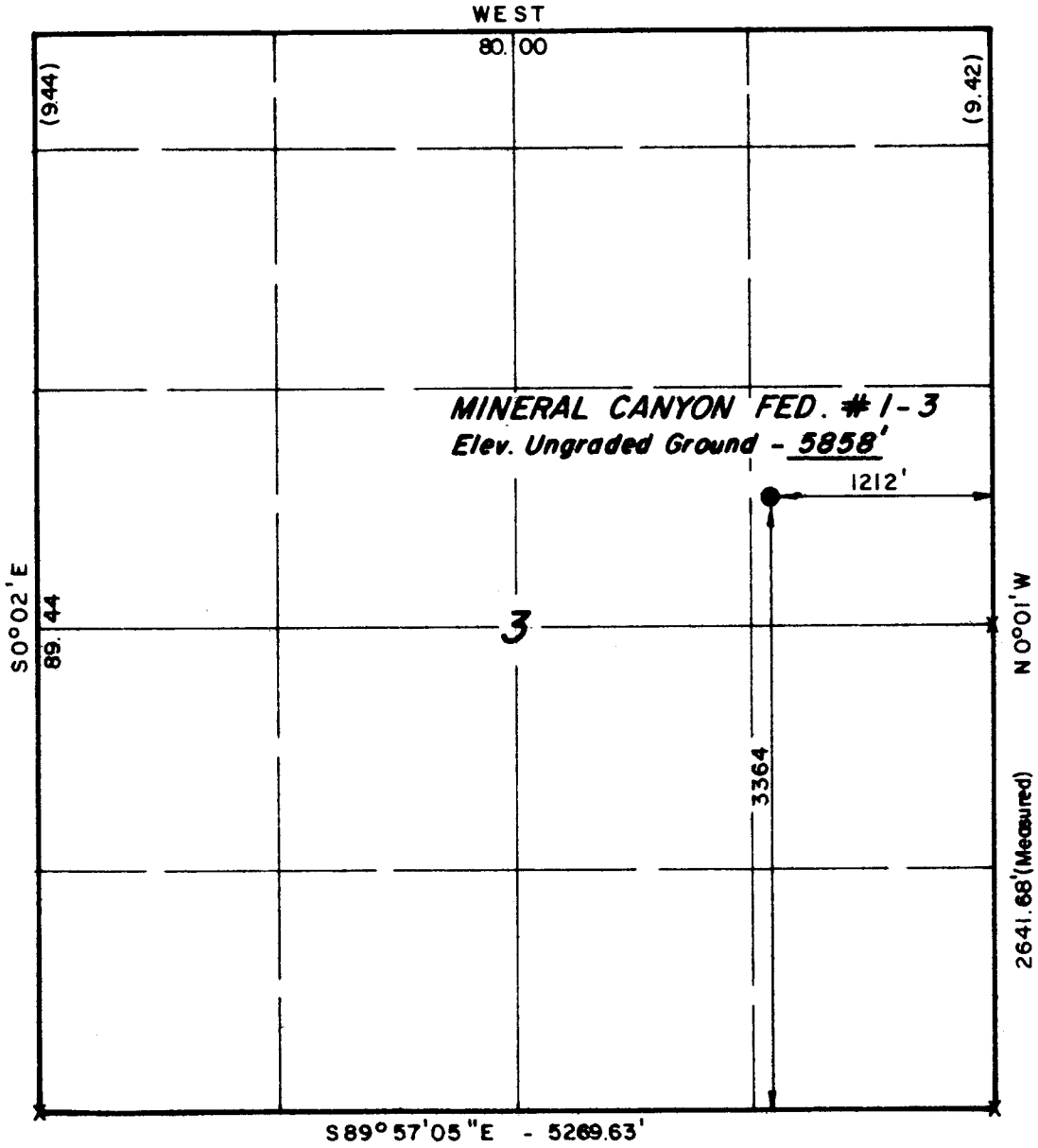
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated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

11/3/83
Date

C. H. Peeples
C. H. Peeples
Regional Drilling Manager

DAC/hrs
Attach
11-2-83

T 26 S , R 19 E , S.L.B.&M.



X = Section Corners Located

PROJECT

ENSERCH EXPLORATION, INC.

Well location, *MINERAL CANYON FED. # 1-3*, located as shown in the SE 1/4 NE 1/4 Section 3, T26S, R19E, S.L.B.&M. Grand County, Utah.

CERTIFICATE

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

Gene Stewart

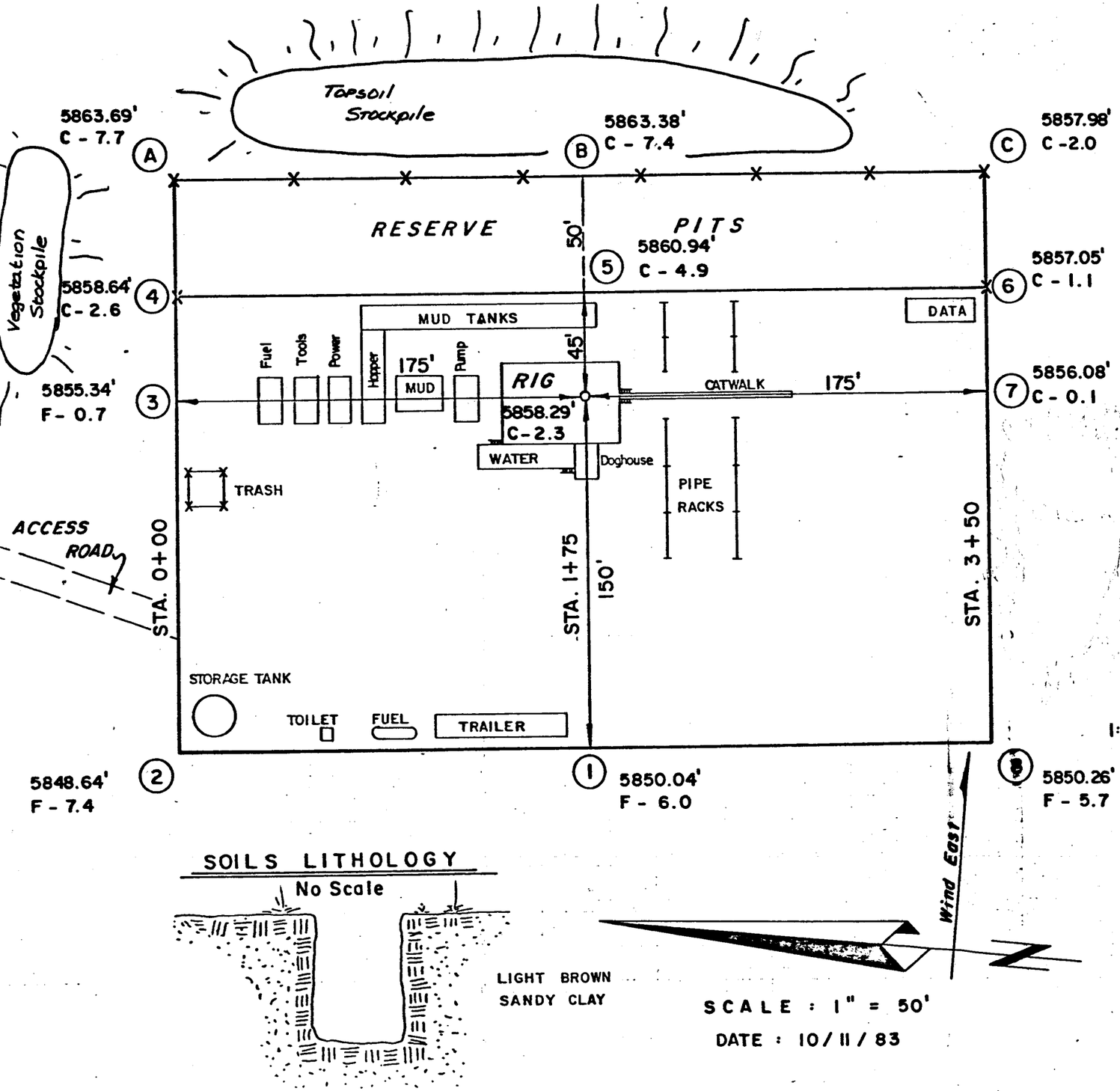
REGISTERED LAND SURVEYOR
REGISTRATION Nº 3154
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
P. O. BOX Q — 85 SOUTH - 200 EAST
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE October 11, 1983
PARTY GS RT RP	REFERENCES GLO Plat
WEATHER Clear / Warm	FILE ENSERCH

ENSERCH EXPLORATION, INC.

MINERAL CANYON FED. # 1-3



SOILS LITHOLOGY

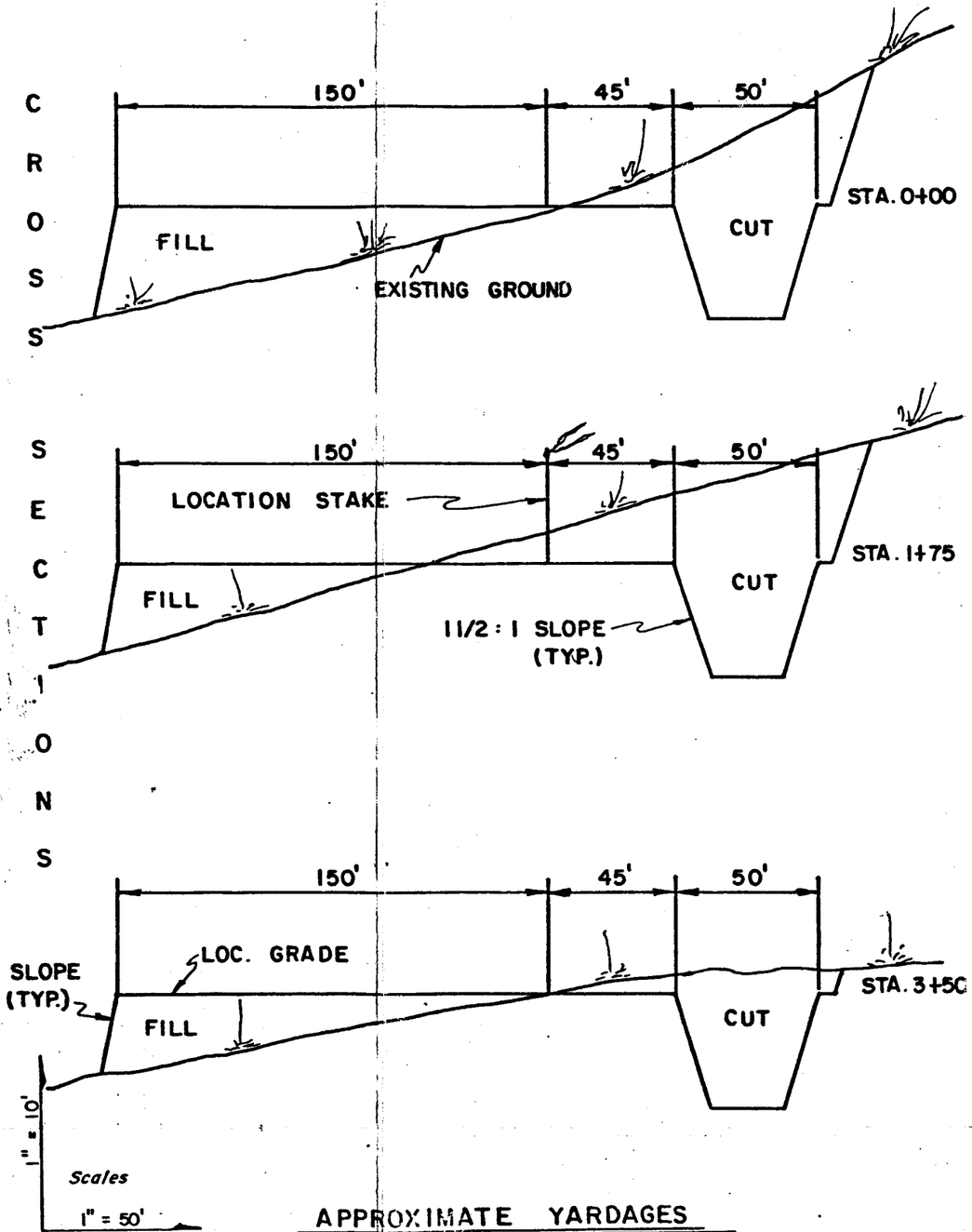
No Scale

LIGHT BROWN SANDY CLAY

SCALE : 1" = 50'

DATE : 10/11/83

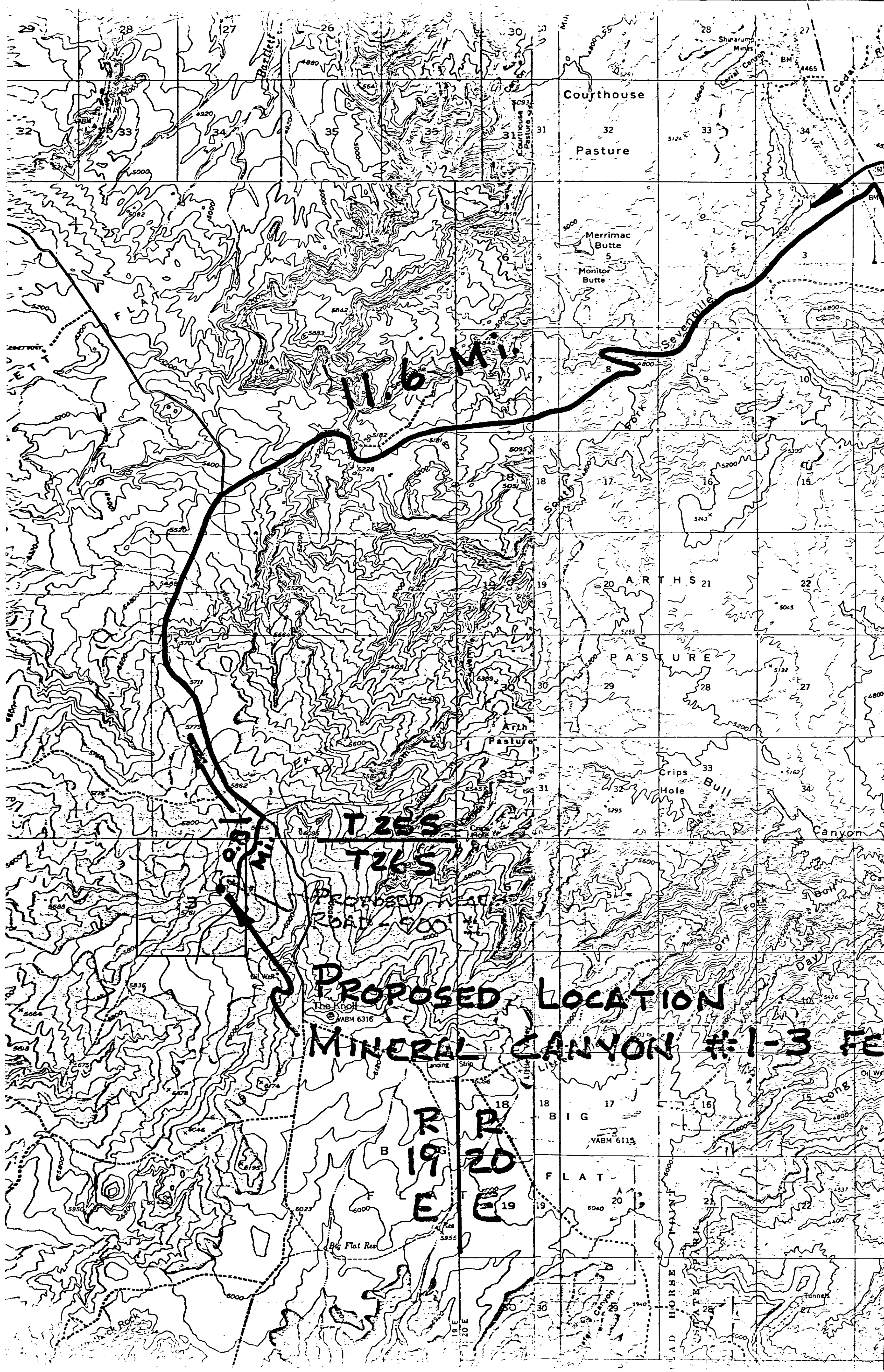
CROSS SECTIONS



APPROXIMATE YARDAGES

Cu. Yds. Cut - 10,320

Cu. Yds. Fill - 6,200



Courthouse
Pasture
Shinarump Mines
Corral Canyon
Merrimac Butte
Monitor Butte
11.6 Mi.
Sevenmile
South Fork
A R T H S
P A S T U R E
Arths Pasture
Crips Hole
Bull
Canyon
T25S
T26S
Dry Fork
PROPOSED LOCATION
MINERAL CANYON #1-3
The Knoll
VABM 6316
Landing Strip
B I G
F L A T
VABM 6115
R 19 E
R 20 E
Big Flat Res
Tunnels

ENSERCH EXPLORATION INC.

MINERAL CANYON FED. #1-3

PROPOSED LOCATION

TOPO. MAP "B"

SCALE 1" = 5000'

ROAD CLASSIFICATION

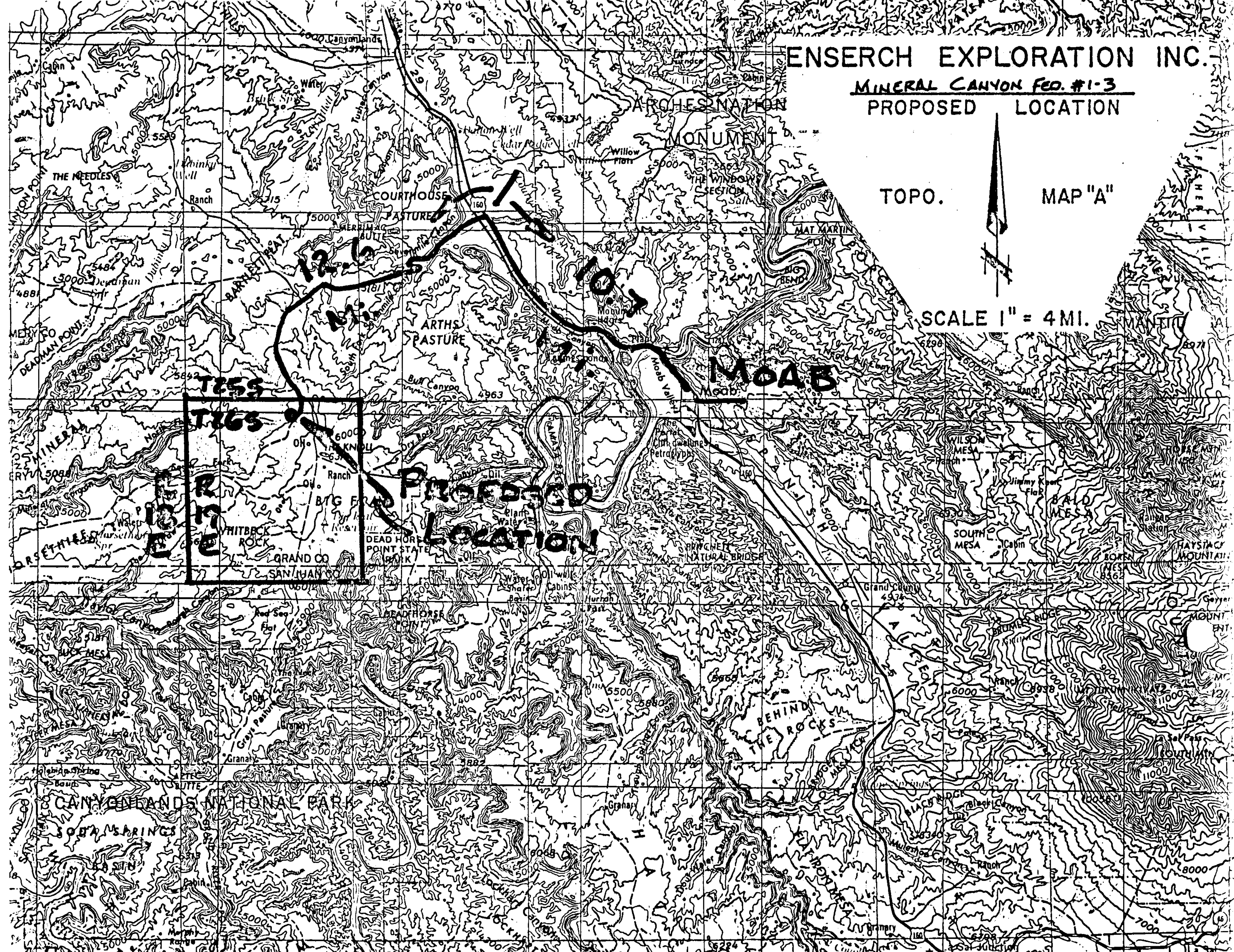
Light duty road, all weather, improved surface ———— Unimproved road fair or dry weather - - - - - -

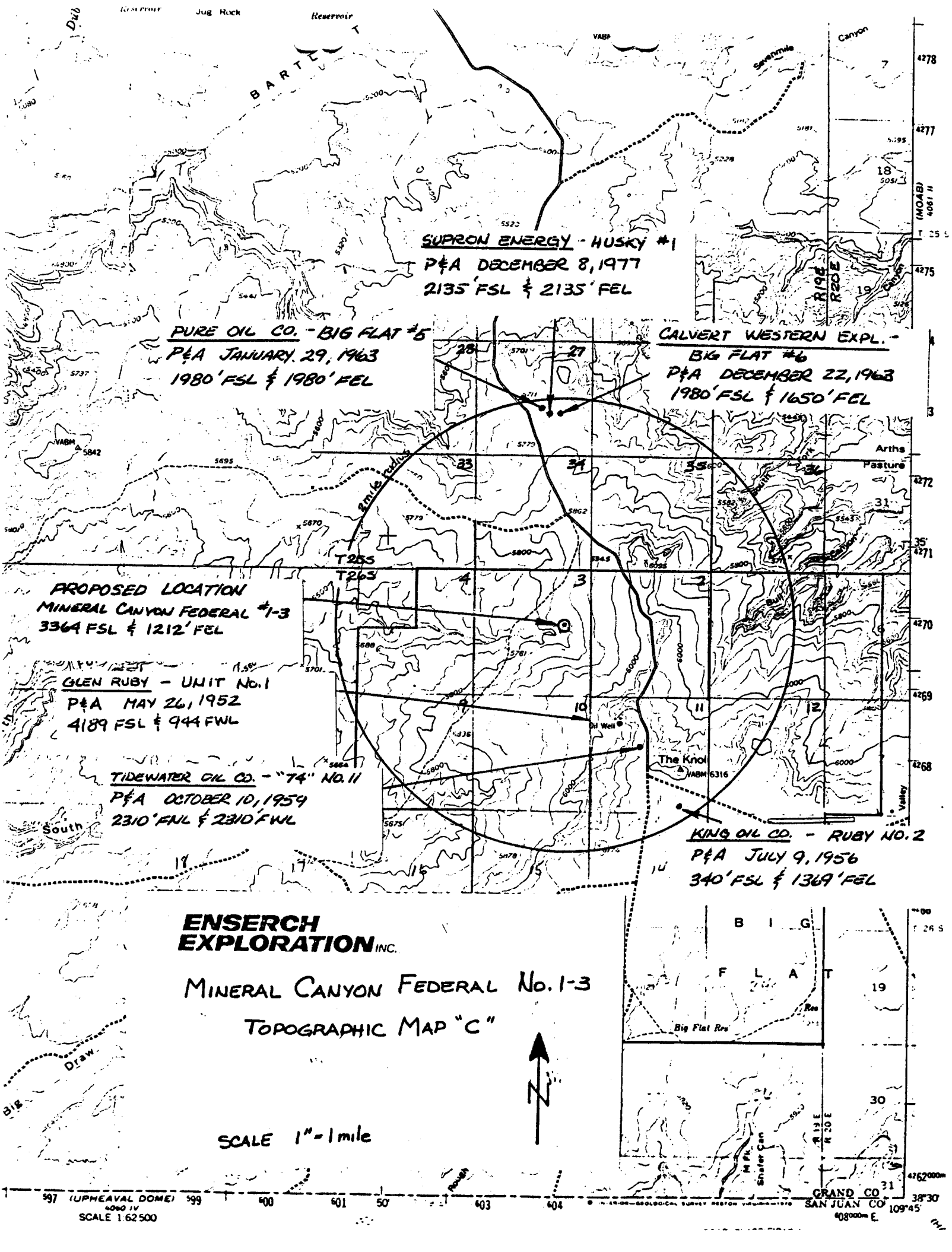
UTAH

QUADRANGLE LOCATION

10.1 MI.

MOAB


ENSERCH EXPLORATION INC.
MINERAL CANYON FED. #1-3
PROPOSED LOCATION
TOPO. MAP "A"
SCALE 1" = 4 MI.
MOAB
PROPOSED LOCATION
T25S
T26S
R 19 E
ARCHES NATIONAL MONUMENT
CANYONLANDS NATIONAL PARK
DEAD HORSE POINT STATE PARK
GRAND CO
SAN JUAN CO
COURTHOUSE PASTURE
ARTHS PASTURE
BEHIND THE ROCKS



ENSERCH EXPLORATION INC.

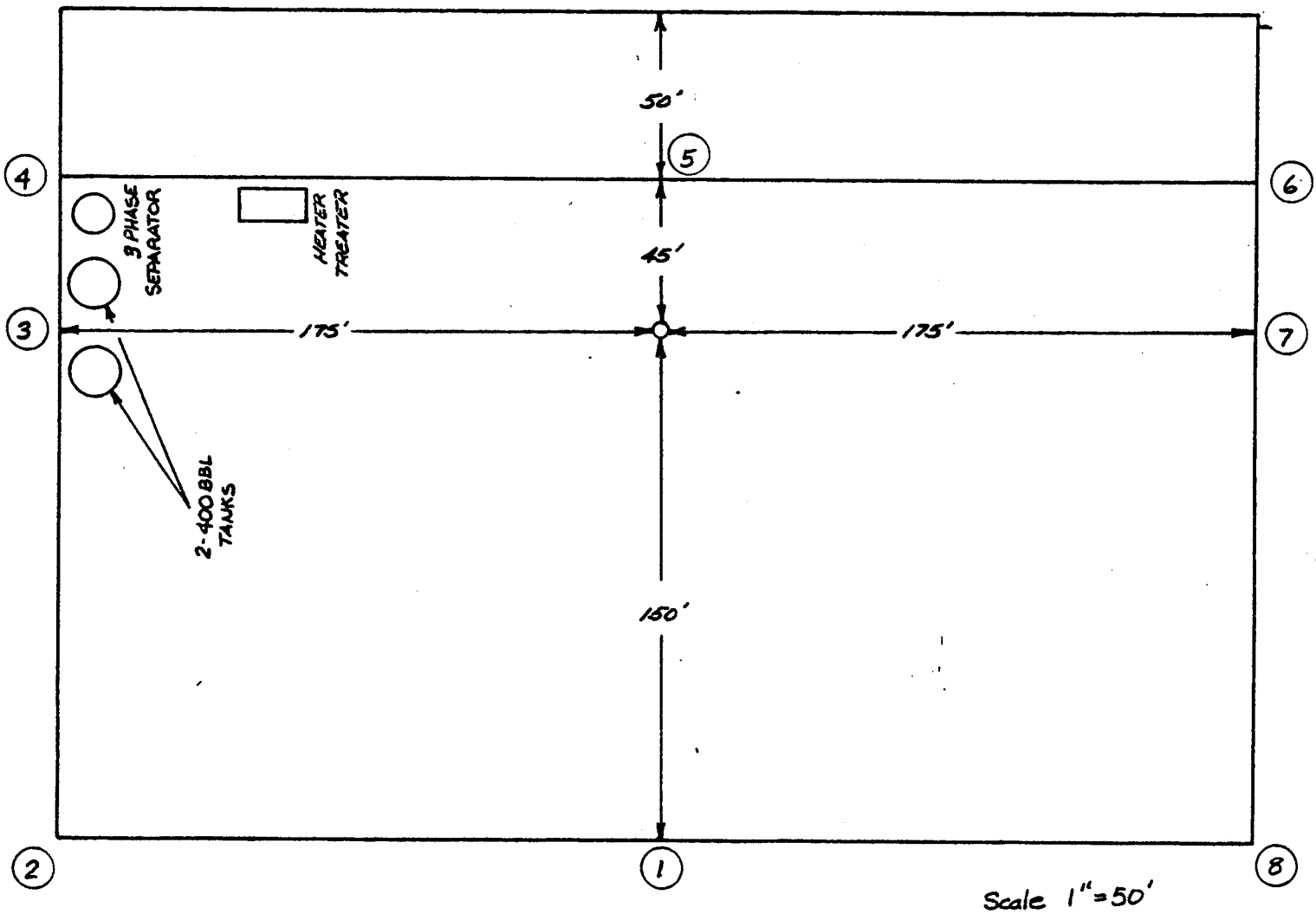
MINERAL CANYON FEDERAL No. 1-3

TOPOGRAPHIC MAP "C"

SCALE 1" = 1 mile

ENSERCH EXPLORATION, INC.
MINERAL CANYON FEDERAL No. 1-3

EXHIBIT "B"



Scale 1"=50'

Grand River Institute

1 November 1983

Enserch Exploration Inc.
1230 River Bend Drive
Suite 136
Dallas, Texas 75247

Attn: Dennis A. Cox, Drilling Engineer

Re: GRI Project No. 8367 (Cultural resources inventory of proposed Mineral Canyon #1-3 and access in Grand County, Utah for Enserch Exploration Inc.)

Dear Mr. Cox:

Enclosed are two copies of our report on the project cited above. Copies have been sent to the appropriate BLM District and Area offices as well.

Also enclosed is a statement for this work.

Please give me a call if you have any questions or if we can be of assistance on future projects.

Sincerely,

Dawn L. Langdon
for

Carl E. Conner
Director

CEC:dll

Enclosures

Cultural Resources Inventory Report
on
Proposed Mineral Canyon Unit #1-3 and Access
In Grand County, Utah
for
Enserch Exploration Inc.

GRI Project No. 8367

1 November 1983

Prepared by

Grand River Institute
1030 Colorado Avenue
Grand Junction, Colorado 81501

Antiquities Permit No. 82-CO-347

Lester A. Wheeler
Project Archaeologist

Submitted to

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

U.S.
Department of the Interior
Bureau of Land Management
Utah State Office

Summary Report of
Inspection for Cultural Resources

For BLM Use Only

BLM Report ID No. | | | |-| | | | | | | | (1, 4, 10)

Report Acceptable Yes __ No __

Mitigation Acceptable Yes __ No __

Comments: _____

1. Report Title | M | i | n | e | r | a | l | | C | a | n | y | o | n | | 1 | - | 3 | , | E | n | s | e | r | c | h | | E | x | p | (11, 40)

2. Development Company Enserch Exploration Inc., Dallas, Texas

3. Report Date | 1 | 0 | | | | 1 | 9 | 8 | 3 | (41 42 MONTH, 43 YEAR 46)

4. Antiquities Permit No. 83-UT-214

5. Responsible Institution | G | R | A | N | D | | R | I | V | E | R | | I | N | S | (47, 61) County Grand

6. Fieldwork Location:

TWN	26S (62 65)	Range	19E (66 69)	Section(s)	03 (70 71)		(72 73)		(74 75)		(76 77)	
TWN	(78 81)	Range	(82 85)	Section(s)	(86 87)		(88 89)		(90 91)		(92 93)	
7. Resource Area GR (110 111) TWN	(94 97)	Range	(98 101)	Section(s)	(102 103)		(104 105)		(106 107)		(108 109)	

PO=PONY EXPRESS, BR=BEAR RIVER, PR=PRICE RIVER, WS=WARM SPRINGS
BC=BOOK CLIFFS, HR=HOUSE RANGE, SE=SEVIER RIVER,
HM=HENRY MOUNTAINS, BE=BEAVER RIVER, DX=DIXIE
KA=KANAB, ES=ESCALANTE, SJ=SAN JUAN, GR=GRAND
SR=SAN RAFAEL, DM=DIAMOND MOUNTAIN,

Fill in spaces 65,69,81,85,97,101 Only if:
V=Vernal Meridian
H=Half Township

8. Description of Examination Procedures:
100% pedestrian survey of well location and access made by walking a pattern of tight, parallel zigzag transects (apices < 50' apart) to cover a 400x400' block for the well location and a 200'-wide corridor for the access road. Suspect areas within 300' of the location and access were also inspected.

9. Linear Miles Surveyed and/or (112 117)

Definable Acres Surveyed and/or 6.4 (118 123)

*Legally Undefinable Acres Surveyed (124 129)

(*A parcel hard to cadastrally locate i.e., center of section)

10. Inventory Type I (130)
R=Reconnaisance
I=Intensive
S=Statistical Sample

11. Description of Findings (attach appendices, if appropriate)
Prehistoric site 42GR1735--overhang/lithic scatter.
See IMACS site form.

12. Number Sites Found: 1 (131 135)
No sites=0

13. Collection: N (136) Y=Yes, N=No

14. Actual/Potential National Register Properties Affected:
Site 42GR1735 lies 100' south of proposed well location.

15. Files Search : Grand Resource Area Office of BLM, 10-25-83

16. Conclusion/Recommendations:
Avoid site 42GR1735.

17. Signature and Title of Institutional Officer Responsible Proj. Archaeol.
Princ. Invest.

Note: Include only requested information in numbered spaces.
* For extra locationals use additional 8100-3 forms.

Ut 8100-3 (1/80)

Introduction

At the request of the Moab District Office of the Bureau of Land Management (BLM), a 100% pedestrian archaeological inspection of proposed gas well location Mineral Canyon Unit #1-3 and its related access was conducted by Lester A. Wheeler of Grand River Institute under BLM Antiquities Permit No. 82-CO-347 for Enserch Exploration Inc. of Dallas, Texas. The proposed well site is approximately 14 miles due west of Moab, Utah (Grand County) at the head of a small drainage which feeds into the North Fork of Mineral Canyon. The project's legal location is described as (see Figure 1):

Mineral Canyon Unit #1-3

T. 26S., R. 19E., Section 3, C of S½NE¼, S.L.B.&M.

Access to above well

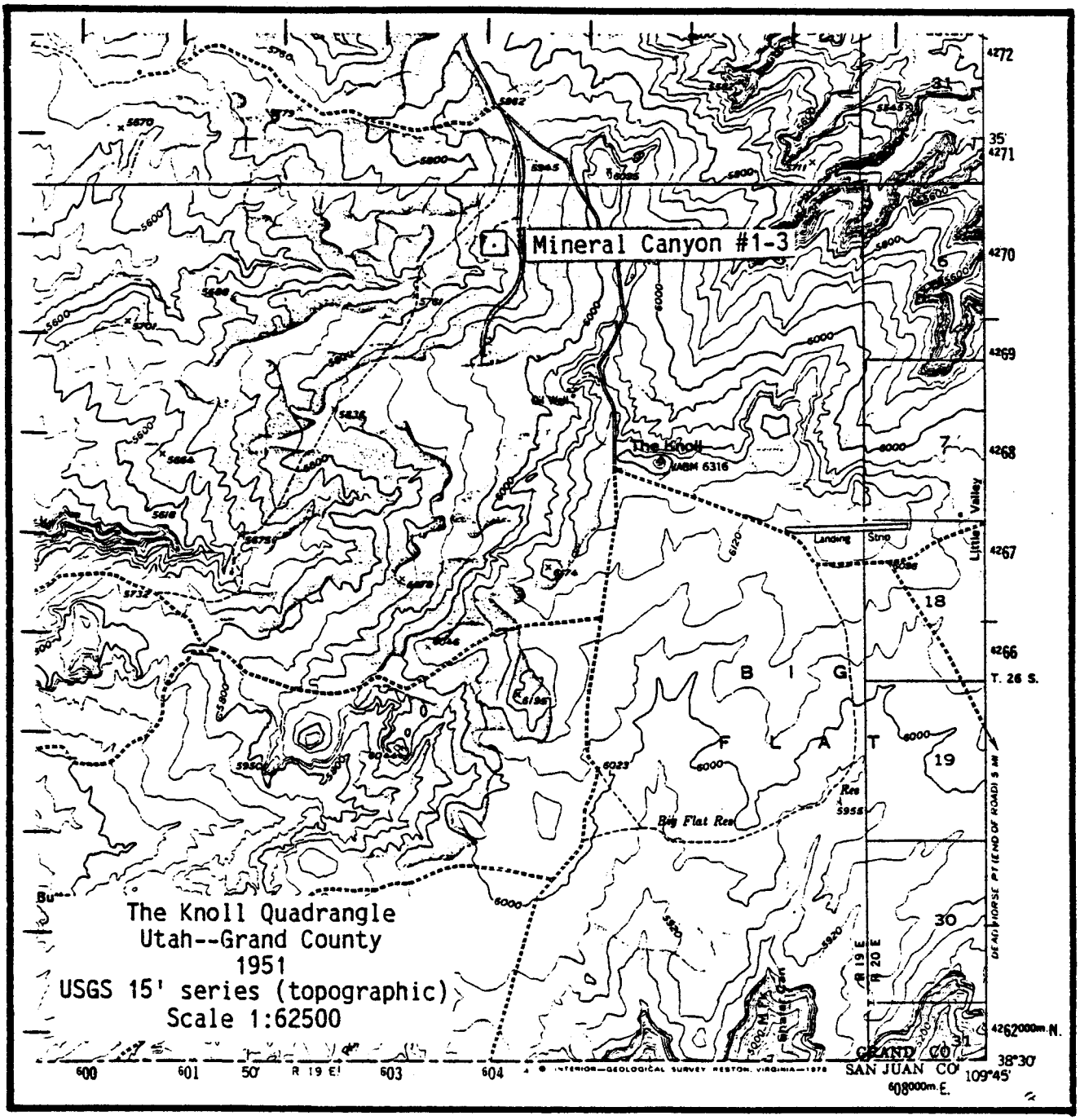
T. 26S., R. 19E., Section 3, NW¼SE¼NE¼

(Map reference: "The Knoll, Utah", USGS 15' series [topographic] quadrangle, 1951)

Environmental Overview

The project area is located on the Colorado Plateau at the eastern edge of the Green River Desert. Steep canyons characterize the area, trending south and west toward the Green River, 10 miles distant. Several ephemeral drainages occur locally; these flow southwest into Mineral Canyon, a tributary of the Green River.

Climatically the area is characterized as a high semi-desert. Yearly precipitation ranges from 9-12", temperatures vary from below 0° F. in the winter to above 100° in the summer. Vegetation is predominantly pinyon-juniper, with interspersed areas of shrub grassland. Species present include single leaf ash, ephedra, snakeweed, and yucca. Soils are reddish sandy silts and are less than 50cm deep on the well location.



Cultural resources inventory of proposed Mineral Canyon #1-3 well and related access road in Grand County, Utah, for Enserch Exploration Inc. Area inspected for cultural resources is highlighted in yellow.

Figure 1.

Known Cultural Resources

A files search for known cultural resources through the Grand Resource Area Office of the BLM revealed four prehistoric sites within a mile radius of the project area. Three--42GR1331, 42GR1332, and 42GR1333--are closely associated and lie 0.5 mile southwest of the project area. Site 42GR1331 is a rockshelter/lithic scatter; sites 42GR1332 and 42GR1333 are lithic scatters. The fourth previously recorded site--42GR43--is an overhang with pictographs and an associated lithic scatter located 0.5 northwest of the project area. All four sites are well beyond the area to be affected by the proposed construction.

Survey Method

A 100% pedestrian survey of the proposed well location and access road was made by walking a pattern of tight, parallel zigzag transects (apices < 50' apart) to cover a 400x400' block for the well location and a 200'-wide corridor for the access road. Suspect areas within 300' of the location and access were also inspected. A total of 6.4 acres was examined for cultural resources.

Findings

A prehistoric overhang/lithic scatter, 42GR1735, was discovered approximately 30m south of the well location. The overhang faces southeast and measures 11.5m long by 2-3m deep by 1-3m high. Lithic debitage extends 5m beyond the overhang's dripline and consists of chert, chalcedony, and siltstone. A large (2x2m) area of ash-stained soil occurs in front of the overhang. The site is well protected and overlooks a small intermittent stream to the south.

The site is probably associated with previously recorded sites 42GR1331, 42GR1332, and 42GR1333. It is considered field eligible to the National Register of Historic Places due to its apparent ability to yield signifi-

cant information concerning the prehistory of the area (i.e. undisturbed fill beneath the overhang, possible fire hearth).

Recommendations

Site 42GR1735 lies outside the proposed construction area of Mineral Canyon #1-3 well and access and will not be directly affected by this action. However, the site's proximity to the construction area renders it subject to the potential indirect effects of increased pedestrian traffic and possible vandalism. Therefore, the location of the resource was specified for Wayne Svejnoha of the BLM and Jane Boyd of Canyonlands Contracting at the time of the on-site and workers should be advised of the responsibility of the developer for the site's protection during well pad and road construction.

IMACS SITE FORM

Part A - Administrative Data

INTERMOUNTAIN ANTIQUITIES COMPUTER SYSTEM
Form approved for use by
BLM - Utah, Idaho, Nevada, Wyoming
Division of State History - Utah, Wyoming
USFS - Intermountain Region
NPS - Utah, Wyoming

*1. State No. 42GR1735
*2. Agency No.
3. Temp No. 8367-A1

4. State Utah County Grand
5. Project Mineral Canyon #1-3 and access for Enserch Exploration Inc.
*6. Report No. GRI No. 8367
7. Site Name
8. Class ☒ Prehistoric ☐ Historic ☐ Paleontologic ☐ Ethnographic
9. Site Type Overhang/lithic scatter
*10. Elevation 5858 ft.
*11. UTM Grid Zone 12 604050 m E 4269770 m N
*12. SE¼ of SW¼ of NE¼ of Section 3 T. 26S. R. 19E.
*13. Meridian
*14. Map Reference The Knoll Quadrangle, 1951, USGS 15' series (topographic)
15. Aerial Photo
16. Location and Access Site lies approx. 14 miles due west of Moab, Utah at the head of a small drainage that feeds into the North Fork of Mineral Canyon. Access to the site is gained by travelling approx. 10.7 miles northwest from Moab on U.S. 160, then 11.6 miles southwest on the Dead Horse Point road, and 0.2 mile south on the Mineral Bottom Road. The site lies 300' west of the road at this point.

*17. Land Owner Bureau of Land Management - Moab District Office
*18. Federal Admin. Units Forest District Nat'l Park
*19. Planning Units (USFS only)
20. Site Description Site consists of an overhang and associated lithic scatter. The overhang is 11.5m long x 2-3m deep x 1-3m high and faces south/southeast. Debitage extends 5m beyond the dripline of the overhang (approx. 20 flakes observed). An area (2x2m) of ash-stained soil lies in front of the overhang. The site is well-protected and overlooks a small intermittent drainage to the south.

*21. Site Condition ☐ Excellent (A) ☒ Good (B) ☐ Fair (C) ☐ Poor (D)
*22. Impact Agent(s) Erosion, animal burrowing.

*23. Nat. Register Status ☒ Significant (C) ☐ Non-Significant (D) ☐ Unevaluated (USFS only) (Z)
Justify Field eligible--undisturbed fill within overhang and probable hearth are likely to yield significant data concerning the prehistory of the area.

24. Photos 8367-1:1-3
25. Recorded by Lester A. Wheeler
*26. Survey Organization Grand River Institute, Grand Junction, CO *28. Survey Date 10/25/83
27. Assisting Crew Members

*Encoded data items

BLM 8100-1
FS R-4 2300-2
5/83

Part A - Environmental Data

Site No.(s) 42GR1735

*29. Slope 1-5° (Degrees) 135° Aspect (Degrees)

*30. Direction/Distance to Permanent Water 270° Bearing (Degrees) 160 x 100 Meters

*Type of Water Source ☐ Spring/Seep (A) ☒ Stream/River (B) ☐ Lake (C) ☐ Other (D)

Name of Water Source Green River

Distance to Nearest Other Water Source/Type .8km south/unnamed intermittent

*31. Geographic Unit Green River Desert (CAS)

*32. Topographic Location (check one under each heading)

PRIMARY LANDFORM
- ☐ mountain spine(A)
- ☐ hill(B)
- ☐ tableland/mesa(C)
- ☐ ridge(D)
- ☐ valley(E)
- ☒ plain(F)
- ☒ canyon(G)
- ☐ island(H)

PRIMARY POSITION
- ☐ top/crest/peak(A)
- ☐ edge(B)
- ☐ slope(C)
- ☐ toe/foot/bottom/mouth(D)
- ☐ saddle/pass(E)
- ☒ bench/ledge(F)
- ☒ rimrock(G)
- ☐ interior(H)

SECONDARY LANDFORM
- ☐ alluvial fan(A)
- ☐ alcove/rock shelter(B)
- ☐ arroyo(C)
- ☐ basin(D)
- ☐ cave(E)
- ☐ cliff(F)
- ☐ delta(G)
- ☐ detached monolith(H)
- ☐ dune(I)
- ☐ floodplain(J)
- ☐ ledge(K)
- ☐ mesa/butte(L)
- ☐ playa(M)
- ☐ port.geo.feature(N)
- ☐ plain(O)
- ☐ ridge/knoll(P)
- ☐ slope(Q)
- ☐ terrace/bench(R)
- ☐ talus slope(S)
- ☐ island(T)
- ☒ outcrop(U)
- ☐ spring mound/bog(V)
- ☐ valley(W)
- ☐ cutbank(X)
- ☐ riser(Y)

SECONDARY POSITION
- ☐ top/crest/peak(A)
- ☐ edge(B)
- ☐ slope(C)
- ☐ toe/foot/bottom/mouth(D)
- ☐ interior(G)
- ☐ step(H)
- ☐ riser(I)
- ☐ patterned ground (N)
- ☒ face(O)
- ☐ saddle/pass(P)

Describe Site lies in a small canyon at the head of an unnamed intermittent drainage.

*33. On-site Depositional Context

- ☐ fan(A)
- ☐ talus(B)
- ☐ dune(C)
- ☐ stream terrace(D)
- ☐ playa(E)
- ☒ outcrop(O)
- ☐ extinct lake(F)
- ☐ extant lake(G)
- ☐ alluvial plain(H)
- ☐ colluvium(I)
- ☐ moraine(J)
- ☐ flood plain(K)
- ☐ marsh(L)
- ☐ landslide/slump(M)
- ☐ delta(N)
- ☐ desert pavement(P)
- ☐ stream bed(R)
- ☐ aeolian(S)
- ☐ none(T)
- ☐ residual(U)

Description of Soil Red sandy silt/

34. Vegetation

*a. Life Zone ☐ Arctic-Alpine(A) ☐ Hudsonian(B) ☐ Canadian(C) ☐ Transitional(D) ☒ Upper Sonoran(E) ☐ Lower Sonoran(F)

*b. Community ☒ - Primary On-Site ☐ - Secondary On-Site ☒ - Surrounding Site

- Aspen(A)
- Spruce-Fir(B)
- Douglas Fir(C)
- Alpine Tundra(D)
- Ponderosa Pine(E)
- Lodgepole Pine(F)
- Other/Mixed Conifer(G)
- Pinyon-Juniper Woodland(H)
- Wet Meadow(I)
- Dry Meadow(J)
- Oak-Maple Shrub(K)
- Riparian(L)
- Grassland/Steppe(M)
- Desert Lake Shore(N)
- Shadscale Community(O)
- Tall Sagebrush(P)
- Low Sagebrush(Q)
- Barren(R)
- Marsh/Swamp(S)
- Lake/Reservoir(T)
- Agricultural(U)
- Blackbrush(V)
- Creosote Bush(Y)

Describe Pinyon-juniper with ephedra, snakeweed, and single-leaf ash.

*35. Miscellaneous Text

36. Comments/Continuations/Location of Curated Materials and Records

List of Attachments: ☒ Part B ☐ Part C ☒ Topo Map ☒ Site Sketch ☒ Photos ☐ Artifact/Feature Sketch ☐ Continuation Sheets ☐ Other

Part B - Prehistoric Sites

Site No.(s) 42GR1735

1. Site Type Overhang/lithic scatter

*2. Culture

AFFILIATION	DATING	AFFILIATION	DATING
Unknown			

3. Site Dimensions 15 m X 15 m *Area 225 sq m

*4. Surface Collection/Method
- [X] None (A)
- [ ] Grab Sample (B)
- [ ] Designed Sample (C)
- [ ] Complete Collection (D)

Sampling Method

*5. Estimated Depth of Fill
- [ ] Surface (A)
- [ ] 0-20 cm (B)
- [X] 20-100 cm (C)
- [ ] 100 cm + (D)
- [ ] Fill noted but unknown (E)

How Estimated Cut bank
(If tested, show location on site map.)

*6. Excavation Status
- [ ] Excavated (A)
- [ ] Tested (B)
- [X] Unexcavated (C)

Testing Method

*7. Summary of Artifacts and Debris
- [X] Lithic Scatter (LS)
- [ ] Ceramic Scatter (CS)
- [ ] Basketry/Textiles (BT)
- [ ] Isolated Artifact (IA)
- [ ] Organic Remains (VR)
- [ ] Shell (SL)
- [X] Burned Stone (BS)
- [ ] Ground Stone (GS)
- [ ] Lithic Source(s)

Describe Lithic debitage consists of approx. 20 flakes: 70% chert, 20% chalcedony, 10% siltstone. No diagnostics or ground stone artifacts observed.

