

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

(Other instructions on reverse side)

8

5. Lease Designation and Serial No.
ML-36202

6. If Indian, Allottee or Tribe Name
N/A

7. Unit Agreement Name
N/A

8. Farm or Lease Name
Canyon

9. Well No.
3-36 State

10. Field, and Pool, or Wildcat
Undesignated

11. Sec., T., R., M., or Blk. and Survey or Area
36-38S-25E SLBM

12. County or Parrish 13. State
San Juan Utah

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work
DRILL DEEPEN PLUG BACK

b. Type of Well
Oil Well Gas Well Other Single Zone Multiple Zone

2. Name of Operator
MCOR Oil and Gas Corp. (713)-953-7777

3. Address of Operator
5718 Westheimer Rd., Houston, Tx. 77057

4. Location of Well (Report location clearly and in accordance with any State requirements.)*
At surface **2140' FNL & 950' FEL (SENE)**

At proposed prod. zone **Same**

14. Distance in miles and direction from nearest town or post office*
16 air miles NE of Montezuma Creek, Ut.

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. line, if any) **500'**
16. No. of acres in lease **160**
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. **1164'**
19. Proposed depth **5650'**
20. Rotary or cable tools **Rotary**

21. Elevations (Show whether DF, RT, GR, etc.) **4915' GR (4928' KB)**
22. Approx. date work will start* **Upon Approval**

23. **PROPOSED CASING AND CEMENTING PROGRAM**

| Size of Hole | Size of Casing | Weight per Foot | Setting Depth | Quantity of Cement |
|--------------|----------------|-----------------|---------------|--------------------|
| | | | | |

- Well is 500' from closest lease boundary line. MCOR has 100% working interest.
- This is an unorthodox (to the quarter-quarter line) location based on geologic and topographic conditions (see Page 9). Request an exception be granted *per* Rule C-3(c). The ownership of all oil and gas leases within a radius of 500 feet of the proposed location is common with the ownership of the oil and gas lease under the proposed location.
- Drilling program is on Pages 1-4.
- Mineral and surface owner is State of Utah.

RECEIVED
NOV 15 1985

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 dip, and blowout preventer program, if any.

24. Signed Brian Wood Title **Consultant** Date **Nov. 14, 1985**

(This space for Federal or State office use)

Permit No. Approval Date

Approved by Title Date

Conditions of approval, if any:

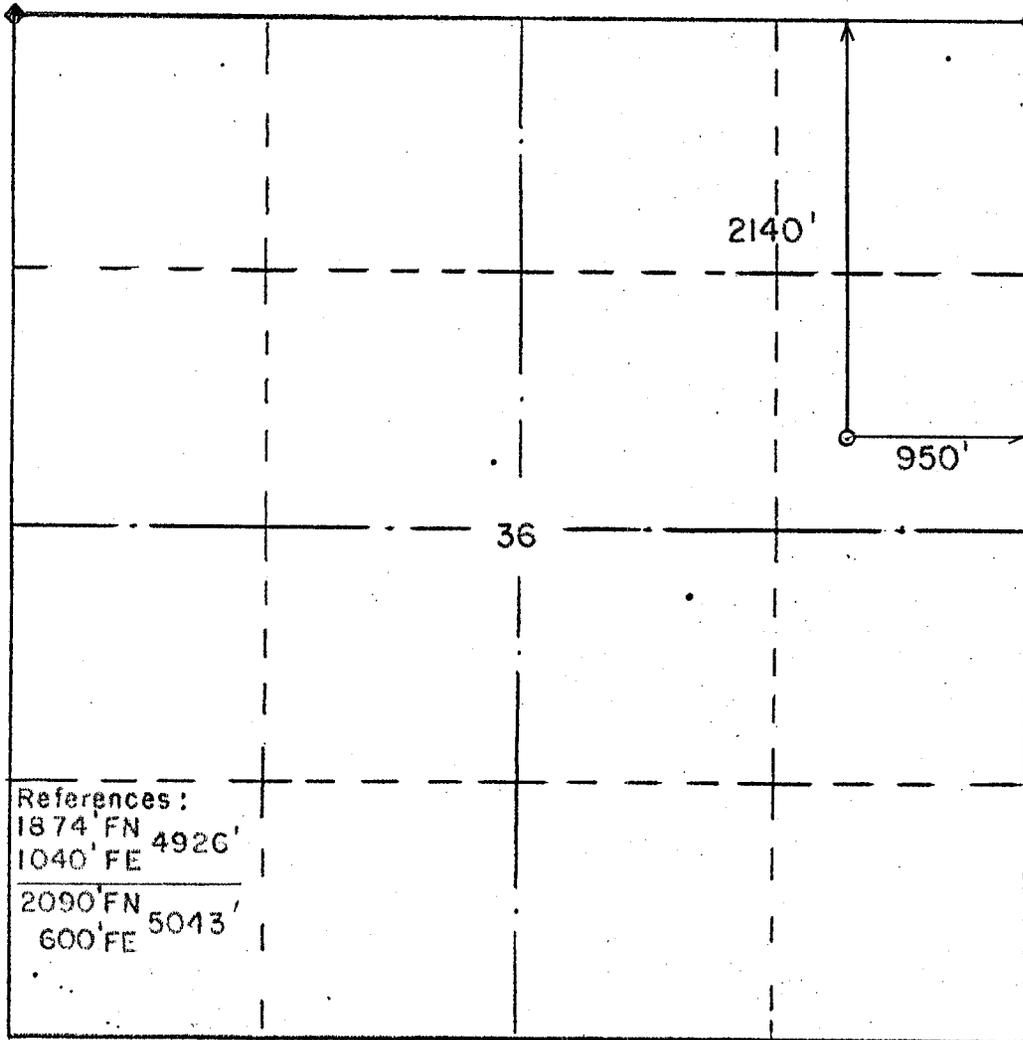
APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING

DATE: **11/21/85**
BY: **John R. Bays**
WELL SPACING: 6-300

cc: UDOGM-SLC (4) & Moab (1), SL&F-Moab(1), Caskey

*See Instructions On Reverse Side

WELL LOCATION AND ACREAGE DEDICATION PLAT



References:
 1874' FN 492G'
 1040' FE
 2090' FN
 600' FE 5043'

| | | | |
|---|-----------------------------|---------------------------------------|---------------------------|
| Operator MCOR | | Well name Canyon 3-36 State | |
| Section 36 | Township 38 South | Range 25 East | Meridian SLM |
| Footages 2140' FN & 950' FE | | County/State San Juan UT | Elevation 4915' |
| Formation | Dedicated Acreage | Requested by B. Wood | |
| <p>The above plat is true and correct to the best of my knowledge and belief.</p> <p>10-7-85</p> <p style="text-align: center;"> Gerald Huddleston, L.S. </p> | | | |

DESIGNATION OF OPERATOR

The undersigned is, on the records of the Department of Natural Resources, Division of State Lands, holder of lease, ML 36202 :

and hereby designates

NAME: MCOR Oil and Gas Corporation
ADDRESS: 5718 Westheimer
Houston, TX 77057.

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

Township 38 South, Range 25 East

Section 36: NE $\frac{1}{4}$

San Juan 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 Rules and Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

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

The lessee agrees promptly to notify the Division of State Lands of any change in the designated operator.

RAYMOND CHORNEY


(Signature of Lessee)

555 17th Street, Ste 1000
Denver, CO 80202-3910

July 30, 1985

(Date)

(Address)

DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of lease ML-36202

DISTRICT LAND OFFICE: Moab, Utah, P.O. Box 970, Moab, Utah 84532
SERIAL NO.: ML-36202

and hereby designates

NAME: MCOR Oil and Gas Corporation
ADDRESS: 5718 Westheimer, Houston, Texas 77057

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 38 South - Range 25 East
Section 36: NE/4
San Juan 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.