*8. Lithic Tools

#	TYPE	#	TYPE
0			

Describe

*9. Lithic Debitage - Estimated Total Quantity
- [ ] None (A)
- [ ] 1-9 (B)
- [X] 10-25 (C)
- [ ] 25-100 (D)
- [ ] 100-500 (E)
- [ ] 500 + (F)

Material Type Chert, chalcedony, siltstone

Flaking Stages

(0) Not Present		(1) Rare		(2) Common		(3) Dominant	
Decortication	0	Secondary	0	Tertiary	1	Shatter	2	Core	1

10. Maximum Density-#/sq m (all lithics) 2

Part B - Prehistoric Sit

Site No.(s) 42GR1735

*11. Ceramic Artifacts

#	TYPE	#	TYPE
0			

Describe

12. Maximum Density-#/sq m (ceramics)

*13. Non-Architectural Features (locate on site map)

☒ Hearth/Firepit (HE) ☐ Rubble Mound (RM) ☐ Earthen Mound (EM) ☐ Water Control (WC)
☐ Midden (MD) ☐ Stone Circle (SC) ☐ Burial (BU) ☐ Petroglyph (PE)
☐ Depression (DE) ☐ Rock Alignment (RA) ☐ Talus Pit (TP) ☐ Pictograph (PI)

Describe A 2x2m area of ash-stained soil occurs in front of the overhang.

*14. Architectural Features (locate on site map)

#	MATERIAL	TYPE	#	MATERIAL	TYPE
0					

Describe

15. Comments/Continuations

Part D - Paleontology Locality

Locality No.(s) _____

1. Type of Locality: ☐ Invertebrate ☐ Plant ☐ Vertebrate ☐ Trace ☐ Other

2. Formation/Horizon/Geologic Age: _____

3. Description of Geology and Topography: _____

4. Location of Outcrop: _____

5. Map Ref.: USGS Quad: _____ Scale _____ Min. _____ Ed. _____
_____of _____of _____of Sec. _____ T. _____ R. _____ Meridian _____

6. County _____ 7. Federal Admin. Unit(s) _____ _____

8. Specimens Collected and Field Accession No.: _____

9. Repository: _____

10. Specimens Observed and Disposition: _____

11. Ownership: ☐ Priv. ☐ State ☐ BLM ☐ USFS ☐ NPS ☐ Ind. ☐ Mil. ☐ Other

12. Recommendations for Further Work or Mitigation: _____

13. Type of Map made by Recorder: _____

14. Published References: _____

15. Remarks: _____

16. Sensitivity: ☐ Critical ☐ Significant ☐ Important ☐ Insignificant

17. Recorded by: _____

IMACS ENCODING FORM

To be completed for each site form.
For instructions and codes, see IMACS Users Guide.

Encoder's Name _____

A

1 State Site Number: 4 2 G R 0 0 1 7 3 5
2 Agency Site Number:
6 Agency Report Number:
10 Elevation: 0 5 8 2 8
11 Zone: 1 2 — Easting: 6 0 4 0 5 0 — Northing: 4 2 6 9 7 7 0

12 ¼: S E — ¼: S W — ¼: N E — Sec: 0 3 — T: 2 6 S — R: 0 1 9 E
13 Merid.: 1

14 USGS Map: T H E K N O L L
17 Owner: L M
18 Forest: — District/Park: B 6

19 Capab: — Anlys: — Mgmt:
21 Cond: B
22 Impacts: E R
23 N.R.: C
26 Organ.: G O
28 Survey Date: 1 0 2 5 8 3
29 Slope: 0 5 — Aspect: 1 3 5

30 Water: degrees/dist./type: 2 7 0 1 6 0 B
31 Geog. Unit: C A S
32 Location: 1st G G — 2nd H O
33 Dep.: O
34 Vegetation: 1 E — 2 H O — 3 H
35 Misc. Text:

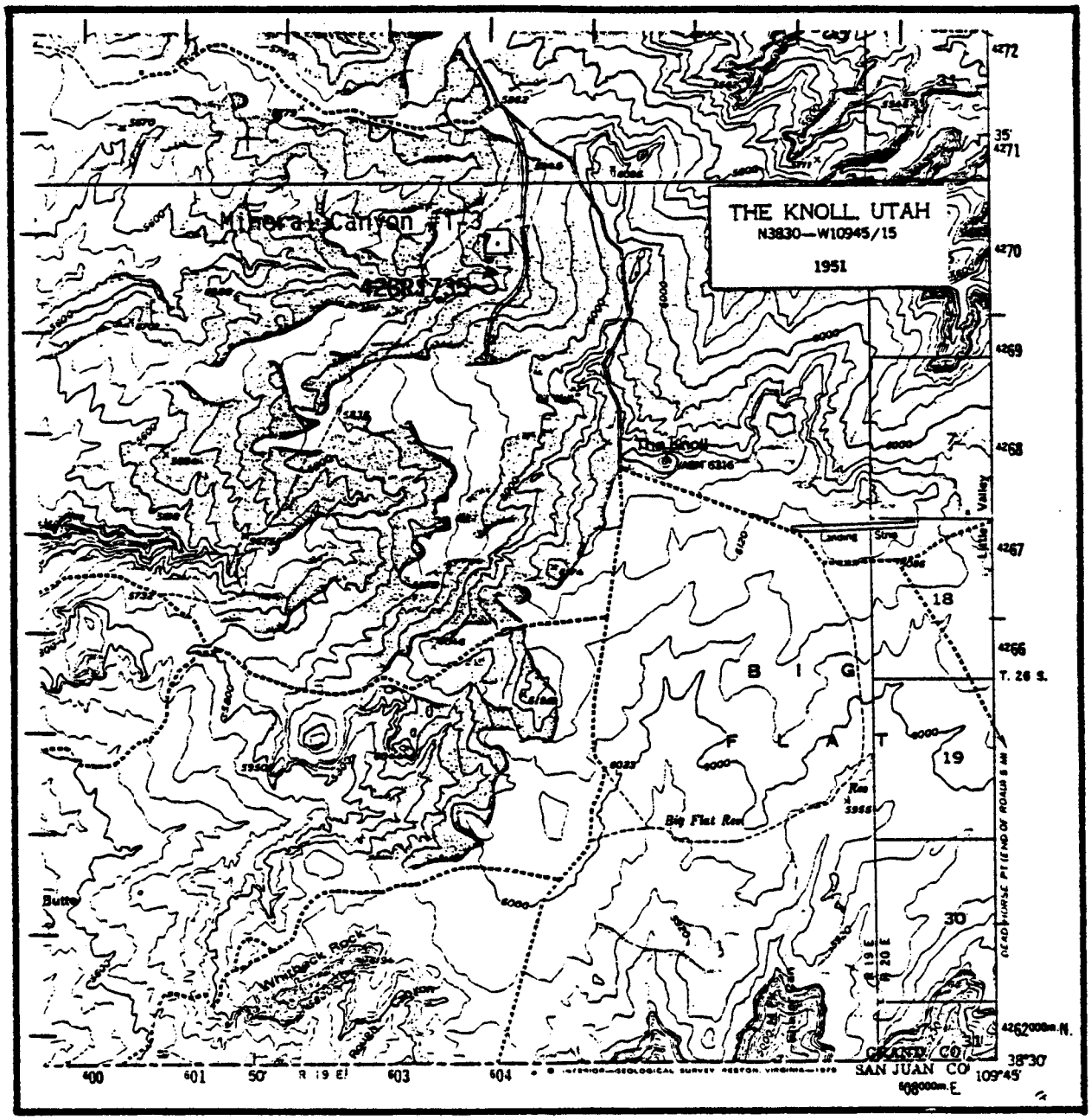
B

2 Culture/Date: Z Z Z
3 Area: 0 0 2 2 5
4 Coll.: A
5 Depth: C
6 Exca. Status: C
7 Artifacts: #/type: 8 C B — 9 L S
8 Lithic Tools: #/type:
9 #: C — Flaking Stages: 0 0 1 2 1
11 Ceramics: #/type:
13 Features: #/type: 1 H E
14 Architecture: #/material/type:

C

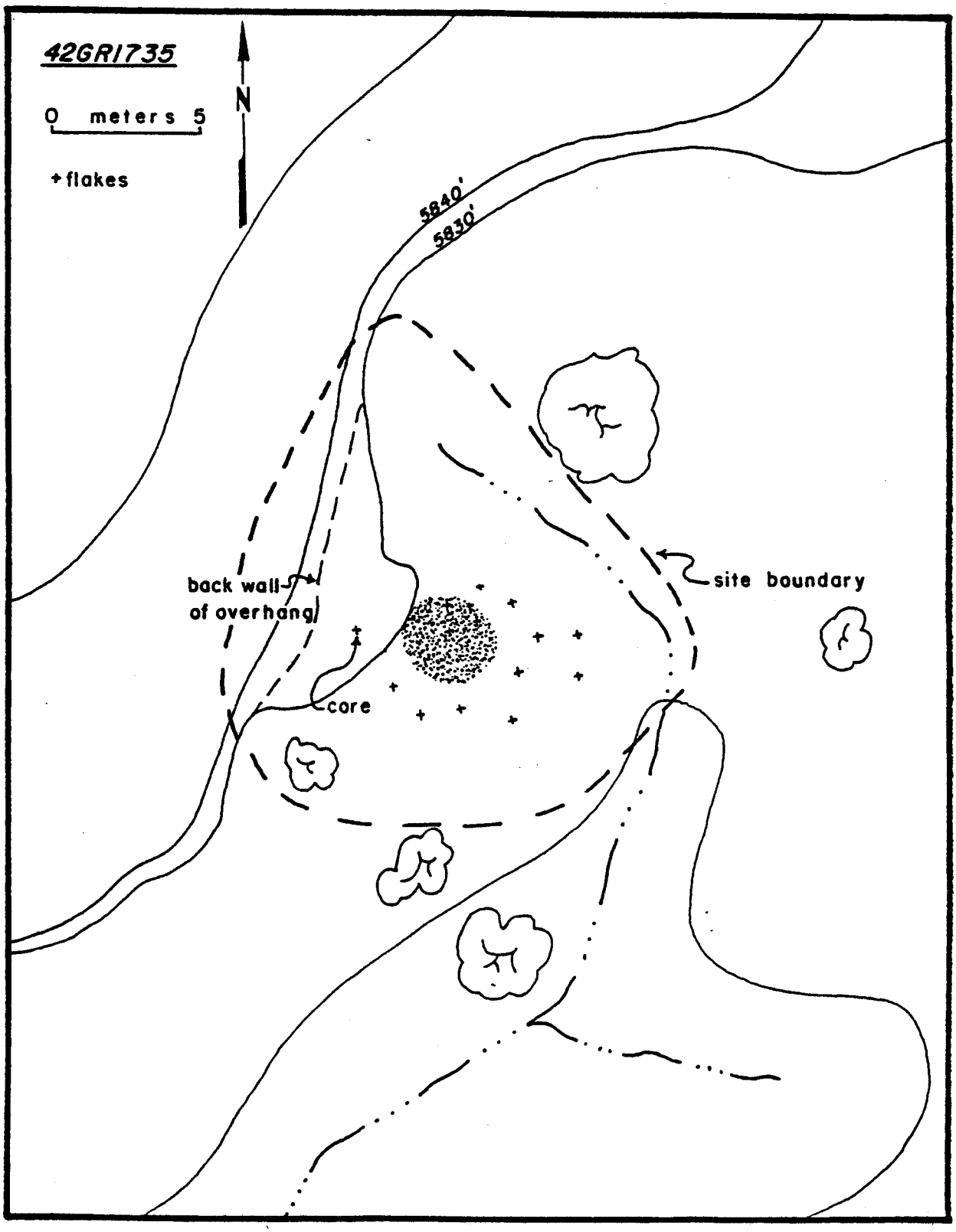
2 Historic Themes:
3 Cultures/Dating:
4 Dates:
5 Area:
6 Coll.:
7 Depth:
8 Exca.
9 Artifacts: #/type:
10 Ceramics: #/type/blank/dec.:
11 Glass: #/mnft./color/funct./blank.:
13 Features: #/type:
14 Architecture: #/material/type:

LETTERING GUIDE A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 1 2 3 4 5 6 7 8 9 Ø



The Knoll Quadrangle
Utah--Grand County
1951
USGS 15' series (topographic)
Scale 1:62500

USGS map showing location of archaeological site 42GR1735 in relation to proposed well Mineral Canyon #1-3.



Sketch map of site 42GR1735.

Site No: 42GR1735 Photo No: 8367-1-1
View: Northwest Date: 10-25-83
Comment: Overview of site.

Site No: 42GR1735 Photo No: 8367-1-2
View: Northeast Date: 10-25-83
Comment: View of overhang; lithics extend 5m beyond dripline.

Form 9-1123
(Rev. Dec. 1957)

(Submit in triplicate to appropriate
Regional Oil and Gas or Mining Supervisor)

DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of lease

DISTRICT LAND OFFICE: Salt Lake City, Utah NOV 2 1983
SERIAL NO.: U-24529

and hereby designates

NAME: Enserch Exploration, Inc.
ADDRESS: P.O. Box 2649, Dallas, Texas 75221

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

Township 26 South Range 19 East
Section 3: E/2NE/4
Grand County, Utah

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

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

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

Intermountain Petroleum Company L.P.

..... , General Parnter
(Signature of lessee)

Post Office Box 7420
Reno, Nevada 89510
(Address)

November 2, 1983
(Date)

U. S. GOVERNMENT PRINTING OFFICE 16—53598-3

Enserch Exploration, Inc.
Mineral Canyon Federal No. 1-3
Section 3 - T26S-R19E- S.L.B.&M.
Grand County, Utah

BONDING

Enserch Exploration, Inc. holds a nationwide oil and gas bond in the amount of $150,000 filed with the United States Department if the Interior, Bureau of Land Management. The bond was approved August 18, 1981. The bond number is: 037857

WAITING FOR C-3-C
REQUEST AS PER
CARL & STEVE 11-8-83

Steve said they would
wait for approval of
unit agreement.
11-22-83

Rec'd 11-30-83

November 30, 1983

Enserch Exploration, Inc.
1230 River Bend Drive, Suite 136
Dallas, Texas 75247

RE: Well No. Mineral Canyon Fed. 1-3
SENE Sec. 3, T. 26S, R. 19E
3364' FSL, 1212' FEL
Grand County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to oil well is hereby granted in accordance with Section 40-6-11, Utah Code Annotated 1953; and predicated on Rule A-3, General Rules and Regulations and Rules of Practice and Procedure. The following stipulations shall receive full compliance, otherwise this letter of approval is void:

1. Prior to spudding, a copy of the Utah Division of Water Rights (Phone No. 801-533-6071) approval for use of water at the drilling site shall be submitted to this office.

2. Gamma Ray-Neutron, Gamma Ray-Sonic, or other appropriate logs shall be run promptly through the Salt Section, and a field copy of such logs shall be submitted to this office within 10 days.

3. A directional survey shall be run from a point at least 20 feet below the Salt Section to the surface, and shall be submitted to this office prior to well completion or plugging.

4. The submitted cementing program shall be modified to cement solidly through the Salt Section using salt saturated cement.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

RONALD J. FIRTH - Chief Petroleum Engineer
Office: 533-5771
Home: 571-6068

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (acquifers) are encountered during drilling. Your cooperation in completing this form will be appreciated.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is 43-019-31119.

Sincerely,

Norman C. Stout
Administrative Assistant

NCS/as
cc: Branch of Fluid Minerals
Encl.

Form 9–331
Dec. 1973

Form Approved.
Budget Bureau No. 42–R1424

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 [X] gas well [ ] other

2. NAME OF OPERATOR
Enserch Exploration, Inc.

3. ADDRESS OF OPERATOR
1230 River Bend Dr., #136, Dallas, TX 75247

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 3364' FSL & 1212' FEL(SE/4-NE/4)
AT TOP PROD. INTERVAL: SAME
AT TOTAL DEPTH: SAME

5. LEASE
U-24529

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
n/a

7. UNIT AGREEMENT NAME
Mineral Canyon

8. FARM OR LEASE NAME
Mineral Canyon Federal

9. WELL NO.
1-3

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 3, T26S, R19E, S.L.B.&M.

12. COUNTY OR PARISH
Grand

13. STATE
Utah

14. API NO.
43-019-31119

15. ELEVATIONS (SHOW DF, KDB, AND WD)
5858' GR

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

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	[ ]		[ ]
FRACTURE TREAT	[ ]		[ ]
SHOOT OR ACIDIZE	[ ]		[ ]
REPAIR WELL	[ ]		[ ]
PULL OR ALTER CASING	[ ]		[ ]
MULTIPLE COMPLETE	[ ]		[ ]
CHANGE ZONES	[ ]		[ ]
ABANDON*	[ ]		[ ]
(other) Change in casing program.			

(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.)*

Due to surface rock, a 20 inch conductor pipe will be set in a 24 inch hole at approximately 30 feet prior to moving on and rigging up the rotary rig. Verbal permission for the conductor pipe was granted on December 20, 1983 from Tom Hare at the Bureau of Land Management District Office in Moab, Utah. All other drilling procedures will be followed as outlined in the Approved Permit dated November 2, 1983.

On December 23, 1983 a 24 inch hole was spudded and the 20 inch conductor pipe was set at 30 feet and cemented to surface.

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

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

SIGNED C. H. Peeples TITLE Regional Drilling Manager DATE December 27, 1983

(This space for Federal or State office use)

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

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 1/4/84
BY:

*See Instructions on Reverse Side

Form DOGC-4

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS CONSERVATION
4241 STATE OFFICE BUILDING
SALT LAKE CITY, UTAH 84114
533-5771

State Lease No.
Federal Lease No. 71-024529
Indian Lease No.
Fee & Pat.

REPORT OF OPERATIONS AND WELL STATUS REPORT

STATE UTAH COUNTY GRAND FIELD/LEASE WILDCAT
MINERAL CANYON FED. 1-3

The following is a correct report of operations and production (including drilling and producing wells) for the month of: JANUARY, 19 84.

Agent's Address ENSERCH EXPLORATION, INC.
475-17TH STREET
DENVER CO 80202
Phone No. 303/298-8295

Company ENSERCH EXPLORATION, INC.
1817 WOOD STREET
DALLAS TX 75201
Signed C. J. HAGEN
Title MGR. PRODUCTION RECORDS
214/670-2820

Sec. and ¼ of ¼	Twp.	Range	Well No.	Days Produced	Barrels of Oil	Gravity	Cu. Ft. of Gas (In thousands)	Gallons of Gasoline Recovered	Barrels of Water (if none, so state)	API NUMBER/REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
3/ SE/NE	T26S	R19E	1-3	0	0	-	0	0	0	API #43-019-31119 SPUD DATE - 12-31-83. PROJECTED TD- 8200'. DRILLED TO 3968' IN SANDSTONE, ANHYDRITE AND LIMESTONE. CONDITIONING HOLE TO RUN LOGS.

GAS: (MCF)
Sold 0
Flared/Vented 0
Used On/Off Lease 0

OIL or CONDENSATE: (To be reported in Barrels)
On hand at beginning of month 0
Produced during month 0
Sold during month 0
Unavoidably lost 0
Reason: 0
On hand at end of month 0

DRILLING/PRODUCING WELLS: This report must be filed on or before the sixteenth day of the succeeding month following production for each well. Where a well is temporarily shut-in, a negative report must be filed. *THIS REPORT MUST BE FILED IN DUPLICATE.*

Note: The API number must be listed on each well.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
(FORM 9-329)
(2/76)
OMB 42-RO 356

MONTHLY REPORT OF OPERATIONS

Lease No. U - 24529
Communitization Agreement No. N/A
Field Name WILDCAT
Unit Name MINERAL CANYON
Participating Area
County GRAND State UTAH
Operator ENSERCH EXPLORATION, INC.
☐ Amended Report

The following is a correct report of operations and production (including status of all unplugged wells) for the month of JANUARY, 19 84

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & ¼ of ¼	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
1-3	SEC. 3 SE/4 - NE/4	26S	19E	DRG					43-019-31119 DRLD 17½" HOLE TO 510' AND SET 510' OF 13 3/8" 48# H-40 STC CASING AND CEMENTED TO SURFACE TESTED BOP TO 3000#. DRILLING 12¼" HOLE DEPTH ON 1-31-84 IS 3986'.

RECEIVED
FEB 3 1984
DIVISION OF MINING

FEB 3 1984

*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLS)	Gas (MCF)	Water (BBLS)
*On hand, Start of Month	NO PRODUCTION	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
*Produced			
*Sold			XXXXXXXXXXXXXXXXX
*Spilled or Lost		XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXX
*Used on Lease			XXXXXXXXXXXXXXXXX
*Injected			
*Surface Pits	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	
*Other (Identify)			
*On hand, End of Month		XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
*API Gravity/BTU Content			XXXXXXXXXXXXXXXXX

Authorized Signature: C.H. Peeples Address: 1230 RIVER BEND #136 DALLAS, TX 75247
Title: REGIONAL DRILLING C.H. PEEPLES

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
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.)

1. OIL WELL [X] GAS WELL [ ] OTHER

5. LEASE DESIGNATION AND SERIAL NO.: U-24529

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

7. UNIT AGREEMENT NAME: MINERAL CANYON

2. NAME OF OPERATOR: ENSERCH EXPLORATION, INC.

8. FARM OR LEASE NAME: MINERAL CANYON FEDERAL

3. ADDRESS OF OPERATOR: 1230 RIVER BEND-SUITE 136 DALLAS, TX 75247

9. WELL NO.: 1-3

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 3364' FSL & 1212' FEL (SE/4-NE/4)

10. FIELD AND POOL, OR WILDCAT: WILDCAT

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC. 3, T265,R19E,S.L.B.&M.

14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.)	12. COUNTY OR PARISH	13. STATE
43-019-31119	5858' GR	GRAND	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	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other) DRILLING OPERATIONS			
(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.)*

THE FOLLOWING IS A CORRECT REPORT OF DRILLING OPERATIONS FOR THE MONTH OF JANUARY 1984.

DRILLED A 17½ INCH HOLE TO A DEPTH OF 510 FEET. A STRING OF 13 3/8 INCH 48# H-40 STC SURFACE CASING WAS RUN TO 510 FEET AND CEMENTED TO SURFACE WITH 775 SACKS CLASS "B" + 2%cc + 0.4% D-44 + ¼#/SACK D-29. THE BOP EQUIPMENT WAS NIPPLED UP AND WAS PRESSURE TESTED TO 1000 psi ALONG WITH THE SURFACE CHOKE EQUIPMENT. THE SURFACE CASING WAS ALSO TESTED TO 500 psi PRIOR TO DRILLING OUT. A 12¼ INCH HOLE WAS DRILLED OUT BELOW SURFACE CASING AND IS PRESENTLY DRILLING AT A DEPTH OF 3986 FEET.

RECEIVED
FEB 9 1984
DIVISION OF
OIL, GAS & MINING

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

SIGNED C.H. PEEPLES TITLE REGIONAL DRILLING MANAGER DATE 2-1-84

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form DOGC-4

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS CONSERVATION
4241 STATE OFFICE BUILDING
SALT LAKE CITY, UTAH 84114
533-5771

State Lease No.
Federal Lease No. 71-024529
Indian Lease No.
Fee & Pat.

REPORT OF OPERATIONS AND WELL STATUS REPORT

STATE UTAH COUNTY GRAND FIELD/LEASE WILDCAT
MINERAL CANYON FED. 1-3

The following is a correct report of operations and production (including drilling and producing wells) for the month of: FEBRUARY, 19 84.

Agent's Address ENSERCH EXPLORATION, INC.
475-17TH STREET
DENVER CO 80202
Phone No. 303/298-8295

Company ENSERCH EXPLORATION, INC.
1817 WOOD STREET
DALLAS TX 75201
Signed C. J. HAGEN
Title MGR / PRODUCTION RECORDS
214/670-2820

Sec. and ¼ of ¼	Twp.	Range	Well No.	Days Produced	Barrels of Oil	Gravity	Cu. Ft. of Gas (In thousands)	Gallons of Gasoline Recovered	Barrels of Water (If none, so state)	API NUMBER/REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
3/ SE/NE	T26S	R19E	1-3	0	0	-	0	0	0	API #43-019-31119 PROJ. TD - 8200'. DRILLED 142'. DRILLING AT 7165' IN SALT.

RECEIVED
MAR 27 1984
DIV. OF OIL, GAS & MINING

GAS: (MCF)
Sold 0
Flared/Vented 0
Used On/Off Lease 0

OIL or CONDENSATE: (To be reported in Barrels)
On hand at beginning of month 0
Produced during month 0
Sold during month 0
Unavoidably lost 0
Reason: 0
On hand at end of month 0

DRILLING/PRODUCING WELLS: This report must be filed on or before the sixteenth day of the succeeding month following production for each well. Where a well is temporarily shut-in, a negative report must be filed. *THIS REPORT MUST BE FILED IN DUPLICATE.*

Note: The API number must be listed on each well.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
(FORM 9-329)
(2/76)
OMB 42-RO 356

MONTHLY REPORT OF OPERATIONS

Lease No. U-24529
Communitization Agreement No. N/A
Field Name Wildcat
Unit Name Mineral Canyon
Participating Area
County Grand State Utah
Operator Enserch Exploration, Inc.
☐ Amended Report

The following is a correct report of operations and production (including status of all unplugged wells) for the month of February, 19 84

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & ¼ of ¼	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
1-3	Sec. 3-SE/4-NE/4	26S	19E	Drlg.					Drilled 12-1/4 inch hole to 3986 feet and ran open-hole logs. Set an intermediate casing string of 9-5/8 inch, 40#, K-55 STC at 3914 feet. BOP equipment was tested to 3000 psi and the casing to 1000 psi prior to drilling out. Drilled out with 8-3/4 inch hole and saturated salt mud. Is presently drilling at a depth of 7165 feet.

*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLS)	Gas (MCF)	Water (BBLS)
*On hand, Start of Month		XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
*Produced			
*Sold			XXXXXXXXXXXXXXXX
*Spilled or Lost		XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXX
*Used on Lease			XXXXXXXXXXXXXXXX
*Injected			
*Surface Pits	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	
*Other (Identify)			
*On hand, End of Month		XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
*API Gravity/BTU Content			XXXXXXXXXXXXXXXX

Authorized Signature: C. H. Peeples
Address: 1230 River Bend Dr. #136, Dallas, TX 75247
Title: Regional Drilling Manager
Page 1 of 1

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
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.)

5. LEASE DESIGNATION AND SERIAL NO.: U-24529

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

1. OIL WELL [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME: Mineral Canyon

2. NAME OF OPERATOR: Enserch Exploration, Inc.

8. FARM OR LEASE NAME: Mineral Canyon Federal

3. ADDRESS OF OPERATOR: 1230 River Bend Drive - Suite 136 - Dallas, Texas 75247

9. WELL NO.: 1-3

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 3364' FSL & 1212' FEL (SE/4-NE/4)

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 3 - T26S-R19E S.L.B.&M.

14. PERMIT NO.: 43-019-31119

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5858' GR

12. COUNTY OR PARISH: Grand

13. STATE: Utah

DIVISION OF OIL, GAS & MINING

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other) Drilling Operations			[X]
(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.)*

The following is a ***correct report*** of drilling operations for the month of February, 1984:

The 12-1/4 inch intermediate hole was drilled to a depth of 3986 feet where the well was open hole logged. A string of 9-5/8 inch, 40#, K-55, STC intermediate casing was run to 3914 feet and was cemented into place. The cement used consisted of a lead slurry of 150 sacks Dowell Lightweight 3-S + 2% $CaCl_2$ + 1/2# D-29 flakes tailed with 100 sacks Class G + 2% $CaCl_2$ + 3% salt + 1/4# D-29 flakes. Topped casing out with 150 sacks Class G + 2% $CaCl_2$. The BOP equipment was nippled up and tested to 3000 psi along with the surface choke equipment. The intermediate casing was tested to 1000 psi prior to drilling out. An 8-3/4 inch hole was drilled out below the intermediate casing using a salt saturated mud system and is currently drilling at a depth of 7165 feet.

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

SIGNED C. H. Peeples (C. H. Peeples) TITLE Regional Drilling Manager DATE March 2, 1984

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

ENSERCH EXPLORATION INC

1230 River Bend Drive
Suite 136
Dallas, Texas 75247
214/630-8711

March 16, 1984

State of Utah Natural Resources
Oil Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114
Attn: Ronald J. Firth

Re: Enserch Exploration, Inc.
Mineral Canyon Federal No. 1-3 Well
Se NE Section 3 - T26S-R19E
Grand County, Utah
API No. 43-019-31119

Dear Mr. Firth,

In accordance with Rule C-23 - "Procedure for wells drilled in Designated Potash Areas" section 4, please find enclosed a copy of the directional survey that was run on the captioned well. The survey was run on March 5, 1984 from a depth of 7645 feet to the bottom of the 9-5/8 inch surface casing at 3914 feet. The hole was assumed to be vertical from the surface to 3914 feet. The bottom of the salt section was found to be at approximately 7520 feet.

This will satisfy the directional survey requirement of this rule. If there are any questions or if additional information is required, please advise.

Very truly yours,

C. H. Peeples

C. H. Peeples
Regional Drilling Manager

RSB/hrs
Attach

Form DOGC-4

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS CONSERVATION
4241 STATE OFFICE BUILDING
SALT LAKE CITY, UTAH 84114
533-5771

State Lease No.
Federal Lease No. 71-024529
Indian Lease No.
Fee & Pat.

REPORT OF OPERATIONS AND WELL STATUS REPORT

STATE UTAH COUNTY GRAND FIELD/LEASE WILDCAT
MINERAL CANYON FED. 1-3

The following is a correct report of operations and production (including drilling and producing wells) for the month of: MARCH, 19 84.

Agent's Address: ENSERCH EXPLORATION, INC.
475-17TH STREET
DENVER CO 80202
Phone No. 303/298-8295

Company: ENSERCH EXPLORATION, INC.
1817 WOOD STREET
DALLAS, TX 75201
Signed: C. J. HAGEN
Title: MGR. PRODUCTION RECORDS
214/670-2820

Sec. and ¼ of ¼	Twp.	Range	Well No.	Days Produced	Barrels of Oil	Gravity	Cu. Ft. of Gas (In thousands)	Gallons of Gasoline Recovered	Barrels of Water (If none, so state)	API NUMBER/REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
3/ SE/NE	T26S	R19E	1-3	0	0	0	0	0	0	API #43-019-31119 MOVING IN A COMPLETION RIG.

25 1984

GAS: (MCF)
Sold 0
Flared/Vented 0
Used On/Off Lease 0

OIL or CONDENSATE: (To be reported in Barrels)
On hand at beginning of month 0
Produced during month 0
Sold during month 0
Unavoidably lost 0
Reason: 0
On hand at end of month 0

DRILLING/PRODUCING WELLS: This report must be filed on or before the sixteenth day of the succeeding month following production for each well. Where a well is temporarily shut-in, a negative report must be filed. *THIS REPORT MUST BE FILED IN DUPLICATE.*

Note: The API number must be listed on each well.

Form OGC-1b

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

3

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND 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 "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER DRY HOLE

2. NAME OF OPERATOR: Enserch Exploration, Inc.

3. ADDRESS OF OPERATOR: 475 17th St., Suite 1300, Denver, Co 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 3364' FSL and 1212' FEL (SE/4-NE/4)

5. LEASE DESIGNATION AND SERIAL NO.: U-24529

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

7. UNIT AGREEMENT NAME: N/A

8. FARM OR LEASE NAME: Mineral Canyon Federal

9. WELL NO.: #1-3

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 3, T26S, R19E S.L.B.&M

14. PERMIT NO.: 43-019-31119

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5858 GR

12. COUNTY OR PARISH: Grand

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	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	X	ABANDON*	X	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☒
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			☐
(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.) *

To perforate the 9 5/8" casing from 3713'-3722'. Acidize well with 1000 gallons acid and swab test well. Plug and abandon well.

Verbal permission was given to plug and abandon well. A CIBP was set in 9 5/8" casing @ 3700'. A 60' cement plug was placed on top of bridge plug from 3640' to 3700'. A 50 sack plug was placed from surface to 120'. Casing was cut off 3' below ground level and a dry hole marker was placed on well site. WELL PLUGGED AND ABANDONED 4/10/84.*

ACCEPTED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 4-18-84
BY:

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

SIGNED Gerald W. Gasch (G. W. Gasch) TITLE Prod. Supervisor DATE 4/12/84

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Casing: 19 3/8" set at 506'

9 5/8" set at 3914'

Hole Deviation Surveys:

142' - 1/2°	2770' - 1°	5137' - 4 3/4°
246' - 3/4°	2970' - 2 1/4°	5200' - 4°
510' - 3/4°(?)	3021' - 2°	5259' - 4°
500' - 1 1/2°	3115' - 2 1/4°	5323' - 3 3/4°
600' - 1 1/2°	3369' - 2°	5387' - 4°
755' - 1°	3490' - 2°	5450' - 3 3/4°
917' - 3/4°	3619' - 2°	5510' - 3 3/4°
1215' - 1°	3746' - 1 3/4°	5637' - 3 1/2°
1407' - 3/4°	3832' - 1 1/2°	5815' - 3 1/4°
1597' - 1°	3848' - 2°	6000' - 3°
1814' - 1 1/4°	4797' - 6°	6309' - 2°
2025' - 1°	4853' - 6°	6650' - 1 1/4°
2214' - 3/4°	4947' - 5 3/4°	7105' - 1 1/4°
2372' - 0°	5010' - 5 1/4°	7444' - 3/4°
2587' - 1°	5072' - 5°	8180' - 1°

Eastman ran hole deviation survey from base of surface pipe at 3914' - 7750'.

Form OGC-3

SUBMIT IN DUP[illegible]E*
(See other instr[illegible]s
on reverse side)

56 64 01 8

STATE O[illegible]TAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

RECEIVED
MAY 2 1984
DIVISION OF OIL
GAS & MINING

5. LEASE DESIGNATION AND SERIAL NO.: U-24529
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
7. UNIT AGREEMENT NAME: N/A
8. FARM OR LEASE NAME: Mineral Canyon Federal
9. WELL NO.: #1-3
10. FIELD AND POOL, OR WILDCAT: Wildcat
11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 3, T26S, R19E-S.L.B.&M.

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: Enserch Exploration, Inc.

3. ADDRESS OF OPERATOR: 475 17th St., Suite 1300, Denver, Colorado 80202

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface 3364' FSL and 1212' FEL (SE/4-NE/4)
At top prod. interval reported below Same
At total depth Same

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
43-019-31119	11-30-83	Grand	Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
12/31/83	3/14/84	4/10/84 Plugged & Abandoned	5858' G.R.	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
8184' M.D.	3826		→	Rotary	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: N/A

25. WAS DIRECTIONAL SURVEY MADE: Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN: DIFL/GR/SP, BHC/GR/CAL, CN/CDL/GR/CAL, CN/CDL/GR/CAL, DLL/MLL/GR/CAL, Frac Log, GR/CBL, Sample

27. WAS WELL CORED: No

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"	48#	506	14½	775 sks. Class "B"	None
9 5/8"	40#	3914	12¼	150 sks. lightweight + 250 sks. Class "G"	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
N/A		

31. PERFORATION RECORD (*Interval, size and number*): 3713-22 4" casing gun

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
3713-22	1000 gal. Spearhead Acid

33.* PRODUCTION

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

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

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

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

TEST WITNESSED BY

35. LIST OF ATTACHMENTS

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

SIGNED Gerald W. Gasch TITLE Production Supervisor DATE 4/25/84
Gerald W. Gasch

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.
If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.
Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.
Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.
Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.
Item 29: *"Sacks Cement":* Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.
Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
DST #1 Cane Creek Marker	7375'	7440'	75 Min., 205-225# FFP, 253# FSIP Recovered 254' of drilling mud
DST #2 Leadville	7549'	7645'	75 Min., 479-850# FFP 2607# FSIP Recovered 1.6 BO, 24.8 BW.
DST #3 Madison	7750'	7791'	105 Min., 79-192# FFP, 2727# FSIP Recovered 269' Mud.
DST #4 Madison	7789'	7840'	105 Min., 846-2235# FFP, 2756# FSIP Recovered 4684' water.
DST #5 Leadville	7608'	7643'	261 Min., 304-1425# FFP Recovered 100' free oil, 186' oil cut mud 929' oil cut water, 1886' formation water.
DST #6 Clastic #3&#4	3890'	4460'	150 Min., 647-621# FFP, 1256# FSIP Recovered 761' gas cut mud w/ trace of oil.

38. GEOLOGIC MARKERS

NAME	TOP MEAS. DEPTH	TOP TRUE VERT. DEPTH
Triassic Chinle	415'	
Triassic Moenkopi	775'	
Permian White Rim	1232'	
Pennsylvanian Hermosa	2600'	
Top Salt	3940'	
Base Salt	7350'	
Mississippian Leadville	7547'	
Devonian Ouray	8027'	
Devonian Elbert	8140'	

ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL SITE GEOLOGY — MUD LOGGING

2450 INDUSTRIAL BLVD. PHONE 243-3044 GRAND JUNCTION, COLORADO 81501

March 26, 1984

Enserch Exploration, Inc.
475 17th Street
Suite 1300
Denver, Colorado 80202

Gentlemen:

Enclosed is the final log on your Mineral Canyon #1-3 well, located in SE/NE Section 3, T26S, R19E of Grand County, Utah

We appreciated the opportunity to serve you. If we can be of any further assistance in the final evaluation of zones encountered, please feel free to call on us.

We are looking forward to working with you again in the near future. Thank you, again.

Sincerely,

Doug Barron

Doug Barron
President

DRB:jl
ENC: 4 Final Logs
XXC: Great Western Drlg, Denver-1;
Great Western DRlg, Midland, Tx-1;
Energy Reserves Group, Denver-2;
Energy Reserves Group, Casper, Wy-1;
HNG Oil Co., Denver-1;
Harvey Merrill, Moab, Ut-1

573

MINERAL CANYON	1-3	1	7375.' - 7440.'	ENSERCH EXPLORATION, INCORPORATED
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME

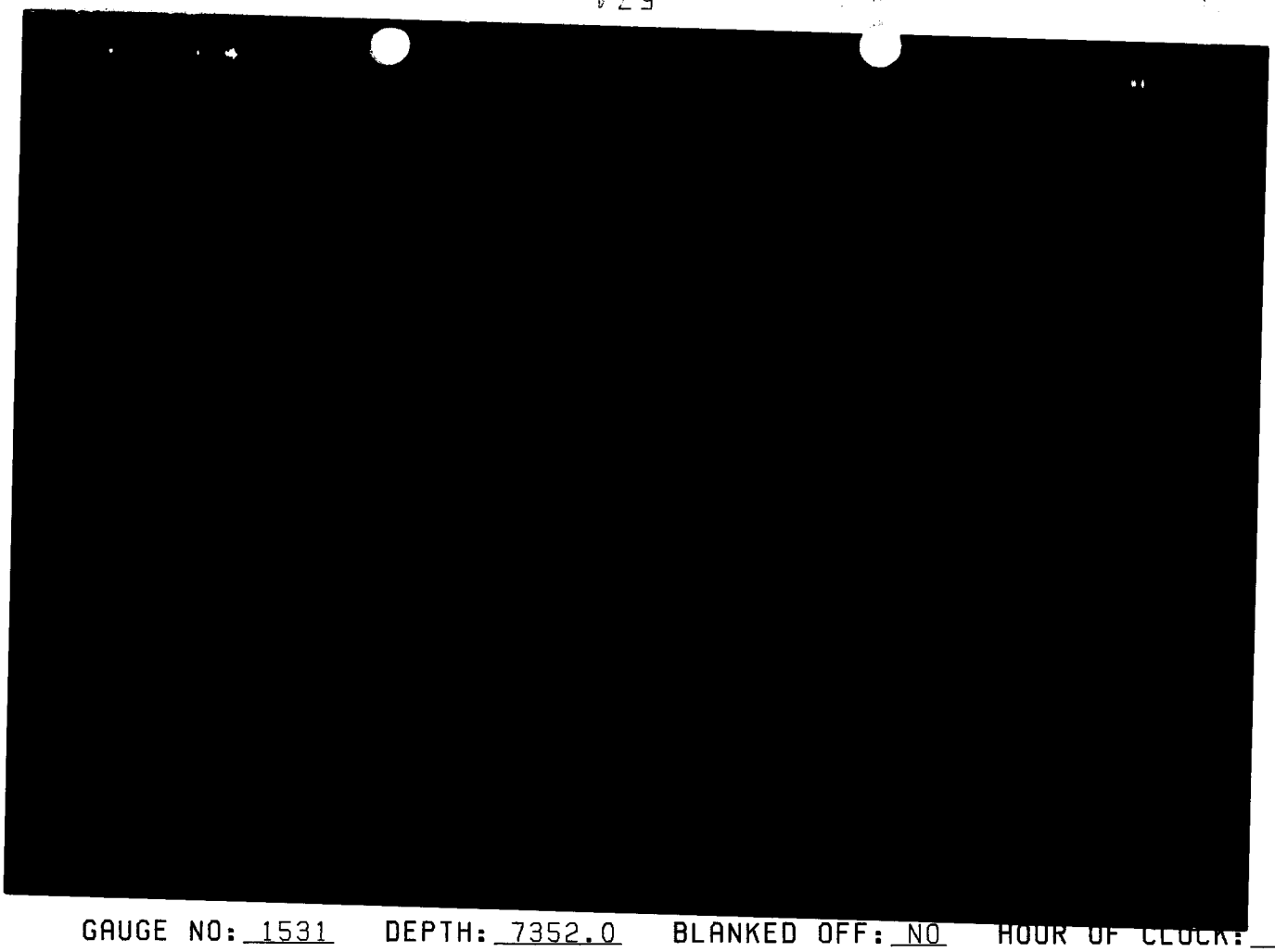
LEGAL LOCATION SEC. - TWP. - RNG.	FIELD AREA	COUNTY	STATE
SEC. 3 - T. 26S - R. 19E	WILDCAT	GRAND	UTAH

HALLIBURTON
SERVICES

TICKET NO. 74045200
12-MAR-84
VERNAL

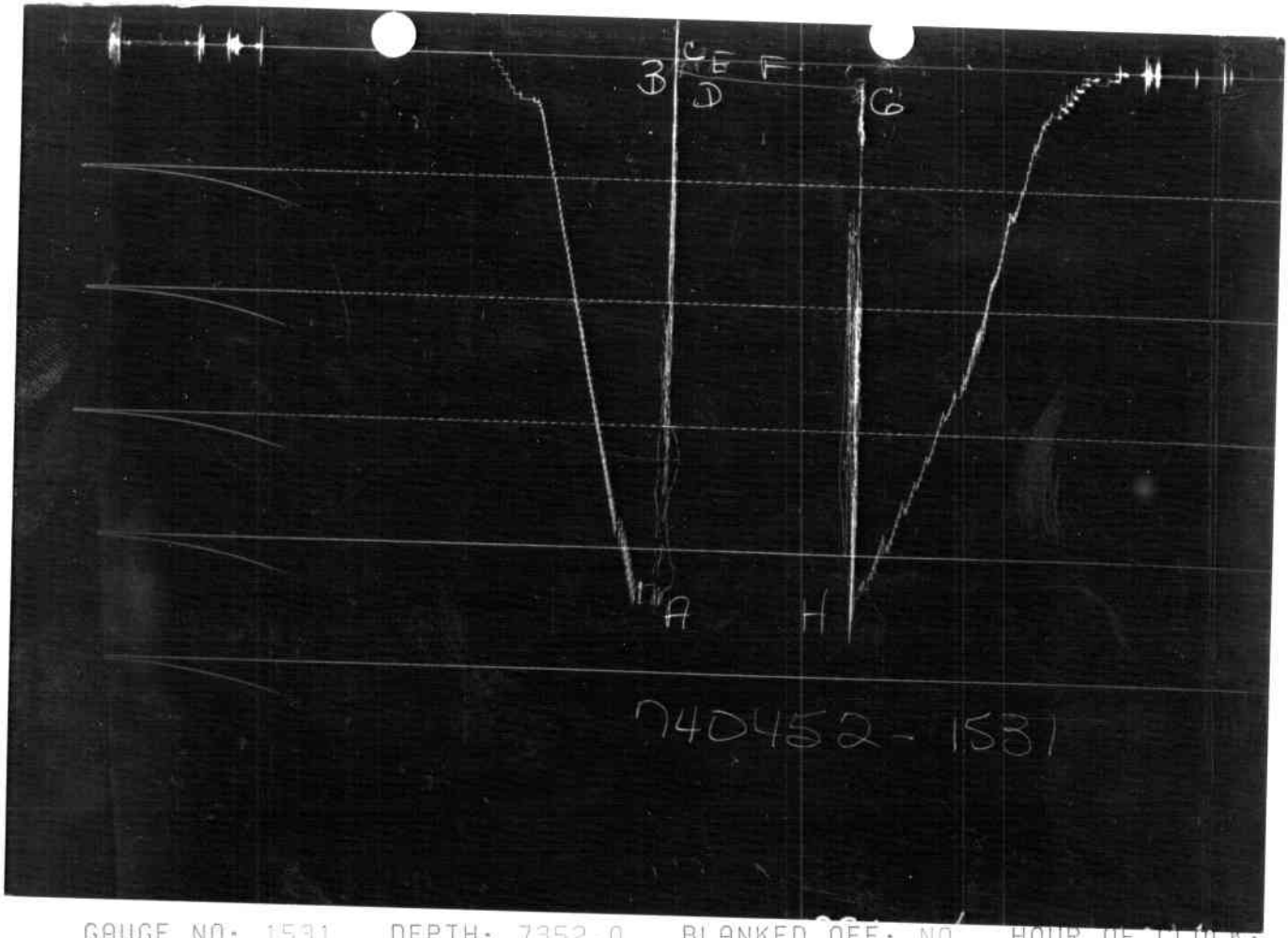
FORMATION TESTING SERVICE REPORT

PW



GAUGE NO: 1531 DEPTH: 7352.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	4255	4308.8			
B	INITIAL FIRST FLOW	101	83.4	15.0	15.0	F
C	FINAL FIRST FLOW	122	107.3			
C	INITIAL FIRST CLOSED-IN	122	107.3	30.0	30.0	C
D	FINAL FIRST CLOSED-IN	162	144.0			
E	INITIAL SECOND FLOW	122	144.0	61.0	61.0	F
F	FINAL SECOND FLOW	182	167.3			
F	INITIAL SECOND CLOSED-IN	182	167.3	120.0	120.0	C
G	FINAL SECOND CLOSED-IN	202	194.3			
H	FINAL HYDROSTATIC	4275	4359.1			



GAUGE NO: 1531 DEPTH: 7352.0 BLANKED OFF: NO HOUR OF CLOCK: 24

		PRESSURE	TIME

575

GAUGE NO: 1530 DEPTH: 7437.0 BLANKED OFF: YES HOUR OF CLOCK: 24

		PRESSURE	TIME	

EQUIPMENT & HOLE DATA

FORMATION TESTED: CANYON CREEK
NET PAY (ft): 30.0
GROSS TESTED FOOTAGE: 65.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 8.750
ELEVATION (ft): 0
TOTAL DEPTH (ft): 7440.0
PACKER DEPTH(S) (ft): 7367, 7375
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 11.80
MUD VISCOSITY (sec): 60
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 120 @ 7436.0 ft

TICKET NUMBER: 74045200

DATE: 3-1-84 TEST NO: 1

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: VERNAL

TESTER: CLIFFORD RICHARDS

WITNESS: BOB WOODY, TED MELLINGER

DRILLING CONTRACTOR: LOFFLAND #1

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
PIT	0.080 @ 50 °F	170000 ppm
TOP RECOVERY	0.080 @ 60 °F	180000 ppm
MIDDLE RECOVERY	0.080 @ 60 °F	180000 ppm
BOTTOM RECOVERY	0.080 @ 60 °F	179000 ppm
SAMPLE CHAMBER	0.080 @ 60 °F	179000 ppm
	@ °F	ppm

SAMPLER DATA

Psig AT SURFACE: 15
cu.ft. OF GAS: 0.00
cc OF OIL: 0
cc OF WATER: 0
cc OF MUD: 2240
TOTAL LIQUID cc: 2240

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): @ °F
GAS/OIL RATIO (cu.ft. per bbl):
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT

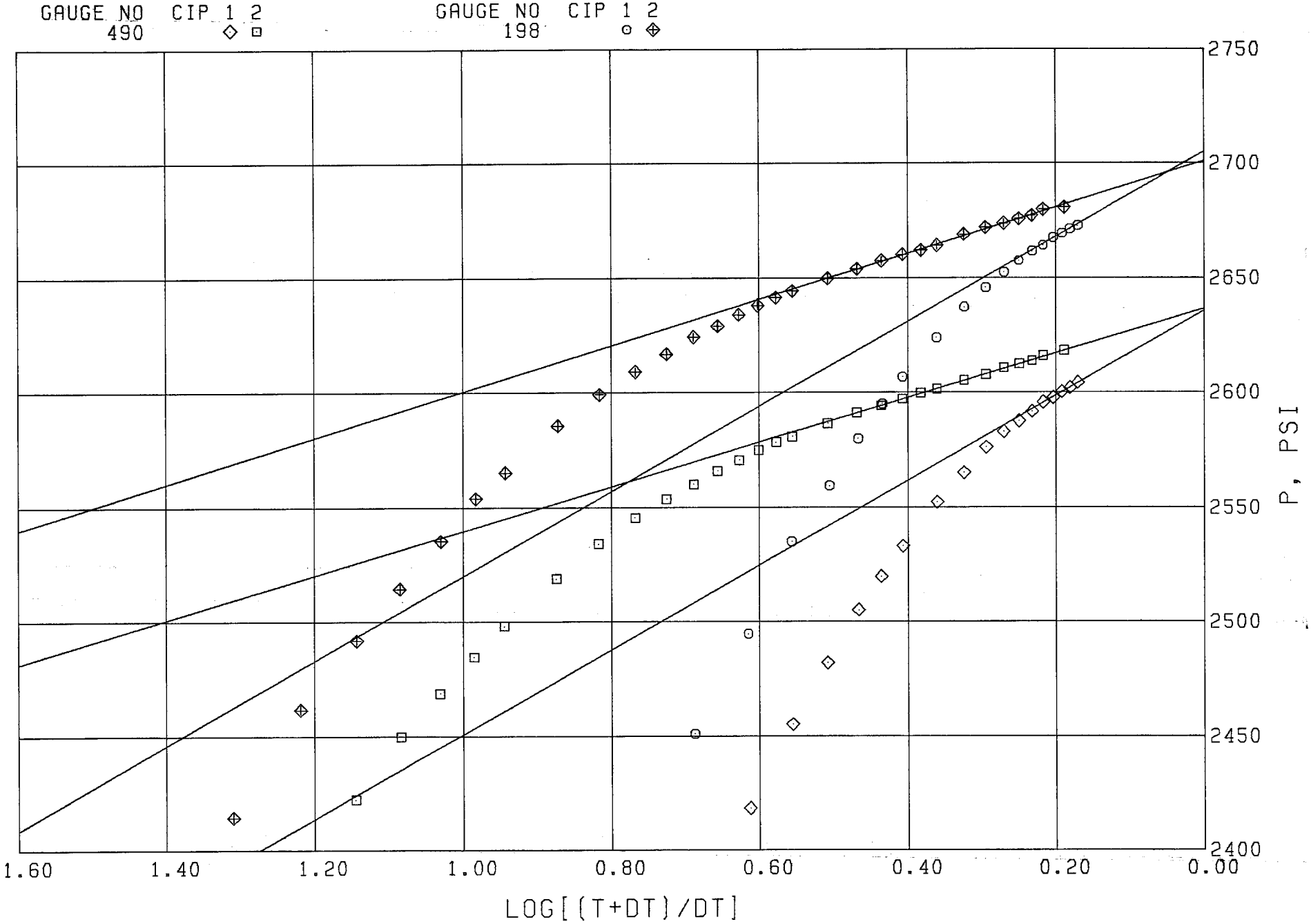
RECOVERED:

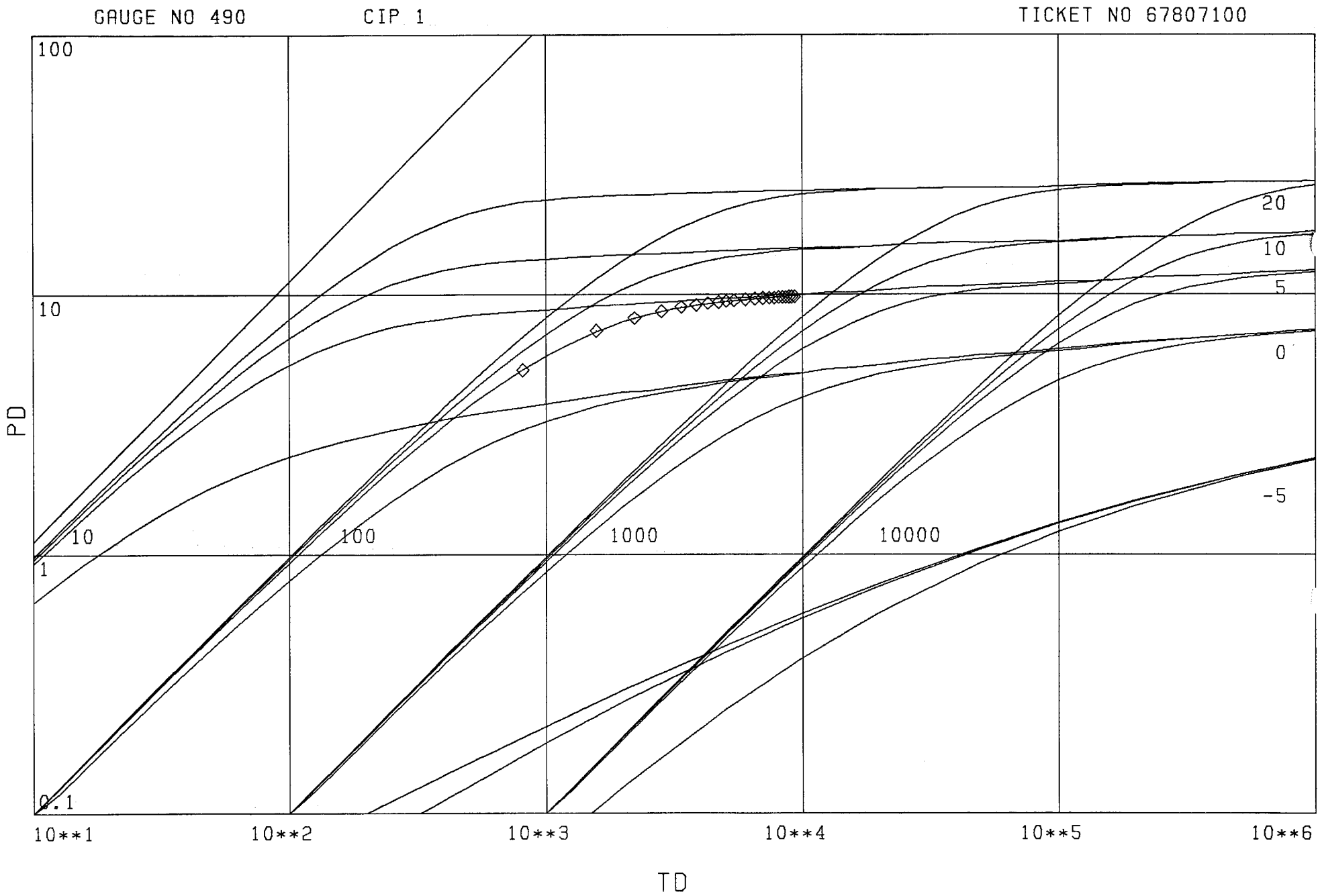
254 FEET OF DRILLING MUD

MEASURED FROM TESTER VALVE

REMARKS:

TICKET NO 67807100

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CIP 1
TICKET NO 67807100
100
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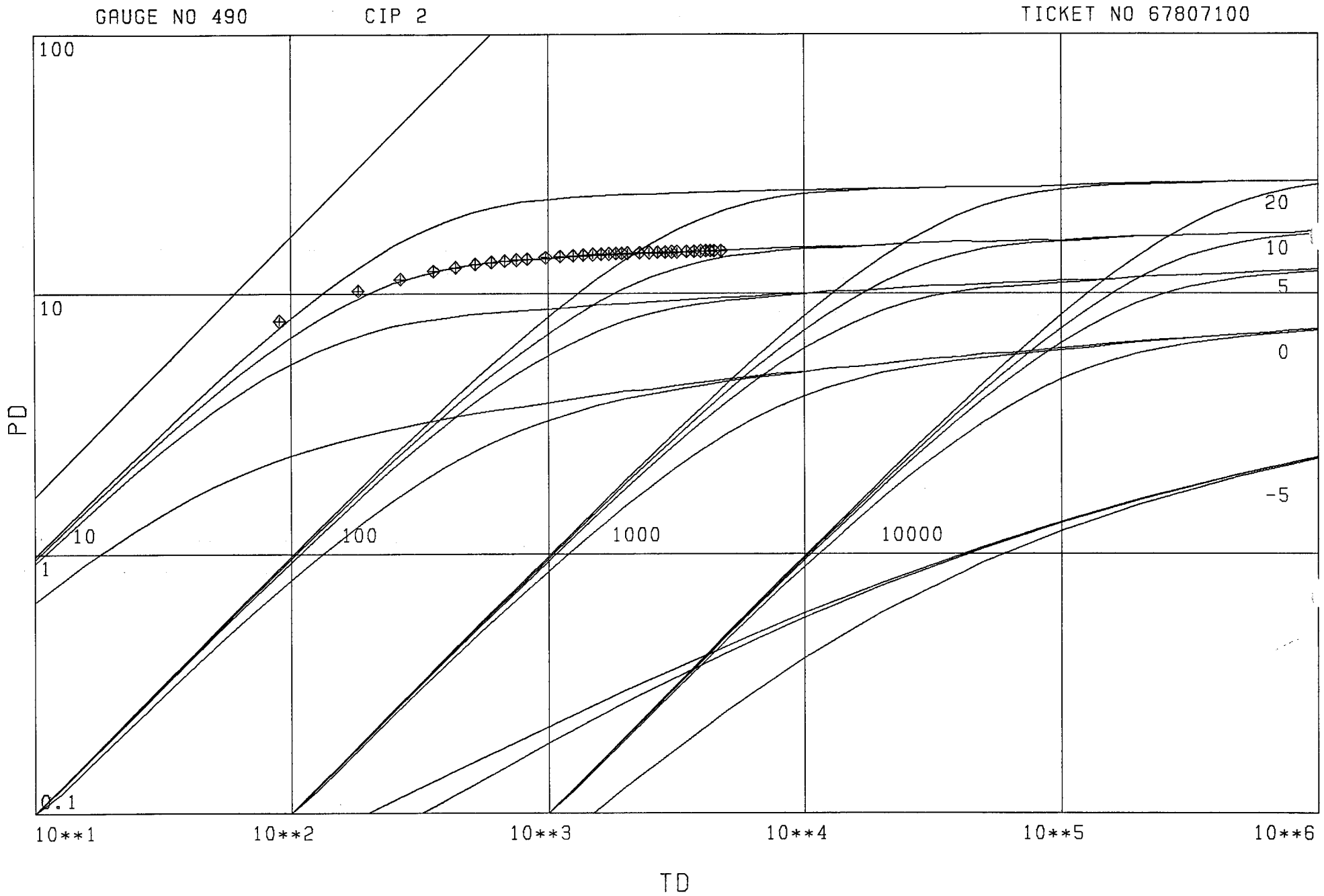
0.1
PD
20
10
5
0
-5
10
100
1000
10000
10**1
10**2
10**3
10**4
10**5
10**6
TD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TICKET NO 67807100
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10**3
10**4
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10**6
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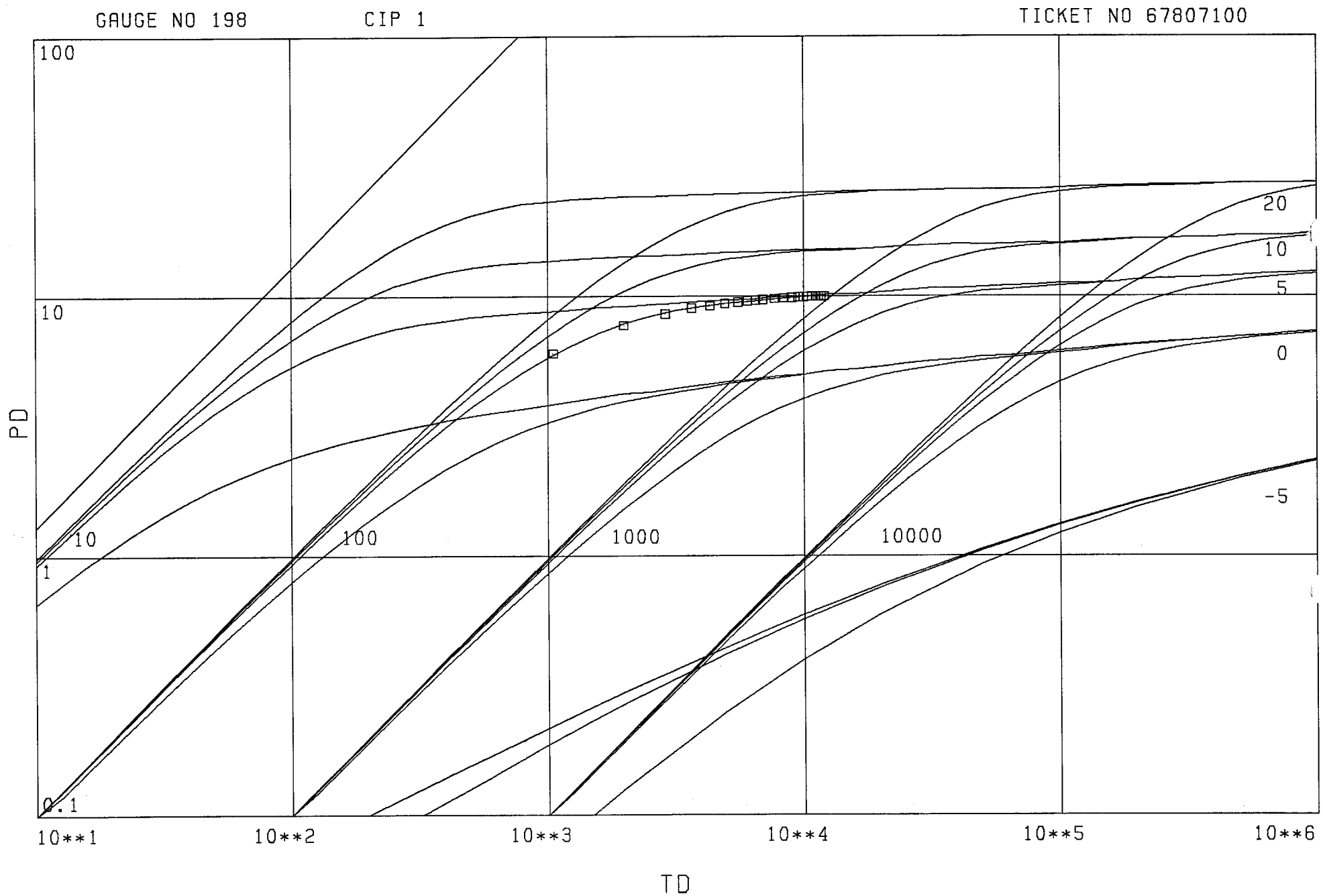
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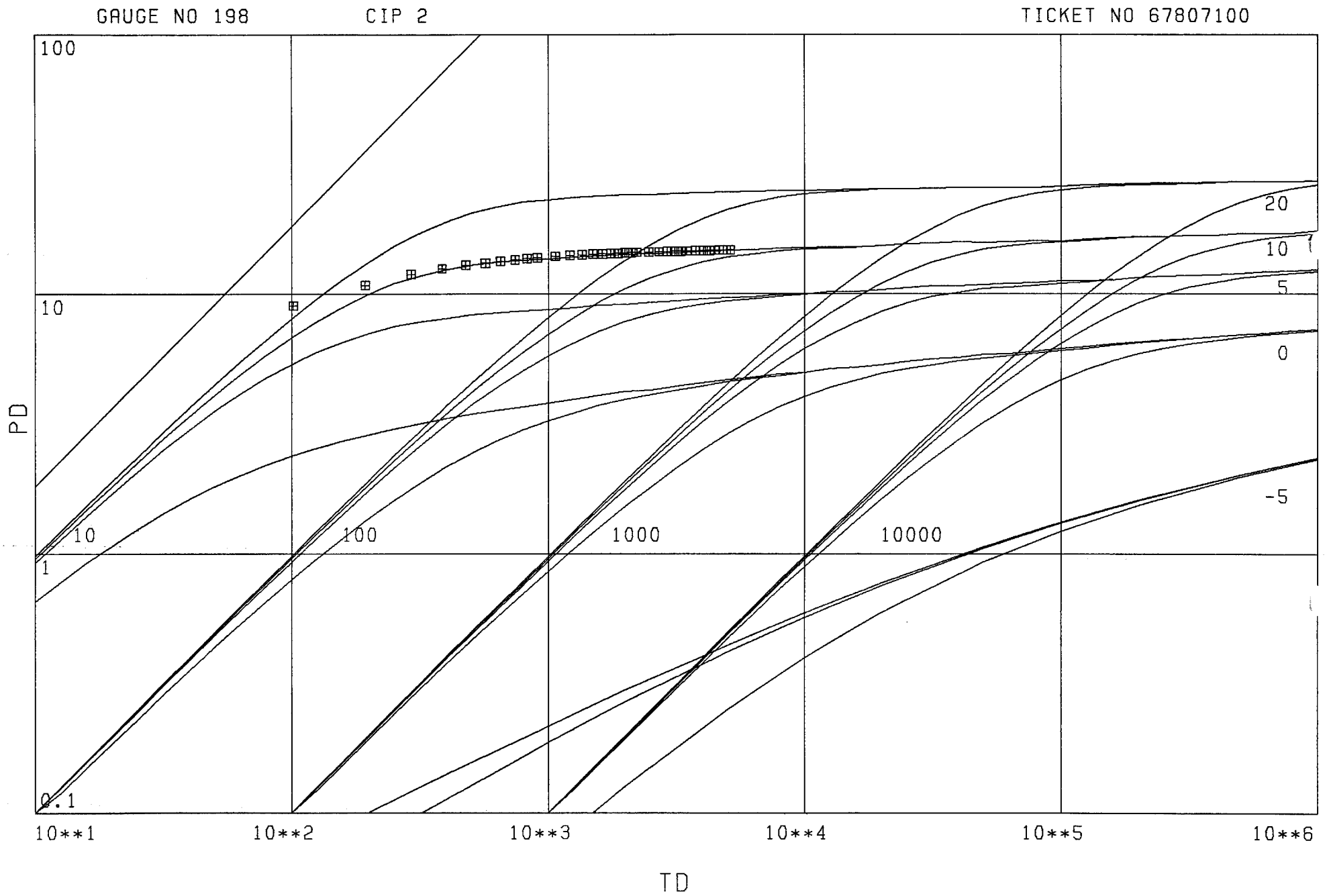
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10**5
10**6
TD

TICKET NUMBER 67807100

SUMMARY
OF
RESERVOIR PARAMETERS
USING HORNER METHOD

OIL GRAVITY 40.4 @60° WATER % SALT 1.9

GAS GRAVITY 0.700 FLUID GRADIENT 0.3567 psi/ft

GAS/OIL RATIO 340.0 cu.ft/bbl FORMATION VOL FACTOR 1.187 vol/vol

TEMPERATURE 123.0 °F FLUID PROPERTIES AT 2701.0 Psig

VISCOSITY 1.299 cp NET PAY 12.0 ft

PIPE CAPACITY FACTOR(S) 0.00492 0.00742 0.01422 bbl/ft

GAUGE NUMBER		490	198					
GAUGE DEPTH		7526.0	7642.0					
FLOW AND CIP PERIOD		2	2					UNITS
FINAL FLOW PRESSURE	P_f	861.5	924.1					Psig
TOTAL FLOW TIME	t	77.7	77.7					min
EXTRAPOLATED PRESSURE	P*	2636.7	2701.0					Psig
ONE CYCLE PRESSURE		2539.5	2600.4					Psig
PRODUCTION RATE	Q	67.0	67.0					BPD
TRANSMISSIBILITY	kh/μ	133.102	128.505					$\frac{md-ft}{cp}$
FLOW CAPACITY	kh	172.894	166.922					md-ft
PERMEABILITY	k	14.4078	13.9102					md
DAMAGE RATIO	DR	3.34	3.23					
POTENTIAL RATE	Q_1	224.0	216.5					BPD
RADIUS OF INVESTIGATION	r_i	154.9	152.2					ft

REMARKS:

THE PRODUCTION RATES SHOWN ARE FOR OIL PRODUCTION ONLY. IT WAS ESTIMATED FROM THE SAMPLER DATA THAT THE PRODUCTION WAS 22.58% OIL AND 77.42% WATER. THE TOTAL CALCULATED FLOW RATE WAS 296.9 BBLS/DAY FOR THE FINAL FLOW PERIOD.

THE REPORTED RECOVERY INDICATED THE PRODUCTION TO BE 5.4% OIL AND 94.6% WATER.

THE RAMEY TYPE CURVE INDICATES QUESTIONABLE CLOSURE OF THE INITIAL CLOSED-IN PRESSURE FOR A RELIABLE HORNER PLOT.

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 74045200

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
3-1-84					
2300					ON LOCATION
3-2-84					
0015					STARTED CLOCKS
0200					PICKED-UP TOOLS
0315					RIG CUT AND SLIPPED DRILLING
					LINE.
0500					WAITED ON REVERSING SUB
0800					TRIPPED IN HOLE WITH TOOLS
1145					SET PACKERS
1158					OPENED TOOL - WEAK 1/8" BLOW
					INCREASING TO 3/4" BLOW IN
					10 MINUTES.
1213					1/2" BLOW - CLOSED TOOL
1243					REOPENED TOOL - 1/8" WEAK
					BLOW DURING ONE HOUR FLOW
					PERIOD.
1344					CLOSED TOOL
1544					OPENED BYPASS AND PULLED
					PACKERS LOOSE. TRIPPED OUT
					OF HOLE.
2200					BROKE DOWN TOOLS AND LOADED OUT
2400					JOB COMPLETED

TICKET NO. 74045200

		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	6686.0	
3	DRILL COLLARS.....	7.000	2.750	559.0	
5	CROSSOVER.....	6.438	2.750	1.0	
3	DRILL COLLARS.....	7.000	2.750	92.0	
5	CROSSOVER.....	6.750	2.750	1.0	
13	DUAL CIP SAMPLER.....	5.000	0.750	6.8	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	7350.0
80	AP RUNNING CASE.....	5.000	3.060	4.1	7352.0
15	JAR.....	5.000	1.750	5.0	
16	VR SAFETY JOINT.....	5.000	1.000	2.8	
70	OPEN HOLE PACKER.....	7.750	1.530	5.8	7367.0
18	DISTRIBUTOR VALVE.....	5.000	1.680	2.2	
70	OPEN HOLE PACKER.....	7.750	1.530	5.8	7375.0
5	CROSSOVER.....	6.500	2.875	0.8	
3	DRILL COLLARS.....	7.000	2.750	28.8	
5	CROSSOVER.....	5.750	2.500	1.0	
20	FLUSH JOINT ANCHOR.....	5.750	2.870	28.0	
81	BLANKED-OFF RUNNING CASE.....	5.750		4.2	7437.0
	TOTAL DEPTH				7440.0

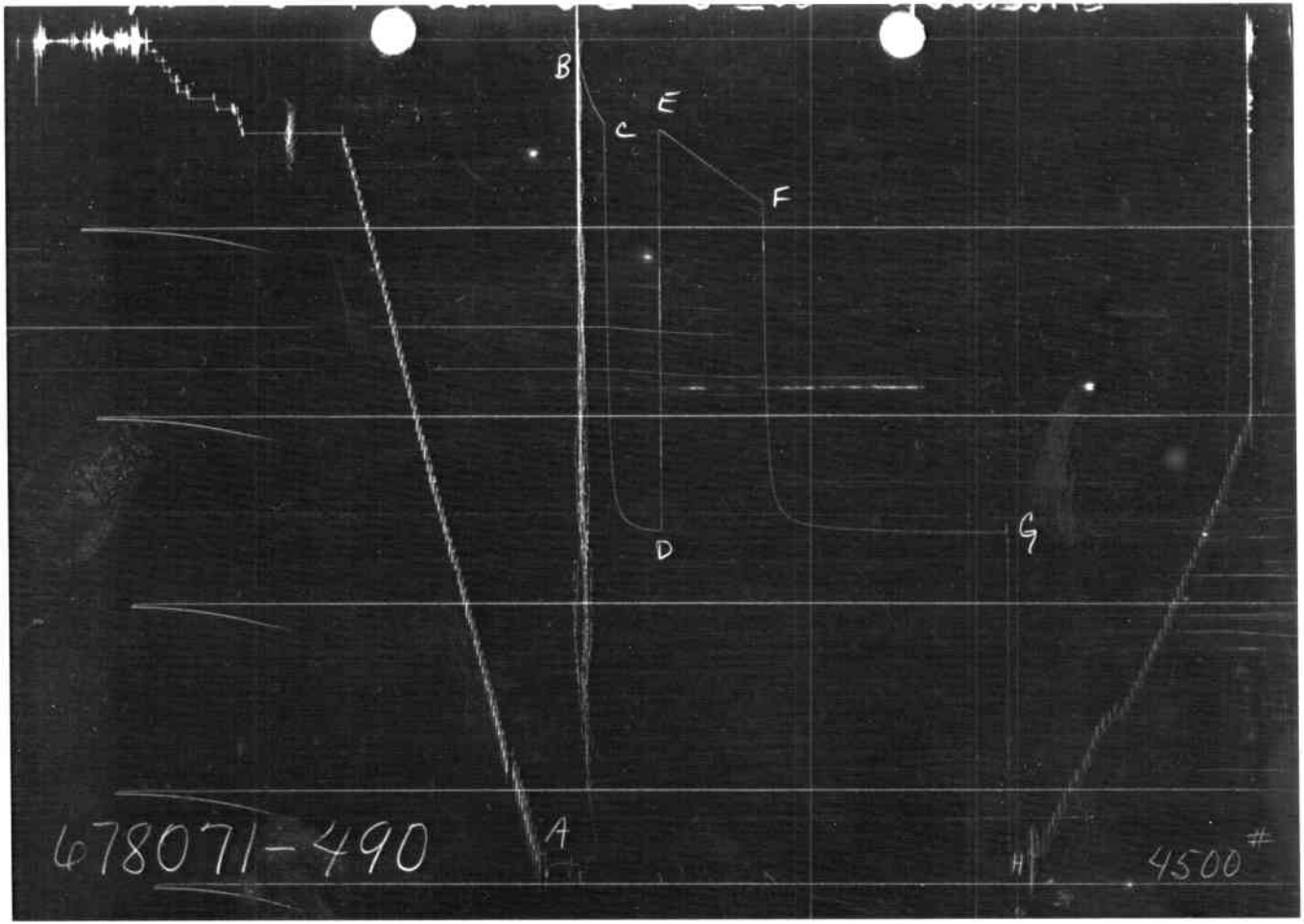
EQUIPMENT DATA

HALLIBURTON
SERVICES

TICKET NO. 67807100
12-MAR-84
VERNAL

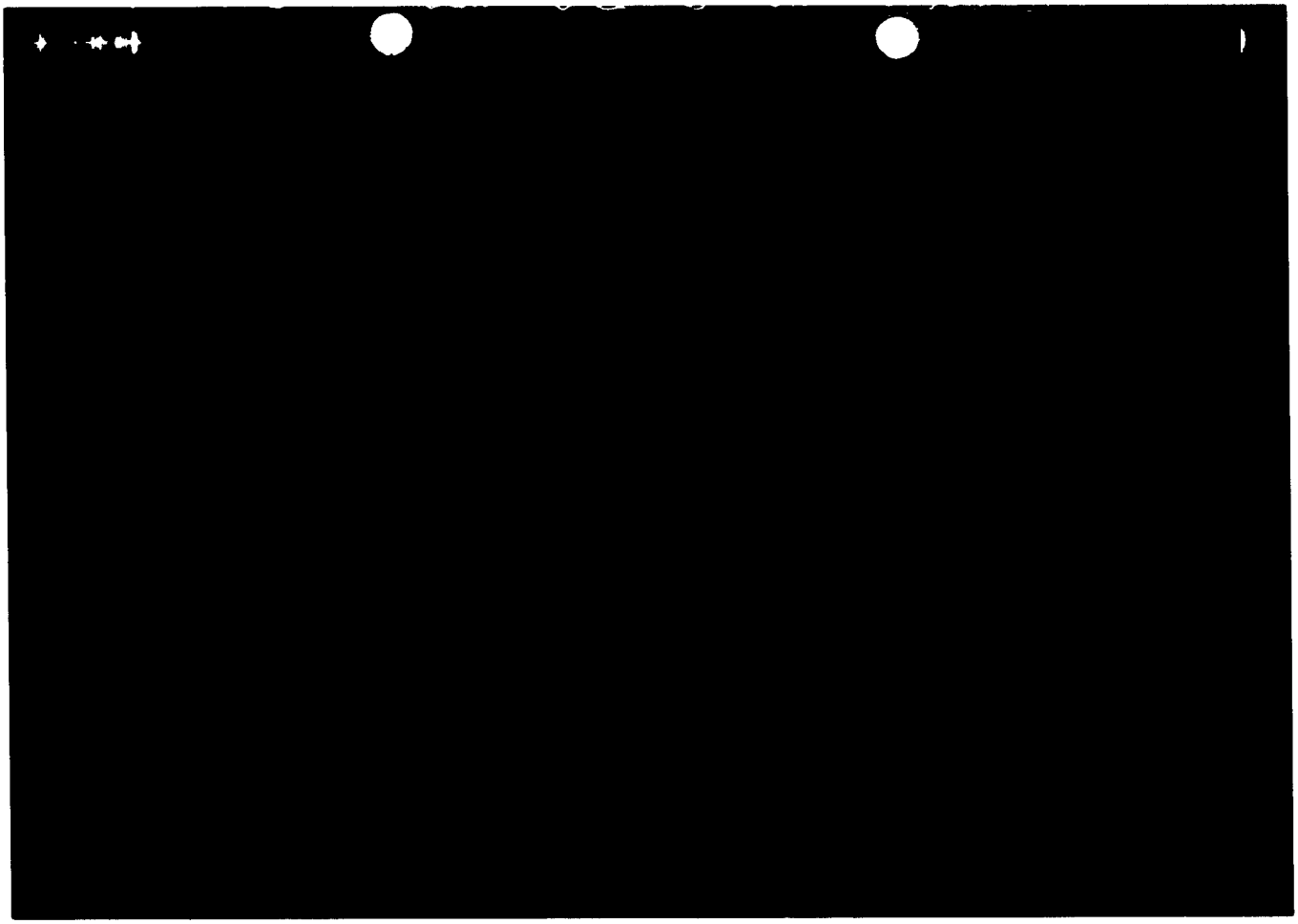
FORMATION TESTING SERVICE REPORT

MINERAL CANYON	1-3	2	7549.' - 7645.'	ENSERCH EXPLORATION, INCORPORATED	
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME	
LEGAL LOCATION SEC. - TWP. - RNG.	3-19E-26S	FIELD AREA	WILDCAT	COUNTY GRAND	STATE UTAH BC



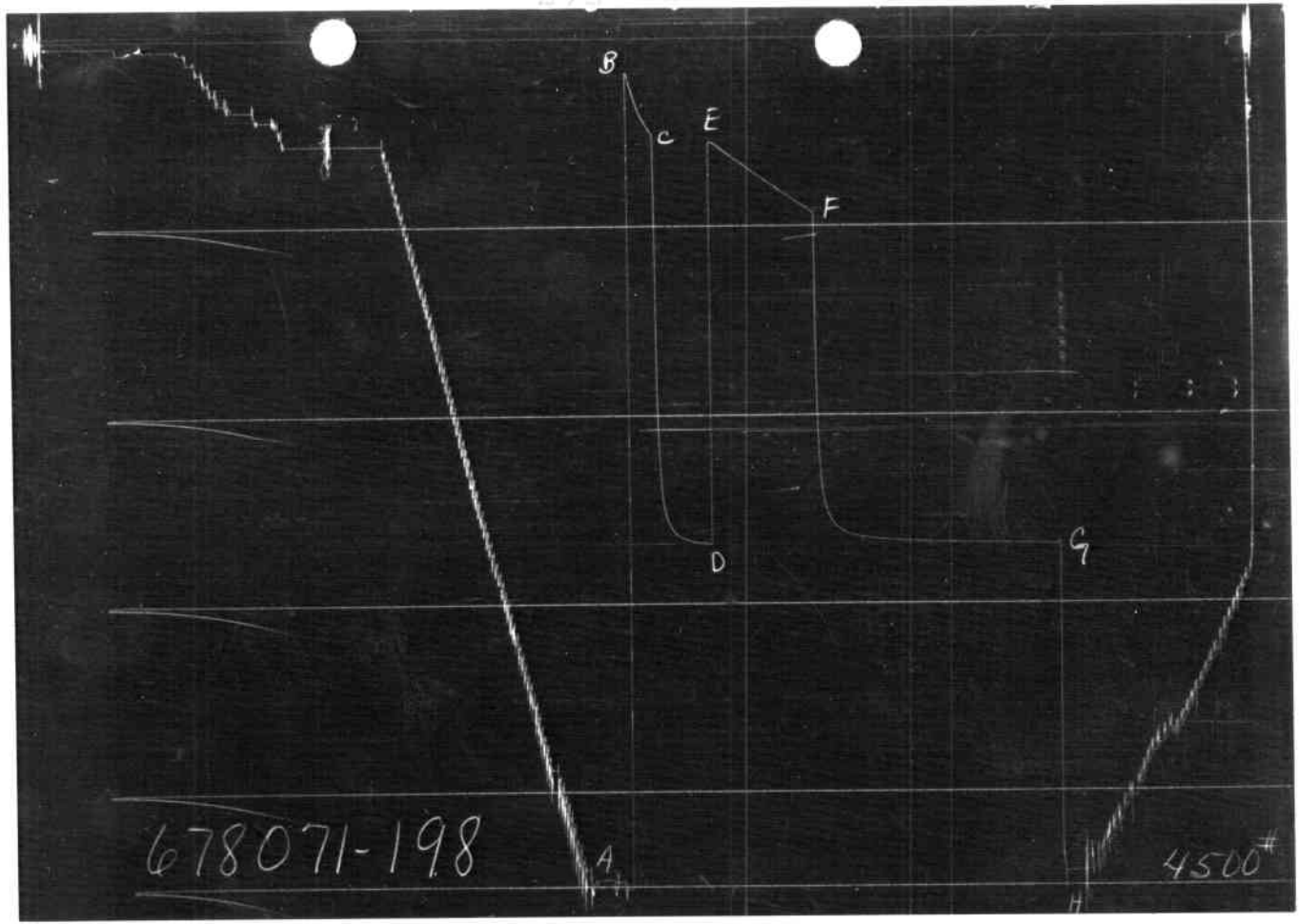
GAUGE NO: 490 DEPTH: 7526.0 BLANKED OFF: NO HOUR OF CLOCK: 12

		PRESSURE	TIME	



GAUGE NO: 490 DEPTH: 7526.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	4411	4381.2			
B	INITIAL FIRST FLOW	133	94.1	15.0	15.5	F
C	FINAL FIRST FLOW	439	441.4			
C	INITIAL FIRST CLOSED-IN	439	441.4	33.0	32.3	C
D	FINAL FIRST CLOSED-IN	2607	2604.3			
E	INITIAL SECOND FLOW	479	480.1	61.0	62.2	F
F	FINAL SECOND FLOW	850	861.5			
F	INITIAL SECOND CLOSED-IN	850	861.5	142.0	142.7	C
G	FINAL SECOND CLOSED-IN	2607	2618.3			
H	FINAL HYDROSTATIC	4424	4342.4			



GAUGE NO: 198 DEPTH: 7642.0 BLANKED OFF: YES HOUR OF CLOCK: 12

		PRESSURE	TIME	

EQUIPMENT & HOLE DATA

FORMATION TESTED: SEE REMARKS
NET PAY (ft): 12.0
GROSS TESTED FOOTAGE: 96.0
ALL DEPTHS MEASURED FROM: KB
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 8.750
ELEVATION (ft): 5875
TOTAL DEPTH (ft): 7645.0
PACKER DEPTH(S) (ft): 7541, 7549
FINAL SURFACE CHOKE (in): 0.250
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 10.80
MUD VISCOSITY (sec): 61
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 123 @ 7641.0 ft

TICKET NUMBER: 67807100

DATE: 3-6-84 TEST NO: 2

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: VERNAL

TESTER: RIPPLE

WITNESS: MELLINGER

DRILLING CONTRACTOR: LOFFLAND BROTHERS DRILLING COMPANY #1

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY		CHLORIDES
MUD PIT	0.086 @	71 °F	63636 ppm
MIDDLE OF FLUID	0.198 @	70 °F	21212 ppm
SAMPLER	0.240 @	60 °F	19393 ppm
BOTTOM OF FLUID	0.167 @	70 °F	25454 ppm
	@	°F	ppm
	@	°F	ppm

SAMPLER DATA

Psig AT SURFACE: 360
cu.ft. OF GAS: 0.75
cc OF OIL: 350
cc OF WATER: 1200
cc OF MUD: 0
TOTAL LIQUID cc: 1550

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): 40.4 @ 60°F
GAS/OIL RATIO (cu.ft. per bbl): 340
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT

RECOVERED:

1.6 BARRELS OF OIL
2 BARRELS OF OIL AND GAS CUT MUD
28 BARRELS OF FORMATION WATER

MEASURED FROM TESTER VALVE

REMARKS:

THERE WAS 30 PPM OF H2S IN THE SAMPLE CHAMBER.

FORMATION TESTED WAS MISSISSIPPIAN - LEADVILLE.

TYPE & SIZE MEASURING DEVICE: LT-20 MANIFOLD | TICKET NO: 67807100

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
3-5-84					
1700					ON LOCATION, WAITED ON RIG
3-6-84					
0645					PICKED UP TOOLS
0823					TRIP IN HOLE WITH TOOLS
1242	.25				TOOL OPENED WITH 1" BLOW IN
					WATER
1247	"	4 OZ			
1252	"	7.5 OZ			
1257	"	10.25 OZ			CLOSED TOOL
1330	"				OPENED TOOL WITH A 3" BLOW
1335	"	5 OZ			
1340	"	8.5 OZ			
1345	"	10 OZ			
1350	"	12.25 OZ			
1355	"	14 OZ			
1400	"	16 OZ			
1410	"	19.5 OZ			
1420	"	23 OZ			
1431	"	25 OZ			CLOSED TOOL
1653					OPENED BY-PASS AND PULLED OUT
					OF HOLE
2050					DROPPED BAR TO REVERSE OUT
3-7-84					
0115					DRAINED SAMPLER, BROKE TOOLS
					AND LOADED OUT
0300					JOB COMPLETED.

TICKET NO: 67807100	GAUGE NO: 490
CLOCK NO: 3806 HOUR: 12	DEPTH: 7526.0

HALLIBURTON SERVICES

FIRST FLOW

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
B	1	0.0	94.1			
	2	1.0	116.5	22.3		
	3	2.0	151.5	35.0		
	4	3.0	180.7	29.3		
	5	4.0	209.6	28.9		
	6	5.0	239.5	29.9		
	7	6.0	269.4	29.9		
	8	7.0	295.3	25.9		
	9	8.0	319.8	24.5		
	10	9.0	343.0	23.1		
	11	10.0	360.1	17.2		
	12	11.0	376.3	16.2		
	13	12.0	390.0	13.7		
	14	13.0	405.6	15.6		
	15	14.0	422.2	16.6		
C	16	15.5	441.4	19.1		

FIRST CLOSED-IN

C	1	0.0	441.4			
	2	1.0	1574.9	1133.6	0.9	1.229
	3	2.0	2041.9	1600.5	1.8	0.944
	4	3.0	2235.0	1793.6	2.5	0.794
	5	4.0	2345.2	1903.9	3.2	0.688
	6	5.0	2418.4	1977.0	3.8	0.613
	7	6.0	2455.1	2013.7	4.3	0.555
	8	7.0	2481.9	2040.6	4.8	0.508
	9	8.0	2505.1	2063.7	5.3	0.467
	10	9.0	2519.7	2078.3	5.7	0.436
	11	10.0	2532.9	2091.5	6.1	0.407
	12	12.0	2552.1	2110.8	6.8	0.361
	13	14.0	2565.0	2123.6	7.4	0.324
	14	16.0	2576.1	2134.7	7.9	0.294
	15	18.0	2582.9	2141.5	8.3	0.270
	16	20.0	2587.6	2146.2	8.7	0.249
	17	22.0	2591.7	2150.4	9.1	0.232
	18	24.0	2595.7	2154.4	9.4	0.217
	19	26.0	2597.7	2156.4	9.7	0.203
	20	28.0	2600.3	2158.9	10.0	0.192
	21	30.0	2601.9	2160.5	10.2	0.181
D	22	32.3	2604.3	2162.9	10.5	0.170

SECOND FLOW

E	1	0.0	480.1			
	2	4.0	494.7	14.6		
	3	8.0	521.5	26.8		
	4	12.0	547.9	26.4		
	5	16.0	574.3	26.4		
	6	20.0	600.3	26.0		

SECOND FLOW - CONTINUED

	7	24.0	627.2	26.9		
	8	28.0	652.1	24.9		
	9	32.0	677.6	25.5		
	10	36.0	703.4	25.9		
	11	40.0	728.4	24.9		
	12	44.0	754.0	25.6		
	13	48.0	778.0	24.0		
	14	52.0	803.7	25.7		
	15	56.0	826.4	22.7		
	16	60.0	849.1	22.7		
F	17	62.2	861.5	12.5		

SECOND CLOSED-IN

F	1	0.0	861.5			
	2	1.0	1806.3	944.7	1.0	1.908
	3	2.0	2094.9	1233.4	2.0	1.600
	4	3.0	2229.8	1368.2	2.9	1.435
	5	4.0	2330.5	1468.9	3.8	1.306
	6	5.0	2379.9	1518.4	4.7	1.220
	7	6.0	2422.2	1560.7	5.6	1.144
	8	7.0	2449.7	1588.2	6.4	1.083
	9	8.0	2468.8	1607.2	7.2	1.031
	10	9.0	2484.6	1623.0	8.0	0.986
	11	10.0	2498.1	1636.6	8.8	0.945
	12	12.0	2518.9	1657.3	10.4	0.874
	13	14.0	2534.0	1672.4	11.8	0.818
	14	16.0	2545.5	1683.9	13.3	0.768
	15	18.0	2553.6	1692.1	14.6	0.726
	16	20.0	2560.0	1698.5	15.9	0.688
	17	22.0	2565.9	1704.4	17.2	0.656
	18	24.0	2570.6	1709.0	18.3	0.627
	19	26.0	2574.9	1713.3	19.5	0.600
	20	28.0	2578.3	1716.8	20.6	0.577
	21	30.0	2580.7	1719.2	21.6	0.555
	22	35.0	2586.6	1725.1	24.1	0.508
	23	40.0	2591.2	1729.6	26.4	0.469
	24	45.0	2594.3	1732.7	28.5	0.436
	25	50.0	2597.2	1735.7	30.4	0.407
	26	55.0	2599.6	1738.1	32.2	0.383
	27	60.0	2601.5	1739.9	33.8	0.361
	28	70.0	2605.1	1743.5	36.8	0.324
	29	80.0	2607.9	1746.3	39.4	0.295
	30	90.0	2610.7	1749.2	41.7	0.270
	31	100.0	2612.4	1750.9	43.7	0.250
	32	110.0	2613.8	1752.2	45.5	0.232
	33	120.0	2615.9	1754.4	47.2	0.217
G	34	142.7	2618.3	1756.8	50.3	0.189

REMARKS:

TICKET NO: 67807100

CLOCK NO: 2797 HOUR: 12

HALLIBURTON SERVICES

GAUGE NO: 198

DEPTH: 7642.0

FIRST FLOW

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
B	1	0.0	183.1			
	2	1.0	199.7	16.6		
	3	2.0	231.5	31.8		
	4	3.0	261.9	30.3		
	5	4.0	289.6	27.7		
	6	5.0	321.4	31.8		
	7	6.0	349.5	28.1		
	8	7.0	376.4	26.9		
	9	8.0	398.0	21.6		
	10	9.0	418.7	20.7		
	11	10.0	433.5	14.8		
	12	11.0	450.4	16.9		
	13	12.0	463.5	13.1		
	14	13.0	479.9	16.5		
	15	14.0	494.9	14.9		
C	16	15.5	509.4	14.6		

FIRST CLOSED-IN

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
C	1	0.0	509.4			
	2	1.0	1813.4	1304.0	0.9	1.228
	3	2.0	2180.1	1670.7	1.7	0.952
	4	3.0	2357.9	1848.4	2.5	0.790
	5	4.0	2450.9	1941.5	3.2	0.688
	6	5.0	2494.6	1985.2	3.8	0.615
	7	6.0	2535.0	2025.5	4.3	0.556
	8	7.0	2559.4	2049.9	4.8	0.506
	9	8.0	2579.8	2070.4	5.3	0.467
	10	9.0	2595.0	2085.5	5.7	0.435
	11	10.0	2606.7	2097.3	6.1	0.407
	12	12.0	2623.9	2114.4	6.8	0.361
	13	14.0	2637.2	2127.8	7.4	0.324
	14	16.0	2645.8	2136.3	7.9	0.295
	15	18.0	2652.5	2143.1	8.3	0.270
	16	20.0	2657.5	2148.1	8.7	0.250
	17	22.0	2661.7	2152.3	9.1	0.232
	18	24.0	2664.2	2154.8	9.4	0.217
	19	26.0	2667.7	2158.2	9.7	0.203
	20	28.0	2669.5	2160.1	10.0	0.192
	21	30.0	2671.4	2161.9	10.2	0.181
D	22	32.3	2672.8	2163.4	10.5	0.170

SECOND FLOW

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
E	1	0.0	551.2			
	2	4.0	560.1	8.9		
	3	8.0	585.7	25.6		
	4	12.0	613.1	27.4		
	5	16.0	639.2	26.1		
	6	20.0	664.7	25.5		

SECOND FLOW - CONTINUED

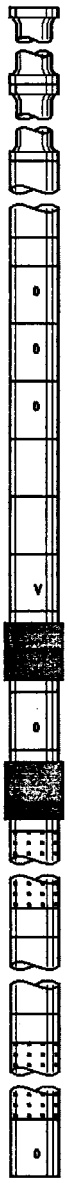
REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
	7	24.0	692.4	27.7		
	8	28.0	715.7	23.4		
	9	32.0	740.8	25.1		
	10	36.0	766.7	25.9		
	11	40.0	791.5	24.8		
	12	44.0	816.8	25.3		
	13	48.0	841.3	24.5		
	14	52.0	865.5	24.1		
	15	56.0	889.0	23.5		
	16	60.0	912.2	23.2		
F	17	62.2	924.1	11.9		

SECOND CLOSED-IN

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
F	1	0.0	924.1			
	2	1.0	1997.5	1073.4	1.0	1.893
	3	2.0	2210.3	1286.1	1.9	1.611
	4	3.0	2342.2	1418.1	2.9	1.429
	5	4.0	2414.3	1490.2	3.8	1.309
	6	5.0	2461.6	1537.4	4.7	1.218
	7	6.0	2491.8	1567.7	5.6	1.142
	8	7.0	2514.4	1590.2	6.4	1.085
	9	8.0	2535.2	1611.1	7.3	1.029
	10	9.0	2554.0	1629.8	8.1	0.983
	11	10.0	2565.2	1641.0	8.9	0.943
	12	12.0	2585.6	1661.5	10.4	0.872
	13	14.0	2599.1	1674.9	11.9	0.816
	14	16.0	2609.1	1685.0	13.3	0.767
	15	18.0	2616.8	1692.6	14.6	0.726
	16	20.0	2624.3	1700.1	15.9	0.689
	17	22.0	2629.0	1704.9	17.2	0.656
	18	24.0	2634.0	1709.9	18.3	0.627
	19	26.0	2638.0	1713.8	19.5	0.601
	20	28.0	2641.4	1717.3	20.6	0.577
	21	30.0	2644.3	1720.2	21.6	0.555
	22	35.0	2649.7	1725.6	24.1	0.508
	23	40.0	2654.0	1729.8	26.4	0.469
	24	45.0	2657.5	1733.4	28.5	0.436
	25	50.0	2660.3	1736.1	30.4	0.407
	26	55.0	2662.1	1738.0	32.2	0.382
	27	60.0	2664.2	1740.1	33.9	0.361
	28	70.0	2669.0	1744.9	36.8	0.324
	29	80.0	2672.0	1747.9	39.4	0.295
	30	90.0	2673.9	1749.7	41.7	0.270
	31	100.0	2675.9	1751.7	43.7	0.250
	32	110.0	2677.3	1753.2	45.5	0.232
	33	120.0	2679.9	1755.8	47.2	0.217
G	34	142.7	2680.7	1756.6	50.3	0.189

REMARKS:

TICKET NO. 67807100



		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	6760.0	
4	FLEX WEIGHT.....	4.500	2.764	128.4	
3	DRILL COLLARS.....	7.000	2.250	623.4	
5	CROSSOVER.....	6.375	2.750	0.8	
50	IMPACT REVERSING SUB.....	5.750	2.625	1.0	7513.0
13	DUAL CIP SAMPLER.....	5.000	0.750	6.8	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	7524.0
80	AP RUNNING CASE.....	5.000	3.060	4.1	7526.0
15	JAR.....	5.000	1.750	5.0	
16	VR SAFETY JOINT.....	5.000	1.000	2.8	
70	OPEN HOLE PACKER.....	7.750	1.530	5.8	7541.0
18	DISTRIBUTOR VALVE.....	5.000	1.680	2.0	
70	OPEN HOLE PACKER.....	7.750	1.530	5.8	7549.0
20	FLUSH JOINT ANCHOR.....	5.750	2.870	25.0	
5	CROSSOVER.....	6.500	2.750	0.8	
3	DRILL COLLARS.....	7.000	2.250	59.9	
5	CROSSOVER.....	6.438	2.500	0.6	
20	FLUSH JOINT ANCHOR.....	5.750	2.870	3.0	
81	BLANKED-OFF RUNNING CASE.....	5.750		4.2	7642.0
	TOTAL DEPTH				7645.0

EQUIPMENT DATA

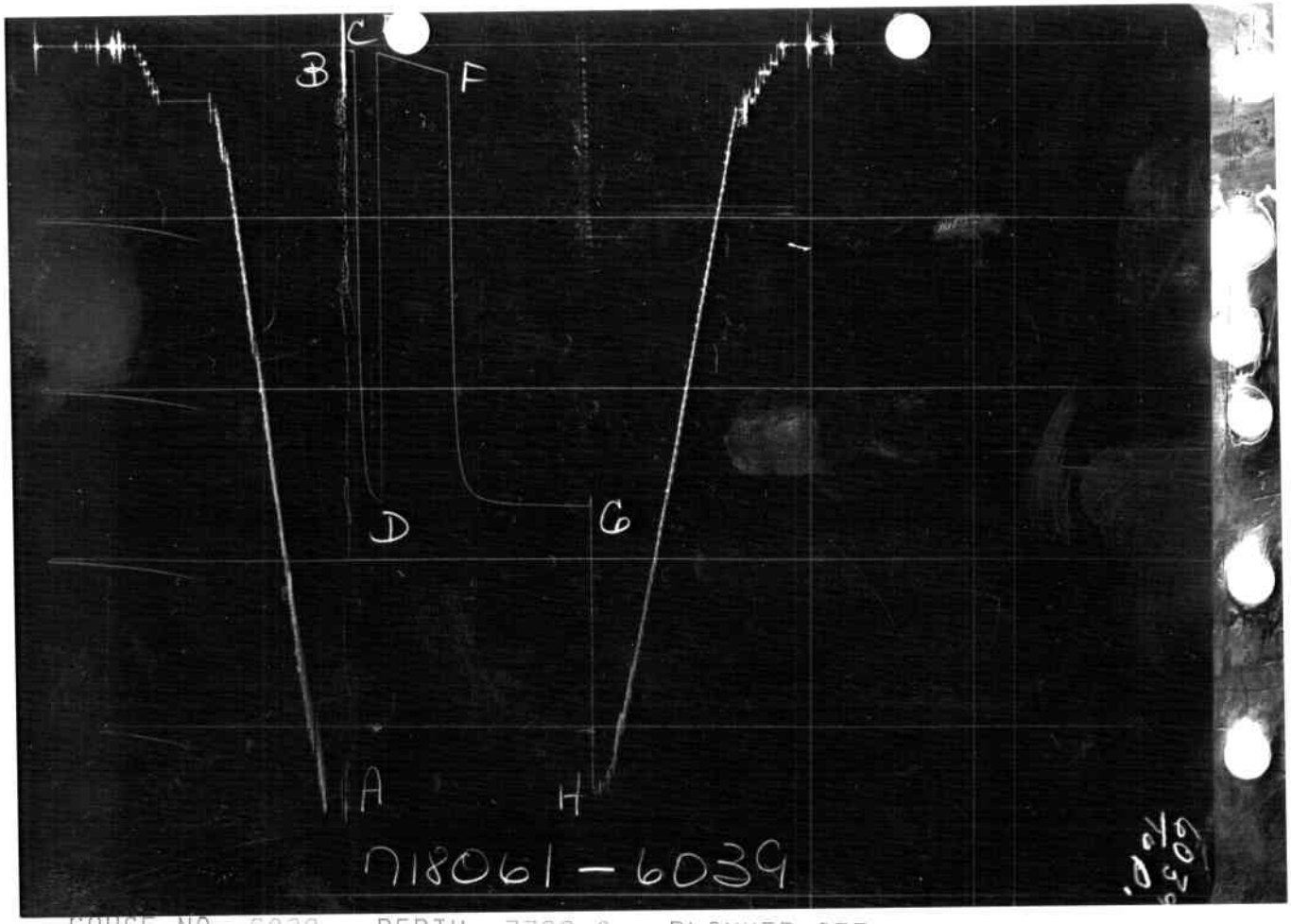
HALLIBURTON
SERVICES

TICKET NO. 71806100
14-MAR-84
FARMINGTON

FORMATION TESTING SERVICE REPORT

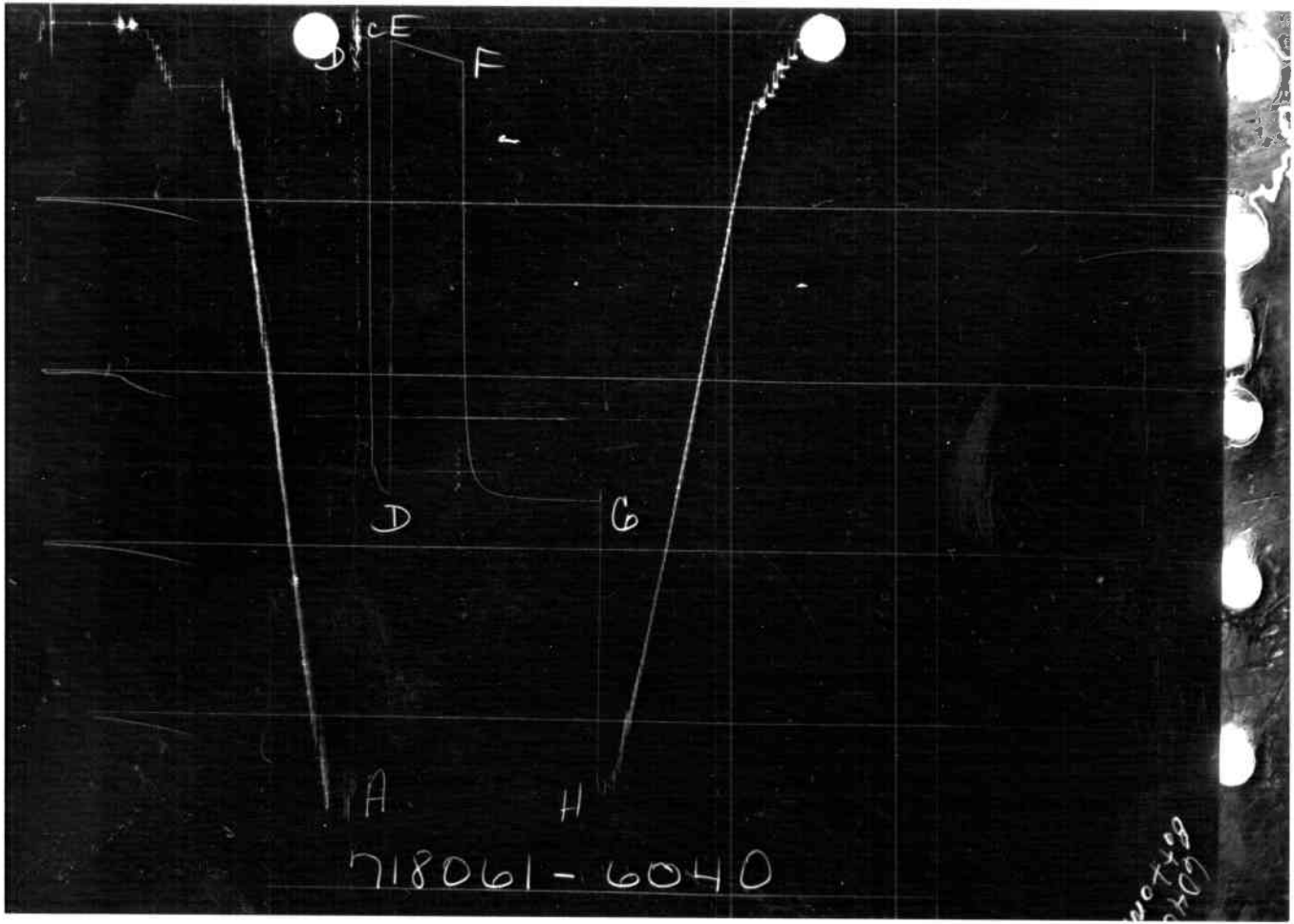
MINERAL CANYON FEDERAL	1-3	3	7750.' - 7791.'	ENSERCH EXPLORATION, INCORPORATED
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME

LEGAL LOCATION SEC. - TWP. - RNG. 3 - 26 SOUTH - 19 EAST	FIELD AREA WILDCAT (MOAB)	COUNTY GRAND	STATE UTAH	PW

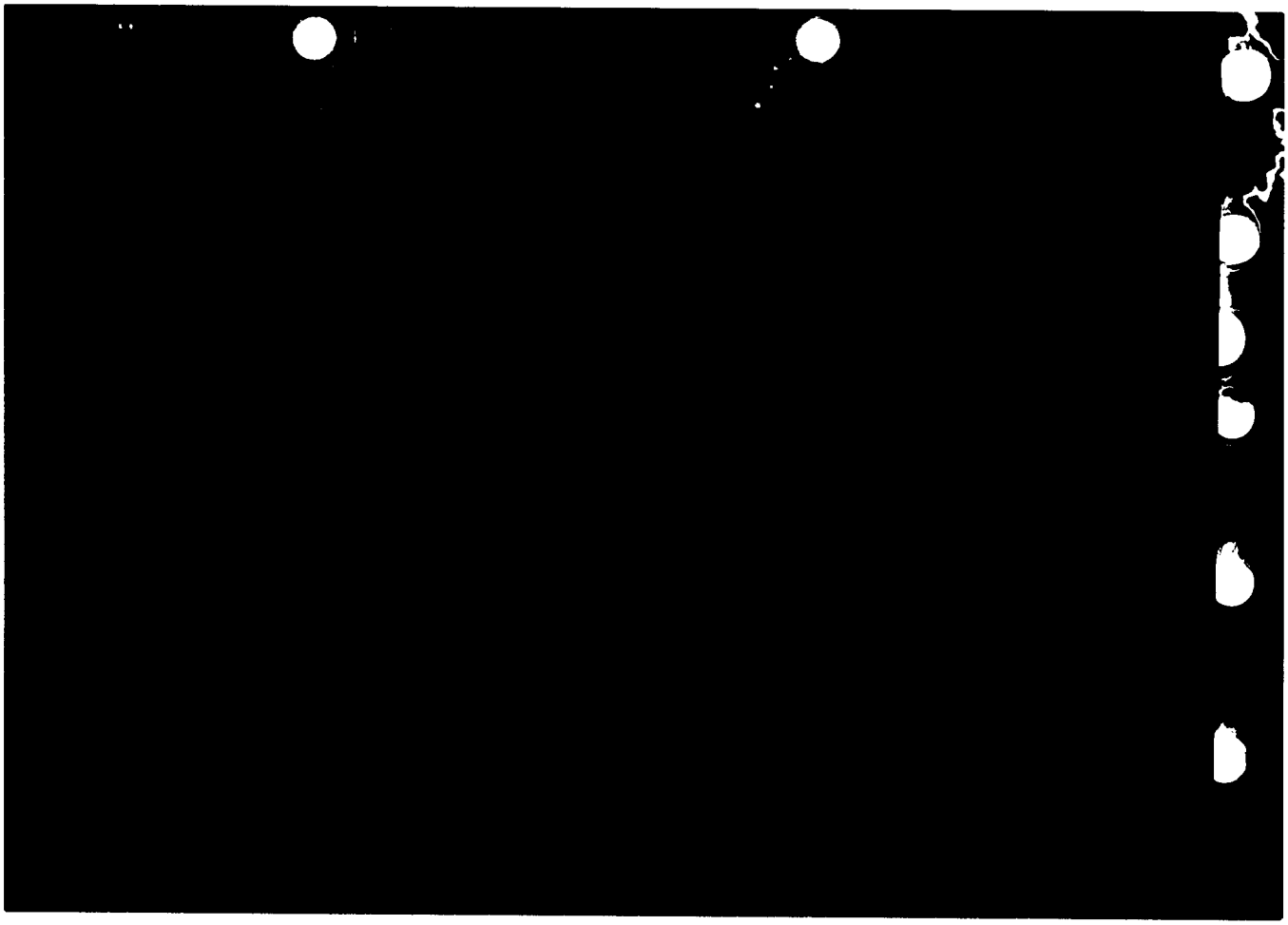


GAUGE NO: 6039 DEPTH: 7729.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE	TIME	



GAUGE NO: 6040 DEPTH: 7788.0 BLANKED OFF: YES HOUR OF CLOCK: 24



GAUGE NO: 6040 DEPTH: 7788.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	4453	4443.8			
B	INITIAL FIRST FLOW	53	50.4	15.0	14.5	F
C	FINAL FIRST FLOW	53	64.9			
C	INITIAL FIRST CLOSED-IN	53	64.9	30.0	29.5	C
D	FINAL FIRST CLOSED-IN	2694	2703.7			
E	INITIAL SECOND FLOW	81	79.7	90.0	91.5	F
F	FINAL SECOND FLOW	161	192.3			
F	INITIAL SECOND CLOSED-IN	161	192.3	180.0	179.5	C
G	FINAL SECOND CLOSED-IN	2721	2727.0			
H	FINAL HYDROSTATIC	4426	4431.4			

EQUIPMENT & HOLE DATA

FORMATION TESTED: MISSISSIPPIAN
NET PAY (ft): 8.0
GROSS TESTED FOOTAGE: 41.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 8.750
ELEVATION (ft): 5875
TOTAL DEPTH (ft): 7791.0
PACKER DEPTH(S) (ft): 7744, 7750
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 10.80
MUD VISCOSITY (sec): 63
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 120 @ 7787.0 ft

TICKET NUMBER: 71806100

DATE: 3-9-84 TEST NO: 3

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: FARMINGTON

TESTER: J.L. ROBINSON

WITNESS:

DRILLING CONTRACTOR: LOFFLAND BROTHERS #1

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY		CHLORIDES
	@ °F		ppm
	@ °F		ppm
	@ °F		ppm
	@ °F		ppm
	@ °F		ppm
	@ °F		ppm

SAMPLER DATA

Psig AT SURFACE: 12
cu.ft. OF GAS: 0.00
cc OF OIL: 0
cc OF WATER: 0
cc OF MUD: 2200
TOTAL LIQUID cc: 2200

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): @ °F
GAS/OIL RATIO (cu.ft. per bbl):
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT

RECOVERED:

279 FEET OF DRILLING MUD

MEASURED FROM TESTER VALVE

REMARKS:

- TIGHT HOLE -

ELEVATION REPORTED WAS AT GROUND LEVEL
FORMATION TESTED: MISSISSIPPIAN MADISON

TYPE & SIZE MEASURING DEVICE: _____					TICKET NO: 71806100
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
3-8-84					
1905					ON LOCATION - STOOD BY
3-9-84					
0030					PICKED-UP AND MADE-UP TOOLS
0140					TRIPPED IN WITH DST #3
0615					TAGGED BOTTOM AND SLACKED OFF
0619	1/8"BH				OPENED TOOL - NO BLOW
0624	"				NO BLOW
0629	"				"
0634	"				CLOSED TOOL
0704	"				REOPENED TOOL - NO BLOW
0709	"				VERY WEAK BUBBLE - SURFACE
					OF BUCKET.
0714	"				SURFACE OF BUCKET
0719	"				"
0734	"				BUBBLE 1/4" UNDER SURFACE
0749	"				BUBBLE 1/2" UNDER SURFACE
0804	"				BUBBLE UNDER SURFACE
0819	"				BUBBLE 1" UNDER SURFACE
0834	"				CLOSED TOOL - 1" BUBBLE
1134					OPENED BYPASS - UNSEAT PACKERS
1620					OUT OF HOLE - BROKE OUT AND
					LAID DOWN TOOLS
1730					JOB COMPLETED

TICKET NO: 71806100

CLOCK NO: 12118 HOUR: 24

HALLIBURTON SERVICES

GAUGE NO: 6039

DEPTH: 7729.0

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0.0	27.5			
	2	2.0	28.6	1.1		
	3	4.0	29.1	0.5		
	4	6.0	29.1	0.0		
	5	8.0	29.1	0.0		
	6	10.0	30.0	0.9		
	7	12.0	32.6	2.5		
C	8	14.5	35.8	3.2		
			FIRST CLOSED-IN			
C	1	0.0	35.8			
	2	2.0	1604.7	1568.9	1.8	0.916
	3	4.0	2085.0	2049.2	3.1	0.667
	4	6.0	2322.0	2286.2	4.3	0.532
	5	8.0	2449.1	2413.3	5.1	0.450
	6	10.0	2526.8	2491.0	5.9	0.389
	7	12.0	2570.1	2534.3	6.6	0.345
	8	14.0	2599.7	2563.9	7.1	0.309
	9	16.0	2618.8	2583.0	7.6	0.280
	10	18.0	2633.4	2597.6	8.0	0.257
	11	20.0	2644.6	2608.8	8.4	0.236
	12	22.0	2654.1	2618.3	8.7	0.219
	13	24.0	2660.7	2624.9	9.0	0.205
	14	26.0	2666.2	2630.4	9.3	0.192
	15	28.0	2670.9	2635.2	9.5	0.181
D	16	29.5	2673.6	2637.9	9.7	0.173
			SECOND FLOW			
E	1	0.0	45.8			
	2	10.0	56.7	10.9		
	3	20.0	70.1	13.4		
	4	30.0	83.6	13.5		
	5	40.0	97.7	14.1		
	6	50.0	110.2	12.5		
	7	60.0	124.4	14.2		
	8	70.0	137.5	13.1		
	9	80.0	150.4	12.9		
F	10	91.5	166.5	16.1		
			SECOND CLOSED-IN			
F	1	0.0	166.5			
	2	10.0	2427.9	2261.4	9.2	1.063
	3	20.0	2583.1	2416.6	16.8	0.799
	4	30.0	2632.2	2465.7	23.4	0.656
	5	40.0	2655.9	2489.5	29.0	0.562
	6	50.0	2668.6	2502.2	34.0	0.494

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	7	60.0	2677.4	2510.9	38.3	0.442
	8	70.0	2683.0	2516.5	42.2	0.400
	9	80.0	2686.8	2520.3	45.6	0.366
	10	90.0	2689.7	2523.2	48.7	0.338
	11	100.0	2691.5	2525.0	51.5	0.314
	12	110.0	2693.1	2526.6	54.0	0.293
	13	120.0	2694.6	2528.1	56.3	0.275
	14	130.0	2695.5	2529.1	58.4	0.259
	15	140.0	2696.4	2529.9	60.3	0.245
	16	150.0	2698.4	2531.9	62.1	0.232
	17	160.0	2699.1	2532.6	63.7	0.221
	18	170.0	2699.3	2532.8	65.3	0.210
G	19	179.5	2700.4	2533.9	66.6	0.202

REMARKS:

TICKET NO: 71806100		GAUGE NO: 6040
CLOCK NO: 14128 HOUR: 24	HALLIBURTON SERVICES	DEPTH: 7788.0

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0.0	50.4			
	2	2.0	51.3	0.9		
	3	4.0	54.4	3.1		
	4	6.0	57.5	3.1		
	5	8.0	59.0	1.5		
	6	10.0	59.0	0.0		
	7	12.0	63.7	4.7		
C	8	14.5	64.9	1.2		
			FIRST CLOSED-IN			
C	1	0.0	64.9			
	2	2.0	1475.5	1410.6	1.8	0.909
	3	4.0	2064.3	1999.4	3.2	0.661
	4	6.0	2328.9	2264.0	4.2	0.532
	5	8.0	2544.2	2479.3	5.1	0.449
[1]	6	10.0	2544.2	2479.3	5.9	0.388
	7	12.0	2595.5	2530.6	6.6	0.344
	8	14.0	2625.9	2561.0	7.1	0.309
	9	16.0	2646.7	2581.8	7.6	0.280
	10	18.0	2662.2	2597.3	8.0	0.257
	11	20.0	2674.0	2609.1	8.4	0.237
	12	22.0	2683.1	2618.1	8.7	0.220
	13	24.0	2690.9	2626.0	9.0	0.205
	14	26.0	2696.6	2631.7	9.3	0.192
	15	28.0	2700.9	2636.0	9.5	0.181
D	16	29.5	2703.7	2638.7	9.7	0.173
			SECOND FLOW			
E	1	0.0	79.7			
	2	10.0	86.8	7.1		
	3	20.0	99.6	12.8		
	4	30.0	112.6	13.0		
	5	40.0	126.3	13.7		
	6	50.0	139.8	13.4		
	7	60.0	152.4	12.6		
	8	70.0	165.3	12.9		
	9	80.0	177.6	12.2		
F	10	91.5	192.3	14.8		
			SECOND CLOSED-IN			
F	1	0.0	192.3			
	2	10.0	2442.0	2249.7	9.1	1.066
	3	20.0	2608.4	2416.1	16.8	0.800
	4	30.0	2658.5	2466.2	23.4	0.656
	5	40.0	2682.7	2490.3	29.0	0.562

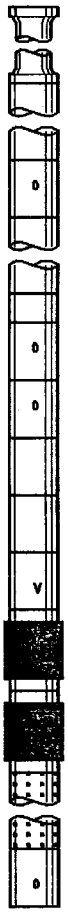
REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	6	50.0	2696.6	2504.3	34.0	0.494
	7	60.0	2706.0	2513.6	38.3	0.442
	8	70.0	2711.9	2519.6	42.1	0.401
	9	80.0	2715.4	2523.1	45.6	0.366
	10	90.0	2717.5	2525.1	48.7	0.338
	11	100.0	2719.8	2527.4	51.4	0.314
	12	110.0	2721.3	2528.9	54.0	0.293
	13	120.0	2722.4	2530.0	56.3	0.275
	14	130.0	2723.4	2531.1	58.4	0.259
	15	140.0	2724.3	2531.9	60.3	0.245
	16	150.0	2725.2	2532.9	62.1	0.232
	17	160.0	2725.7	2533.4	63.8	0.221
	18	170.0	2726.7	2534.4	65.3	0.210
G	19	179.5	2727.0	2534.6	66.6	0.202

LEGEND:
[1] STAIR-STEP

REMARKS:

TICKET NO. 71806100

		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	7053.0	
3	DRILL COLLARS.....	7.000	2.250	565.3	
50	IMPACT REVERSING SUB.....	6.500	2.870	1.2	7618.0
3	DRILL COLLARS.....	7.000	2.250	96.3	
5	CROSSOVER.....	5.750	2.750	1.0	
13	DUAL CIP SAMPLER.....	5.750	0.870	7.0	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	7727.0
80	AP RUNNING CASE.....	5.000	2.250	4.1	7729.0
15	JAR.....	5.030	1.750	5.0	
16	VR SAFETY JOINT.....	5.000	1.000	2.9	
70	OPEN HOLE PACKER.....	7.750	1.530	5.8	7744.0
70	OPEN HOLE PACKER.....	7.750	1.530	5.8	7750.0
20	FLUSH JOINT ANCHOR.....	5.750	2.870	35.0	
81	BLANKED-OFF RUNNING CASE.....	5.750		4.2	7788.0



TOTAL DEPTH 7791.0

EQUIPMENT DATA

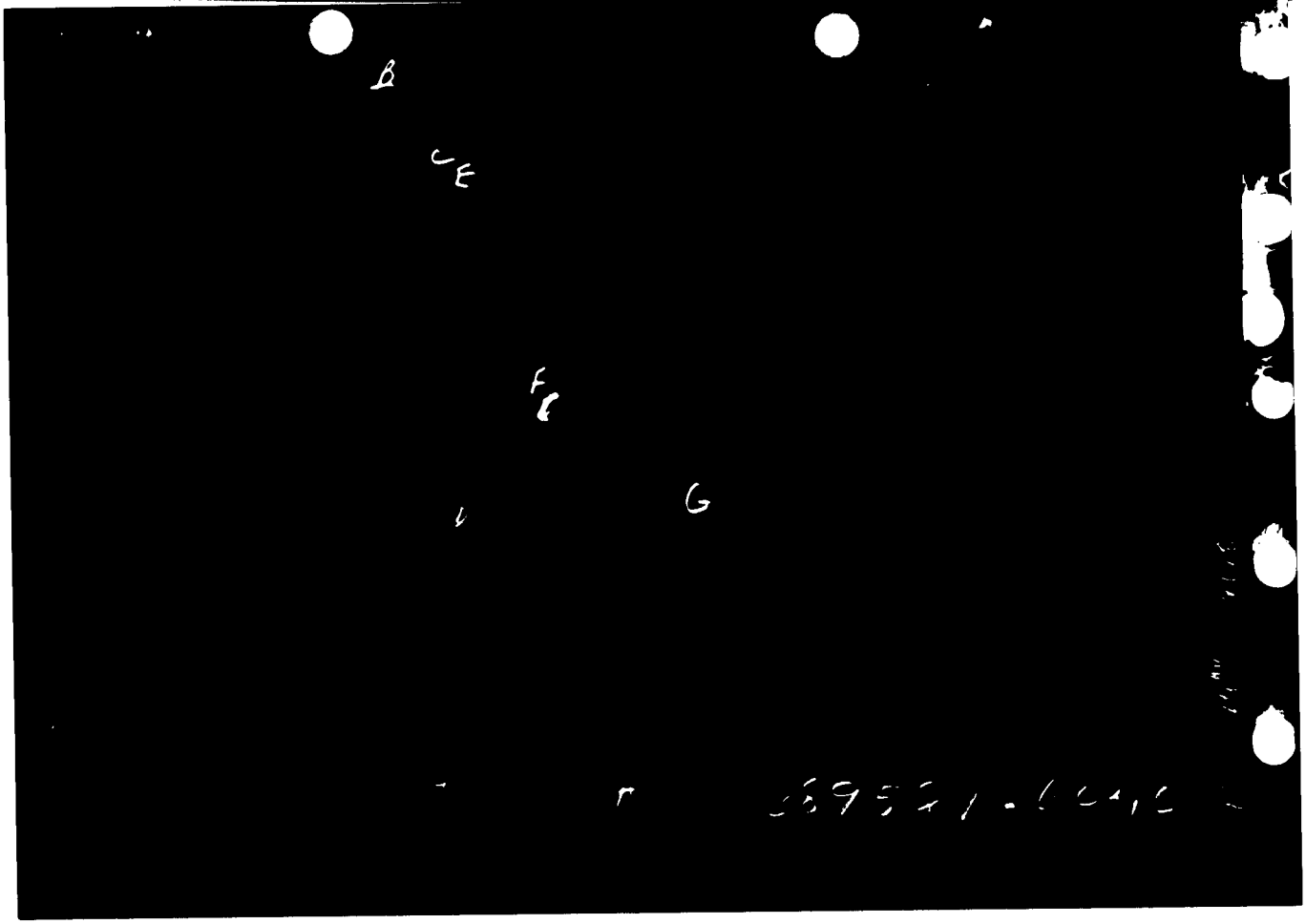
HALLIBURTON
SERVICES

TICKET NO. 68958100
15-MAR-84
FARMINGTON

FORMATION TESTING SERVICE REPORT

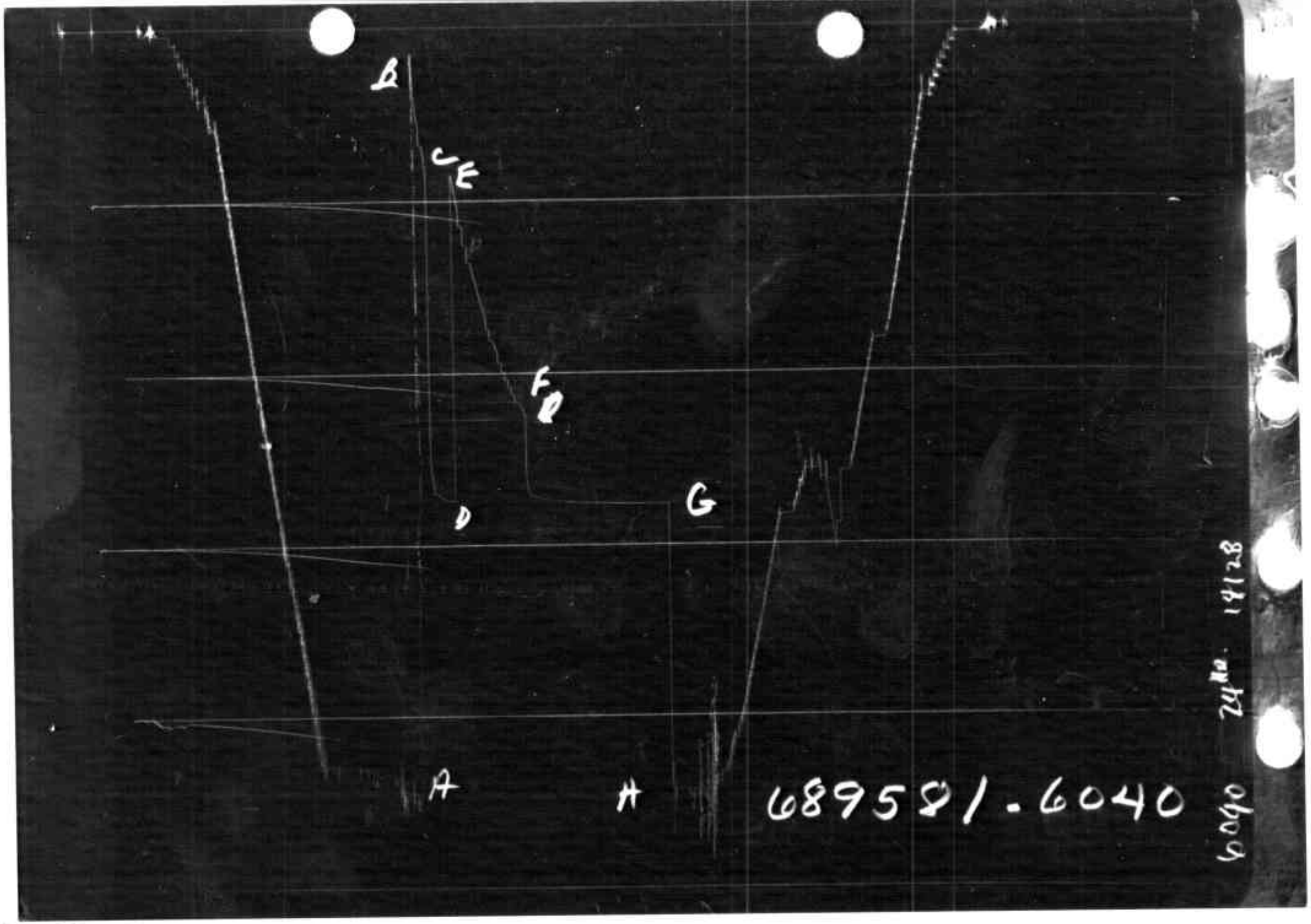
MINERAL CANYON FEDERAL	1-3	4	7789.' - 7840.'	ENSERCH EXPLORATION INCORPORATED
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME

LEGAL LOCATION SEC. - TWP. - RNG.	FIELD AREA	COUNTY	STATE
3-26S-19E	WILDCAT	GRAND	UTAH OR



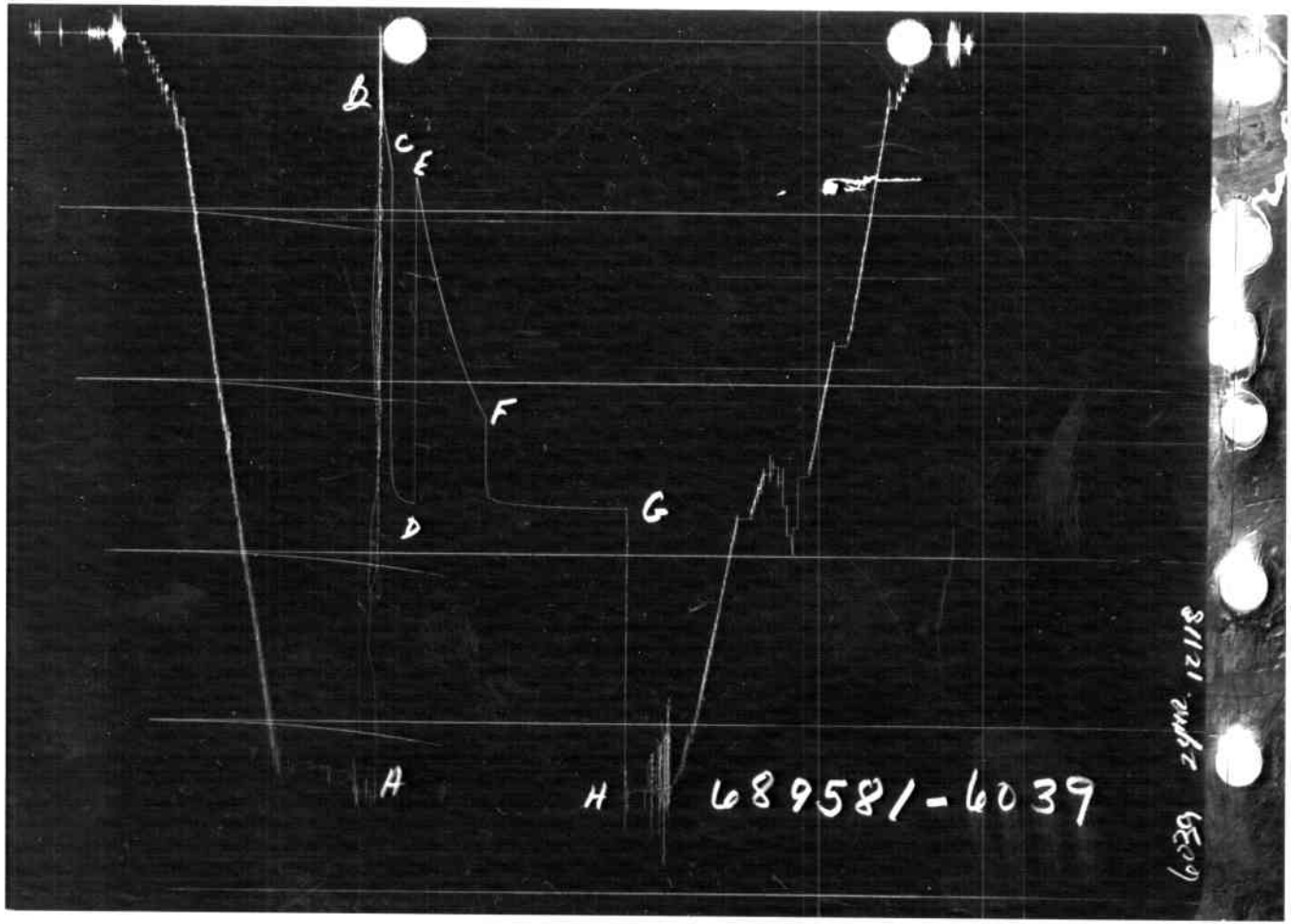
GAUGE NO: 6040 DEPTH: 7837.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	4453	4431.9			
B	INITIAL FIRST FLOW	148	144.9	16.0	16.0	F
C	FINAL FIRST FLOW	806	797.2			
C	INITIAL FIRST CLOSED-IN	806	797.2	32.0	30.9	C
D	FINAL FIRST CLOSED-IN	2735	2737.1			
E	INITIAL SECOND FLOW	833	846.0	90.0	91.8	F
F	FINAL SECOND FLOW	2261	2234.9			
F	INITIAL SECOND CLOSED-IN	2261	2234.9	182.0	181.3	C
G	FINAL SECOND CLOSED-IN	3235	2756.0			
H	FINAL HYDROSTATIC	4399	4423.2			



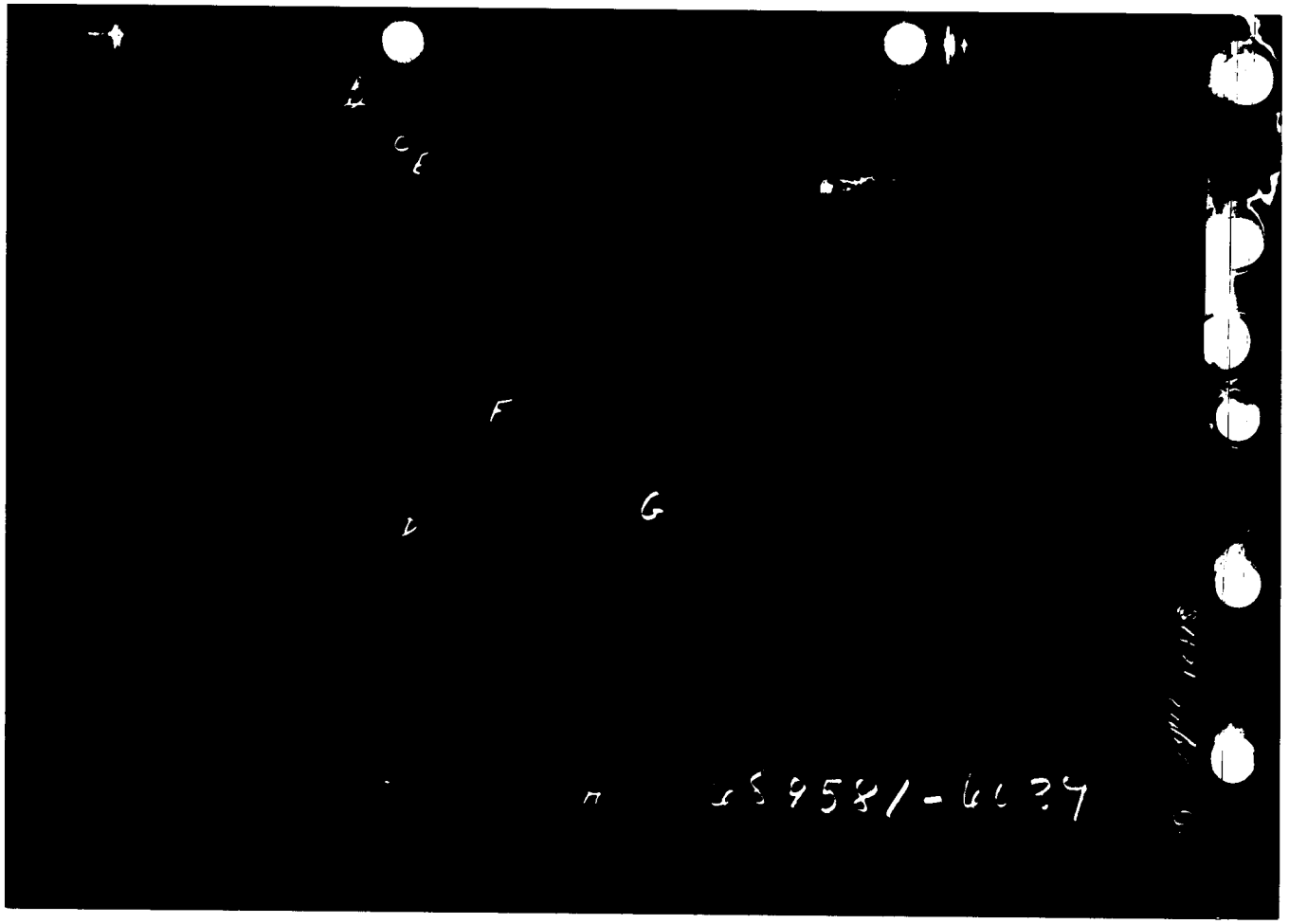
GAUGE NO: 6040 DEPTH: 7837.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	



GAUGE NO: 6039 DEPTH: 7768.0 BLANKED OFF: NO HOUR OF CLOCK: 24

		PRESSURE	TIME	



GAUGE NO: 6039 DEPTH: 7768.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	4424	4391.3			
B	INITIAL FIRST FLOW	134	281.5	16.0	16.0	F
C	FINAL FIRST FLOW	750	771.7			
C	INITIAL FIRST CLOSED-IN	750	771.7	32.0	30.9	C
D	FINAL FIRST CLOSED-IN	2703	2704.7			
E	INITIAL SECOND FLOW	804	805.2	90.0	91.8	F
F	FINAL SECOND FLOW	2204	2208.5			
F	INITIAL SECOND CLOSED-IN	2204	2208.5	182.0	181.3	C
G	FINAL SECOND CLOSED-IN	2703	2722.8			
H	FINAL HYDROSTATIC	4370	4382.1			

EQUIPMENT & HOLE DATA

FORMATION TESTED: MISSISSIPPI MADISON
NET PAY (ft): 40.0
GROSS TESTED FOOTAGE: 51.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 8.750
ELEVATION (ft): 5875
TOTAL DEPTH (ft): 7840.0
PACKER DEPTH(S) (ft): 7783, 7789
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 10.70
MUD VISCOSITY (sec): 51
ESTIMATED HOLE TEMP. (°F): 120
ACTUAL HOLE TEMP. (°F): 122 @ 7836.0 ft

TICKET NUMBER: 68958100

DATE: 3-11-84 TEST NO: 4

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: FARMINGTON

TESTER: GUNN

WITNESS:

DRILLING CONTRACTOR: LOFFLAND BROTHERS #1

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
MUD PIT	@ °F	83000 ppm
TOP	@ °F	34000 ppm
SAMPLER	@ °F	34000 ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm

SAMPLER DATA

Psig AT SURFACE: 16
cu.ft. OF GAS: 0.00
cc OF OIL: 0
cc OF WATER: 2500
cc OF MUD: 0
TOTAL LIQUID cc: 2500

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): @ °F
GAS/OIL RATIO (cu.ft. per bbl):
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT

RECOVERED:

4684' (66.7 BARRELS) OF H2S WATER (FORMATION H20)

MEASURED FROM TESTER VALVE

REMARKS:

TIGHT HOLE

SAMPLER, MIDDLE, AND BOTTOM RECOVERY WAS SOUR WATER.

ELEVATION REPORTED WAS MEASURED AT GROUND LEVEL

TYPE & SIZE MEASURING DEVICE: _____					TICKET NO: 68958100
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
3-10-84					
2115					ON LOCATION
2315					PICKED UP TOOLS
3-11-84					
0010					TRIPPED IN HOLE WITH DST #4
0525					ON BOTTOM
0530	1/8BH				OPENED TOOL WITH A WEAK BLOW
					1 1/2" IN BUBBLE BUCKET
0535	"	9 OZ.			GOOD BLOW-BOTTOM OF BUCKET
0540	"	19 OZ			SAME
0546	"	29 OZ			CLOSED TOOL-NO GAS AT SURFACE
0618	"	0			OPENED TOOL WITH A FAIR BLOW
					6" IN BUBBLE BUCKET
0623	"	11.5 OZ			GOOD BLOW-BOTTOM OF BUCKET
0635	"	30.5 OZ			GOOD BLOW THROUGHOUT PERIOD.
0650	"	3.5#			
0705	"	5.0#			
0720	"	5.5#			
0735	"	6.5#			
0748	"	6.75#			CLOSED TOOL-NO GAS AT SURFACE
1050					PULLED OFF BOTTOM-OPENED
					BYPASS
1150					TRIPPED OUT OF HOLE WITH DST
					#4
1400					HIT FLUID, DROPPED BAR AND
					REVERSE OUT
1445					FINISH TRIPPING OUT OF HOLE
1715					OUT OF HOLE
					LAID TOOLS DOWN
2000					JOB COMPLETED

TICKET NO: 68958100	GAUGE NO: 6039
CLOCK NO: 12118 HOUR: 24	DEPTH: 7768.0

HALLIBURTON SERVICES

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0.0	281.5			
	2	4.0	423.6	142.1		
	3	8.0	547.6	124.0		
	4	12.0	669.3	121.7		
C	5	16.0	771.7	102.4		
			FIRST CLOSED-IN			
C	1	0.0	771.7			
	2	2.0	2561.8	1790.1	1.8	0.952
	3	4.0	2612.3	1840.6	3.2	0.697
	4	6.0	2637.2	1865.5	4.4	0.564
	5	8.0	2654.7	1883.1	5.3	0.476
	6	10.0	2665.5	1893.9	6.2	0.414
	7	12.0	2674.2	1902.5	6.8	0.368
	8	14.0	2681.1	1909.4	7.5	0.330
	9	16.0	2686.2	1914.6	8.0	0.301
	10	18.0	2690.4	1918.7	8.5	0.276
	11	20.0	2693.4	1921.7	8.9	0.255
	12	22.0	2696.5	1924.8	9.2	0.237
	13	24.0	2698.4	1926.7	9.6	0.222
	14	26.0	2700.7	1929.0	9.9	0.208
	15	28.0	2702.7	1931.0	10.2	0.196
D	16	30.9	2704.7	1933.1	10.5	0.181
			SECOND FLOW			
E	1	0.0	805.2			
	2	15.0	1154.0	348.8		
	3	30.0	1439.2	285.2		
	4	45.0	1684.5	245.3		
	5	60.0	1884.2	199.7		
	6	75.0	2055.4	171.2		
F	7	91.8	2208.5	153.1		
			SECOND CLOSED-IN			
F	1	0.0	2208.5			
	2	10.0	2680.8	472.3	9.1	1.071
	3	20.0	2691.4	482.9	16.9	0.806
	4	30.0	2698.0	489.5	23.4	0.662
	5	40.0	2704.1	495.6	29.2	0.567
	6	50.0	2707.7	499.2	34.2	0.499
	7	60.0	2711.5	503.0	38.5	0.446
	8	70.0	2713.5	505.0	42.4	0.405
	9	80.0	2715.0	506.5	45.9	0.370
	10	90.0	2716.8	508.3	49.0	0.342
	11	100.0	2717.7	509.2	51.9	0.318
	12	110.0	2719.1	510.6	54.4	0.297

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	13	120.0	2720.7	512.2	56.8	0.278
	14	130.0	2720.7	512.2	58.9	0.262
	15	140.0	2721.5	513.0	60.9	0.248
	16	150.0	2721.9	513.4	62.7	0.235
	17	160.0	2721.9	513.4	64.4	0.224
	18	170.0	2721.9	513.4	65.9	0.213
G	19	181.3	2722.8	514.3	67.6	0.203

REMARKS:

TICKET NO: 68958100	GAUGE NO: 6040
CLOCK NO: 14128 HOUR: 24	DEPTH: 7837.0

HALLIBURTON SERVICES

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		FIRST FLOW				
B	1	0.0	144.9			
	2	4.0	471.6	326.7		
	3	8.0	676.9	205.3		
	4	12.0	697.3	20.4		
C	5	16.0	797.2	99.9		
		FIRST CLOSED-IN				
C	1	0.0	797.2			
	2	2.0	2588.1	1790.9	1.8	0.947
	3	4.0	2643.6	1846.4	3.2	0.698
	4	6.0	2690.4	1893.2	4.4	0.563
	5	8.0	2689.7	1892.5	5.3	0.475
	6	10.0	2697.3	1900.1	6.1	0.415
	7	12.0	2707.3	1910.1	6.8	0.368
	8	14.0	2714.1	1916.9	7.5	0.331
	9	16.0	2721.7	1924.5	8.0	0.301
	10	18.0	2722.9	1925.7	8.5	0.275
	11	20.0	2727.6	1930.5	8.9	0.255
	12	22.0	2729.1	1931.9	9.2	0.237
	13	24.0	2732.2	1935.1	9.6	0.222
	14	26.0	2733.6	1936.4	9.9	0.208
	15	28.0	2737.4	1940.2	10.2	0.196
D	16	30.9	2737.1	1939.9	10.5	0.181
		SECOND FLOW				
E	1	0.0	846.0			
	2	15.0	1251.5	405.5		
	3	30.0	1469.8	218.3		
	4	45.0	1741.2	271.5		
	5	60.0	1936.5	195.3		
	6	75.0	2118.4	181.9		
F	7	91.8	2234.9	116.5		
		SECOND CLOSED-IN				
F	1	0.0	2234.9			
	2	10.0	2705.8	471.0	9.1	1.073
	3	20.0	2720.7	485.9	16.8	0.806
	4	30.0	2731.7	496.8	23.5	0.662
	5	40.0	2736.6	501.7	29.2	0.568
	6	50.0	2741.1	506.2	34.1	0.499
	7	60.0	2743.8	508.9	38.5	0.446
	8	70.0	2746.1	511.2	42.4	0.405
	9	80.0	2748.4	513.5	45.9	0.370
	10	90.0	2749.3	514.5	49.0	0.342
	11	100.0	2750.9	516.1	51.9	0.317
	12	110.0	2751.6	516.8	54.4	0.296

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		SECOND CLOSED-IN - CONTINUED				
	13	120.0	2752.8	518.0	56.8	0.278
	14	130.0	2753.0	518.1	58.9	0.262
	15	140.0	2753.4	518.5	60.9	0.248
	16	150.0	2753.4	518.5	62.7	0.235
	17	160.0	2754.7	519.9	64.4	0.224
	18	170.0	2754.7	519.9	65.9	0.213
G	19	181.3	2756.0	521.1	67.6	0.203

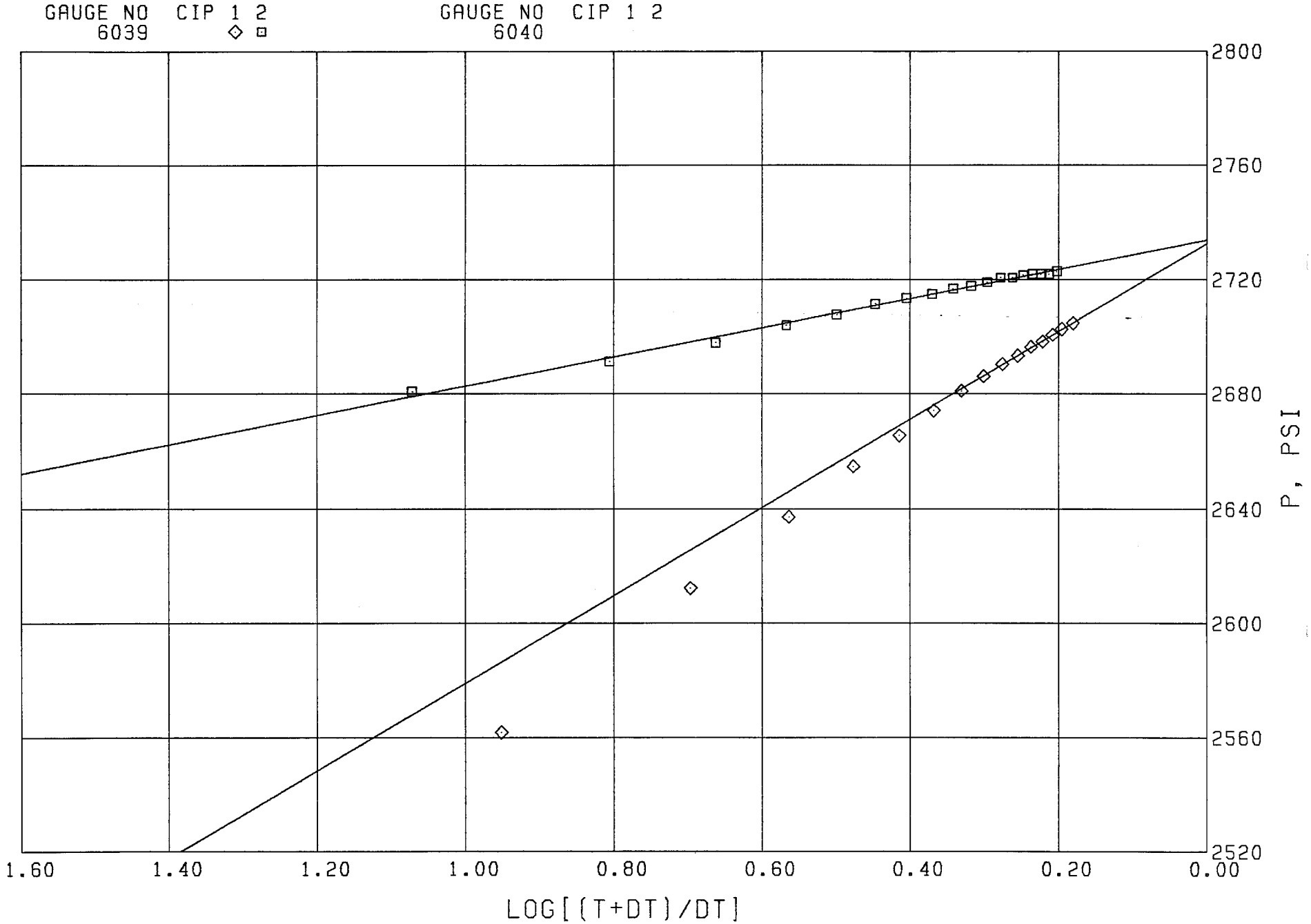
REMARKS:

TICKET NO. 68958100

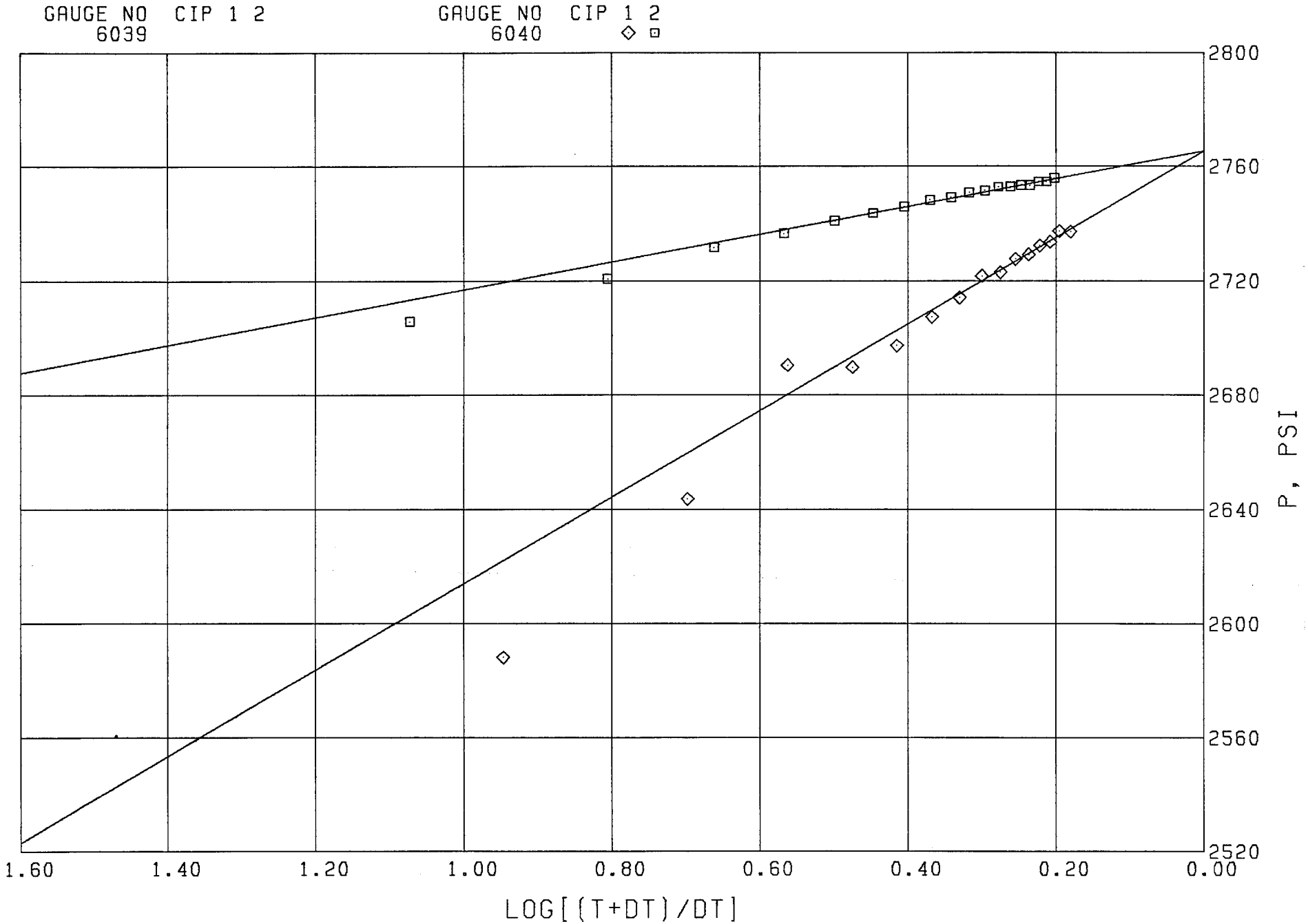
		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	7095.0	
3	DRILL COLLARS.....	7.000	2.250	565.3	
50	IMPACT REVERSING SUB.....	6.500	2.870	1.2	7660.0
3	DRILL COLLARS.....	7.000	2.250	93.3	
5	CROSSOVER.....	5.750	2.750	1.0	
13	DUAL CIP SAMPLER.....	5.750	0.870	7.0	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	7766.0
80	AP RUNNING CASE.....	5.000	2.250	4.0	7768.0
15	JAR.....	5.030	1.750	5.0	
16	VR SAFETY JOINT.....	5.000	1.000	3.0	
70	OPEN HOLE PACKER.....	7.750	1.530	6.0	7783.0
70	OPEN HOLE PACKER.....	7.750	1.530	6.0	7789.0
21	PERFORATED TAIL PIPE.....	5.750	2.870	45.0	
81	BLANKED-OFF RUNNING CASE.....	5.750		4.0	7837.0
	TOTAL DEPTH				7840.0

EQUIPMENT DATA

TICKET NO 68958100



TICKET NO 68958100



TICKET NUMBER 68958100

SUMMARY
OF
RESERVOIR PARAMETERS
USING HORNER METHOD

OIL GRAVITY 0.0 @60° | WATER % SALT 3.4
GAS GRAVITY 0.700 | FLUID GRADIENT 0.4439 psi/ft
GAS/OIL RATIO 0.0 cu.ft/bbl | FORMATION VOL FACTOR 1.013 vol/vol
TEMPERATURE 122.0 °F | FLUID PROPERTIES AT 2765.4 Psig
VISCOSITY 0.587 cp | NET PAY 40.0 ft
PIPE CAPACITY FACTOR(S) 0.00492 0.01422 bbl/ft

GAUGE NUMBER		6039	6040					
GAUGE DEPTH		7768.0	7837.0					
FLOW AND CIP PERIOD		2	2					UNITS
FINAL FLOW PRESSURE	P_f	2208.5	2234.9					Psig
TOTAL FLOW TIME	t	107.7	107.7					min
EXTRAPOLATED PRESSURE	P*	2733.7	2765.4					Psig
ONE CYCLE PRESSURE		2682.7	2716.9					Psig
PRODUCTION RATE	Q	630.8	590.8					BPD
TRANSMISSIBILITY	kh/μ	2035.64	2007.26					$\frac{md-ft}{cp}$
FLOW CAPACITY	kh	1194.40	1177.75					md-ft
PERMEABILITY	k	29.8601	29.4438					md
DAMAGE RATIO	DR	1.88	2.00					
POTENTIAL RATE	Q_1	1188.1	1183.4					BPD
RADIUS OF INVESTIGATION	r_i	262.6	260.8					ft

REMARKS:
ANALYSIS WAS BASED ON SALTWATER PRODUCTION WITH A SALINITY OF 3.4%

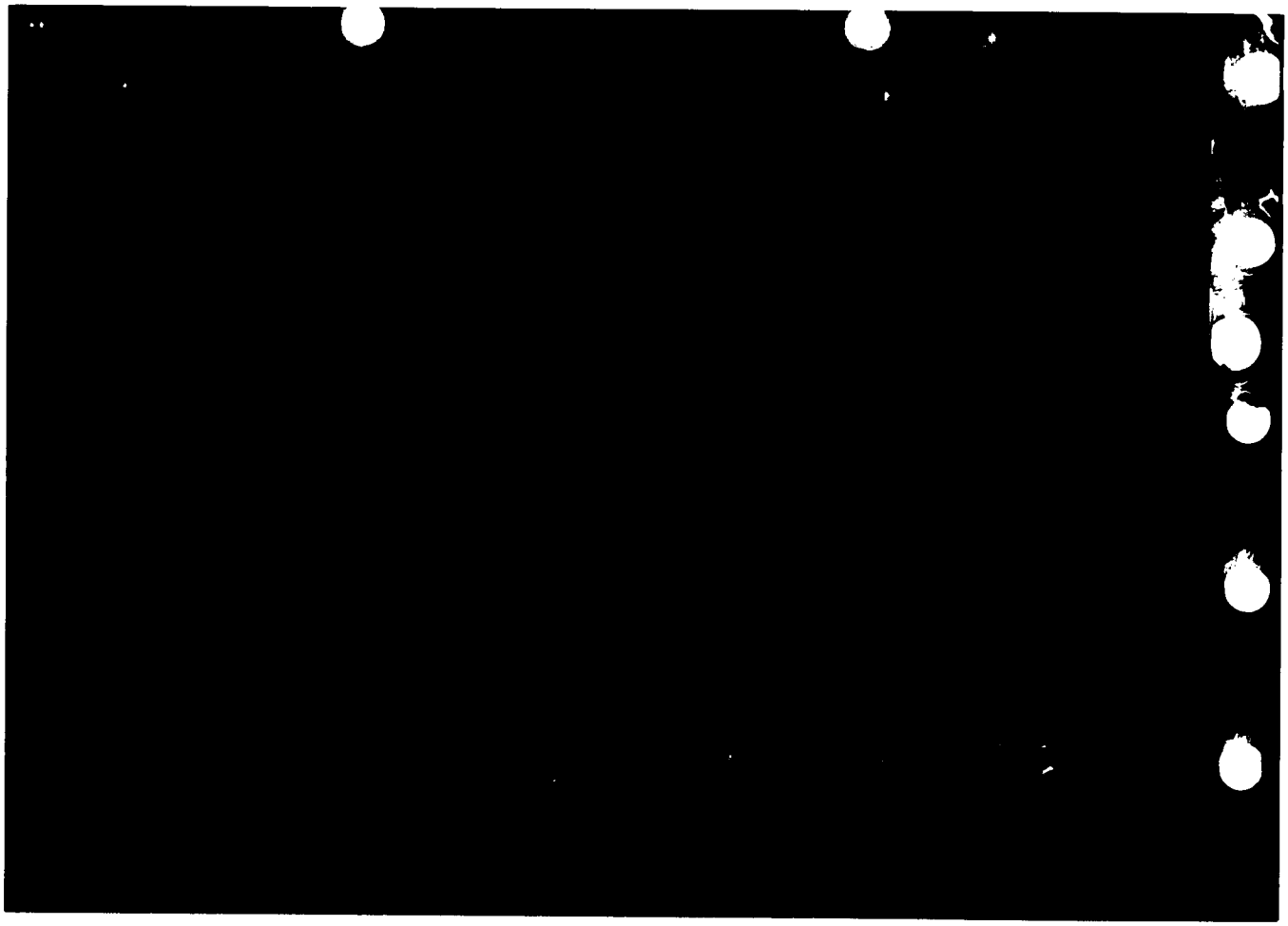
HALLIBURTON
SERVICES

TICKET NO. 67807300
23-MAR-84
VERNAL

FORMATION TESTING SERVICE REPORT

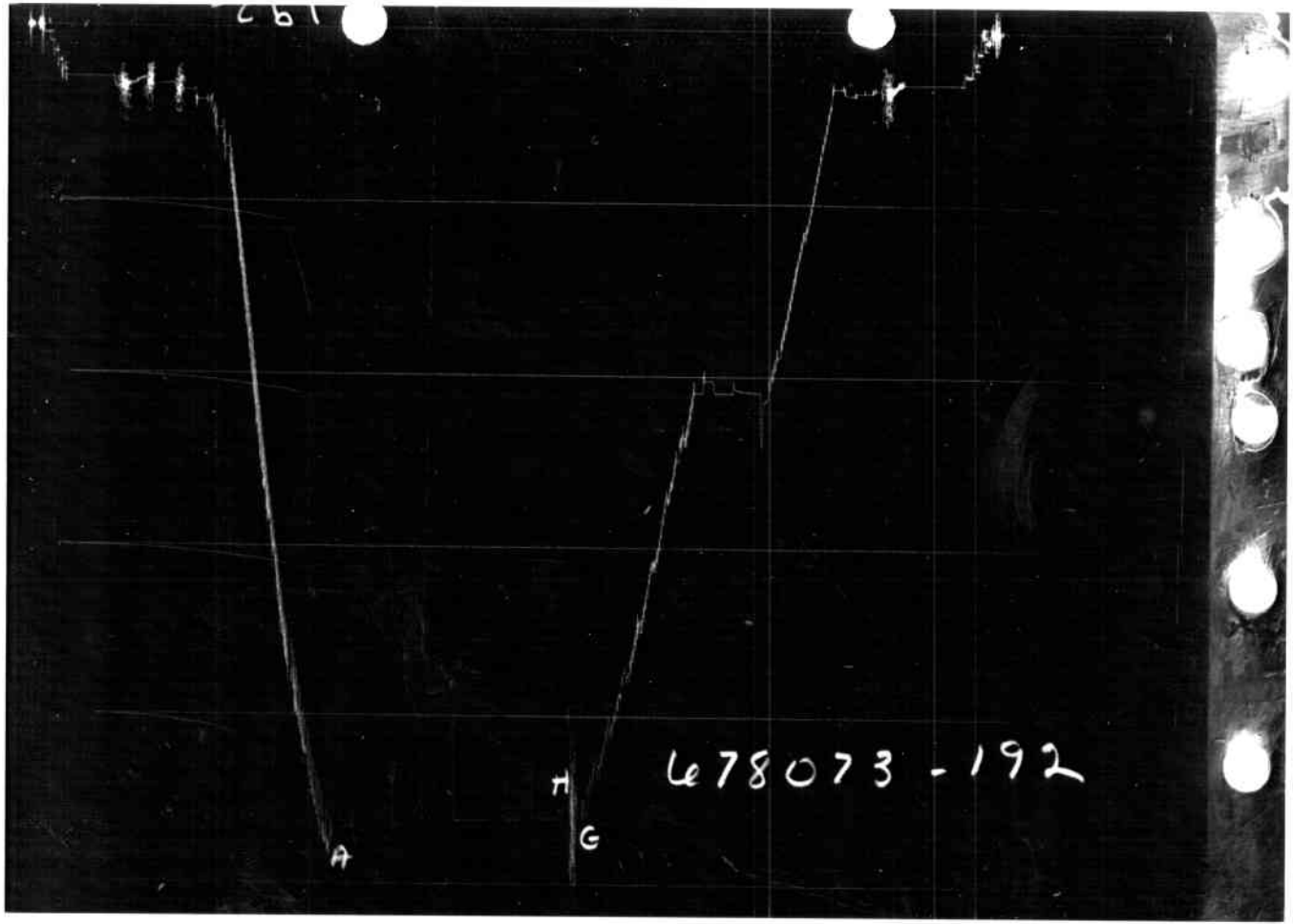
MINERAL CANYON	1-3	5	7608.' - 7643.'	ENSERCH EXPLORATION INCORPORATED
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME

LEGAL LOCATION SEC. - TWP. - RNG.	FIELD AREA	COUNTY	STATE
T 26S-R 19E	WILDCAT	GRAND	UTAH OR

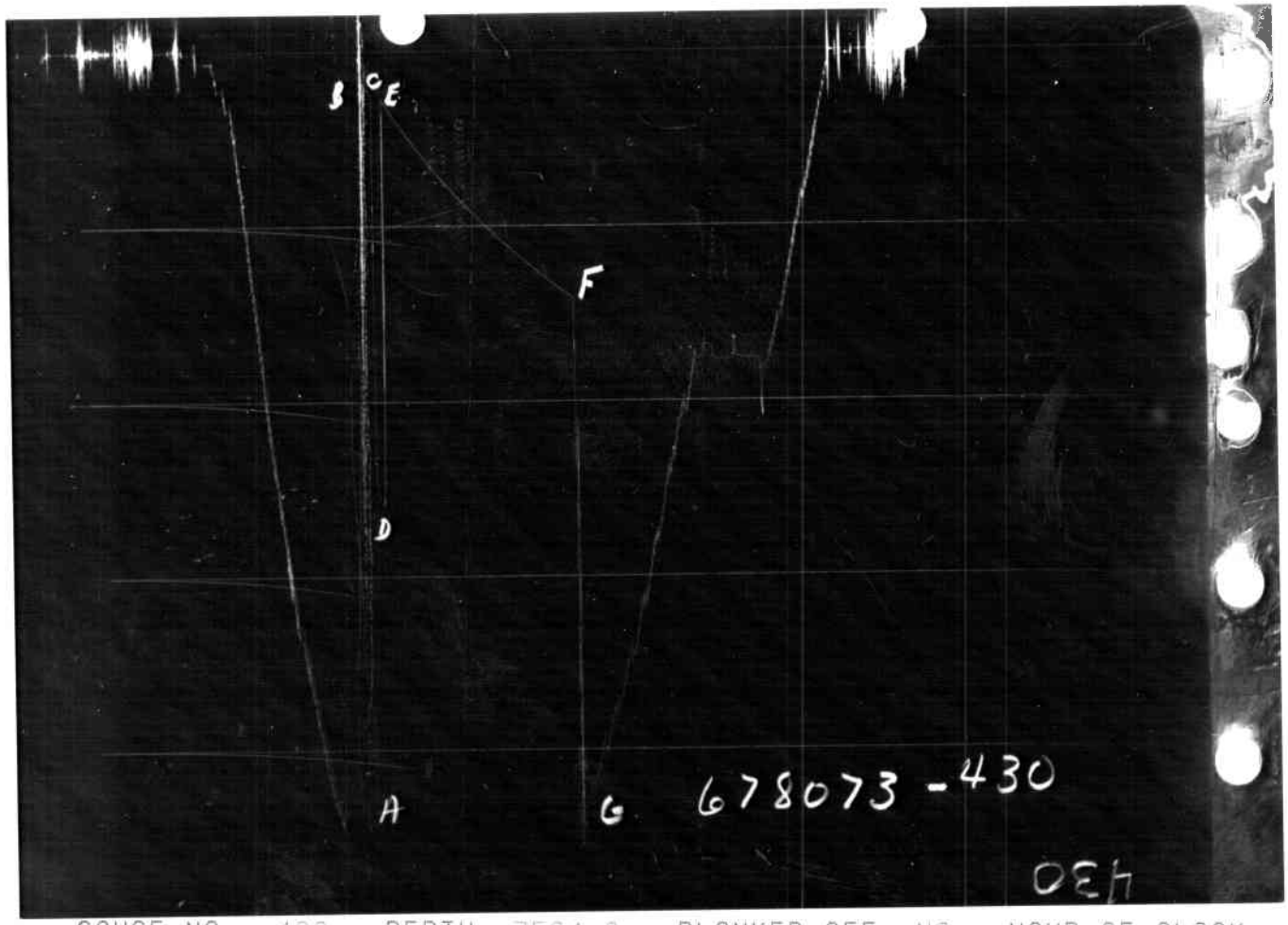


GAUGE NO: 192 DEPTH: 8187.0 BLANKED OFF: YES HOUR OF CLOCK: 24

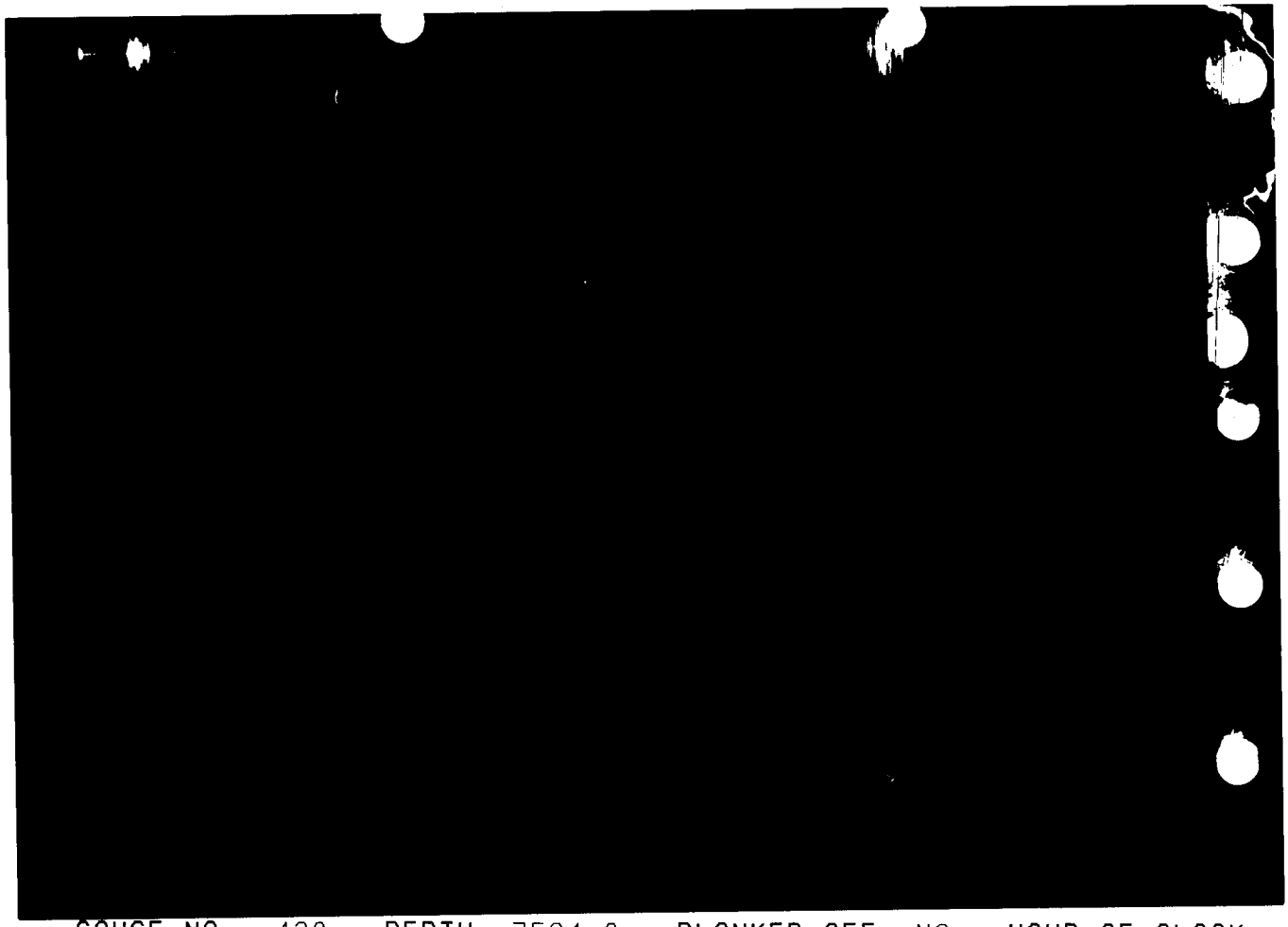
ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	4629	4648.3			
B	INITIAL FIRST FLOW			15.0		F
C	FINAL FIRST FLOW					
C	INITIAL FIRST CLOSED-IN			14.0		C
D	FINAL FIRST CLOSED-IN					
E	INITIAL SECOND FLOW			241.0		F
F	FINAL SECOND FLOW					
G	FINAL HYDROSTATIC	4629	4629.7			
H	HYDROSTATIC RELEASE		4582.8			



GAUGE NO: 192 DEPTH: 8187.0 BLANKED OFF: YES HOUR OF CLOCK: 24

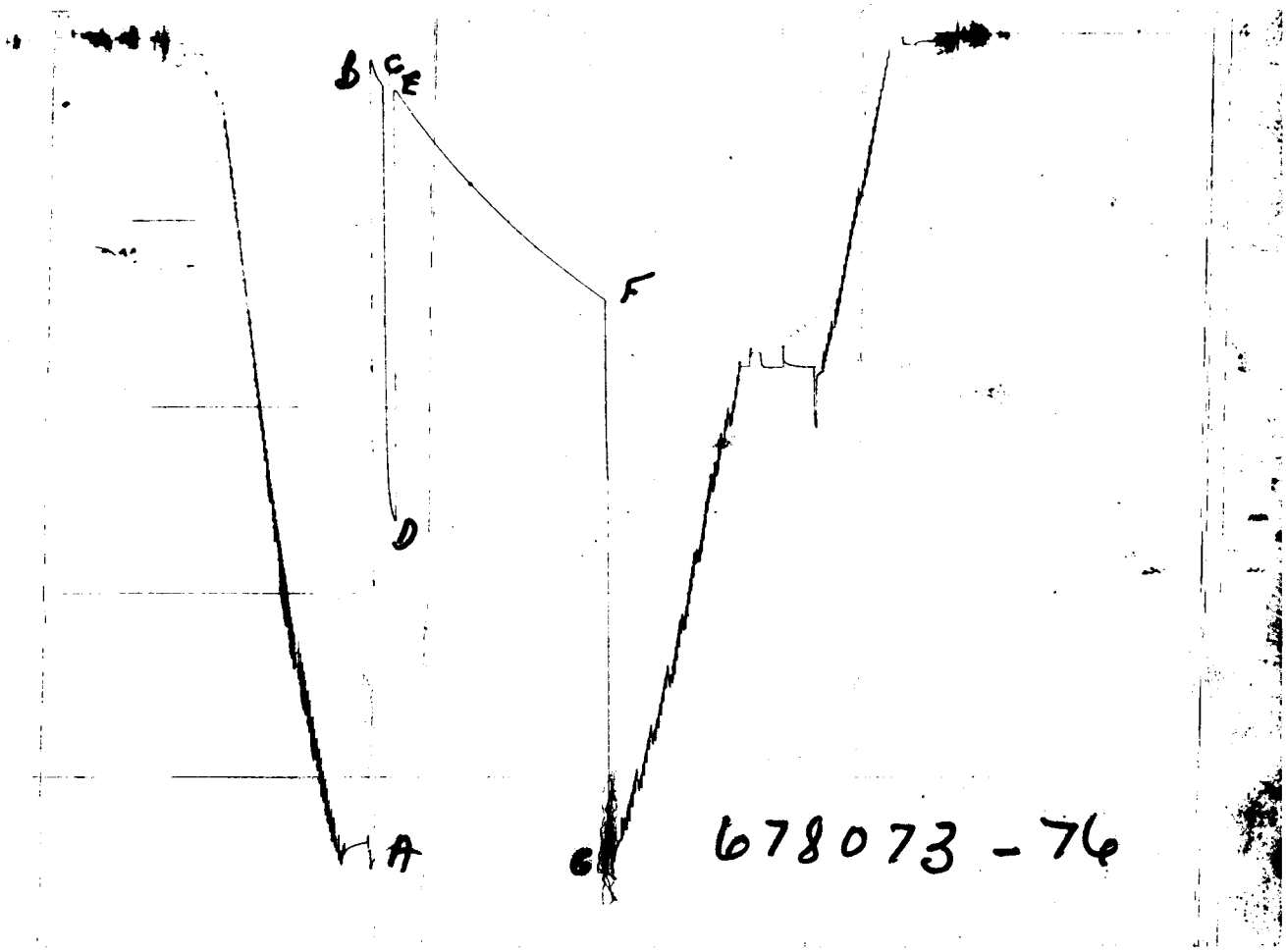


GAUGE NO: 430 DEPTH: 7584.0 BLANKED OFF: NO HOUR OF CLOCK: 24



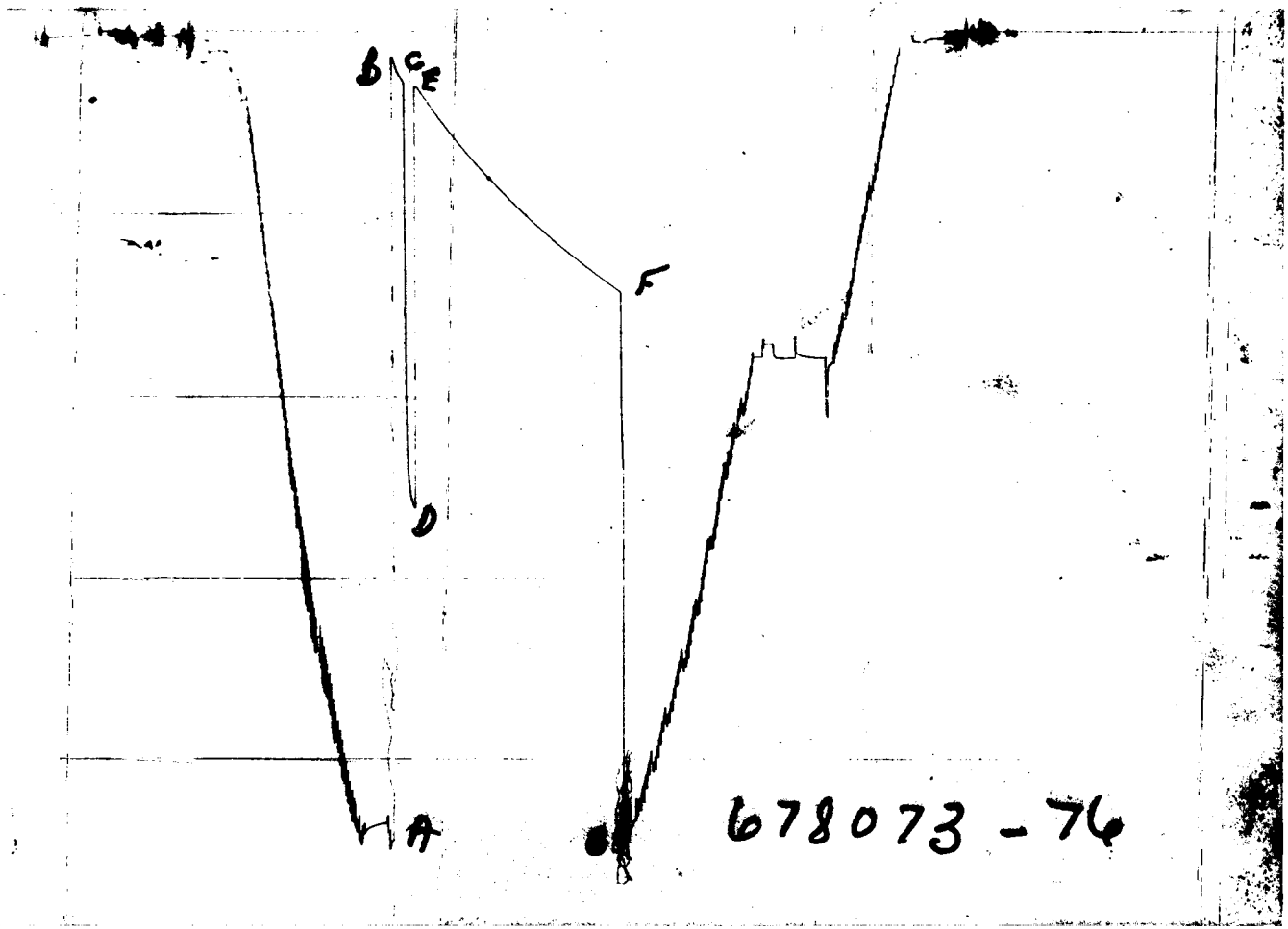
GAUGE NO: 430 DEPTH: 7584.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	4279	4316.3			
B	INITIAL FIRST FLOW	186	118.9	15.0	14.2	F
C	FINAL FIRST FLOW	266	247.6			
C	INITIAL FIRST CLOSED-IN	266	247.6	14.0	9.2	C
D	FINAL FIRST CLOSED-IN	2508	2598.1			
E	INITIAL SECOND FLOW	279	281.6	241.0	246.6	F
F	FINAL SECOND FLOW	1424	1409.1			
G	FINAL HYDROSTATIC	4341	4293.9			
H	HYDROSTATIC RELEASE					



GAUGE NO: 76 DEPTH: 7639.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	4298	4346.1			
B	INITIAL FIRST FLOW	157	142.5	15.0	14.2	F
C	FINAL FIRST FLOW	279	277.2			
C	INITIAL FIRST CLOSED-IN	279	277.2	14.0	9.2	C
D	FINAL FIRST CLOSED-IN	2610	2610.3			
E	INITIAL SECOND FLOW	293	304.5	241.0	246.6	F
F	FINAL SECOND FLOW	1443	1425.1			
G	FINAL HYDROSTATIC	4340	4328.2			
H	HYDROSTATIC RELEASE					



GAUGE NO: 76 DEPTH: 7639.0 BLANKED OFF: YES HOUR OF CLOCK: 24

EQUIPMENT & HOLE DATA

FORMATION TESTED: SEE REMARKS
NET PAY (ft):
GROSS TESTED FOOTAGE: 35.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 9.625
ELEVATION (ft): 5875
TOTAL DEPTH (ft): 8190.0
PACKER DEPTH(S) (ft): 7600, 7608, 7643, 7649
FINAL SURFACE CHOKE (in): 0.125
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 10.80
MUD VISCOSITY (sec): 56
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 120 @ 8186.0 ft

TICKET NUMBER: 67807300

DATE: 3-17-84 TEST NO: 5

TYPE DST: ON BTM. STRADDLE

HALLIBURTON CAMP: VERNAL

TESTER: RIPPLE / RICHARDS

WITNESS: WOODY / MELLINGER

DRILLING CONTRACTOR: LOFFLAND #1

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
MUD PIT	0.043 @ 68 °F	158000 ppm
TOP OF FLUID	0.054 @ 68 °F	115000 ppm
MIDDLE OF FLUID	0.140 @ 68 °F	30300 ppm
BOTTOM OF FLUID	0.360 @ 68 °F	12100 ppm
SAMPLER	0.360 @ 68 °F	12100 ppm
	@ °F	ppm

SAMPLER DATA

Psig AT SURFACE: 500
cu.ft. OF GAS: 0.21
cc OF OIL: 300
cc OF WATER: 1800
cc OF MUD: 0
TOTAL LIQUID cc: 2100

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): 44.5 @ 60°F
GAS/OIL RATIO (cu.ft. per bbl): 111
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT

RECOVERED:

100' OF FREE OIL
186' OF OIL CUT MUD
929' OF SLIGHTLY OIL CUT WATER
1886' OF FORMATION WATER

MEASURED FROM TESTER VALVE

REMARKS:

FINAL CLOSED IN PRESSURE NOT TAKEN AT COMPANY REQUEST.
BOTTOM RECORDER INDICATES FLUID MOVEMENT. ANNULUS MUD DID NOT DROP MORE THAN 3' DURING TEST.
POSSIBILITY THAT FORMATION BELOW BOTTOM PACKERS WAS TAKING SOME FLUID AND WASH PIPE WAS PLUGGING.
FORMATION TESTED: MISSISSIPPIAN- LEADVILLE

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 67807300

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
3-17-84					
0010					ON LOCATION
0030					PICKED UP TOOLS
0400					TRIPPED IN HOLE WITH TOOLS
0757	1/8BH				OPENED TOOL THROUGH BUBBLE
					HOSE
0802		3.5 OZ			
0807		6 OZ			
0812		7 OZ			CLOSED TOOL
0826					OPENED TOOL
0836	1/8BH	11 OZ			
0846	"	13 OZ			
0901	"	15 OZ			
0916	"	17 OZ			
0931	1/8	19 OZ			
0946	"	1			
1001	"	1			
1016	"	1			
1031	"	1			
1046		1.5			
1101		1.5			
1116		1.5			
1131		1.5			
1146		1.5			
1201		1			
1216		1			
1226		1			
1227					CLOSED TOOL
1229					OPENED BYPASS, PULLED OUT
					OF HOLE
1515					DROPPED BAR TO REVERSE OUT
1640					PULLED OUT OF HOLE
2040					DRAINED SAMPLER
2055					BROKE TOOLS, LOADED OUT,
					READ CHARTS
2200					JOB COMPLETED

TICKET NO: 67807300

CLOCK NO: 11654 HOUR: 24

HALLIBURTON SERVICES

GAUGE NO: 430

DEPTH: 7584.0

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
		FIRST FLOW				
B	1	0.0	118.9			
	2	2.0	153.5	34.6		
	3	4.0	182.2	28.7		
	4	6.0	204.8	22.6		
	5	8.0	219.9	15.2		
	6	10.0	233.9	14.0		
	7	12.0	247.7	13.8		
C	8	14.2	247.6	-0.1		
		FIRST CLOSED-IN				
C	1	0.0	247.6			
	2	1.0	2482.9	2235.3	0.9	1.190
	3	2.0	2520.1	2272.5	1.8	0.905
	4	3.0	2546.2	2298.6	2.5	0.758
	5	4.0	2562.2	2314.6	3.1	0.660
	6	5.0	2574.6	2327.0	3.7	0.587
	7	6.0	2586.0	2338.4	4.2	0.529
	8	7.0	2592.7	2345.1	4.7	0.482
	9	8.0	2595.8	2348.2	5.1	0.444
D	10	9.2	2598.1	2350.5	5.6	0.405
		SECOND FLOW				
E	1	0.0	281.6			
	2	5.0	288.0	6.4		
	3	10.0	322.2	34.2		
	4	15.0	358.6	36.4		
	5	20.0	391.2	32.6		
	6	25.0	423.4	32.2		
	7	30.0	454.0	30.6		
	8	35.0	485.0	31.0		
	9	40.0	514.0	29.0		
	10	45.0	546.3	32.3		
	11	50.0	574.5	28.1		
	12	55.0	603.3	28.8		
	13	60.0	632.5	29.2		
	14	65.0	661.8	29.3		
	15	70.0	687.8	26.0		
	16	75.0	714.8	27.0		
	17	80.0	742.4	27.6		
	18	85.1	766.9	24.5		
	19	90.0	790.6	23.7		
	20	95.0	814.8	24.2		
	21	100.0	839.1	24.3		
	22	105.0	861.9	22.8		
	23	110.0	885.6	23.7		
	24	115.0	909.6	24.0		
	25	120.0	932.1	22.5		
	26	125.0	954.8	22.8		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
		SECOND FLOW - CONTINUED				
	27	130.0	976.6	21.7		
	28	135.0	999.1	22.5		
	29	140.0	1020.9	21.8		
	30	145.0	1040.7	19.7		
	31	150.0	1063.0	22.4		
	32	155.0	1082.6	19.6		
	33	160.0	1103.8	21.2		
	34	165.0	1124.9	21.1		
	35	170.0	1143.9	19.1		
	36	175.0	1163.3	19.3		
	37	180.0	1182.2	18.9		
	38	185.0	1201.2	18.9		
	39	190.0	1219.5	18.3		
	40	195.0	1238.6	19.1		
	41	200.0	1257.5	18.9		
	42	205.0	1275.3	17.8		
	43	210.0	1291.8	16.6		
	44	215.0	1308.9	17.1		
	45	220.0	1326.2	17.2		
	46	225.0	1342.8	16.6		
	47	230.0	1358.3	15.5		
	48	235.0	1376.1	17.8		
	49	240.0	1391.1	15.0		
	50	245.0	1408.7	17.6		
F	51	246.6	1409.1	0.4		

REMARKS:

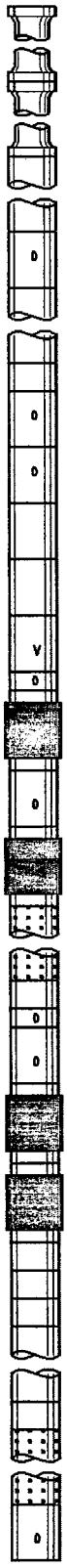
TICKET NO: 67807300		GAUGE NO: 76
CLOCK NO: 2786 HOUR: 24	HALLIBURTON SERVICES	DEPTH: 7639.0

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0.0	142.5			
	2	2.0	153.8	11.3		
	3	4.0	185.8	32.0		
	4	6.0	214.9	29.2		
	5	8.0	234.4	19.4		
	6	10.0	249.9	15.5		
	7	12.0	265.8	15.9		
C	8	14.2	277.2	11.5		
			FIRST CLOSED-IN			
C	1	0.0	277.2			
	2	1.0	2050.1	1772.9	0.9	1.181
	3	2.0	2339.2	2061.9	1.8	0.908
	4	3.0	2435.8	2158.6	2.5	0.755
	5	4.0	2498.9	2221.7	3.1	0.659
	6	5.0	2538.6	2261.3	3.7	0.585
	7	6.0	2563.6	2286.4	4.2	0.529
	8	7.0	2583.4	2306.2	4.7	0.481
	9	8.0	2599.6	2322.3	5.1	0.444
D	10	9.2	2610.3	2333.1	5.6	0.405
			SECOND FLOW			
E	1	0.0	304.5			
	2	5.0	313.3	8.8		
	3	10.0	348.5	35.2		
	4	15.0	381.3	32.8		
	5	20.0	413.3	32.0		
	6	25.0	446.9	33.7		
	7	30.0	477.7	30.7		
	8	35.0	507.7	30.1		
	9	40.0	537.8	30.1		
	10	45.0	567.1	29.3		
	11	50.0	596.5	29.4		
	12	55.0	623.9	27.3		
	13	60.0	650.7	26.8		
	14	65.0	677.9	27.2		
	15	70.0	705.9	28.0		
	16	75.0	731.1	25.1		
	17	80.0	754.7	23.6		
	18	85.0	782.2	27.5		
	19	90.0	805.1	22.9		
	20	95.0	828.3	23.2		
	21	100.0	853.7	25.4		
	22	105.0	877.6	23.9		
	23	110.0	900.4	22.8		
	24	115.0	924.6	24.2		
	25	120.0	946.8	22.2		
	26	125.0	968.9	22.1		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND FLOW - CONTINUED			
	27	130.0	990.2	21.3		
	28	135.0	1012.6	22.4		
	29	140.0	1035.3	22.7		
	30	145.0	1056.4	21.1		
	31	150.0	1077.6	21.2		
	32	155.0	1097.2	19.7		
	33	160.1	1117.5	20.2		
	34	165.0	1136.1	18.7		
	35	170.0	1157.3	21.2		
	36	175.0	1175.3	18.0		
	37	180.0	1194.5	19.1		
	38	185.0	1213.7	19.3		
	39	190.0	1231.7	18.0		
	40	195.0	1249.2	17.5		
	41	200.0	1267.0	17.9		
	42	205.0	1285.9	18.8		
	43	210.0	1301.8	15.9		
	44	215.0	1319.8	18.0		
	45	220.0	1336.4	16.6		
	46	225.0	1354.2	17.7		
	47	230.0	1372.2	18.0		
	48	235.0	1389.5	17.3		
	49	240.0	1404.2	14.7		
	50	245.0	1420.2	16.1		
F	51	246.6	1425.1	4.8		

REMARKS:

TICKET NO. 67807300



		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	7259.0	
4	FLEX WEIGHT.....	4.500	2.875	182.4	
3	DRILL COLLARS.....	7.000	2.250	96.5	
50	IMPACT REVERSING SUB.....	6.500	3.000	1.0	7338.0
3	DRILL COLLARS.....	7.000	2.250	31.1	
5	CROSSOVER.....	6.750	2.875	0.8	
13	DUAL CIP SAMPLER.....	5.000	0.750	6.8	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	7582.0
80	AP RUNNING CASE.....	5.000	3.060	4.1	7584.0
15	JAR.....	5.000	1.750	5.0	
16	VR SAFETY JOINT.....	5.000	1.000	2.9	
17	PRESSURE EQUALIZING CROSSOVER...	5.000	1.000	1.0	
70	OPEN HOLE PACKER.....	7.750	1.530	5.8	7600.0
18	DISTRIBUTOR VALVE.....	5.000	1.680	2.0	
70	OPEN HOLE PACKER.....	7.750	1.530	5.8	7608.0
20	FLUSH JOINT ANCHOR.....	5.750	2.870	26.0	
5	CROSSOVER.....	5.500	1.000	0.7	
17	PRESSURE EQUALIZING CROSSOVER...	5.000	1.000	1.0	
81	BLANKED-OFF RUNNING CASE.....	5.000		4.1	7639.0
70	OPEN HOLE PACKER.....	7.750	1.530	5.8	7643.0
70	OPEN HOLE PACKER.....	7.750	1.530	5.8	7649.0
5	CROSSOVER.....	4.813	1.625	1.1	
5	CROSSOVER.....	5.750	2.063	0.9	
5	CROSSOVER.....	6.500	2.813	0.8	
3	DRILL COLLARS.....	7.000	2.250	526.8	
5	CROSSOVER.....	6.500	2.500	0.9	
20	FLUSH JOINT ANCHOR.....	5.750	2.870	2.0	
81	BLANKED-OFF RUNNING CASE.....	5.750		4.2	8187.0

TOTAL DEPTH 8190.0

EQUIPMENT DATA

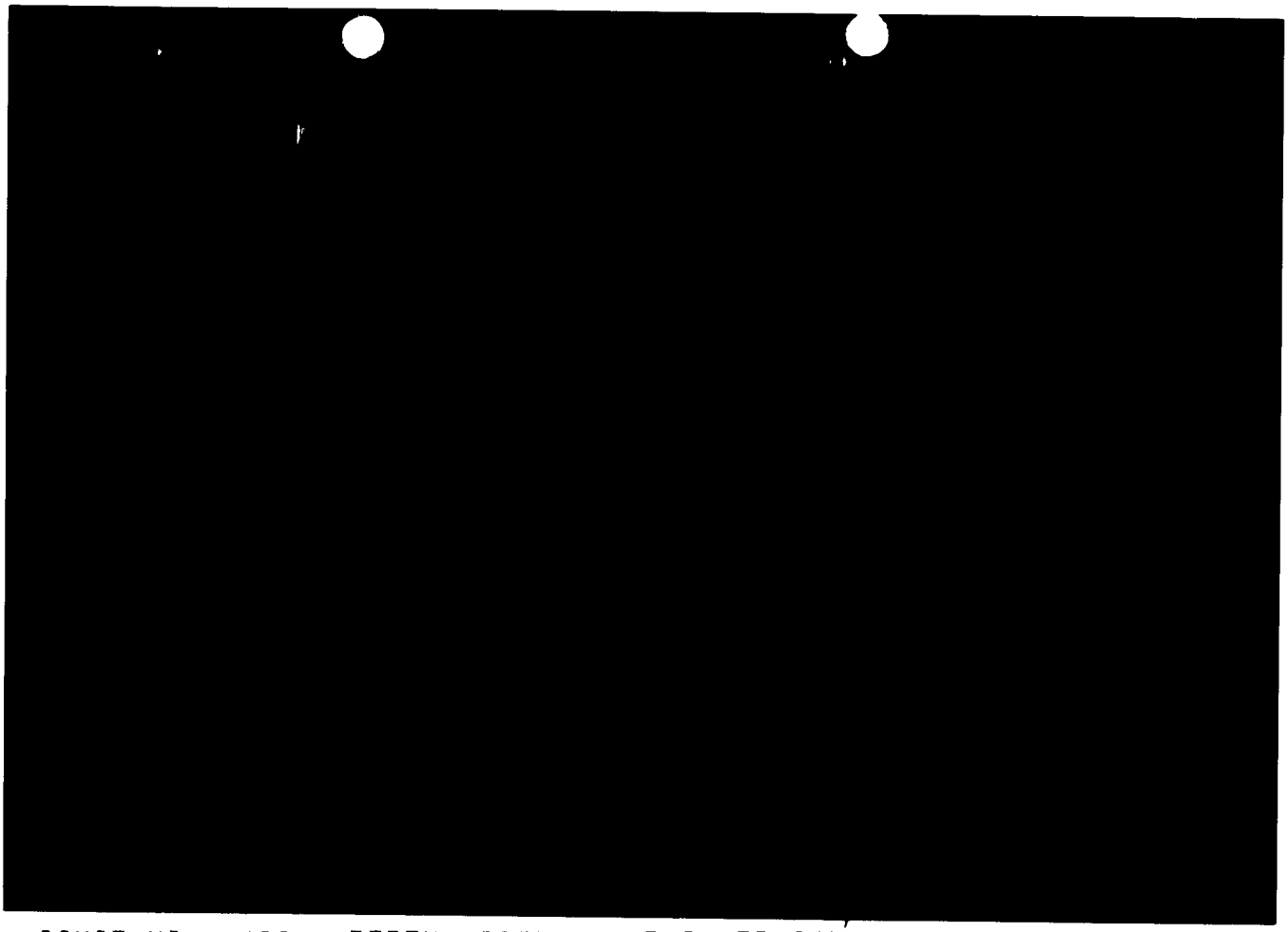
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME
MINERAL CANYON	1-3	6	3890.' - 4460.'	ENSERCH EXPLORATION INCORPORATED

LEGAL LOCATION SEC. - TWP. - RNG.	FIELD AREA	COUNTY	STATE
4-26S-19E	WILDCAT	GRAND	UTAH

HALLIBURTON
SERVICES

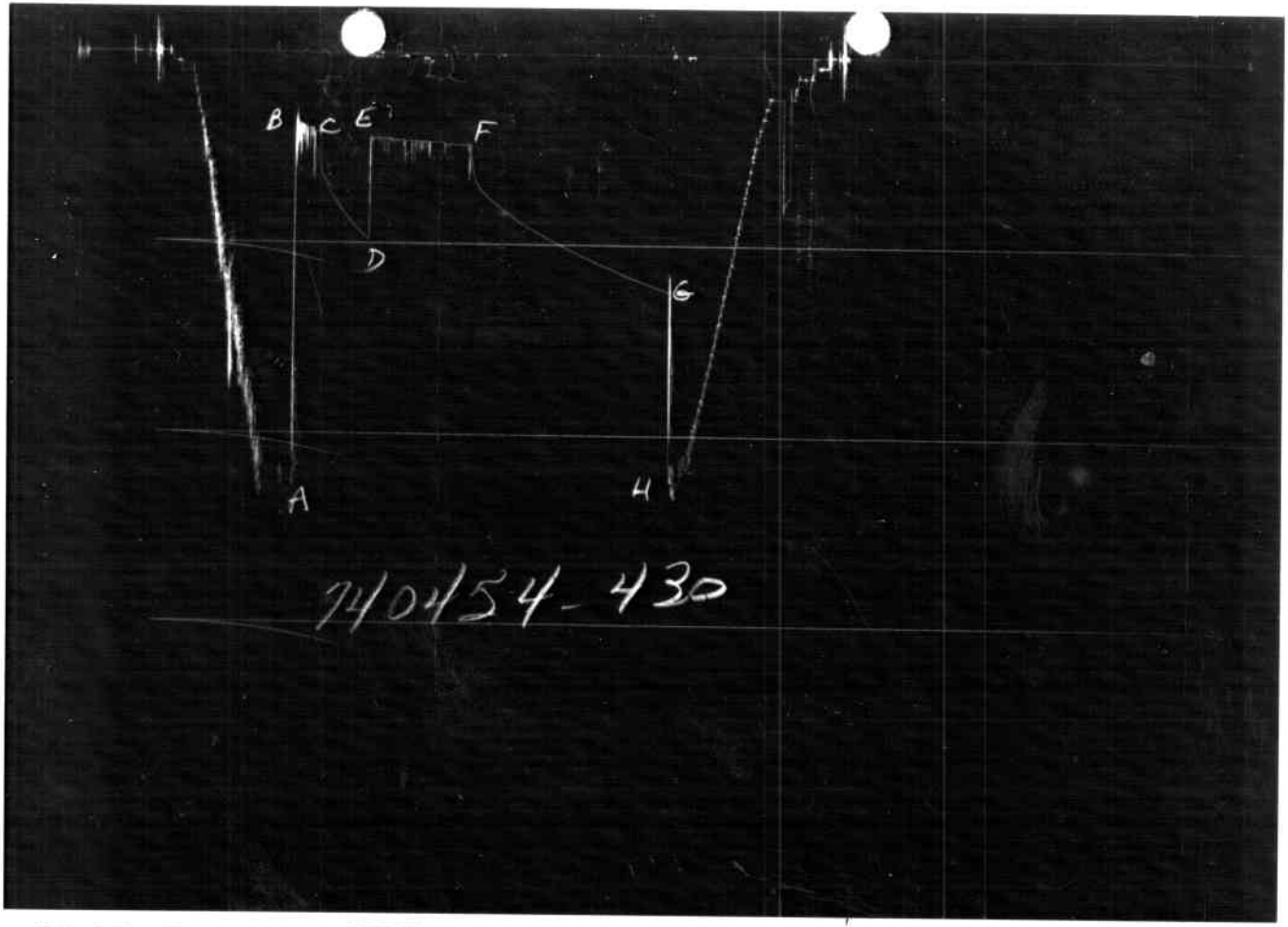
TICKET NO. 74045400
26-MAR-84
VERNAL

FORMATION TESTING SERVICE REPORT

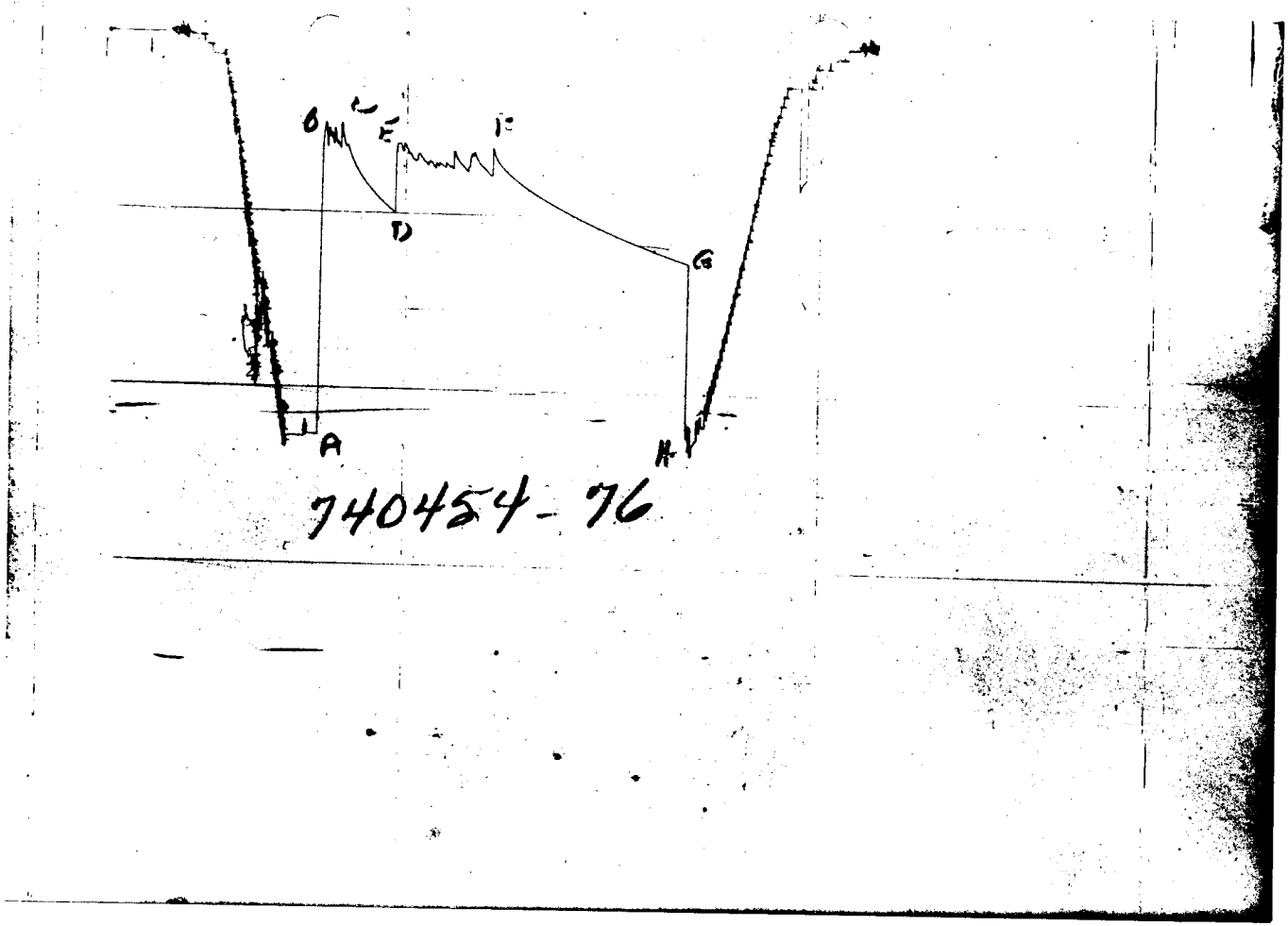


GAUGE NO: 430 DEPTH: 3876.0 BLANKED OFF: NO HOUR OF CLOCK: 24

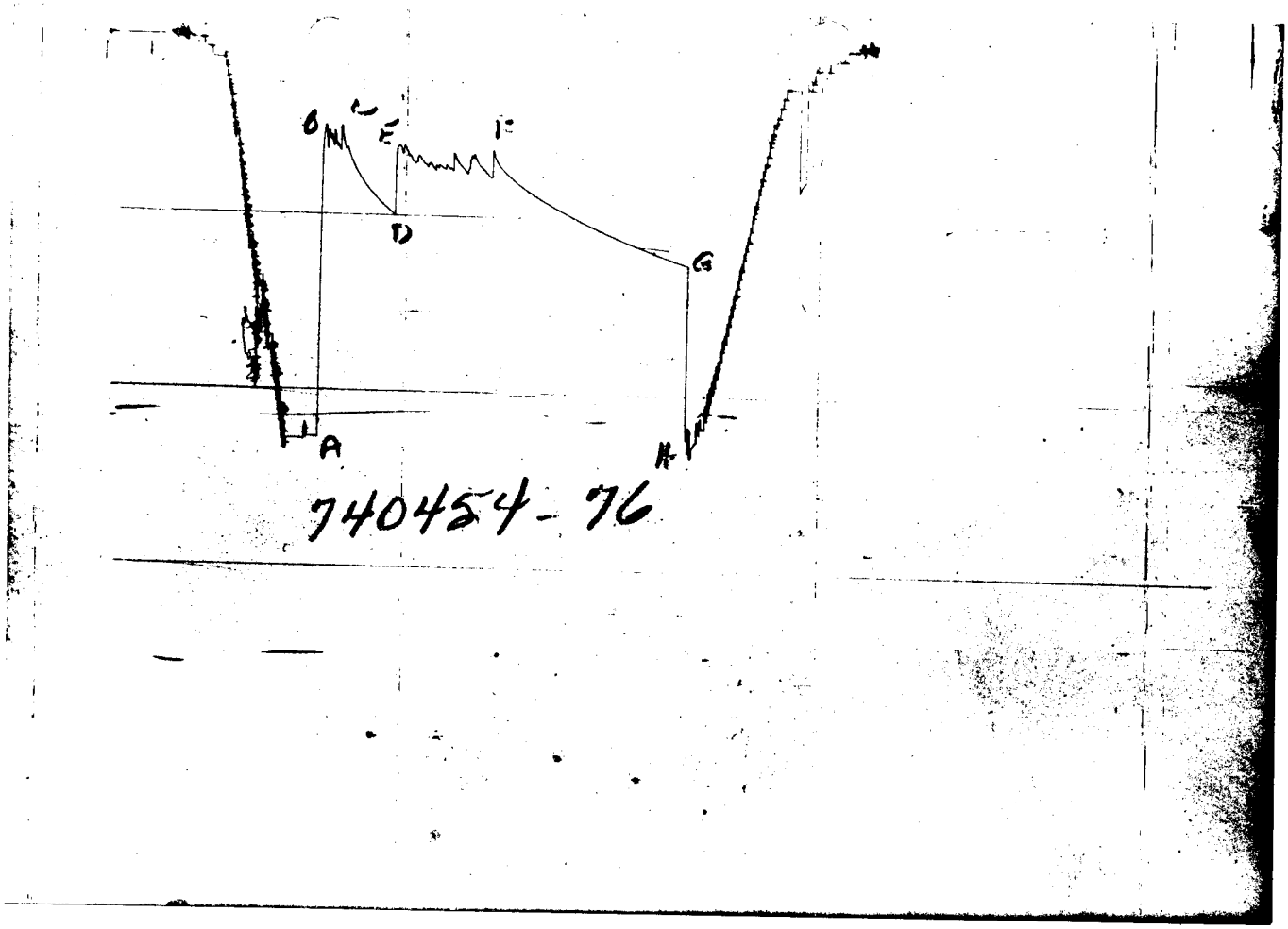
ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2257	2250.7			
B	INITIAL FIRST FLOW	332	386.8	30.0	31.0	F
C	FINAL FIRST FLOW	412	416.9			
C	INITIAL FIRST CLOSED-IN	412	416.9	60.0	59.4	C
D	FINAL FIRST CLOSED-IN	1002	982.7			
E	INITIAL SECOND FLOW	425	454.5	121.0	119.9	F
F	FINAL SECOND FLOW	492	487.4			
F	INITIAL SECOND CLOSED-IN	492	487.4	241.0	241.6	C
G	FINAL SECOND CLOSED-IN	1239	1243.9			
H	FINAL HYDROSTATIC	2349	2232.8			



GAUGE NO: 430 DEPTH: 3876.0 BLANKED OFF: NO HOUR OF CLOCK: 24



GAUGE NO: 76 DEPTH: 3908.0 BLANKED OFF: YES HOUR OF CLOCK: 24



GAUGE NO: 76 DEPTH: 3908.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2262	2263.2			
B	INITIAL FIRST FLOW	488	493.3	30.0	31.0	F
C	FINAL FIRST FLOW	599	619.1			
C	INITIAL FIRST CLOSED-IN	599	619.1	60.0	59.4	C
D	FINAL FIRST CLOSED-IN	986	997.9			
E	INITIAL SECOND FLOW	585	647.4	121.0	119.9	F
F	FINAL SECOND FLOW	627	621.7			
F	INITIAL SECOND CLOSED-IN	627	621.7	241.0	241.6	C
G	FINAL SECOND CLOSED-IN	1249	1256.4			
H	FINAL HYDROSTATIC	2359	2254.9			

EQUIPMENT & HOLE DATA

FORMATION TESTED: CLASSIC #3 & 4
NET PAY (ft): 25.0
GROSS TESTED FOOTAGE: 570.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 9.625
ELEVATION (ft): 5875
TOTAL DEPTH (ft): 4460.0
PACKER DEPTH(S) (ft): 3890
FINAL SURFACE CHOKE (in): 0.125
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 10.80
MUD VISCOSITY (sec): 68
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 108 @ 3906.0 ft

TICKET NUMBER: 74045400

DATE: 3-20-84 TEST NO: 6

TYPE DST: CASED HOLE

HALLIBURTON CAMP: VERNAL

TESTER: C. RICHARDS

WITNESS: BOB WOODY, TED MELLINGER

DRILLING CONTRACTOR: LOFFLAND #1

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
PIT	0.030 @ 50 °F	181000 ppm
TOP OF FLUID	0.031 @ 54 °F	158000 ppm
MIDDLE FLUID	0.040 @ 74 °F	157000 ppm
BOTTOM FLUID	0.040 @ 75 °F	157000 ppm
SAMPLE CHAMBER	0.040 @ 73 °F	158000 ppm
	@ °F	ppm

SAMPLER DATA

Psig AT SURFACE: 225
cu.ft. OF GAS: 0.00
cc OF OIL: 0
cc OF WATER: 0
cc OF MUD: 2000
TOTAL LIQUID cc: 2000

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): @ °F
GAS/OIL RATIO (cu.ft. per bbl):
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT

RECOVERED:

761 FEET (9.1 BARRELS) OF GAS CUT MUD WITH A TRACE OF OIL

MEASURED FROM TESTER VALVE

REMARKS:

CHARTS INDICATE PARTIAL PLUGGING OF ANCHOR PERFORATIONS THROUGHOUT THE FLOW PERIODS.

DEPTH REPORTED AS TOTAL DEPTH IS PLUGGED BACK DEPTH.

NOTE: TESTING OPEN HOLE BELOW CASING.

C.C.' OF OIL IN SAMPLER-TRACE; CUBIC FEET OF GAS IN SAMPLER-.00185.

TYPE & SIZE MEASURING DEVICE: _____					TICKET NO: 74045400
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
3-19-84					
2300					CALLED OUT
3-20-84					
0200					ON LOCATION
0435					STARTED CLOCKS
0500					PICKED UP TOOLS
0600					STARTED IN HOLE
0841					SET PACKER
0851	.125				OPENED TOOL WITH A 2" BLOW IN
					5 GALLON BUCKET OF WATER
0856	.125	.75#			
0901	.125	.75#			
0906	.125	.50#			
0911	.125	20 OZ.			
0916	.125	19 OZ.			
0921	.125	18.5 OZ.			
0921	.125				CLOSED TOOL
1021					OPENED TOOL
1022					HAD A 2" BLOW
1027					8" BLOW IN 5 GALLON BUCKET OF
					WATER
1032					9.5" BLOW IN 5 GALLON BUCKET
1037					BOTTOM OF BUCKET BLOW
1042		4.5 OZ.			
1047		4.5 OZ.			
1052		5 OZ.			
1057		6 OZ.			
1107		5 OZ.			
1117		4 OZ.			
1127		4 OZ.			
1137		5 OZ.			
1147		5.25 OZ.			
1157		6 OZ.			
1207		5.5 OZ.			
1217		4 OZ.			
1222		4 OZ.			CLOSED TOOL
1622					OPENED BYPASS

TYPE & SIZE MEASURING DEVICE:					TICKET NO: 74045400
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
1623					PULLED PACKER LOOSE
1625					TRIP OUT OF HOLE
2000					OUT OF HOLE
2030					DRAINED SAMPLE CHAMBER
2100					BROKE DOWN TOOLS-LOADED OUT
2200					JOB COMPLETED

TICKET NO: 74045400

CLOCK NO: 2786 HOUR: 24

HALLIBURTON SERVICES

GAUGE NO: 430

DEPTH: 3876.0

FIRST FLOW

REF		MINUTES	PRESSURE	ΔP
B	1	0.0	386.8	
	2	5.0	384.8	-2.0
	3	10.0	388.8	4.0
	4	15.0	397.7	8.9
	5	20.0	400.1	2.4
	6	25.0	414.9	14.8
C	7	31.0	416.9	2.0

FIRST CLOSED-IN

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
C	1	0.0	416.9			
	2	1.0	624.5	207.6	0.9	1.517
	3	2.0	641.8	224.9	1.9	1.223
	4	3.0	654.5	237.6	2.7	1.054
	5	4.0	661.8	244.9	3.5	0.944
	6	5.0	667.5	250.7	4.3	0.861
	7	6.0	673.2	256.3	5.0	0.791
	8	7.0	679.1	262.2	5.7	0.737
	9	8.0	686.9	270.0	6.4	0.689
	10	9.0	695.3	278.4	7.0	0.647
[1]	11	10.4	703.8	286.9	7.8	0.601
	12	12.0	739.9	323.0	8.7	0.555
	13	14.0	749.9	333.0	9.7	0.507
	14	16.0	762.0	345.2	10.6	0.469
	15	18.0	774.6	357.7	11.4	0.436
	16	20.0	788.9	372.0	12.2	0.406
	17	22.0	802.0	385.1	12.9	0.382
	18	24.0	814.5	397.6	13.5	0.361
	19	26.0	827.0	410.1	14.2	0.341
	20	28.0	839.8	422.9	14.7	0.324
	21	30.0	850.9	434.0	15.3	0.308
	22	35.0	877.7	460.9	16.5	0.275
	23	40.0	902.9	486.0	17.5	0.250
	24	45.0	926.6	509.7	18.4	0.228
	25	50.0	946.9	530.0	19.2	0.210
	26	55.0	967.5	550.7	19.8	0.194
D	27	59.4	982.7	565.8	20.4	0.182

SECOND FLOW

REF		MINUTES	PRESSURE	ΔP
E	1	0.0	454.5	
	2	10.0	451.3	-3.2
	3	20.0	451.3	0.0
	4	30.0	457.8	6.5
	5	40.0	460.5	2.7
	6	50.0	464.4	3.9
	7	60.0	465.2	0.8
	8	70.0	466.0	0.8
	9	80.0	469.7	3.7

SECOND FLOW - CONTINUED

REF		MINUTES	PRESSURE	ΔP
	10	90.0	476.7	7.0
	11	100.0	481.1	4.4
	12	110.0	481.6	0.5
F	13	119.9	487.4	5.7

SECOND CLOSED-IN

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
F	1	0.0	487.4			
	2	1.0	566.0	78.6	1.0	2.180
	3	2.0	606.4	119.0	2.0	1.882
	4	3.0	630.1	142.7	3.0	1.709
	5	4.0	649.2	161.8	3.9	1.593
	6	5.0	664.7	177.3	4.9	1.493
	7	6.0	677.0	189.6	5.8	1.416
	8	7.0	686.6	199.3	6.7	1.354
	9	8.0	694.4	207.0	7.6	1.300
	10	9.0	700.1	212.8	8.5	1.248
	11	10.0	708.2	220.9	9.4	1.205
	12	12.0	716.6	229.3	11.1	1.135
	13	14.0	726.7	239.3	12.8	1.072
	14	16.0	737.4	250.1	14.5	1.018
	15	18.0	743.6	256.2	16.1	0.972
	16	20.0	752.0	264.6	17.6	0.933
	17	22.0	760.9	273.5	19.2	0.895
	18	24.0	768.8	281.5	20.7	0.863
	19	26.0	775.9	288.5	22.2	0.833
	20	28.0	783.8	296.4	23.6	0.805
	21	30.0	791.1	303.7	25.0	0.780
	22	35.0	808.0	320.6	28.4	0.725
	23	40.0	824.3	337.0	31.6	0.679
	24	45.0	841.2	353.9	34.7	0.639
	25	50.0	857.6	370.2	37.6	0.604
	26	55.0	872.6	385.3	40.3	0.574
	27	60.0	886.6	399.3	42.9	0.546
	28	70.0	913.9	426.5	47.8	0.499
	29	80.0	937.4	450.1	52.3	0.460
	30	90.0	960.5	473.1	56.4	0.428
	31	100.0	983.8	496.4	60.2	0.400
	32	110.0	1006.4	519.1	63.6	0.375
	33	120.0	1028.2	540.8	66.9	0.354
	34	135.0	1059.2	571.8	71.3	0.326
	35	150.0	1089.5	602.1	75.2	0.302
	36	165.0	1117.0	629.6	78.8	0.282
	37	180.0	1144.1	656.7	82.1	0.265
	38	195.0	1172.8	685.4	85.1	0.249
	39	210.0	1195.4	708.0	87.8	0.235
	40	225.0	1220.3	732.9	90.3	0.223
G	41	241.6	1243.9	756.6	92.9	0.211

LEGEND:
[1] STAIR-STEP

REMARKS:
FLOW READINGS MAY BE QUESTIONABLE DUE TO PLUGGING.

TICKET NO: 74045400	GAUGE NO: 76
CLOCK NO: 2290 HOUR: 24	DEPTH: 3908.0

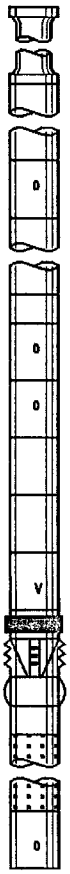
HALLIBURTON SERVICES

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		FIRST FLOW				
B	1	0.0	493.3			
	2	5.0	521.3	28.0		
	3	10.0	571.7	50.4		
	4	15.0	526.7	-45.0		
	5	20.0	611.9	85.2		
	6	25.0	538.1	-73.8		
C	7	31.0	619.1	80.9		
		FIRST CLOSED-IN				
C	1	0.0	619.1			
	2	1.0	628.3	9.3	1.0	1.508
	3	2.0	647.4	28.3	1.9	1.220
	4	3.0	660.2	41.2	2.8	1.049
	5	4.0	674.2	55.1	3.5	0.944
	6	5.0	685.8	66.7	4.3	0.857
	7	6.0	697.2	78.2	5.0	0.790
	8	7.0	707.3	88.3	5.7	0.734
	9	8.0	717.8	98.8	6.4	0.687
	10	9.0	727.1	108.0	7.0	0.646
	11	10.0	737.2	118.1	7.6	0.613
	12	12.0	753.0	134.0	8.7	0.555
	13	14.0	768.1	149.0	9.6	0.508
	14	16.0	783.7	164.6	10.5	0.469
	15	18.0	798.1	179.0	11.4	0.436
	16	20.0	811.5	192.4	12.1	0.407
	17	22.0	823.6	204.6	12.9	0.383
	18	24.0	837.3	218.2	13.5	0.360
	19	26.0	848.5	229.4	14.1	0.341
	20	28.0	859.3	240.2	14.7	0.324
	21	30.0	869.8	250.7	15.2	0.309
	22	35.0	895.4	276.4	16.4	0.276
	23	40.0	920.7	301.7	17.5	0.249
	24	45.0	941.6	322.5	18.4	0.228
	25	50.0	961.7	342.7	19.1	0.210
	26	55.0	981.9	362.8	19.8	0.194
D	27	59.4	997.9	378.9	20.4	0.182
		SECOND FLOW				
E	1	0.0	647.4			
	2	10.0	624.6	-22.8		
	3	20.0	679.1	54.6		
	4	30.0	663.7	-15.5		
	5	40.0	712.7	49.0		
	6	50.0	715.6	2.9		
	7	60.0	730.2	14.6		
	8	70.0	734.1	3.9		
	9	80.0	710.5	-23.6		
	10	90.0	734.0	23.5		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		SECOND FLOW - CONTINUED				
	11	100.0	685.2	-48.8		
	12	110.0	738.8	53.6		
F	13	119.9	621.7	-117.1		
		SECOND CLOSED-IN				
F	1	0.0	621.7			
	2	1.0	639.8	18.1	1.0	2.197
	3	2.0	658.4	36.7	2.0	1.886
	4	3.0	669.2	47.5	2.9	1.712
	5	4.0	680.4	58.7	3.9	1.584
	6	5.0	688.1	66.4	4.8	1.494
	7	6.0	695.9	74.2	5.8	1.418
	8	7.0	703.2	81.5	6.7	1.352
	9	8.0	708.7	87.0	7.6	1.300
	10	9.0	714.2	92.5	8.5	1.250
	11	10.0	720.9	99.2	9.4	1.206
	12	12.0	730.8	109.1	11.1	1.133
	13	14.0	741.3	119.6	12.8	1.071
	14	16.0	751.2	129.6	14.5	1.019
	15	18.0	759.4	137.7	16.1	0.972
	16	20.0	768.5	146.8	17.7	0.932
	17	22.0	776.5	154.8	19.2	0.895
	18	24.0	783.7	162.0	20.7	0.863
	19	26.0	791.9	170.2	22.2	0.833
	20	28.0	799.6	177.9	23.6	0.806
	21	30.0	807.3	185.6	25.0	0.780
	22	35.0	824.3	202.6	28.4	0.725
	23	40.0	841.4	219.8	31.7	0.678
	24	45.0	855.9	234.3	34.6	0.639
	25	50.0	870.9	249.2	37.6	0.604
	26	55.0	886.2	264.5	40.3	0.573
	27	60.0	898.5	276.8	42.9	0.546
	28	70.0	925.6	303.9	47.8	0.499
	29	80.0	950.0	328.3	52.3	0.461
	30	90.0	975.3	353.6	56.4	0.428
	31	100.0	997.8	376.1	60.1	0.400
	32	110.0	1020.9	399.2	63.6	0.375
	33	120.0	1041.1	419.5	66.9	0.354
	34	135.0	1073.3	451.6	71.3	0.326
	35	150.0	1102.1	480.4	75.2	0.302
	36	165.0	1130.6	508.9	78.8	0.282
	37	180.0	1156.9	535.2	82.1	0.264
	38	195.0	1183.0	561.3	85.1	0.249
	39	210.0	1208.4	586.8	87.8	0.235
	40	225.0	1232.1	610.4	90.3	0.223
G	41	241.6	1256.4	634.7	92.9	0.211

REMARKS:
FLOW READINGS QUESTIONABLE DUE TO PLUGGING.

TICKET NO. 74045400



		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	3676.3	
3	DRILL COLLARS.....	7.000	2.250	93.1	
50	IMPACT REVERSING SUB.....	6.500	3.000	1.0	3770.0
3	DRILL COLLARS.....	7.000	2.250	92.0	
5	CROSSOVER.....	6.500	2.625	0.9	
13	DUAL CIP SAMPLER.....	5.000	0.750	6.8	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	3869.0
80	AP RUNNING CASE.....	5.000	3.060	4.1	3876.0
15	JAR.....	5.000	1.750	5.0	
16	VR SAFETY JOINT.....	5.000	1.000	3.8	
71	CASING PACKER.....	8.187	2.437	5.3	3890.0
5	CROSSOVER.....	6.125	2.625	0.8	
20	FLUSH JOINT ANCHOR.....	5.750	2.870	10.0	
81	BLANKED-OFF RUNNING CASE.....	5.750		4.2	3908.0

TOTAL DEPTH 4460.0

EQUIPMENT DATA

DRILL STEM TEST REPORT

DST # 6 Date 3-20-84 Testing Co. HALLIBURTON

WELL NAME: ENSERCH EXPLORATION, INC. MINERAL CANYON UNIT #1-3

Formation: CLASTIC #3 Interval: 3890-4460 Wtr. Cushion NONE

Hole Size 8 3/4" Packer Size --- Drl. Pipe Size 4½" Bbls/Ft .01422

Drl. Collar Size 7" Bbls/Ft --- Drlg. Contractor LOFFLAND RIG #1

Mud Filtrate: Ppm Nitrate --- Ppm Chlorides 181M

	Minutes Duration
Preflow	30
Initial Shutin	60
Flow Period	120
Final Shutin	240

Gas to Surf. --- Min; Rate ---

Fluid to Surf. --- Min; Rate ---

Mud --- Min; Wtr --- Min; Oil --- Min

Test Description: OPEN TOOL W/ 2" BLOW, 3/4# IN 5 min (BTM OF BUCKET), ½# IN 15 min 20oz IN 20 min, 19oz IN 25 min, 18½oz IN 30 min--OPEN TOOL W/ 2" BLOW INCR TO 8" IN 5 min, BTM OF BUCKET IN 20 min, 5oz IN 35 min, 4oz IN 60 min, 5oz IN 80 min, 6oz IN 100 min, 4oz IN 120 min

Orifice Plate Size	Temp.	Minutes from V.O.	Pressure	Rate

Pressure Records (Field Readings) -- Bomb Depth 3876 / 3908 Bottom Hole Temp. 108F

	Pre-Flow				Final Flow			
IHP 2230 / 2276	IFP 363 / 502	FFP 413 / 516	ISIP 979 / 1013	IFP 442 / 613	FFP 474 / 627	FSIP 1242 / 1263	FHP 2283 / 2304

Sampler Capacity 2000 Cc's; Sampler Pressure 225 Rstv .04 Temp 73F

Cu Ft Gas .00185 Cc's Oil TRACE Cc's Water --- Cc's (Other) 2000 MUD

Sampler Recovery (Water): Ppm Nitrate --- Ppm Chlorides 158M

Pipe Recovery: 761' GCM .31 ohms @ 54°F Cl-151M

Problems: TOOL PLUGGED

Remarks:

Agent of Operator

DRILL STEM TEST REPORT

DST # 5 Date 3-17-84 Testing Co. HALLIBURTON

WELL NAME: MINERAL CANYON UNIT #1-3

Formation: LEADVILLE Interval: 7608-7644 Wtr. Cushion ---

Hole Size 8 3/4" Packer Size --- Drl. Pipe Size 4½" Bbls/Ft .01422

Drl. Collar Size 7" Bbls/Ft --- Drlg. Contractor LOFFLAND RIG #1

Mud Filtrate: Ppm Nitrate ---- Ppm Chlorides 158M

	Minutes Duration
Preflow	15
Initial Shutin	14
Flow Period	240
Final Shutin	---

Gas to Surf. --- Min; Rate ---

Fluid to Surf. --- Min; Rate ---

Mud --- Min; Wtr --- Min; Oil --- Min

Test Description: OPEN W/ WEAK BLOW INCR TO 3½ oz IN 5 min, 6 oz IN 10 min, 7 oz IN 15 min---OPEN TOOL W/ 11 oz IN 10 min, 19 oz IN 1 hr, 1# IN 2 hrs, 1½# IN 3 hrs, 1# IN 4 hrs

Orifice Plate Size	Temp.	Minutes from V.O.	Pressure	Rate

Pressure Records (Field Readings) -- Bomb Depth --- Bottom Hole Temp. 120F°

IHP	Pre-Flow IFP	Pre-Flow FFP	ISIP	Final Flow IFP	Final Flow FFP	FSIP	FHP
4279 4298	186 157	266 279	2508 2610	279 293	1424 1443	--- ---	4341 4340

Sampler Capacity 2100 Cc's; Sampler Pressure 500 Rstv .36 Temp 68F°

Cu Ft Gas .209 Cc's Oil 300 Cc's Water 1800 Cc's (Other) ---

Sampler Recovery (Water): 44.5 GRAVITY @ 60°F Ppm Nitrate --- Ppm Chlorides 12,100

Pipe Recovery: TOTAL FLUID 3101'--- 100' FREE OIL 45 GRAVITY @ 62°F--186' OCM--929' SL OC FRMN WATER--1886' FRMN WATER

Problems: NONE

Remarks: REVERSE OUT

Agent of Operator _____

DRILL STEM TEST REPORT

DST # 4 Date 3-11-84 Testing Co. HALLIBURTON

WELL NAME: MINERAL CANYON UNIT #1-3

Formation: MADISON Interval: 7789-7840 Wtr. Cushion NONE

Hole Size 8 3/4" Packer Size ---- Drl. Pipe Size 4½" Bbls/Ft .01422

Drl. Collar Size 7" Bbls/Ft ---- Drlg. Contractor LOFFLAND RIG #1

Mud Filtrate: Ppm Nitrate ---- Ppm Chlorides 183M

	Minutes Duration
Preflow	15
Initial Shutin	30
Flow Period	90
Final Shutin	180

Gas to Surf. ---- Min; Rate ----

Fluid to Surf. ---- Min; Rate ----

Mud --- Min; Wtr --- Min; Oil --- Min

Test Description: OPEN W/ 0 psi 1½" BLOW, CLOSED AT 29 oz. BTM OF BUCKET, BLOW DIED AFTER TOOL WAS CLOSED, OPENED W/ 0 psi 6", CLOSED AT 6.75 # NO GTS, BLOW DIED DOWN IN 15 min

Orifice Plate Size	Temp.	Minutes from V.O.	Pressure	Rate

Pressure Records (Field Readings) -- Bomb Depth 7767 / 7837 Bottom Hole Temp. 122 F°

	Pre-Flow				Final Flow			
IHP 4424 / 4453	IFP 134 / 148	FFP 750 / 806	ISIP 2703 / 2735		IFP 804 / 833	FFP 2204 / 2261	FSIP 2703 / 3235	FHP 4370 / 4399

Sampler Capacity 2500 Cc's; Sampler Pressure 16 # Rstv .60 Temp 60 F°

Cu Ft Gas ---- Cc's Oil ---- Cc's Water 2500 Cc's (Other) ----

Sampler Recovery (Water): Ppm Nitrate ---- Ppm Chlorides 34,000 ppm

Pipe Recovery: RECOVERED 4684 ft OF H_2S WATER, REVERSED OUT 66.7 bbls OF FLUID

Problems: NONE

Remarks: INCOUNTERED H_2S WHILE TRIPPING OUT OF HLOE

Agent of Operator

DRILL STEM TEST REPORT

DST # 3 Date 3-9-84 Testing Co. HALLIBURTON

WELL NAME: MINERAL CANYON UNIT #1-3

Formation: MADISON Interval: 7750-7791 Wtr. Cushion ---

Hole Size 8 3/4" Packer Size ---- Drl. Pipe Size 4 1/2" Bbls/Ft .01422

Drl. Collar Size 7" Bbls/Ft --- Drlg. Contractor LOFFLAND RIG #1

Mud Filtrate: Ppm Nitrate ----- Ppm Chlorides 186M

	Minutes Duration
Preflow	15
Initial Shutin	30
Flow Period	90
Final Shutin	180

Gas to Surf. --- Min; Rate ---

Fluid to Surf. --- Min; Rate ---

Mud --- Min; Wtr --- Min; Oil --- Min

Test Description: PREFLOW NONE--FINAL FLOW WEAK BLOW AFTER 5 min INCR TO 1" --BEGIN TO DECR. AFTER 10 min DEAD AFTER 45 min

Orifice Plate Size	Temp.	Minutes from V.O.	Pressure	Rate

Pressure Records (Field Readings) -- Bomb Depth 7729 / 7788 Bottom Hole Temp. 120F°

	Pre-Flow				Final Flow			
IHP 4424 / 4453	IFP 27 / 53	FFP 27 / 53	ISIP 2662 / 2694	IFP 54 / 81	FFP 161 / 161	FSIP 2662 / 2721	FHP 4397 / 4426

Sampler Capacity 2200 Cc's; Sampler Pressure 12 Rstv .32 Temp 71F°

Cu Ft Gas .003 Cc's Oil --- Cc's Water --- Cc's (Other) 2200 MUD

Sampler Recovery (Water): Ppm Nitrate --- Ppm Chlorides ---

Pipe Recovery: RECOVERED 297' DRILLING MUD Rstv PITS .28 @ 77F°

Problems: NONE

Remarks:

Agent of Operator

DRILL STEM TEST REPORT

DST # 2 Date 3-7-84 Testing Co. HALLIBURTON

WELL NAME: ENSERCH EXPLORATION INC. MINERAL CANYON UNIT #1-3

Formation: MISS. LEADVILLE Interval: 7549-7645 Wtr. Cushion NONE

Hole Size 8 3/4" Packer Size - Drl. Pipe Size 4½" Bbls/Ft .01422

Drl. Collar Size 7" Bbls/Ft _____ Drlg. Contractor LOFFLAND BROTHERS RIG #1

Mud Filtrate: Ppm Nitrate - Ppm Chlorides 185,000

	Minutes Duration
Preflow	15
Initial Shutin	33
Flow Period	61
Final Shutin	142

Gas to Surf. - Min; Rate _____

Fluid to Surf. - Min; Rate _____

Mud - Min; Wtr - Min; Oil - Min

Test Description: PREFLOW OPENED WITH 1" BLOW, WENT TO 10½ OZ AFTER 15 MINUTES. BLOW DROPPED DOWN TO 0 AFTER 30 MINUTES (POSSIBLE PLUGGING OF LINE WITH MUD). FINAL FLOW OPENED WITH 3" BLOW, WENT TO 24¼ OZ IN 60 MINUTES

Orifice Plate Size	Temp.	Minutes from V.O.	Pressure	Rate

Pressure Records (Field Readings) -- Bomb Depth 7526 / 7642 Bottom Hole Temp. 123 °F

	Pre-Flow				Final Flow			
IHP 4411 / 4454	IFP 133 / 185	FFP 439 / 501	ISIP 2607 / 2607		IFP 479 / 554	FFP 850 / 921	FSIP 2607 / 2672	FHP 4424 / 4480

Sampler Capacity 2240 Cc's; Sampler Pressure 360 Rstv .24 Temp 60 °F

Cu Ft Gas .75 Cc's Oil 350 Cc's Water 1200 Cc's (Other) -

Sampler Recovery (Water): Ppm Nitrate - Ppm Chlorides TAKEN TO LAB

Pipe Recovery: 1.6 BBLS OIL, 2 BBLS GAS CUT MUD, 28.4 BBLS FORMATION WATER

Problems: NONE

Remarks: _____

Agent of Operator _____

ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD. PHONE 243-3044 GRAND JUNCTION, COLORADO 81501

COMPANY ENSERCH EXPLORATION INC.

WELL NO. MINERAL CANYON UNIT #1-3

LOCATION SEC. 3, T26S, R19E

ZONE OF INTEREST NO. 8

INTERVAL: From 7590 To 7620

DRILL RATE: Abv 19 Thru 16 Below 13

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C_1	C_2	C_3	C_4	C_5	OTHER
Before	50	2600	900	720	350	--	CO_2 TR
During	60	4200	1250	950	425	--	TR
After	50	2600	900	720	350	--	TR

Type gas increase: Gradual ☒ Sharp ☐

Gas variation within zone: Steady ☒ Erratic ☐ Increasing ☐ Decreasing ☐

CARBIDE HOLE RATIO: GRAMS / READING X Min. in Peak = -- Sensitivity: Poor ☐ Fair ☐ Good ☐

FLUO: Mineral ☒ Even ☒ Spotty ☐
None ☐ % in total sample 40%
Poor ☐
Fair ☒ % in show lithology 40%
Good ☒ COLOR: BRIT WH, YEL, DL GRN

CUT: None ☒ Poor ☒ Fair ☒ Good ☐

Streaming
Slow ☐ Mod ☒ Fast ☐
COLOR: MKLY

STAIN: None ☐ Poor ☒ Fair ☐ Good ☐ Live ☒ Dead ☐ Residue ☐ Even ☐ Spotty ☒ Lt. ☐ Dk. ☒

POROSITY: Poor ☒ Fair ☐ Good ☐ Kind VP VUG

LITHOLOGY LS LT-MED GY W/S OFF WH DNS SFT-FRM CHLKY CRYPTO-MICRO XLN

SAMPLE QUALITY GOOD

NOTIFIED HARVEY MERRELL @ 4;15 pm HRS. DATE: 3-4-84

REMARKS POSS SME MNRL FLOR--FR CUT FROM BRIT WH FLOR--P-NO CUT FROM DL YEL FLOR--YEL-WH RES--LEADVILLE FORM.

ZONE DESCRIBED BY TONY VERVLOET

COLORADO PRINTING CO., GRAND JUNCTION, COLO

ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD. PHONE 243-3044 GRAND JUNCTION, COLORADO 81501

COMPANY ENSERCH EXPLORATION INC.

WELL NO. MINERAL CANYON UNIT #1-3

LOCATION SEC. 3, T26S, R19E

ZONE OF INTEREST NO. 9

INTERVAL: From 7620 To 7650

DRILL RATE: Abv 16 Thru 12-14 7646-7650=6 avg Below 20

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C_1	C_2	C_3	C_4	C_5	OTHER
Before	50	2600	900	720	350	---	CO_2 TR
During	70	5000	1600	1100	500	---	TR
After	40	1800	700	800	400	---	TR

Type gas increase: Gradual ☒ Sharp ☐

Gas variation within zone: Steady ☒ Erratic ☐ Increasing ☒ Decreasing ☒

CARBIDE HOLE RATIO: GRAMS / READING X Min. in Peak = ---

Sensitivity: Poor ☐ Fair ☐ Good ☐

FLUO: Mineral ☐ Even ☒ Spotty ☒
None ☐ % in total sample 60%
Poor ☒
Fair ☒ % in show lithology 15%
Good ☒ COLOR: YEL, WH

CUT: None ☒ Streaming
Poor ☒ Slow ☐
Fair ☒ Mod ☐
Good ☒ Fast ☒ --DOLO
COLOR: MLKY

STAIN: None ☐ Poor ☒ Fair ☐ Good ☐ Live ☒ Dead ☐ Residue ☐ Even ☐ Spotty ☒ Lt. ☐ Dk. ☒

POROSITY: Poor ☐ Fair ☐ Good ☐ Kind VUG, INTERXLN

LITHOLOGY DOLO LT-MED GY HD DNS W/S FRM MICROXLN W/S VF-F XLN YEL-WH FLOR-G STRMG CUT-YEL RE

SME DK BRN STN SAMPLE QUALITY GOOD

NOTIFIED HARVEY MERRELL @ 4:00 am HRS. DATE: 3-5-84

REMARKS NOTE CROSS-OVER OF ETHANE & PROPANE LEADVILLE FORM.

ZONE DESCRIBED BY TONY VERVLOET

COLORADO PRINTING CO., GRAND JUNCTION, COLO.

ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD. PHONE 243-3044 GRAND JUNCTION, COLORADO 81501

COMPANY ENSERCH EXPLORATION INC.

WELL NO. MINERAL CANYON UNIT #1-3

LOCATION

ZONE OF INTEREST NO. 10

INTERVAL: From 7777 To 7786

DRILL RATE: Abv 10-12 MIN/FT Thru 5-6 MIN/FT Below 10-12 MIN/FT

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C_1	C_2	C_3	C_4	C_5	OTHER
Before	40	935	420	620	220		
During	50	1000	580	790	490		
After	30	890	520	700	400		

Type gas increase: Gradual [X] Sharp [ ]

Gas variation within zone: Steady [X] Erratic [ ] Increasing [X] Decreasing [X]

CARBIDE HOLE RATIO: GRAMS / READING X Min. in Peak = _____ Sensitivity: Poor [ ] Fair [ ] Good [XX]

FLUO: Mineral [X] Even [ ] Spotty [ ]
None [ ] % in total sample _____
Poor [ ]
Fair [ ] % in show lithology _____
Good [ ] COLOR: _____

CUT: None [ ] Poor [ ] Fair [X] Good [ ]

Streaming
Slow [ ] Mod [X] Fast [ ]
COLOR: _____

STAIN: None [ ] Poor [XX] Fair [ ] Good [ ] Live [ ] Dead [X] Residue [ ] Even [ ] Spotty [ ] Lt. [ ] Dk. [XX]

POROSITY: Poor [X] Fair [X] Good [ ] Kind FRACTURE

LITHOLOGY 50% LS LTGY WH MOTT 40% DOLO LTBRN LTGY HD SUC MICROXLN 10% CHERT VLTGY VHD ANG TRANSL

SAMPLE QUALITY

NOTIFIED HARVEY MERRELL @ HOME HRS. DATE: 07:30 3-8-84

REMARKS

ZONE DESCRIBED BY CUSH COPELAND

COLORADO PRINTING CO., GRAND JUNCTION, COLO.

ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2480 INDUSTRIAL BLVD. PHONE 243-3044 GRAND JUNCTION, COLORADO 81501

COMPANY ENSERCH EXPLORATION INC.

WELL NO. MINERAL CANYON UNIT #1-3

LOCATION

ZONE OF INTEREST NO. 11

INTERVAL: From 7793 To 7820

DRILL RATE: Abv 10-11 MIN/FT Thru 3-6 MIN/FT Below 7-8 MIN/FT

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C_1	C_2	C_3	C_4	C_5	OTHER (CO_2)
Before	25	850	420	640	310		TR
During	55	5300	1750	800	400		TR
After	25	1000	80	450	230		TR

Type gas increase: Gradual ☒ Sharp ☐

Gas variation within zone: Steady ☐ Erratic ☒ Increasing ☒ Decreasing ☒

CARBIDE HOLE RATIO: GRAMS / READING X Min. in Peak = _____ Sensitivity: Poor ☐ Fair ☐ Good ☐

FLUO: Mineral ☐ Even ☐ Spotty ☒
None ☒ % in total sample 15%
Poor ☒
Fair ☐ % in show lithology 15%
Good ☐ COLOR: DULL YELLOW-GOLD

CUT: None ☒ Streaming
Poor ☒ Slow ☒
Fair ☐ Mod ☐
Good ☐ Fast ☐
COLOR: MILKY WHITE

STAIN: None ☐ Poor ☐ Fair ☒ Good ☐ Live ☒ Dead ☒ Residue ☐ Even ☐ Spotty ☒ Lt. ☐ Dk. ☒

POROSITY: Poor ☒ Fair ☒ Good ☐ Kind INTERCRYSTALLINE & VUG

LITHOLOGY 100% DOLOMITE CRM-TAN-OFF WH-PINK W/S LT-MGY, FRM-HRD,DNS, CRYPTO-MICROXLN, SUCROSIC SAMPLE QUALITY GOOD

NOTIFIED HARVEY MERRELL @ 11:00 PM HRS. DATE: 3-9-84

REMARKS GAS INCREASE POSSIBLY MASKED BY RECYCLED TRIP GAS

ZONE DESCRIBED BY TONY VERVLOET

COLORADO PRINTING CO., GRAND JUNCTION, COLO.

ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD. PHONE 243-3044 GRAND JUNCTION, COLORADO 81501

COMPANY ENSERCH EXPLORATION INC.

WELL NO. MINERAL CANYON UNIT #1-3

LOCATION SEC. 3, T26S, R19E

ZONE OF INTEREST NO. 7

INTERVAL: From 7410 To 7440

DRILL RATE: Abv 22 Thru 10 Below 15

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C_1	C_2	C_3	C_4	C_5	OTHER
Before	40	2000	900	600	220	--	--
During	60	7000	2800	950	380	--	--
After	30	1100	760	510	150	--	--

Type gas increase: Gradual ☒ Sharp ☐

Gas variation within zone: Steady ☒ Erratic ☐ Increasing ☒ Decreasing ☒

CARBIDE HOLE RATIO: GRAMS / READING X Min. in Peak = ------- Sensitivity: Poor ☐ Fair ☐ Good ☐

FLUO: Mineral ☐ None ☐ Poor ☒ Fair ☐ Good ☐ Even ☐ Spotty ☒ % in total sample 20-30% % in show lithology 20-30% COLOR: DL YEL

CUT: None ☐ Poor ☒ Fair ☐ Good ☐ Streaming Slow ☒ Mod ☐ Fast ☐ COLOR: MLKY

STAIN: None ☒ Poor ☐ Fair ☐ Good ☐ Live ☐ Dead ☐ Residue ☐ Even ☐ Spotty ☐ Lt. ☐ Dk. ☐

POROSITY: Poor ☒ Fair ☐ Good ☐ Kind INTERGRAN

LITHOLOGY SLTST LT-MED GY BLKY SFT ARG ANHY DOLO-MED CALC-----SH BLK BLKY SFT SME HD DOLO-CALC SME SLTY SAMPLE QUALITY GOOD

NOTIFIED HARVEY MERRELL @ 5:00 pm HRS. DATE: 3-2-84

REMARKS CANE CREEK GAS PEAKS 7362-64 95 UNITS 7366-70 95 UNITS 7374-76 75 UNITS 7378-84 90 UNITS

ZONE DESCRIBED BY CUSH COPELAND TONY VERVLOET

COLORADO PRINTING CO., GRAND JUNCTION, COLO.

ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD. PHONE 243-3044 GRAND JUNCTION, COLORADO 81501

COMPANY ENSERCH EXPLORATION INC.

WELL NO. MINERAL CANYON UNIT #1-3

LOCATION

ZONE OF INTEREST NO. 6

INTERVAL: From 7096 To 7105

DRILL RATE: Abv 3-4 MIN/FT Thru 10-12 MIN/FT Below 5 MIN/FT

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C_1	C_2	C_3	C_4	C_5	OTHER
Before	8	200	110	80	TR		
During	125	10400	4050	3000	610		
After	20	1100	330	270	80		

Type gas increase: Gradual ☐ Sharp ☒

Gas variation within zone: Steady ☒ Erratic ☐ Increasing ☒ Decreasing ☒

CARBIDE HOLE RATIO: GRAMS / READING X Min. in Peak = _____ Sensitivity: Poor ☐ Fair ☐ Good ☒

FLUO: Mineral ☐ Even ☐ Spotty ☐
None ☒ % in total sample _____
Poor ☐
Fair ☐ % in show lithology _____
Good ☐ COLOR: _____

CUT: None ☐ Streaming
Poor ☐ Slow ☒
Fair ☒ Mod ☐
Good ☐ Fast ☐
COLOR: MILKY WHITE
CUT SEEN ONLY IN BLACK SHALES

STAIN: None ☒ Poor ☐ Fair ☐ Good ☐ Live ☐ Dead ☐ Residue ☐ Even ☐ Spotty ☐ Lt. ☐ Dk. ☐

POROSITY: Poor ☒ Fair ☐ Good ☐ Kind PROBABLY FRACTURE

LITHOLOGY 50% SHALE BLK BLKY VCARB SFT-MFRM 35% ANHYDRITE WH SFT AMOR 15% SILTSTONE LTGY BLKY SFT ARG ANHY SAMPLE QUALITY FAIR

NOTIFIED _____ @ _____ HRS. DATE: _____

REMARKS GAS INCREASED AT THE SAME TIME AS CONNECTION GAS FROM CLASTIC #20 CAME IN- TRIPPED FOR NEW BIT 9 FEET INTO SHOW ZONE

ZONE DESCRIBED BY CUSH COPELAND

COLORADO PRINTING CO., GRAND JUNCTION, COLO.

Eastman Whipstock
A PETROLANE COMPANY

REPORT of SUB-SURFACE DIRECTIONAL SURVEY

RECEIVED
MAR 12 1984
WEST DRILLING

ENSEARCH EXPLORATION INC.
COMPANY

MINERAL CANYON 1-3
WELL NAME

GRAND COUNTY, UTAH
LOCATION

JOB NUMBER	TYPE OF SURVEY	DATE
RM384 S1513	MAGNETIC MULTISHOT	5-MAR-84

SURVEY BY	OFFICE
RICHARD CROSS	EVANSTON, WYOMING

ROCKY MOUNTAIN GEO ENGINEERING CO.
WELL SITE GEOLOGY — MUD LOGGING

BIT RECORD

WELL NAME: MINERAL CANYON #1-3
CO. NAME: ENSERCH EXPLORATION
CONTRACTOR: LOFFLAND BROS., RIG #1
SPUD DATE: 12/31/83

ELEVATION: GL 5856' - KB 5875'
SECTION: 3-T26S-19E
CO. & STATE: GRAND, UTAH
T.D. DATE: 3/15/84

BIT RECORD							FT PER/DAY			FT PER/DAY		
RUN	MAKE	TYPE	IN	FTG	HOURS	FT/HR	DATE	DEPTH	FT	DATE	DEPTH	FT
17½" 1	HTC	OSC	26	484	37½	12.9	2/4	3968	-0-	2/27	6693	279
12¼" 2	STC	F-4	510	2214	62½	35.4	2/5	3968	7	2/28	6972	133
3	"	F-3	2724	718	53	13.5	2/6	3975	-0-	2/29	7105	1285
4	VAREL	V537	3442	91	27	3.4	2/7	3975	-0-	3/1	7390	50
5	HTC	X33	3533	339	79	4.3	2/8	3975	-0-	3/2	7440	-0-
6	"	J-33	3872	-0-	-0-	-0-	2/9	3975	147	3/3	7440	98
7	REED	FPS3J	3872	96	21½	4.5	2/10	4122	274	3/4	7538	95
8 3/4" 8	HTC	J-22	3968	845	59½	14.2	2/11	4396	244	3/5	6733	17
9	REED	FP52J	4813	552	94	5.9	2/12	4640	173	3/6	7645	-0-
10	HTC	J-22	5365	567	102	5.6	2/13	4813	92	3/7	7645	89
11	"	"	5932	1173	109½	10.7	2/14	4905	174	3/8	7734	57
12	"	"	7105	540	84½	6.4	2/15	5079	105	3/9	7791	20
13	STC	F-3	7645	545	89½	9.4	2/16	5184	92	3/10	7811	29
							2/17	5276	97	3/11	7840	25
							2/18	5373	90	3/12	7865	163
							2/19	5463	144	3/13	8028	118
							2/20	5607	186	3/14	8146	44
							2/21	5793	93	3/15	8190	-0-
							2/22	5886	46	T.D.	8190	-0-
							2/23	5932	100	3/16	8190	-0-
							2/24	6032	211	3/17	8190	-0-
							2/25	6243	180	3/18	8190	-0-
							2/26	6423	270	3/19	8190	-0-
										3/20	8190	-0-
										3/21	8190	-0-

DEVIATION SURVEYS

COMPANY NAME: ENSERCH EXPLORATION COUNTY: GRAND,

WELL NAME: MINERAL CANYON UNIT #1-3 STATE: UTAH

DEPTH	DEV.	DEPTH	DEV.	DEPTH	DEV.	DEPTH	DEV.	DEPTH	DEV.
142	½ °	5571	3 ½						
245	3/4	5636	3 ¼						
448	1 ½	5815	3 ¼						
500	1 3/4	6000	3						
600	1 ½	6302	2						
753	1	6650	1 ¼						
971	3/4	7105	1 ¼						
1215	1	7444	3/4						
1407	3/4	7791	3/4						
1597	1	8180	1						
1814	1 ¼								
2025	1								
2214	3/4								
2372	0								
2587	1								
2770	1								
2970	2 ¼								
3021	2								
3115	2 ¼								
3364	2								
3490	2								
3619	2								
3746	1 3/4								
3832	1 ½								
3848	2								
4797	6								
4853	5 3/4								
4947	5 3/4								
5010	5 ¼								
5072	5								
5137	4 3/4								
5200	4								
5259	4								
5323	3 3/4								
5387	4								
5450	3 3/4								
5510	3 3/4								

ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD. PHONE 243-3044 GRAND JUNCTION, COLORADO 81501

COMPANY ENSERCH EXPLORATION INC.

WELL NO. MINERAL CANYON UNIT #1-3

LOCATION SE/NE SEC 3, T26S, R19E

ZONE OF INTEREST NO. 1

INTERVAL: From 4175 To 4180

DRILL RATE: Abv 4 MIN/FT Thru 7-9 MIN/FT Below 4 MIN/FT

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C_1	C_2	C_3	C_4	C_5	OTHER
Before	1	TR					
During	40	4000	850	300	100		
After	4	385	80	26	-		

Type gas increase: Gradual ☐ Sharp ☒

Gas variation within zone: Steady ☐ Erratic ☒ Increasing ☒ Decreasing ☒

CARBIDE HOLE RATIO: GRAMS/READING X Min. in Peak = _____ Sensitivity: Poor ☐ Fair ☒ Good ☐

FLUO: Mineral ☒ Even ☐ Spotty ☒
None ☐ % in total sample 5 %
Poor ☐
Fair ☐ % in show lithology _____
Good ☐ COLOR: YEL-DULL YEL

CUT: None ☒ Poor ☐ Fair ☐ Good ☐

Streaming
Slow ☐
Mod ☐
Fast ☐
COLOR: _____

STAIN: None ☒ Poor ☐ Fair ☐ Good ☐ Live ☐ Dead ☐ Residue ☐ Even ☐ Spotty ☐ Lt. ☐ Dk. ☐

POROSITY: Poor ☒ Fair ☐ Good ☐ Kind _____

LITHOLOGY 50-75% DOLO ltgy dns calc 25-50% ANHYDRITE wh sft granular 0-25% SILTSTONE ltgy blky calc-dolo frm TR blk shale

SAMPLE QUALITY FAIR-POOR

NOTIFIED HARVEY MERRELL @ 07:50 HRS. DATE: 2-10-84

REMARKS BOTTOMS UP TIME, DRILL RATE, & SAMPLE QUALITY VARIABLE DUE TO PUMP PROBLEMS

ZONE DESCRIBED BY CUSH COPELAND

COLORADO PRINTING CO., GRAND JUNCTION, COLO.

ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD. PHONE 243-3044 GRAND JUNCTION, COLORADO 81501

COMPANY ENSERCH EXPLORATION INC.

WELL NO. MINERAL CANYON UNIT #1-3

LOCATION

ZONE OF INTEREST NO. 2

INTERVAL: From 4195 To 4214

DRILL RATE: Abv 4-5 MIN/FT Thru 3 MIN/FT Below 4 MIN/FT

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C_1	C_2	C_3	C_4	C_5	OTHER
Before	4	385	80	26	-		
During	45	3000	980	930	100		
After	20	400	150	210	50		

* Type gas increase: Gradual ☐ Sharp ☒

Gas variation within zone: Steady ☐ Erratic ☒ Increasing ☒ Decreasing ☒

CARBIDE HOLE RATIO: GRAMS / READING X Min. in Peak = _____ Sensitivity: Poor ☐ Fair ☒ Good ☐

FLUO: Mineral ☒ Even ☐ Spotty ☐
None ☐ % in total sample 5 %
Poor ☐
Fair ☐ % in show lithology _____
Good ☐ COLOR: YEL-DULL YEL

CUT: None ☒ Streaming
Poor ☐ Slow ☐
Fair ☐ Mod ☐
Good ☐ Fast ☐
COLOR: _____

STAIN: None ☒ Poor ☐ Fair ☐ Good ☐ Live ☐ Dead ☐ Residue ☐ Even ☐ Spotty ☐ Lt. ☐ Dk. ☐

POROSITY: Poor ☒ Fair ☐ Good ☐ Kind _____

LITHOLOGY SLTST ltbrn blky frm s/dolo s/arg DOLO offwh frm suc dns

SAMPLE QUALITY FAIR-POOR

NOTIFIED _____ @ _____ HRS. DATE: _____

REMARKS BOTTOMS UP TIME, DRILL RATE, & SAMPLE QUALITY VARIABLE DUE TO PUMP PROBLEMS

ZONE DESCRIBED BY CUSH COPELAND

COLORADO PRINTING CO., GRAND JUNCTION, COLO.

ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2480 INDUSTRIAL BLVD. PHONE 243-3044 GRAND JUNCTION, COLORADO 81501

COMPANY ENSERCH EXPLORATION INC.

WELL NO. MINERAL CANYON UNIT #1-3

LOCATION

ZONE OF INTEREST NO. 3

INTERVAL: From 4218 To 4280

DRILL RATE: Abv 3-4 MIN/FT Thru 1-6 MIN/FT Below 5-6 MIN/FT

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C_1	C_2	C_3	C_4	C_5	OTHER
Before	20	400	150	210	50		
During	310	26750	6380	3770	1530		
After	10	200	65	100	25		

Type gas increase: Gradual ☐ Sharp ☒

Gas variation within zone: Steady ☐ Erratic ☒ Increasing ☒ Decreasing ☒

CARBIDE HOLE RATIO: GRAMS / READING X Min. in Peak = _____ Sensitivity: Poor ☐ Fair ☒ Good ☒

FLUO: Mineral ☐ Even ☐ Spotty ☐
None ☐ % in total sample 40%
Poor ☐
Fair ☒ % in show lithology _____
Good ☒ COLOR: YELLOW

CUT: None ☐ Streaming
Poor ☒ Slow ☒
Fair ☐ Mod ☐
Good ☐ Fast ☐
COLOR: BLU-GRN

STAIN: None ☐ Poor ☒ Fair ☐ Good ☐ Live ☐ Dead ☐ Residue ☒ Even ☐ Spotty ☐ Lt. ☐ Dk. ☐

POROSITY: Poor ☒ Fair ☒ Good ☐ Kind _____

LITHOLOGY SLTST buff blky frm dolo-calc sndy grdg to vfg ss

SAMPLE QUALITY FAIR-POOR

NOTIFIED _____ @ _____ HRS. DATE: _____

REMARKS BOTTOMS UP TIME, DRILL RATE, & SAMPLE QUALITY VARIABLE DUE TO PUMP PROBLEMS

ZONE DESCRIBED BY CUSH COPELAND

COLORADO PRINTING CO., GRAND JUNCTION, COLO.

ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD. PHONE 243-3044 GRAND JUNCTION, COLORADO 81501

COMPANY ENSERCH EXPLORATION INC.

WELL NO. MINERAL CANYON UNIT #1-3

LOCATION

ZONE OF INTEREST NO. 4

INTERVAL: From 4328 To 4420

DRILL RATE: Abv 1-1½ MIN/FT Thru 3-4 MIN/FT Below 2-3 MIN/FT

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C_1	C_2	C_3	C_4	C_5	OTHER
Before	10	500	180	80	TR		
During	120	14000	1200	500	100		
After	15	1120	300	175	50		

Type gas increase: Gradual ☐ Sharp ☒

Gas variation within zone: Steady ☐ Erratic ☒ Increasing ☒ Decreasing ☒

CARBIDE HOLE RATIO: GRAMS / READING X Min. in Peak = _____ Sensitivity: Poor ☐ Fair ☒ Good ☐

FLUO: Mineral ☐ Even ☐ Spotty ☒
None ☐ % in total sample 1%
Poor ☐
Fair ☐ % in show lithology _____
Good ☐ COLOR: DULL YELLOW

CUT: None ☒ Streaming
Poor ☐ Slow ☐
Fair ☐ Mod ☐
Good ☐ Fast ☐
COLOR: _____

STAIN: None ☒ Poor ☐ Fair ☐ Good ☐ Live ☐ Dead ☐ Residue ☐ Even ☐ Spotty ☐ Lt. ☐ Dk. ☐

POROSITY: Poor ☒ Fair ☒ Good ☐ Kind INTRAGRANULAR

LITHOLOGY SILTSTONE buf-mgy blky s-sl calc frm

SAMPLE QUALITY FAIR

NOTIFIED _____ @ _____ HRS. DATE: _____

REMARKS

ZONE DESCRIBED BY

COLORADO PRINTING CO. GRAND JUNCTION COLO.

ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD. PHONE 243-3044 GRAND JUNCTION, COLORADO 81501

COMPANY ENSERCH EXPLORATION, INC.

WELL NO. MINERAL CANYON UNIT #1-3

LOCATION SEC. 3, T26S, R19E

ZONE OF INTEREST NO. 5

INTERVAL: From 6943 To 6950

DRILL RATE: Abv 18 Thru 4.5-6 Below 16

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C_1	C_2	C_3	C_4	C_5	OTHER
Before	20	2600	800	400	90	---	---
During	136	10,000	2600	1200	350	---	---
After	20	2600	800	400	90	---	---

Type gas increase: Gradual ☐ Sharp ☒

Gas variation within zone: Steady ☐ Erratic ☒ Increasing ☒ Decreasing ☒

CARBIDE HOLE RATIO: GRAMS / READING X Min. in Peak = ------ Sensitivity: Poor ☐ Fair ☐ Good ☐

FLUO: Mineral ☐ None ☐ Poor ☒ Fair ☐ Good ☐ Even ☒ Spotty ☒ % in total sample .5 % in show lithology 4 COLOR: YEL

CUT: None ☐ Poor ☐ Fair ☐ Good ☒ Streaming Slow ☐ Mod ☒ Fast ☐ COLOR: MLKY

STAIN: None ☒ Poor ☐ Fair ☐ Good ☐ Live ☐ Dead ☐ Residue ☐ Even ☐ Spotty ☐ Lt. ☐ Dk. ☐

POROSITY: Poor ☒ Fair ☐ Good ☐ Kind POSS. FRAC.

LITHOLOGY SH BLK SME DKGY SFT CARB BLKY SL-NON CALC SME SLO STRMG MLKY CUT W/ NO FLOR

SAMPLE QUALITY FAIR

NOTIFIED HARVEY MERRELL @ 9:30 pm HRS. DATE: 2-27-84

REMARKS GAS INCR 6940-6943 INCR TO 60 UNITS FROM BGG OF 3 UNITS

ZONE DESCRIBED BY TONY VERVLOET

COLORADO PRINTING CO., GRAND JUNCTION, COLO.

DRILL STEM TEST REPORT

DST # 1 Date 3-2-84 Testing Co. HALLIBURTON

WELL NAME ENSERCH EXPL., INC. MINERAL CANYON UNIT# 1-3

Formation: CANE CREEK Interval: 7367-7440 Wtr. Cushion NONE

Hole Size 8 3/4" Packer Size ----- Drl. Pipe Size 4½" Bbls/Ft .01422

Drl. Collar Size 7" Bbls/Ft -------- Drlg. Contractor LOFFLAND RIG #1

Mud Filtrate: Ppm Nitrate ---------- Ppm Chlorides 186M

	Minutes Duration
Preflow	15
Initial Shutin	30
Flow Period	60
Final Shutin	120

Gas to Surf. NONE Min; Rate ----

Fluid to Surf. NONE Min; Rate ----

Mud ---- Min; Wtr ---- Min; Oil ---- Min

Test Description: OPEN WITH WEAK BLOW ½" INCR TO 3/4". FINAL FLOW OPEN WITH WEAK BLOW 1/8" MAINTAINED THROUGHOUT

Orifice Plate Size	Temp.	Minutes from V.O.	Pressure	Rate

Pressure Records (Field Readings) -- Bomb Depth _____ Bottom Hole Temp. _____°

Pre-Flow / Final Flow

IHP 4342 IFP 125 FFP 146 ISIP 167 ; IFP 146 FFP 208 FSIP 250 FHP 4342

Sampler Capacity 2240 Cc's; Sampler Pressure ---- Rstv .08 Temp 60°

Cu Ft Gas ---- Cc's Oil ---- Cc's Water ---- Cc's (Other) 2240 MUD

Sampler Recovery (Water): Ppm Nitrate ---- Ppm Chlorides ----

Pipe Recovery: 254' OF DRLG. MUD

Problems: NONE

Remarks:

Agent of Operator BOB WOODY Sr.

ENSEARCH EXPLORATION, INC.
WELL NAME:; MINERAL CANYON 1-3 RIG: LOFFLAND #1
FILE NO: D6-14
SURVEYOR: RICHARD CROSS
JOB NUMBER: RM384S1513
START DATE: 6-MAR-84
TYPE: MAGNETIC MULTI-SHOT
COMPUTER OPERATOR: LISA BOURNE
EVANSTON, WYOMING

Eastman Whipstock
A PETROLANE COMPANY

RADIUS OF CURVATURE METHOD

ENSEARCH EXPLORATION, INC.

WELL NAME: MINERAL CANYON 1-3 RIG: LOFFLAND #1

FILE NO: D6-14

COMPUTATION PAGE NO.

TIME 16:01:37 DATE 06-MAR-84

MEASURED DEPTH FEET	DRIFT ANGLE DEG	DRIFT DIRECTION DEG	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	RECTANGULAR COORDINATES FEET		DOGLEG SEVERITY DG/100FT
0.00	0.00	0.00	0.	0.00	0.00	0.00	0.00
ASSUME VERTICLE TO 3914'							
3914.00	0.00	0.00	3914.	3914.00	0.00	0.00	0.00
3991.00	2.25	N57.00E	77.	3990.98	0.82 N	1.27 E	2.92
4087.00	2.50	N47.00E	96.	4086.90	3.27 N	4.40 E	0.50
4181.00	3.25	N36.00E	94.	4180.78	6.29 N	7.52 E	0.99
4274.00	4.25	N31.00E	93.	4273.58	11.86 N	10.87 E	1.13
4367.00	5.25	N30.00E	93.	4366.26	18.50 N	14.78 E	1.09
4460.00	5.25	N28.00E	93.	4458.87	25.94 N	18.91 E	0.20
4553.00	5.50	N29.00E	93.	4551.46	33.60 N	23.06 E	0.29
4646.00	5.50	N31.00E	93.	4644.07	41.32 N	27.52 E	0.21
4739.00	6.00	N27.00E	93.	4736.67	49.46 N	32.04 E	0.64
4832.00	6.00	N26.00E	93.	4829.25	58.05 N	36.52 E	0.11
4925.00	5.75	N26.00E	93.	4921.86	66.57 N	40.85 E	0.35
5018.00	5.50	N22.00E	93.	5014.12	74.89 N	44.55 E	0.50
5111.00	4.75	N22.00E	93.	5106.74	82.60 N	47.67 E	0.81
5204.00	4.25	N20.00E	93.	5199.46	89.41 N	50.28 E	0.56
5297.00	4.25	N19.00E	93.	5292.20	95.91 N	52.58 E	0.08
5390.00	4.25	N17.00E	93.	5384.95	102.46 N	54.71 E	0.16
5483.00	4.25	N15.00E	93.	5477.69	109.08 N	56.61 E	0.16
5577.00	3.50	N12.00E	94.	5571.47	115.26 N	58.09 E	0.83
5670.00	3.50	N12.00E	93.	5664.30	120.81 N	59.27 E	0.00
5763.00	3.25	N11.00E	93.	5757.14	126.18 N	60.36 E	0.28
5856.00	3.25	N16.00E	93.	5849.99	131.30 N	61.59 E	0.30
5949.00	3.25	N15.00E	93.	5942.84	136.38 N	63.00 E	0.06
6042.00	2.75	N 9.00E	93.	6035.71	141.14 N	64.02 E	0.63
6135.00	2.50	N 1.00E	93.	6128.62	145.38 N	64.39 E	0.48
6228.00	2.00	N 7.00W	93.	6221.54	149.03 N	64.20 E	0.63
6321.00	2.00	N10.00W	93.	6314.49	152.24 N	63.72 E	0.11

MEASURED DEPTH FEET	DRIFT ANGLE DEG	DRIFT DIRECTION DEG	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	RECTANGULAR COORDINATES FEET		DOGLEG SEVERITY DG/100FT
6414.00	1.50	N19.00W	93.	6407.44	154.98 N	63.01 E	0.61
6507.00	1.50	N14.00W	93.	6500.41	157.32 N	62.31 E	0.14
6600.00	1.25	N35.00W	93.	6593.39	159.34 N	61.39 E	0.60
6693.00	1.00	N45.00W	93.	6686.37	160.73 N	60.22 E	0.34
6786.00	1.00	N43.00W	93.	6779.35	161.90 N	59.09 E	0.04
6879.00	1.00	N61.00W	93.	6872.34	162.90 N	57.82 E	0.34
6973.00	1.25	N69.00W	94.	6966.32	163.68 N	56.15 E	0.31
7066.00	1.50	N74.00W	93.	7059.29	164.38 N	54.03 E	0.30
7159.00	1.50	N83.00W	93.	7152.26	164.87 N	51.65 E	0.25
7252.00	1.50	N88.00W	93.	7245.23	165.06 N	49.22 E	0.14
7345.00	1.25	N74.00W	93.	7338.20	165.41 N	47.03 E	0.45
7438.00	0.75	N84.00W	93.	7431.18	165.72 N	45.43 E	0.57
7531.00	0.75	N83.00W	93.	7524.18	165.85 N	44.23 E	0.01

FINAL CLOSURE - DIRECTION: 14.931 DEGS CLOCKWISE FROM NORTH
DISTANCE: 171.65 FEET

ENSERCH EXPLORATION INC.

Metrobank Building, Suite 1300
Denver, Colorado 80202
303-298-8295

Rocky Mountain Area
R. W. Sharp
Area Manager - Exploration

May 11, 1984

State of Utah
Division of Natural Resources
Well Records Division
4241 State Office Bldg.
Salt Lake City, UT 84114

Gentlemen:

Enclosed is the complete well data for the Mineral Canyon Unit #1-3 well which was drilled in the SENE section 3, T26S-R19E, Grand County, Utah. The well was P&A on April 10, 1984. Enserch Exploration, Inc. requests that this data be held confidential for the allotted time period.

Respectfully,

Kent L. Fouret

K. L. Fouret
Geologist

KLF/pn
Enclosures

GEOLOGICAL REPORT
AND WELL HISTORY

on

ENSERCH EXPLORATION, INC.
Mineral Canyon Unit 1-3

Grand County, Utah

by Harvey W. Merrell
Consulting Geologist
CPG #2013
P.O. Box 645
Moab, Utah 84532

March, 1984

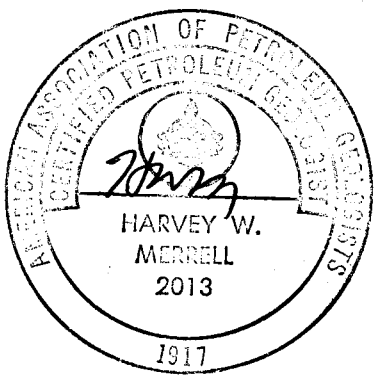


TABLE OF CONTENTS

WELL SUMMARY

Operator:	Enserch Exploration, Inc.
Address:	474 17th Street, Suite 1300 Denver, Colorado 80202
Telephone:	(303)298-8295
Well Name:	Enserch Exploration, Inc. Mineral Canyon Unit 1-3 Section 3, T26S, R19E Grand County, Utah
Elevation:	5875' Kelly Bushing 5856' Ground
Start:	December 31, 1983
Finish Open Hole Testing:	March 21, 1984
Total Depth:	8190' driller
Disposition of Well:	Plugged back to test 3715' zone.

WELL INFORMATION

General Information.

Operator:	Enserch Exploration, Inc.
Well Name:	Enserch Exploration, Inc. Mineral Canyon Unit 1-3
Location:	3364' FSL, 1212 FEL Section 3, T26S, R19E, SLM Grand County, Utah
Elevation:	5875' Kelly Bushing 5856' Ground
Contractor:	Loffland Brothers
Rig:	Number 1
Type:	Unit 40

Personnel.

Enserch Exploration Drilling Department:	Bob Woody Robert Dutton Joey Armstrong Ted Mellinger
Geology Department:	Kent Fouret
Engineering Department:	Lonnie Murphy Bryan Sherran
Consulting Geologist:	Harvey W. Merrell Moab, Utah 84532
Tool Pusher:	Junior Woods Farmington, New Mexico
	Don Brown Cortez, Colorado
Mud Loggers.	Rocky Mountain Geological Engineering Grand Junction, Colorado
	Cush Copeland Tony Vervloet
	Two-man unit from under surface casing of 3914' to 8190' (TD). Hot wire plus chromatograph. A CO_2 detector was placed on the hole at the top of Cane Creek Marker.
Air Drilling	Northwest Air, Grand Junction, CO
Mud Program.	IMCO, Grand Junction, CO John Dmochowski, Engineer John Rule, Engineer

Electric Logging.

Run 1	Dresser Atlas truck from Farmington, New Mexico, Jan 31, 1984 to Feb 1, 1984. BHC Acoustilog/GR/Cal 506'-3958' Dual Ind. Focus Log/GR/Cal 506'-3960' Comp. Densilog/Comp-Neutron/GR/Cal 1900'-3960'
Run 2	Dresser Atlas truck from Rock Springs, Wyoming, March 15, 1984 BHC Acustilog/GR/Cal 3816'-8177' Dual Laterolog/Micro Laterolog/GR/Cal 3810'-8181' Comp. Densilog/Comp Neutron/Gr/Cal 3810'-8181' FRACLOG/GR/CALIPER 4170'-8176'

Bit Record:

Bit No.	Company	Size	Type	In	Out	Footage
1	HTC	17 1/2	OSC	26'	510'	486'
2	Smith	12 1/4	F-4	510'	2724'	2214'
3	Smith	12 1/4	F-3	2724'	3442'	718'
4	Varel	12 1/4	V537	3442'	3533'	91'
5	HTC	12 1/4	X-33	3533'	3872'	339'
6	HTC	12 1/4	J-33	3872'	3872'	0'
7	Reed	12 1/4	FP53J	3872'	3968'	96'
8	HTC	8 3/4	J-22	3968'	4814'	846'
9	Reed	8 3/4	FP52	4814'	5365'	551'
10	HTC	8 3/4	J-22	5365'	5932'	567'
11	HTC	8 3/4	J-22	5932'	7105'	1132'
12	HTC	8 3/4	J-22	7105'	7645'	540'
13	HTC	8 3/4	J-3	7645'	8190'	545'

WELL HISTORY

DATE	DEPTH	FEET	OPERATION	WT.	VISC	W.L.	CLI.	BG GAS	LITHO
12/31/83	Spudded at 2200 hours								
1/1/84	102'	102'	Drilling						SS
1/2/84	326'	224'	Drilling						SH
1/3/84	510'	177'	Run 13 3/8" csg. at 510' w/275 sks class "B" Circ. 60 bbls to pits						SH
1/4/84	510'	0'	Nipple up						
1/5/84	510'	0'	Test BOP						
1/6/84	520'	10'	Drilling - Drilling 12 1/4" hole with air						SH
1/7/84	1013'	493'	Drilling "						SS
1/8/84	1985'	972'	Drilling "						SS,SH
1/9/84	2679'	694'	Drilling - Drilling with mist at 2026'						SS,SH
1/10/84	3001'	322'	Trip "						LS, SH
1/11/84	3063'	62'	Ream to bottom - Tight 300' - 3021' No returns 2775'						LS,SH
1/12/84	3292'	229'	Drilling - Tight 3100' - 3165'						
1/13/84	3442'	150'	Work stuck pipe - 110' off bottom						LS, Chert
1/14/84	3242'	0'	Work stuck pipe, stuck at 3085', mixing mud						
1/15/84	3242'	0'	Fishing, wait on fisherman, mix mud						
1/16/84	3242'	0'	RIH w/bit, wash and ream, shot with vibrator, came out with all fish tight at 1036' - hit bridge at 1060'.						
1/17/84	3452'	10'	Drilling	8.6	39	10.0	1000	--	LS,SS
1/18/84	3532'	80'	Drilling	8.7	34	11.5	1000	--	LS
1/19/84	3574'	42'	Drilling Tight 700' - 1300' on trip, 161' of fill	8.8	35	10.0	1000	--	LS
1/20/84	3672'	98'	Drilling	8.8	39	9.8	1100	--	LS
1/21/84	3778'	106'	Drilling Drilling break 3721' - 3728', tan sucrosic and vuggy dolomite, fair porosity, fluorescence, cut, looks tight.	8.8	38	9.8	900	--	LS, Dolomite

DATE	DEPTH	FEET	OPERATION	WT.	VISC	W.L.	CLI.	BG GAS	LITHO
1/22/84	3864'	86'	Drilling	8.8	37	10.2	800	--	LS, Chert
1/23/84	3873'	9'	Stuck Stuck bit 62' off bottom at 3821', no circulation.	8.5	42	--	300	--	LS, Chert
1/24/84	3873'	0'	Fishing Free point 3821', backed off 3336', fishing	8.7	45	9.8	500	--	--
1/25/84	3873'	0'	Fishing Jarring on fish	8.8	49	8.4	800	--	--
1/26/84	3873'	0'	Fishing Washing over D.C.s, tight 745' - 780', 1112' - 1145' 1745' - 1870'	8.8	58	8.6	800	--	--
1/27/84	3873'	0'	Fishing Top of fish at 3371', washed over DP 3371' - 3518'	8.7	64	6.2	800		
1/28/84	3873'	0'	RIH w/bit Recovered fish, washed over to 3516', jarred loose	8.6	58	8.0	800	--	--
1/29/84	3873'	0'	Rig repair Washed and reamed 3491' - 3757', stand pipe broke	8.6	63	5.4	900		
1/30/84	3889'	16'	Drilling 111' of fill after trip	8.7	62	4.8	1000	--	LS
1/31/84	3968'	79'	Circ. for logs	8.7	61	5.8	5500	--	
2/1/84	3968'	0'	Elect. logs DIFL/GR, BHC Acoustilog/GR, COL/CN/GR	8.7	65	4.8	6500		
2/2/84	3968'	0'	WOC plug Set 50' plug at bottom of hole w/60 sks Class "G" w/2% CaCl						
2/3/84	3914'	PBD 0'	WOC Ran 92 jts 40# 9 5/8" csg, set at 3914' w/150 sks lt wt 3-5 w/2% CaCl and 1/2# D-29 flakes, tail w/100 sks Class "G" cement w/2% CaCl, 3%salt and 1/4# D-29 falkes. Ran 150 sks at surface w/2% CaCl, added.Cemented back to surface.						
2/4/84	3914'	0'	Test BOP - drilling with brine water.						
2/5/84	3975'	6'	Tripping Lost 100 bbl prep. to squeeze.	10.1	26	—	182k	—	Salt
2/6/84	3975'	0'	Drilling cement, squeezed 100 sks at 3914' with braden head squeeze.						
2/7/84	3975'	0'	Drilling cement, Ran 2nd braden head squeeze with 75 sks, ran 10 sks into formation with 2000# pressure.						

DATE	DEPTH	FEET	OPERATION	WT.	VISC	W.L.	CLI.	BG GAS	LITHO
2/8/84	3975'	0'	Drilling cement, ran 3rd squeeze 0 125 sks, pump 3 1/2 bbl at 1/2 bbl/min, pressure to 2700#, bled off to 2500#.						
2/9/84	3975'	0'	Circ. cond. mud	10.2	26	—	183k	--	--
			Ran leak off test, 900# max., broke back to 400#.						
2/10/84	4171'	196'	Drilling	11.5	38	—	185k	1 unit	Salt, Anhydrite
2/11/84	4220'	249'	Drilling	11.9	49	17.0	183k	10	Salt, Any., slts
			Clastic 3 4175' - 4280' Drilling break, 310 units gas						
			Clastic 4 4387' - 4390' Drilling break, 120 units gas						
2/12/84	4737'	317'	Drilling	11.6	37	15.2	183k	6	Salt, Slts, Anhy
2/13/84	4815'	78'	Drilling	11.8	46	19.0	183k	4	" "
			Trip gas - 200 units						
2/14/84	4958'	143'	Drilling	11.5	40	12.4	183k	3	Anhydrite, salt
			Conn gas, 7 units						
2/15/84	5100'	142'	Drilling	11.5	47	--	--	8	SH, Anhy, salt
			Gas after survey, 150 units						
2/16/84	5208'	108'	Survey	11.3	50	13	183k	15	Salt, anhy., shale
			Trip gas 200 units						
2/17/84	5324'	116'	Drilling	11.8	51	10.0	183k	10	Anhy., salt
			Downtime gas - 100 units						
2/18/84	5415'	91'	Drilling	11.8	52	11.5	183k	4	" "
			Trip gas - 80 units						
2/19/84	5522'	107'	Drilling	10.8	51	12.6	183k	3	" "
			Conn. gas - 12 units						
2/20/84	5630'	108'	Drilling	12.0	50	10.0	180 k	1	Salt, anhy., slts
			Survey gas - 2 units						
2/21/84	5822'	192'	Drilling	11.9	48	11.0	183k	2	Salt, Anhy, slts
			5682-84 - 18 units max						
			5708-10 - 20 units max						
2/22/84	5895'	73'	Drilling	11.9	51	10.0	190k	1	Anhy, salt, slts,
			Conn gas - 2 units						SH
2/23/84	5932'	37'	Cond. muc	11.8	60	14.6	185k	1	Anhy, salt
			Conn gas - 2 units						
2/24/84	6092'	160'	Drilling	11.9	52	14.8	189k	1	Salt, anhyd.
			Conn gas - 2 units						
2/25/84	6280'	188'	Drilling	12.0	53	13.8	186k	2	Salt, Anhy, slts
			Conn gas - 2 units						

DATE	DEPTH	FEET	OPERATION	WT.	VISC	W.L.	CLI.	BG GAS	LITHO
2/26/84	6469'	189'	Drilling Conn gas - 4 units	11.8	54	10.2	186k	2 units	Salt, anhydrite
2/27/84	6760'	281'	Drilling Conn gas - 4 units	11.8	65	11.5	186k	2 "	Salt, anhydrite
2/28/84	7023'	263'	Drilling Conn gas - 44 units Drilling break 6943' - 6950', 136 units max.	11.8	55	12.0	186k	15 "	SH, Salt, anhy
2/29/84	7165'	142'	Drilling BG Gas - 50, Conn gas - 110, Trip gas - 1100 units Clastic 21 7096-7105, gas incr. 8 to 125 to 20	11.5	53	12.4	180k	50 "	Salt, SH, anhy
3/1/84	7404'	239'	Drilling Conn gas - 100 units	11.0	50	8.5	186k	40 "	Anhy, salt, slts, sh
3/2/84	7440'	36'	Circ. for DST - 1 Short trip gas - 140 units 7410 - 7440 gas 40 units - 60 units - 30 units	11.0	60	10.0	186k	40 "	Slts, Sh, anhy
3/3/84	7447'	7'	Wait on circ. sub. Trip gas - 1400 units	11.0	60	10.0	185k	150 "	Salt, sh, anhydrite
3/14/84	7571'	124'	Drilling Conn gas - 90 units	10.8	53	14.0	186k	60 "	LS
3/5/84	7645'	74'	Trip Drilling break 7620 - 45 gas 50 units - 70 units - 40 units	10.8	61	9.8	186 k	60 "	LS, dolomite
3/6/84	7645'	0'	POH DST-2 trip gas - 100 units	11.0	53	9.2	186k	60 "	LS, dolomite
3/7/84	7645'	0'	Trip IH	10.9	54	9.2	185k	--	--
3/8/84	7768'	123'	Drilling Trip gas - 1200 units	11.0	60	8.8	186k	35 units	LS, dolo, chert
3/9/84	7791'	23'	DST-3 Trip gas - 285 units	10.8	63	8.4	186k	50 "	Dolomite
3/10/84	7820'	29'	Circ. for DST3 Conn gas - 80, trip gas - 1300	10.8	58	9.1	186k	20 "	LS, dolo
3/11/84	7840'	20'	DST#4	10.7	47	10.5	178k	20 "	Dolomite
3/12/84	7915'	75'	Drilling Trip gas - 1040 units	10.7	53	12.0	162k	30 "	Dolomite
3/13/84	8056'	141'	Drilling Conn gas - 44 units	10.7	49	12.0	177k	30 "	Limestone, shale

FORMATION TOPS

Log Tops KB=5875'

Formation	Depth	Datum	Formation	Depth	Datum
Chinle	415'	(+5460)	Clastic 13 Top	5886'	(-11)
Moenkopi	775'	(+5100)	Base	5917'	(-42)
Cutler White Rim	1232'	(+4643)	Clastic 14 Top	6087'	(-212)
Rico	1850'	(+4025)	Base	6120'	(-245)
Hermosa	2600'	(+3275)	Clastic 15 Top	6202'	(-327)
Paradox Salt	3943'	(+1932)	Base	6219'	(-344)
Clastic 3 Top	4168'	(+1707)	Clastic 16 Top	6259'	(-384)
Base	4270'	(+1605)	Base	6287'	(-412)
Clastic 4 Top	4328'	(+1547)	Clastic 17 Top	6429'	(-554)
Base	4420'	(+1455)	Base	6445'	(-570)
Clastic 5 Top	4526'	(+1349)	Clastic 13 Top	6479'	(-604)
Base	4589'	(+1286)	Base	6483'	(-608)
Clastic 6 Top	4761'	(+1114)	Clastic 19 Top	6668'	(-793)
Base	4851'	(+1024)	Base	6676'	(-801)
Clastic 7 Top	5198'	(+677)	Clastic 20 Top	6932'	(-1057)
Base	5223'	(+652)	Base	6980'	(-1113)
Clastic 8 Top	5320'	(+555)	Clastic 21 Top	7088'	(-1213)
Base	5333'	(+542)	Base	7108'	(-1233)
Clastic 9 Top	5403'	(+472)	Cane Creek Top	7350'	(-1475)
Base	5452'	(+423)	Base	7461'	(-1586)
Clastic 10 Top	5585'	(+290)	Salt Base	7520'	(-1645)
Base	5631'	(+244)	Leadville	7547'	(-1672)
Clastic 11 Top	5785'	(+90)	Madison	7782'	(-1907)
Base	5820'	(+55)	Ouray	8027'	(2152)
Clastic 12 Top	5865'	(+10)	Elbert	8140'	(-2265)
Base	5886'	(-11)	T.D.	8190'	(-2315)

DATE	DEPTH	FEET	OPERATION	WT.	VISC	W.L.	CLI.	BG GAS	LITHO
3/14/84	8170'	114'	Drilling Conn gas - 32 units	10.8	47	11.0	181k	20 units	Dolo, shale
3/15/84	8190'	TD 20'	ELOGS	10.8	56	9.0	179k	30 "	Dolo, shale
3/16/84	8190'	0'	SOO Trip gas - 1040 units	10.8	59	9.2	174k	60 "	--
3/17/84	8190'		Circ for DST Trip gas - 160 units	10.8	64	9.5	174k	40 "	
3/18/84	8190'		DST #5 Trip gas - 1060 units	10.8	70	9.2	173k	---	--
3/19/84	8190'		Wait on orders	10.8	69	9.2	173k		
3/20/84	8190'		DST #6	10.8	70	25	172k	60/100 units	
3/21/84	8190'	TD	Wait on orders Trip gas - 1240 units	10.8	70	30	170k	55/70 units	

3:00 p.m. preparing to set cement plut at base of surface csg at 3914' and release rig.

Planning on testing porous zone with slightly fair show at 3714' - 3723'.

DRILL STEM TESTS

DST -1 7367' - 7450' (Cane Creek Marker)
Open 15 minutes, shut in 30 minuts, open 1 hour, shut in 2 hours.
Open with very weak blow, top of bucket (a few bubbles)
Rec 254' drilling mud
Sample chamber recov. 2240 cc mud, 0 gas, .08 ohm at 60°F.

	Top	Bottom
1 Hydro	4255	4342
1FP	101/122	125/146
ISIP	162	167
FFP	122/182	146/208
FSIP	202	250
FHydro	4275	4342

Temp 120°F

DST -2 7541' - 7645' (Leadville LS)
Open 15 minutes, shut in 30 minutes, open 60, shut in 142 minutes.
Open with fair blow increasing to good blow that continued throughout.
Recov. 2538' fluid. Reversed out: Gas cut mud, oil and gas Cut mud, water, sample chamber recov.

	Top	Bottom	
1 Hydro	4411	4454	.75 SCF gas
IFP	133/439	185/501	350 cc oil
ISIP	2607	2652	1200 cc water
FFP	479/850	454/921	GOR = 340
FSIP	2607	2672	Resistivity .24 ohm at 60°F
FHydro	4424	4480	Res. mud pit .086 ohm at 71°F

Temp 123°F

DST -3 7750' - 7791' (Leadville and Madison)
Open 15 minutes, shut in 30 minutes, open 90 minutes, shut in 180 minutes.
Open with very weak blow increasing to 1" in bucket after 10 minutes, died after 45 minutes.
Recovered 297' drilling mud, sample chamber recov.

	Top	Bottom	
1Hydro	4424	4453	2200 cc. mud .003 SCF gas at 12 psi
IFP	27/27	53/53	Resistivity .32 at 71°F
ISIP	2662	2694	Pit resist. .28 ohm at 77°F
FFP	54/161	81/161	
FSP	2694	2721	
FHydro	4397	4426	

Temp 120°F

DST -4 7789' - 7840' (Madison)
Open 15 minutes, shut in 30 minutes, open 90 minutes, shut in 180 minutes.
Open weak blow increasing to good blow in bottom of bucket after five minutes.
Second open good blow in 6" increasing to bottom of bucket, max 6 3/4# on gauge.
Recovered: 4600' saltwater, with max of 330 ppm H_2S
Reversed out.

	Top	Bottom	
1Hydro	4424	4453	Sample chamber
IFP	134/750	148/806	Recov. 2500 cc water
ISIP	2703	2735	No gas at 12 psi
FFP	804/2204	833/2261	Res. water .60 ohm at 60°F
FSIP	2703	3235	Res. pit .26 ohm at 63°F
FHydro	4370	4399	

Temp 122°F

DST -5 7608' - 7644' (Leadville)
Open 15 minutes shut in 14 minutes, open 4 hours, shut in
Open with weak blow increasing to 3 1/2 oz/5 min, 7 oz/15 min.
2nd open 11 oz/10 min, 19 oz/1hr., 1 psi/2 hrs, 1 1/2 psi/3 hr, 1 psi/4 hr. Recov. 100' oil (44.5 gravity), 186' OCM, 926' water

	Top	Bottom	
1Hydro	4279	4298	Sample chamber
IFP	186/266	157/279	Recov. .209 SCF gas at 500 psi
ISIP	2508	2610	.300 cc oil
FFP	279/1424	293/1443	1800 cc water
FSIP			Resist .36 ohm at 68°F
FHydro	4341	4340	Resist pit .043 ohms at 68°F

Temp 120°F

DST -6 3890' - 4460' (Clastic #3 and #4)
Open 30 minutes, shut in 60 minutes, second open 2 hrs, second shut in 4 hours, open with 2" blow, increasing to 3/4 psi/5 min, 1/2#/15 min., 20 oz/20 minutes.
19 oz 25 min, 18 1/2 oz/30 minutes.
Second open 2" blow increasing 8" in bucket/5 minutes, bottom of bucket/20 minutes
5 oz/35 minutes, 4 oz/60 minutes, 5 oz/80 minutes, 6 oz/100 minutes, 4 oz/120 minutes.
Recovered 761' fluids, gas cut mud.

	Top	Bottom	
lHydro	2230	2276	Sample chamber
IFP	363/413	502/516	2000 cc mud
ISIP	979	1013	Trace oil
FFP	442/474	613/627	Resistivity .04 ohms at 73°F
FSIP	1242	1263	Res. of pit .3 ohms at 50°F
FHyd	2283	2304	

Temp 108°F
*Plugging in perforation seen on charts.

CEMENT PLUGS

Plug #1 7510' - 7745' Base of salt/Mississippian
65 Sacks premium cement with 18% salt

Plug #2 4300' - 4450' Clastic #4 with 60 sacks premium cement with 18% salt *This plug slid down hole about 160' ±

Plug #3 3800' - 3964' across base of 9 5/8 surface casing set at 3914' with 100 sacks class "G" cement.

Enserch Exploration, Inc.
Mineral Canyon Unit 1-3
Grand County, Utah

Sample Descriptions.

2000' - 2030' Shale, red-brown, soft. (All samples very fine powder.

2030' - 2060' Sandstone, red-brown, very fine to fine grained, subangular to subrounded, micaceous, mainly loose grains, siltstone. (Slight water at 2026' - started to inject water and soap.)

2090' - 2110' Sandstone, red-brown, very fine to fine grained, subangular to subrounded, few coarse grains, micaceous, trace shale, maroon.

2110' - 2140' Sandstone, red-brown, very fine to medium grained, subangular to subrounded, few coarse grains, micaceous, trace shale, maroon.

2140' - 2170' Sandstone, red-brown, very fine grained, calcareous cement, very micaceous, subangular to subrounded, few coarse grains floating; little shale, dark brown, maroon.

2170' - 2200' As above.

2200' - 2230' Shale, red to red-brown, very micaceous in part; sandstone, red, very fine grained, slightly calcareous, shaley.

2230' - 2260' Sandstone, red to red-brown, fine grained, very shaley, very calcareous, micaceous; little limestone, gray, very fine crystalline, dense; little shale, as above.

2260' - 2290' Sandstone and shale as above.

2290' - 2320' Shale, chocolate brown to red-brown; some sandstone, purple, very fine to fine grained, well rounded with abundant clay matrix (dark brown and light gray mottled), dirty, slightly micaceous. POOR SAMPLE.

2320' - 2350' Sandstone, light tan, light gray, very fine grained, subangular, slightly calcareous, argillaceous, slightly micaceous; some shale, brown to maroon. POOR SAMPLE.

2350' - 2380' As above. Few coarse sand grains, well rounded.

2380' - 2410' As above.

2410' - 2440' Sandstone as above, little limestone, dark gray, very fine crystalline, dense.

2440' - 2470' Sandstone, light gray, slightly pale purple, very fine to medium grained, slightly calcareous, micaceous, very finely ground samples.

2470' - 2500' Sandstone, bright rust, very fine grained to medium grained, slightly micaceous; slightly calcareous.

2500' - 2530' As above, bright orange.

2530' - 2560' Sandstone, light gray to red-brown, very fine grained, very micaceous, subangular and limestone, light gray, crystalline, clean, dense; trace chert, dark brown; little shale, dark maroon and light gray-green; abundant grains, very coarse, well rounded, clear orange sandstone grains.

2560' - 2590' Sandstone and shale as above.

2590' - 2620' Sandstone, red-brown, very fine grained, subangular, very micaceous (biotite); some shale, dark red-brown; some limestone, light tan to cream, microcrystalline, clean, dense.

2620' - 2650' Limestone, cream to light gray, microcrystalline; limestone, dark gray, very fine crystalline with tan fossil shadow? Crinoid stem?

2650' - 2680' As above.

2680' - 2710' Limestone, gray to dark gray, very fine crystalline, dense; abundant chert, light orange.

2710' - 2740' Limestone as above; some shale, red-brown, trace chert, light gray and orange.

2740' - 2770' Limestone as above and sandstone, light gray, very fine grained, loose grains, calcareous, well cemented.

2770' - 2800' Shale, chocolate brown, some sandstone as above, very calcareous.

2800' - 2830' Sandstone, gray, very fine grained, calcareous, tightly cemented and limestone, light gray, very fine crystalline, dense, sandy in part; some limestone, light gray, very sandy.

2830' - 2890' Limestone, light gray to cream, very fine crystalline, slightly oolitic ? or fossil shadows; limestone, dark gray, very fine crystalline, dense, hard, little shale, chocolate as above.

2890' - 2920' Sandstone, tan, fine grained to very fine grained, mostly loose grains, subrounded; shale, brown to maroon.

2920' - 2950' Limestone, dark gray, very fine crystalline, dense, sandstone, tan as above, shale, dark brown to maroon.

2950' - 2970' Missing.

2970' - 3000' Shale, dark brown to maroon; some limestone, light cream, microcrystalline, dense, clean.

3000' - 3030' Limestone, cream, white, very fine to microcrystalline, dense, some shale, brown to maroon, abundant very fine grained, sandstone, loose.

3030' - 3060' Limestone ? light tan, fluorescent, very calcareous.

3060' - 3080' Very poor sample. Shale, brown, maroon, probably cavings, no small pieces, 3/8" - 1"

3080' - 3090' Sandstone, limestone, shale, gray, very finely ground up sample.

3090' - 3100' Limestone, light tan, microcrystalline, shale, maroon, red, purple.

3100' - 3110' As above. Abundant cavings, trace shale, light pale blue-green.

3110' - 3120' Limestone, dark gray-brown, very fine crystalline, dense, rexuzed fossils ? fusilinids?; little limestone, cream, microcrystalline, soft, clean; little shale, dark brown.

3120' - 3130' Limestone, gray, very fine crystalline, dense; little limestone, light gray to cream, sub-lithographic with mixture of light orange chert, slightly min. fluorescent.

3130' - 3140' Limestone, gray as above; limestone, dark gray, fine crystalline, very sandy, slightly shaley, dirty.

3140' - 3150' Limestone, lgiht gray to gray, very fine crystalline, sandy in part, dense, hard, no visible porosity, little calcite, white to light pink, crystalline, dense, trace kaolin, white,firm.

3150' - 3160' Sandstone, gray to red-gray, fine grained, well sorted, very shaley, calcareous; little limestone, light gray, fine crystalline, dense.

3160' - 3170' As above.

3170' - 3180' Limestone, gray, very fine crystalline, sandy, dense, hard.

3180' - 3190' As above.

3190' - 3200' Limestone as above; some sandstone, gray, very fine grained, siliceous, tight.

3200' - 3210' As above.

3210' - 3220' Limestone, dark gray, very fine crystalline, dense, hard; little limestone, tan, microcrystalline, dense with occasional oolite floating, trace chert, gray.

3220' - 3230' Limestone as above; trace chert, orange.

3230' - 3240' No sample.

3240' - 3250' Limestone, gray, very fine crystalline to microcrystalline, dense, siliceous in part; trace chert, bright orange fragmented, honey colored, layered.

3250' - 3260' Limestone, light gray, microcrystalline, dense, blocky; little sandstone, light gray, very fine grained with lime; dense, micaceous; trace chert, light gray.

3260' - 3270' Sandstone, light gray to tan, very fine grained, mostly loose grains; little limestone as above.

3270' - 3280' Limestone, light gray, very fine crystalline, dense, hard, blocky, min. fluorescence.

3280' - 3290' Limestone as above, becoming more siliceous.

3290' - 3300' Limestone as above; some limestone, cream to white, microcrystalline, very siliceous in part; trace chert, honey, minimal fluorescence in limestone.

3300' - 3310' Sandstone, light gray, very fine grained, subrounded, well cemented, calcareous cement, slightly micaceous; some limestone, gray to white, microcrystalline, dense; trace chert, orange, white, gray.

3310' - 3320' As above.

3320' - 3330' Limestone, light gray, microcrystalline, dense, hard, very poor sample.

3330' - 3340' Limestone, light to medium gray, very fine to microcrystalline, dense, hard, very siliceous in part, sandy; some sandstone, dark gray, very calcareous; micaceous, very shaley; some

sandstone as above; some limestone, light gray, cream, very fine crystalline, dense, clean, tight; trace chert, gray, orange.

3340' - 3350' As above.

3350' - 3360' Limestone, light gray, very fine crystalline, dense, very siliceous in part, limestone, cream, very fine crystalline, dense, blocky, clean.

3360' - 3380' Limestone, light gray, very siliceous, dense, hard.

3380' - 3400' No sample.

3400' - 3420' No sample.

3420' - 3430' Limestone, light gray, very fine crystalline, dense, hard, clean, abundant sandstone and shale from above, trace chert, light gray, Very poor sample.

3430' - 3440' As above.

3440' - 3450' Limestone, light gray to cream, microcrystalline, dense, clean, abundant red-brown sandstone and shale from above, abundant LCM, Very poor sample after being stuck.

3450' - 3460' Limestone, light gray as above, some limestone, gray, fine crystalline, dense, slightly micaceous; abundant LCM, abundant sandstone, shale from above, Poor sample.

3460' - 3470' Limestone, cream to light gray, very fine to micro-crystalline, dense, clean; little sandstone, medium-gray, very fine grained, well rounded, well sorted and well cemented; tight, no visible porosity; trace chert, light gray, abundant LCM, Poor sample.

3470' - 3480' Limestone, light gray to white, micrycrystalline, dense, some limestone, light tan, very fine crystalline, dense; trace chert, tan, abundant LCM, poor sample.

3480' - 3490' As above, chert increasing, poor sample.

3490' - 3500' Limestone, light gray to white as above, abundant red sandstone and shale, abundant LCM, Very poor sample.

3500' - 3510' Limestone, light gray to gray-tan, very fine to microcrystalline, dense, clean, some limestone, dark tan, very fine crystalline, dense; trace smokey, abundant red shale and sandstone from above and light gray green, chalky.

3510' - 3520' Limestone, light gray to gray, very fine to microcrystalline, dense; little limestone, dark tan, microcrystalline, dense; abundant red sandstone and shale from above, very poor sample.

3520' - 3550' As above, very poor samples.

3550' - 3560' Limestone, light gray, microcrystalline, dense, tight, clean, some limestone, dark gray, very fine crystalline, dense; abundant LCM, abundant red shale, sandstone from above, poor sample.

3560' - 3570' As above; trace chert, light gray, poor sample.

3570' - 3580' Limestone, light gray, microcrystalline, dense, blocky, hard; and limestone, cream to white, mottled, clean, dense; abundant sand grains and fine shale fragments.

3580' - 3590' As above.

3590' - 3600' No sample.

3600' - 3610' Limestone, light gray, microcrystalline, dense, blocky, clean; abundant chert, light gray to tan.

3610' - 3620' Limestone, light gray as above and limestone, cream, very fine crystalline, dense; trace chert, light gray, white.

3620' - 3630' Limestone as above; little sandstone, light gray, very fine grained, rounded, abundant calcite cement, no visible porosity.

3630' - 3640' Limestone, light gray to gray, very fine crystalline to microcrystalline, dense, siliceous in part; some limestone, cream to tan, microcrystalline, dense; little limestone, dark gray, very fine crystalline, dense; trace chert, white to light tan.

3640' - 3650' As above, little shale, black, carbonaceous, calcareous.

3650' - 3660' As above.

3660' - 3670' Limestone, light gray, very fine to microcrystalline, dense; little shale, dark gray to black, carbonaceous, calcareous; some limestone, cream to light gray, microcrystalline; trace chert, light tan to white.

3670' - 3680' As above.

3680' - 3690' No sample.

3690' - 3700' Limestone, light gray to cream, very fine to microcrystalline, dense; some limestone, dark gray,

fine crystalline; trace shale, black, carbonaceous; trace chert, light tan.

3700' - 3710' Limestone, light gray, very fine crystalline, dense, hard; some limestone, cream, microcrystalline, abundant chert; trace shale, dark gray to black, some sandstone, light gray, very fine grained, subrounded, very calcareous, tight cement, slightly micaceous, no visible porosity.

3710' - 3720' As above.

3720' - 3730' Limestone, dark tan, very fine crystalline, dense; limestone, light gray, very fine to microcrystalline, dense; little sandstone, very fine grained, subrounded, very calcareous, tight; very abundant chert, gray to tan.

3730' - 3740' Limestone, light gray to cream, very fine to microcrystalline, dense, clean; some limestone, dark gray, very shaley, very fine crystalline grading to shale, very calcareous; little limestone, cream, sucrosic, oolitic; some dolomite, light tan, fine crystalline, sucrosic; little intercrystalline and vuggy, porosity, good fluorescence and cut, slight oil show.

3740' - 3750' Limestone, light gray, microcrystalline, earthy, dense, clean, sandstone, light gray, fine grained, subrounded, well sorted, tight cement, very calcareous; abundant chert, light gray to white.

3750' - 3760' Limestone, light gray to white, very fine crystalline to microcrystalline, dense, tight, clean, sandy in part; little limestone, gray to dark tan, fine crystalline, dense, tight; trace chert, white to gray.

3760' - 3770' Sandstone, light gray as above; some limestone, dark gray to dark tan, fine crystalline, dense; little limestone, tan, dolomitic, sucrosic with P.P. and intercrystalline porosity, good fluorescence, fair cut, trace vuggy to oolitic molds, porosity, fine crystalline; abundant chert, light gray to white; trace calcite, clear.

3770' - 3780' As above; trace limestone, light gray, sucrosic, slightly oolitic molds, clean, no fluorescence.

3780' - 3790' Limestone, light gray to white, very fine crystalline to microcrystalline, dense, clean, little limestone, dark tan to gray, very fine crystalline, dense, tight, no porosity; little chert, tan, gray, white.

3790' - 3800' As above.

3800' - 3810' Limestone, light gray to dark tan, very fine crystalline and some sandstone as above; little shale, dark gray to black, blocky, calcareous; trace chert, tan to light gray; little anhydrite, white and light tan, finely sucrosic.

3810' - 3820' Limestone, light gray, microcrystalline, dense, tight; little limestone, dark tan to brown, very fine crystalline, dense; little sandstone, as above; abundant chert, white, light gray, tan; little anhydrite, as above.

3820' - 3830' As above. Chert increasing to very abundant, no anhydrite.

3830' - 3840' Sandstone, light gray, fine grained, subrounded, well cemented, calcareous cement, clean, no fluorescence; some limestone, light gray, very fine crystalline, dense to sucrosic; trace dolomite, light gray to light tan, fine crystalline, limey, dense with trace intercrystalline porosity, fair fluorescence, slight stream cut, very abundant chert, tan, white, light gray.

3840' - 3850' As above.

3850' - 3860' Sandstone, light gray to white, very fine grained, subrounded, well cemented, calcareous cement, very limey, well sorted, no visible porosity; some limestone, light tan to light gray, very fine crystalline, sucrosic in part - microcrystalline, dense; little abundant chert, light gray, white, light tan.

3860' - 3870' As above, sandstone decreasing, limestone increasing, chert increasing.

3870' - 3880' Limestone, light gray to light tan, very fine crystalline to microcrystalline, tight, dense; little sandstone, light gray as above; trace chert, gray to white; trace calcite, white; trace shale, black, calcareous, carbonaceous. Very poor sample. (Added Soltex to mud system which fluoresces).

3880' - 3890' Limestone, gray, microcrystalline, dense, blocky, siliceous in part; some limestone, gray, fine crystalline, sucrosic, sandy in part, dense; little sandstone, white, very calcareous, very fine grained; trace shale, black, calcareous; trace chert, white, tan, gray.

4160' - 4170' Salt as above; some anhydrite, white, soft, gummy.

4170' - 4190' Anhydrite, dark tan to gray, fine crystalline, white; little dolomite, light brown, sucrosic, dirty, no visible porosity, slightly light yellow fluorescence, no cut, no stain; little anhydrite, white, soft; abundant salt, white, clear.

4190' - 4210' Siltstone, light tan, slightly dolomitic, soft, dirty; little dolomite, light tan to brown, very fine crystalline - sucrosic, tight cement, slight yellow fluorescence; trace salt, clear with inclusions of white anhydrite; little anhydrite, light tan, softy, shaley, dirty.

4210' - 4220' Shale, black to dark gray, carbonaceous, very calcareous, very silty, some anhydrite, white to gray, soft; some siltstone, buff to tan, abundant salt.

4220' - 4240' Siltstone, light tan to light gray, well sorted, sub to well rounded, slightly dolic cement; GOOD FLUORESCENCE, slightly slow cut, poor show, good gas show, 4218' 4280'.

4240' - 4260' Anhydrite, white, soft, gummy; some siltstone as above; abundant salt; little dolomite, light tan; trace shale, black, carbonaceous.

4260' - 4320' Salt, white, clear; trace anhydrite along bedding planes of salt crystals, trace anhydrite, white soft, sucrosic to satiny; trace dolomite, light brown, sucrosic.

4320' - 4330' As above, anhydrite increasing to some.

4330' - 4360' Anhydrite, white, soft, gummy, bedded; light gray, inclusions in white matrix; some dolomite, light tan, fine crystalline, dense; some siltstone, light gray, very calcareous, firm, argil, no fluorescence or cut.

4360' - 4380' Shale, dark brown to black, carbonaceous in part, some dolomite, light gray, very fine crystalline, soft anhydrite, some anhydrite, white to light tan, fine crystalline to sucrosic, silty and anhydrite white, softy, gummy.

4380' - 4400' Shale, gray to brown, black, carbonaceous in part, calcareous in part, very silty; dolomite, light tan, very fine crystalline to sucrosic, softy, anhydritic and siltstone, light gray, calcareous, tight, shaley.

4400' - 4410' Shale, dark gray-brown to black, very carbonaceous, slightly calcareous, some siltstone, light tan to white, slightly calcareous, argill; some anhydrite, white, soft, gummy and gray, fine crystalline, dense; trace limestone, light gray, microcrystalline, dense, slightly dolomitic; little red shale and sandstone from above (from pits.)

4410' - 4420' Anhydrite, white, soft, gummy, and gray, fine crystalline, soft, dense; some siltstone as above; little black, carbonaceous shale as above.

4420' - 4440' Salt, white to clear; little anhydrite, white, soft; little shale, light gray, soft, slightly doloic; abundant LCM, very poor sample.

4440' - 4480' Salt, white to clear; trace salt with light orange tint; trace anhydrite, white, soft and gray argyll.

4480' - 4490' Salt, clear to white; 90% LCM.

4490' - 4520' Salt, white to clear, trace limestone, light gray, microcrystalline, argil; little anhydrite, white, soft; trace shale, black, carbonaceous.

4520' - 4530' Anhydrite, white, softy, gummy, and anhydrite, light gray, fine crystalline with occasional H.L. shale splits; trace dolomite, light tan, fine crystalline, silty; trace shale, dark gray to black, carbonaceous, slightly calcareous.

4530' - 4540' Anhydrite, gray, softy, very argil.; little limestone, light gray to tan, microcrystalline, dense; little anhydrite, white, softy, gummy, trace shale.

4540' - 4550' Siltstone, light gray, softy, very argil, sandy in part, some anhydrite, white, soft, gummy, and light gray, softy argill; some shale, dark brown to black, carbonaceous, calcareous in part; some light gray dolomite, shale, soft (muddy).

4550' - 4580' Shale, light gray, soft, very dolomitic, very silty in part; some anhydrite, white, satiny, bedded; trace limestone, light gray, microcrystalline, dense, dolomitic.

4580' - 4590' Anhydrite, white, satiny, softy; little shale, light gray, dolomitic, softy; salt, white, clear.

4590' - 4600' Salt, white to clear; trace anhydrite, white, salt inclusions in part.

4600' - 4640' Salt, white, clear, trace anhydrite, white; trace shale, black, dark brown, light gray, dolomitic in part.

4640' - 4650' Salt, white to clear; little carnalite salt, light to bright orange; trace anhydrite, white, soft; trace light gray dolomite, shale, soft.

4650' - 4700' Salt, clear to white; trace anhydrite, white soft; trace shale, light gray, dolomitic, soft.

4700' - 4730' Salt, white to clear; trace anhydrite, white as inclusions in salt.

4730' - 4760' Salt, white to clear; trace shale, black, carbonaceous; trace anhydrite, white, soft.

4760' - 4770' Anhydrite, white, softy, gummy and anhydrite, white, softy, satiny; some siltstone, light gray, tan, very argil; trace limestone, light tan, microcrystalline, dense, dolomitic.

4770' - 4790' Shale, gray, light tan, very calcareous, soft, some anhydrite, white to gray, soft; trace limestone, light tan, microcrystalline, dolomitic.

4790' - 4800' Siltstone, light tan, very shaley, very calcareous, softy, no fluorescence, no cut; some shale, gray, soft, very calcareous; little anhydrite, softy, crystalline.

4800' - 4810' Anhydrite, light gray to tan, mottled, very fine crystalline, firm; dolomite, tan, very fine crystalline, with inclusions of white anhydrite in part, very silty in part; little anhydrite, white, fine crystalline, satiny.

4810' - 4820' Anhydrite, white, fine crystalline, satiny and white, softy, gummy; little shale, dark brown, some siltstone, light gray, very calcareous, soft; trace limestone, tan, microcrystalline, dense, dolomitic, blocky, hard.

4820' - 4830' As above. Trace limestone, light tan, microcrystalline, dense.

4830' - 4840' Anhydrite, white to light gray, softy, gummy and fine crystalline; little shale, light brown to black, carbonaceous; little shale, light gray, very softy, very calcareous.

4840' - 4850' Anhydrite, light gray to white, soft gummy to fine crystalline, soft; little siltstone, light gray, very calcareous, very argil.

3890' - 3900' Shale, black, carbonaceous, very carbonaceous, blocky; little limestone, tan, very fine to microcrystalline, dense; trace dolomite, brown, fine crystalline, sucrosic, dense; trace chert, light gray, botroidal shap in part.

3900' - 3910' Dolomite, dark brown, very fine to microcrystalline, dense, tight and shale as above.

3910' - 3920' As above; abundant cavings from above, very poor sample.

3920' - 3930' Siltstone, light gray, calcareous, tight; shale, dark gray, brown, very calcareous, blocky, carbonaceous; little limestone, light tan, finely sucrosic, clean.

3930' - 3940' Shale, gray, blocky, very calcareous; some dolomite, dark gray-brown, very fine crystalline, sucrosic, dense; little limestone, light gray, very fine crystalline, dense; little anhydrite, light gray, fine crystalline, dense fractures (healed.)

3940' - 3950' Salt top at 3943; by drilling Tim and by chlorides in mud system.

3950' - 3975' No salt to surface.

3975' - 3990' No salt or sample to surface.

3990' - 10 Salt, white, clear, abundant LCM, abundant cement; little shale, dark gray.

3990' - 4050' Salt as above; trace shale, dark gray; trace anhydrite, white.

4050' - 4100' Salt, white to clearn, clean; trace salt, light gray, shaley; trace dolomite, light gray, fine crystalline, sucrosic, abundant cement; abundant LCM; trace shale, red-brown, well rounded, fragments (from pite?); trace shale, dark gray, very calcareous, carbonaceous.

4100' - 4120' Salt, white to clear; trace salt, light gray, slightly shaley; little anhydrite, light gray, soft, dirty; trace shale, light tan to dark gray, carbonaceous;

4120' - 4140' Salt, white to clear as above; with increasing shale.

4140' - 4160' Salt, white to clear; little shale, dark tan, gray, black; trace anhydrite, light gray to yellow, soft, gummy to firm; trace dolomite, gray, very fine crystalline, dense, calcareous, argil.

4850' - 4860' Salt, white, clear; trace anhydrite, white, soft.

4860' - 4870' Salt, white to clear; trace dolomite, gray, fine crystalline, dense, firm, blocky; trace anhydrite, white, soft to fine crystalline, satiny.

4870' - 4890' Salt as above. Dolomite as above; shale as above; trace carnalite salt, bright orange.

4890' - 4930' Salt, white, clear; trace anhydrite, white, soft to fine crystalline, satiny; trace shale, dark gray, doloic.

4930' - 4950' Salt, clear to white; trace orange stain on crystal surface in part; trace shale, dark gray to black, carbonaceous; trace anhydrite, white, soft; trace dolomitic anhydrite, very argil ?.

4950' - 4970' Salt, clear to white; trace anhydrite, white, fine crystalline, satiny, soft; trace shale, black, carbonaceous with few small crystals of pyrite; trace salt, light pale orange.

4970' - 4980' Salt, light gray, white, clear; little salt, orange to pale orange, carnalite?; trace shale, light gray, dolomitic, soft; trace shale, black, carbonaceous; trace anhydrite, white, soft.

4980' - 5000' Salt, pale orange, white, light gray, few bright orange fragments; little anhydrite, white, light gray, soft; trace shale, black, carbonaceous.

5000' - 5040' Salt, pale orange, white, clear, occasional bright orange, carnalite fragments; little anhydrite, white, satiny, soft; trace shale, black, carbonaceous, soft; trace dolomite, light gray, shaley.

5040' - 5060' Salt, light orange, white, clear and anhydrite, white, fine crystalline, satiny, soft, medium firm; trace shale, black, carbonaceous.

5060' - 5090' Anhydrite, white, fine crystalline, soft; salt, white to clear; trace shale, black, carbonaceous.

5090' - 5100' Anhydrite, shite to light gray, amorphous to fine crystalline, satiny, soft to softy gummy; little shale, dark brown to black, carbonaceous, blocky, soft; some salt, white to clear.

5100' - 5120' Anhydrite, as above; trace shale as above; trace dolomite, dark tan, fine crystalline, silty, argil, dense, firm, no visible porosity.

5120' - 5150' Salt, white to clear; trace shale, black to dark brown, carbonaceous, soft; trace anhydrite, white, soft, fine crystalline, satiny.

5150' - 5160' Salt, white to clear; trace anhydrite, white softy, satiny; trace shale, black, carbonaceous; trace siltstone, gray, softy, shaley, one piece black crystal striated with light green opaque mineral inclusion.

5160' - 5190' Salt as above; little anhydrite; trace shale, black, carbonaceous; trace siltatone, gray.

5190' - 5200' Salt, white to clear; some anhydrite, white, soft to satiny, soft; trace shale, black to dark brown, carbonaceous; trace siltstone, light gray, very soft, very argil.

5200' - 5210' Anhydrite, white to light gray, softy, gummy and fine crystalline, softy, little shale, black to dark green, soft.

5210' - 5220' Anhydrite as above; little siltstone, light gray, soft, very shaley; little anhydrite, light gray, soft, bedded with thin splits of dark colored anhydrite; trace shale, black to dark brown.

5220' - 5240' Anhydrite, white to light gray, soft, amorphous to fine crystalline, softy, satiny; trace shale and siltstone as above.

5240' - 5250' Salt, white to clear, ; little anhydrite, white, satiny; trace shale, dark brown to black, carbonaceous; trace anhydrite, light gray, shaley, soft.

5250' - 5300' Salt, white to clear; trace anhydrite, white, soft gummy; trace shale, black, carbonaceous.

5300' - 5310' Salt, white, clear, with trace white anhydrite inclusions, crystalline, satiny; trace siltstone, light tan, anhydrite, shaley; trace anhydrite, white, fine crystalline, satiny, soft.

5310' - 5320' As above; trace anhydrite, light gray, soft, very shaley.

5320' - 5340' Anhydrrite, light gray to white, very fine crystalline, amorph, soft; trace shale, dark brown to black, carbonaceous, soft; trace anhydrite, light gray, shaley.

5340' - 5350' Salt, white to clear; trace anhydrite, white fine crystalline, soft, satiny.

5350' - 5380' Salt, white to clear; little anhydrite, white, soft, fluffy, satiny; trace shale, black, carbonaceous.

5380' - 5410' Salt, white to clear; trace anhydrite, white, soft, very fine crystalline, satiny; trace shale, black carbonaceous (abundant black pipe dope).

5410' - 5420' Anhydrite, white, fine crystalline, satiny, medium soft, with occasional thin splits of black shale filled fractures; anhydrite, light gray, softy, shaley, difty; trace shale, black, dark brown, carbonaceous; trace siltstone, tan, very shaley, soft.

5420' - 5430' Anhydrite, light gray, shaley, softy, dirty, some anhydrite, white, soft, calcareous in part; trace limestone, light tan, microcrystalline, dense, dolomitic; trace shale, black, carbonaceous.

5430' - 5450' Anhydrite as above; some siltstone, light gray to tan, very shaley, soft; trace shale, black, carbonaceous.

5450' - 5460' Anhydrite, white to light gray, fine crystalline, satiny, soft to light gray, shaley, gummy; little siltstone, light gray bands in white anhydrite.

5460' - 5500' Walt, white to clear; little anhydrite, white, satiny, soft; trace anhydrite, light gray, soft, shaley, gummy; trace shale, black, carbonaceous, soft.

5500' - 5510' Salt, white to clear; little siltstone, light gray, anhydritic; trace anhydrite, light gray; trace shale, black, carbonaceous, soft.

5510' - 5550' Salt as above; siltstone decreasing to trace; trace shale, black, carbonaceous.

5550' - 5590' Salt, white, clear; trace anhydrite, light gray, silty, dirty, soft; trace anhydrite, white, soft, gummy.

5590' - 5610' Anhydrite, white, softy, gummy; anhydrite, light gray, soft, silty in part, slightly dolomitic; little siltstone, light tan, very shaley, anhydritic, soft; little shale, dark gray to black, carbonaceous.

5610' - 5630' Siltstone, light tan, very shaley, softy, calcareous; some anhydrite, white, fine crystalline, satiny, soft; grading to light gray amorphous with hair-line fractures (tight). Trace shale, black, carbonaceous.

5630' - 5640' Anhydrite, light gray to white, little siltstone as above; little shale as above; trace limestone, light tan, microcrystalline, dense, clean.

5640' - 5670' Salt, white, clear; trace anhydrite, white, soft, gummy.

5670' - 5680' No sample available (bypassed Sh shaker), abundant LCM.

5680' - 5690' Salt as above.

5690' - 5710' Salt, light gray, white, clear; some anhydrite, white, light gray, amorphous to fine crystalline, soft; trace shale, black, carbonaceous.

5710' - 5750' Salt, white to clear; trace anhydrite, white, soft.

5750' - 5790' Salt as above.

5790' - 5800' Anhydrite, white to light gray, amorphous to fine crystalline, soft to gummy; little siltstone, tan, soft, shaley, very slightly fluorescent, very slightly slow cut; little shale, black, carbonaceous.

5800' - 5820' Anhydrite, white, light gray, amorphous, fine crystalline, soft to gummy; little siltstone, light tan, poorly cemented, no fluorescence; trace shale, black to dark gray, carbonaceous.

5820' - 5830' Anhydrite, white, soft, amorphous, fine crystalline with occasional thin shale (?) splits; little anhydrite, light gray, very shaley, dirty.

5830' - 5870' Salt, white to clear; little anhydrite, white, fine crystalline, satiny, soft.

5870' - 5890' Anhydrite, white, soft, amorphous, fine crystalline, satiny; some anhydrite, light gray, very soft, gummy, shaley; trace siltstone, light gray, shaley; trace shale, black, carbonaceous, abundant LCM.

5890' - 5900' Anhydrite, white, soft, amorphous; little dolomite, dark gray to brown, fine crystalline, very shaley, anhydritic; little shale, dark gray to black, carbonaceous, soft; little anhydrite, light gray, very shaley, soft; abundant LCM.

5900' - 5920' Siltstone, light tan, poorly cemented, very anhydritic; anhydrite, white, soft, amorphous, abundant LCM.

5920' - 5940' Salt, clear to white, clean; little anhydrite, white, soft; trace shale, black, carbonaceous; trace siltstone, light gray, soft; trace salt, pale orange.

5940' - 5950' Salt, white to clear; trace anhydrite, white, soft; trace siltstone, light gray, soft; trace shale, black, carbonaceous.

5950' - 6060' Salt, clear to white, trace anhydrite, white, soft; shale, black.

6060' - 6080' Salt as above, abundant LCM.

6080' - 6090' Salt, very abundant LCM, very poor sample.

6090' - 6120' Anhydrite, white; trace shale, black, carbonaceous; some siltstone, light tan, very shaley, softy, very poor sample, very abundant LCM, 99%.

6120' - 6130' Anhydrite, white, soft, amorphous; little siltstone, light brown, shaley, soft, non-calcareous; trace shale, black, and salt, white to clear; abundant LCM.

6130' - 6150' Salt, white to clear; trace anhydrite, white, soft, amorphous to fine crystalline, abundant LCM.

6150' - 6210' Salt as above; anhydrite increasing to little, LCM decreasing to little.

6210' - 6220' Anhydrite, white, soft, amorphous; little shale, black, carbonaceous; little siltstone, light gray, shaley, sandy, soft, non-calcareous, abundant LCM.

6220' - 6230' Anhydrite, shale, siltstone as above; salt, white to clear, little salt with light tan tint; little LCM.

6230' - 6260' Salt, white to clear, light orange, clean, blocky; some anhydrite, white, soft; little shale, black, carbonaceous.

6260' - 6270' Salt, white, clear and anhydrite, white, gray, soft; amorphous; some shale, blocky, carbonaceous.

6270' - 6280' Siltstone, light gray to gray, poorly cemented, soft, shaley, anhydritic; some anhydrite, white, amorphous, soft; little salt, white; little shale, black to dark brown, carbonaceous, soft.

6280' - 6290' Anhydrite, white, amorphous, white, fine crystalline, soft; some anhydrite, light gray, very silty, soft; little shale, dark gray to black, carbonaceous.

6290' - 6300' Anhydrite, siltstone, shale as above; salt, white to clear.

6300' - 6320' Salt, white to clear; little anhydrite, white, soft; trace shale, black, carbonaceous, abundant LCM.

6320' - 6430' Salt, white, clear; trace anhydrite, white, soft; trace siltstone, light gray, soft, anhydritic; trace shale, black, carbonaceous, occasional LCM.

6430' - 6440' Anhydrite, white to light gray, amorphous to fine crystalline, satiny, soft; shale, black, carbonaceous, very slightly carbonaceous, slightly cut, no fluorescence, abundant LCM.

6440' - 6480' Salt, white, clear; trace anhydrite, white, soft; trace shale, black, carbonaceous.

6480' - 6490' Shale, black, carbonaceous, very slightly calcareous; salt, white, clear; some anhydrite, white, soft, gummy; little LCM.

6490' - 6520' Salt, clear to white; trace anhydrite, gray, soft; trace shale, black, carbonaceous; little LCM.

6520' - 6530' Shale, black, very carbonaceous, soft; some anhydrite, white, soft, amorphous, gummy, abundant LCM.

6530' - 6600' Salt, white to clear; little anhydrite, white to light gray, soft, gummy; trace shale, black, carbonaceous; abundant LCM.

6600' - 6620' Salt, white to light gray; little anhydrite, white to light gray, slightly min. fluorescence; trace shale, black, carbonaceous.

6620' - 6670' Salt, white to clear, trace shale as above; trace anhydrite, white, little LCM.

6670' - 6680' Shale, black, carbonaceous; anhydrite, white, soft, amorphous, salt, white to clear, abundant LCM.

6680' - 6800' Salt, clear, light gray to white; little anhydrite, soft, amorphous; trace shale, black, carbonaceous abundant LCM.

6800' - 6870' Salt, white to clear; trace anhydrite, white, soft; trace shale, black, carbonaceous; trace LCM.

6870' - 6890' Salt as above; trace shale, trace anhydrite, LCM increasing to some.

6890' - 6940' Salt, white, clear; LCM decreasing to trace.

6940' - 6950' Anhydrite, white, sfot, amorphous; anhydrite, white, light gray, fine crystalline, satiny, soft; some shale, black, very carbonaceous, soft; little siltstone, gray, shaley, difty.

6950' - 6970' Anhydrite, white, soft, amorphous to fine crystalline, little shale, black, carbonaceous.

6970' - 6980' Siltstone, light gray, very shaley, anhydritic, dirty, some shale, black, very carbonaceous, no fluorescence, fair cut (streaming and better); some anhydrite as above; little limestone, light tan, fine crystalline, dense, doloic.

6980' - 6990' Anhydrite, white, soft, amorphous, satiny; little siltstone, gray, anhydritic, very shaley, dirty; little shale, black as above; trace limestone, tan, very fine crystalline, dense, tight, clean.

6990' - 7000' Anhydrite, white, soft, amorphous, trace siltstone, light gray, shaley; trace shale, black, carbonaceous.

7000' - 7070' Salt, white to clear; trace anhydrite, white, soft; little LCM.

7070' - 7090' Salt as above; LCM increasing to some.

7090' - 7100' Shale, black, carbonaceous, soft with no fluorescence, fair cut; some anhydrite, white, soft, amorphous to fine crystalline, soft; little salt, clear to white; abundant LCM.

7100' - 7110' Anhydrite, white to light gray; some siltstone, light gray, very anhydritic, some shale, black, carbonaceous as above, poor sample.

7110' - 7120' Anhydrite, siltstone, shale as above; salt, white to clear, very abundant LCM, very poor sample.

7120' - 7140' Salt, white to clear, little salt (carnalite?), light pale orange; little anhydrite, white, soft, abundant LCM.

7140' - 7150' Salt, white to light gray; trace anhydrite and shale; trace LCM.

7150' - 7180' Salt, white to light gray; trace salt, pale orange, fine crystals in part; trace anhydrite, white to light gray; trace LCM.

7180' - 7250' Salt, white to clear, clean; trace shale, black, carbonaceous, trace LCM.

7250' - 7300' Salt, white to clear; trace shale, black, carbonaceous; trace LCM.

7300' - 7350' Salt, clear; trace shale, black, carbonaceous; trace LCM.

7350' - 7360' Salt, white to clear; little anhydrite, white to light gray, soft amorphous or fine crystalline; little shale, black, carbonaceous, soft (top Cane Creek marker at 7359').

7360' - 7370' Anhydrite, white, soft, amorphous; some siltstone, gray, soft, anhydritic, shaley, calcareous; little shale, dark gray to black, softly carbonaceous.

7370' - 7380' Siltstone, gray, soft, calcareous, dirty, shaley, no visible porosity; some anhydrite, white, soft, amorphous; little shale, dark gray to black, carbonaceous, calcareous.

7380' - 7390' Shale, dark gray to black, calcareous, carbonaceous, slightly silty in part; some siltstone as above; trace anhydrite, white, soft.

7390' - 7400' Shale, black to dark gray, carbonaceous, calcareous, pyritic in part, little anhydrite, white, fine crystalline, soft to firm.

7400' - 7420' Siltstone, light gray (anhydritic sand) soft, dirty, shaley; some shale, dark gray to black; trace anhydrite, white, fine crystalline; trace calcite light pink.

7420' - 7440' Siltstone, light gray, calcareous in part, shaley, dirty, no visible porosity, some shale, black, carbonaceous, calcareous in part; little anhydrite, chalky, white, dense.

7440' - 7460' Siltstone as above and anhydrite, white as above; little shale, black, carbonaceous, little LCM.

7460' - 7470' As above, trace limestone, gray, very fine crystalline, dense.

7470' - 7480' Shale, black, carbonaceous, slightly calcareous; little anhydrite, white, soft, medium hard; trace limestone, dark brown, very fine crystalline, dense, dolomitic; trace salt crystals, white to light gray.

7480' - 7500' Shale, black, carbonaceous, calcareous in part, slightly pyritic in part; little siltstone, gray, dirty; little anhydrite, white, soft, medium hard; trace chert, honey color.

7500' - 7520' Salt, white to clear, very anhydritic in part and anhydrite, light gray to white; some shale, black, carbonaceous.

7520' - 7530' Limestone, dark gray to gray, very fine crystalline, dense, shaley in part; little shale, black, carbonaceous as above. Some dolomite, light tan, very fine crystalline, dense, clean.

7530' - 7540' Dolomite, light gray to tan, fine crystalline, sucrosic, silty, tight, dense; little limestone, dark gray, very fine crystalline, dense; trace shale, black, carbonaceous; little siltstone, light gray, very dolomitic, shaley, dirty.

7540' - 7550' As above; trace chert, light tan; trace selenite crystal; long, clear.

7550' - 7560' Limestone, light gray to cream, fine to microcrystalline, clean, dense; limestone, cream, fine crystalline, dense, slightly fossiliferous, sucrosic in part with few pyrite crystals disseminated in part; littel dolomite, light tan to light gray, fine crystalline, dense, with trace PP - Vugular porosity, some fluorescence, slightly cut, little dead oil stain on porosity; dolomite, dark tan, black, very fine crystalline with slightly oolitic tight, no visible porosity. Little limestone, light tan, microcrystalline, dense; little limestone, white, chalky; trace chert, little gray to white, honey.

7560' - 7580' Limestone, light cream to white, fine to microcrystalline, dense to chalky, clean, tight; some limestone, gray, microcrystalline, dense, tight; trace dolomite, gray, fine crystalline with pp to vuggy porosity with black residue; trace chert, light gray to white.

7580' - 7600' Limestone, light tan, fine crystalline to sucrosic, clean, dense; limestone, cream to white, fine crystalline, chalky, clean, dense; trace dolomite, dark gray, fine crystalline, sucrosic, slightly vuggy, with black residue on surface of porosity (dead oil?)

7600' - 7620' Limestone, cream to light gray, very fine crystalline, sucrosic, clear, tight, dense to chalky; trace dolomite, light to medium gray fine crystalline with poor intercrystalline pp porosity; trace pyrite, small cluster of crystals.

7620' - 7630' Limestone as above; little dolomite, dark gray, fine crystalline, sucrosic, slightly pp to intercrystalline porosity.

7630' - 7650' Limestone, light tan to cream, fine to very fine crystalline, dense, clean, trace intercrystalline and pp porosity; some dolomite, light gray to gray, fine crystalline, fair pp and vuggy porosity, fair fluorescence, fair to good cut; trace black residue on porosity in part; little chert, light tan to light gray.

7650' - 7670' Limestone, light gray to white, microcrystalline, medium firm to soft, chalky in part, clean, tight; little limestone, light tan, microcrystalline, dense, with trace pp porosity; trace chert, white, light gray, honey.

7670' - 7680' Limestone, white to light gray, very fine to microcrystalline, dense, clean; little limestone, light tan to light gray, very fine crystalline, sucrosic, dense, trace pp and vuggy porosity; trace black residue on vugs; trace calcite, white crystals; trace limestone, light tan to white, oolitic in matrix, no visible porosity.

7680' - 7700' Limestone, white to light gray, very fine to microcrystalline, dense, clean, tight, chalky in part; little limestone, light tan, fine crystalline, sucrosic, clean, tight, ghost fossils in part.

7700' - 7730' Limestone, light gray to white, very fine crystalline to microcrystalline, dense, tight; some limestone, light tan to white, mottled, soft very fine crystalline, amorphous; trace dolomite, light gray, light tan, very fine crystalline, dense, with trace pp porosity with dead oil stains.

7730' - 7740' Limestone as above; trace dolomite, light brown, fine crystalline, sucrosic; trace chert, light gray.

7740' - 7750' Limestone, white to light gray, very fine crystalline, microcrystalline, dense, clean with styolite, trace hel. fractures; trace vuggy porosity with black residue; trace chert, light gray to white, with occasional HL fractures filled with black filling.

7750' - 7770' Limestone, light gray to white, very fine to microcrystalline, sublithographic, dense to chalky; some limestone, light tan, sublithographic, very siliceous, tight, dense; trace chert, light tan to light gray, with slightly pp porosity with dead oil stain ? at interface with white limestone in fragments and in chert fragments.

7770' - 7780' Limestone, whtie to light gray, very fine crystalline, chalky, clean, soft; some limestone, light brown to tan, fine crystalline, sucrosic, abundant black residue of intergranular intercrystalline and poor vuggy porosity; little chert, light tan to light gray.

7780' - 7790' Limestone, light gray to white, very fine crystalline to chalky, dense, with occasional pp porosity (no perm) no stain, some dolomite, light gray, fine crystalline, trace fair intercrystalline and poor vuggy porosity with black dead oil stain on porosity; trace chert, light tan to light gray.

7790' - 7800' Limestone and dolomite as above; some dolomite, light tan, fine crystalline, dense; trace dolomite, pink, fine crystalline, dense; trace chert, light gray to light tan, poor sample after DST.

7800' - 7820' Dolomite, light tan, fine crystalline, sucrosic, tight, clean, some dolomite, light gray, microcrystalline, sucrosic, with trace intercrystalline and vuggy porosity, slightly dead oil stain on porosity, slightly cut, very slightly fluorescent.

7820' - 7840' Dolomite, white, fine to medium crystalline, dense, clean, tight, some dolomite, lihg gray, fine crystalline, sucrosic, with good porosity intercrystalline and small vuggy with black dead oil stain; trace pyrite in 7830' - 7840' sample, slight cut, no fluorescence.

7840' - 7850' Dolomite, light gray, fine crystalline, sucrosic, good pinpoint intercrystalline and vuggy porosity, black residue on porosity; some dolomite, white, fine crystalline to microcrystalline, dense, clean, tight, trace chert, light gray to light tan.

7850' - 7860' Dolomite, light gray, fine crystalline, sucrosic, good intercrystalline pinpoint and vuggy porosity with black dead oil stain in the porosity; some dolomite, white, very fine to microcrystalline, clean, white, no visible porosity.

7860' - 7870' Dolomite, white as above;some dolomite, light gray as above.

7870' - 7880' As above; dolomite, light gray decreasing to little.

7880' - 7900' Dolomite, white to light tan, very fine crystalline to microcrystalline, dense, tight, no visible porosity; little dolomite, light gray, fine crystalline, sucrosic with intercrystalline and vuggy porosity with black residue.

7900' - 7930' Dolomite, light tan, white, very fine crystalline, fine crystalline, dense, tight, clean; some dolomite, light tan to light gray, fine crystalline, sucrosic with trace intercrystalline porosity with dead oil stain; little dolomite, light gray.

7930' - 7950' Dolomite, light gray, very fine to fine crystalline, sucrosic in part, clean, dense, tight; trace pinpoint porosity, clean; trace dolomite, light gray, fine crystalline, sucrosic; trace ppp with wtain; trace chert, tan.

7950' - 7960' Dolomite, light tan, fine crystalline, sucrosic; trace pinpoint porosity, no stain or fluorescence.

7960' - 7980' Limestone, white, fine crystalline to very fine crystalline, dense, clean, sucrosic in part, no visible porosity; some dolomite, light tan, very fine crystalline, dense, sucrosic, no visible porosity; trace pyrite.

7980' - 7990' Dolomite, light tan, fine to very fine crystalline, sucrosic, dense, tight, clean, trace intercrystalline porosity with black stain; little limestone white, fine crystalline, dense.

7990' - 8000' Dolomite, light tan, fine to very fine crystalline, sucrosic, clean, tight, no visible porosity.

8000' - 8010' Dolomite, light tan, buff, sublitho, fine crystalline, sucrosic in part, clean, tight, slightly pyritic, no visible porosity.

8010' - 8020' Dolomite as above; little limestone, light gray, very fine crystalline, sucrosic, slightly argil.

8020' - 8040' Limestone, gray, light gray, very fine crystalline to microcrystalline, dense, medium soft, argil; some dolomite, tan, microcrystalline, dense, tight, clean.

8040' - 8050' Limestone, light tan, light gray, fine to very fine crystalline, microcrystalline, dense; little limestone, light gray, fine crystalline, dense, argil in part.

8050' - 8070' Limestone, light tan, very fine crystalline to microcrystalline, clean, dense; some limestone, white, very fine crystalline, chalky; trace limestone, pink medium rounded, dense; trace shale, light gray to gray green, slightly calcareous.

8070' - 8090' Limestone, white, very fine crystalline, chalky; little limestone, light tan, fine crystalline, dense; trace dolomite, light brown, fine crystalline, dense; trace shale, light green, waxy, medium hard, few loose grains, well rounded, frosted sand grains.

8090' - 8100' Limestone, white and light tan, as above; trace shale, light blue green and light gray; little dolomite, light brown to tan, fine to very fine crystalline, dense.

8100' - 8110' Limestone, white, light gray, very fine crystalline, chalky, some limestone, light tan, very fine crystalline, dense, clean, tight, blocky.

8110' - 8120' Limestone, white as above; limestone, light tan as above; trace dolomite, light gray, crystalline with poor intercrystalline porosity; trace shale, light gray-green; few well rounded frosted coarse sand grains.

8120' - 8140' Dolomite, light gray, medium crystalline to sucrosic; little dolomite, light gray to light tan, fine to very fine crystalline, dense; trace dolomite, pink, crystalline; trace pyrite, inclusions in dolomite and small crystal clusters as nodules;

abundant sandstone grains, coarse grained, frosted, well rounded; trace shale, dark brown and dark gray and gray-green.

8140' - 8160' Dolomite as above; little limestone, light gray to tan, very fine crystalline, dense; trace shale, gray to gray-green, calcareous.

8160' - 8170' Shale, gray to gray-green, medium firm, slightly dolomitic and dolomite, light tan to dark brown, fine crystalline to very fine crystalline, dense, clean.

8170' - 8180' Dolomite, light tan to light gray, fine to very fine crystalline, dense, clean with occasional floating fine to medium grained, well rounded, sand grains in dolomite.

8180' - 8190' As above, with few floating sandstone grains, coarse to fine grained, well rounded, frosted, clear.

8190' TOTAL DEPTH

Form OGC-1b

IN TRIPLICATE
(See instructions on reverse side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND 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 "APPLICATION FOR PERMIT—" for such proposals.)

NOV 16 1987
DIVISION OF OIL, GAS & MINING

5. LEASE DESIGNATION AND SERIAL NO.: U-24529 PA

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A 111809

1. OIL WELL ☐ GAS WELL ☐ OTHER Dry Hole

7. UNIT AGREEMENT NAME: N/A

2. NAME OF OPERATOR: E P Operating Company (303) 831-1616

8. FARM OR LEASE NAME: Mineral Canyon Federal

3. ADDRESS OF OPERATOR: 1700 Lincoln St., Ste. #3600, Denver, CO 80203

9. WELL NO.: #1-3

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

3364' FSL, 1212' FEL (SE/4, NE/4)

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 3, T26S, R19E

14. PERMIT NO.: 43-019-31119

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5858' GR

12. COUNTY OR PARISH: Grand

13. STATE: Utah

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

NOTICE OF INTENTION TO:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐
REPAIR WELL	☐	CHANGE PLANS	☐
(Other)			☐

SUBSEQUENT REPORT OF:			
WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
(Other) Re-seed location			X

(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.)*

Re-seeding of the Mineral Canyon #1-3 location was completed on 11/4/87. The following seed mixture was used.

Indian Ricegrass	2 lbs./acre
Crested Wheatgrass	2 lbs./acre
Western Wheatgrass	2 lbs./acre
Four wing saltbush	3 lbs./acre

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

SIGNED Gerald W. Gasch TITLE Sr. Production Supervisor DATE 11/11/87

(This space for Federal or State office use)

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

*See Instructions on Reverse Side