TXP OPERATING COMPANY, a limited partnership
By: Transco Exploration Company, its
Managing General Partner

By: _____

(Signature of lessee)

WADE S. McALISTER, Vice President, Land
1700 Lincoln Street, Suite 2100
Denver, Colorado 80203

8/15/85

(Date)

(Address)

MCOR Oil and Gas Corp.
Canyon 3-36 State
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Sec. 36, T. 38 S., R. 25 E.
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8 Point Drilling Program

1. The estimated tops of important geologic markers are:

| <u>Formation Name</u> | <u>KB Depth</u> | <u>GR Depth</u> | <u>Subsea Elevation</u> |
|-----------------------|-----------------|-----------------|-------------------------|
| Morrison (Surface) | 0000' | 0000' | +4928' |
| Chinle | 1350' | 1337' | +3578' |
| Upper Ismay | 5258' | 5245' | - 330' |
| Upper Ismay (Pay) | 5298' | 5285' | - 370' |
| Hovenweep Shale | 5428' | 5415' | - 500' |
| Desert Creek (Pay) | 5588' | 5575' | - 660' |
| Akah (Total Depth) | 5663' | 5650' | - 735' |

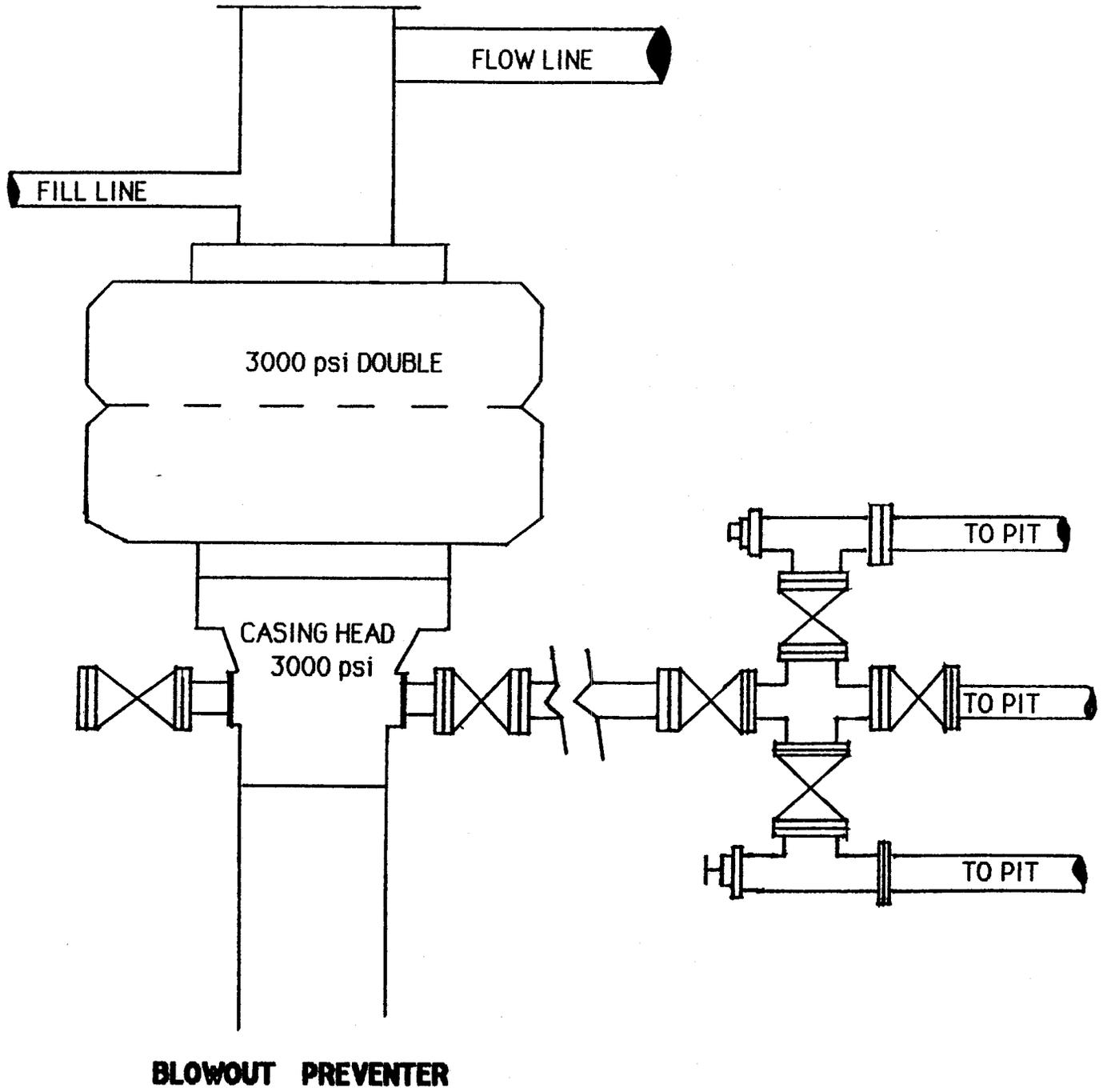
2. The estimated KB depths at which water, oil, gas, or other mineral bearing zones are expected to be encountered are:

Upper Ismay Pay (Oil): 5298' (Primary Objective)
Desert Creek Pay (Oil): 5588' (Secondary Objective)

Surface casing will be set in the Chinle. Water bearing zones will be protected with weighted mud. All fresh water encountered during drilling will be recorded by depth, cased, and cemented. All oil and gas shows will be tested to determine commercial potential.

3. A schematic diagram of the 8-5/8" x 11" 3000 psi BOP is on the following page. Once nipped up, the 11" 3000 psi BOP stack and choke manifold will be tested to 1000 psi for 15 minutes, and after any use under pressure. BOPs will be inspected and operated at least daily to ensure good mechanical working order. Inspections will be recorded on the daily drilling report.

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4. The proposed casing program is:

| <u>Hole Size</u> | <u>O.D.</u> | <u>Weight</u> | <u>Grade</u> | <u>Type</u> | <u>Age</u> | <u>GR Setting Depth</u> |
|------------------|-------------|---------------|--------------|----------------|------------|-------------------------|
| 20" | 16" | | | Conductor Pipe | New | 0'- 80' |
| 12-1/4" | 8-5/8" | 24* | K-55 | ST&C | New | 0'-1500' |
| 7-7/8" | 5-1/2" | 15.5* | K-55 | ST&C | New | 0'-5650' |

The proposed cementing program is:

Conductor Pipe: Redimix. Cement to surface

Surface Casing: First mix - 700 sx "light" cement with 2% calcium chloride and 1/4 lb/sk Flocele.

Second mix - 200 sx Class "B" cement with 2% calcium chloride.

Cement to surface.

Production Casing: 283 sx 50/50 Pozmix cement with 10% salt, 2% bentonite, 0.50% CFR-2, and 0.50% Halad.

1400' linear fill up.

There will be a stabbing valve on the floor.

5. The proposed mud program is below. Previous experience with the Canyon 1-36 State and Canyon 2-36 State wells indicates mudding up may not be necessary until 4000'.

| <u>Depth</u> | <u>Type</u> | <u>Weight</u> | <u>Viscosity</u> | <u>Water Loss</u> | <u>pH</u> |
|--------------|-------------|---------------|------------------|-------------------|-----------|
| 0'-1500' | Water & Gel | 8.8 | 35 | N/C | 8 |
| 1500'-4500' | Chemical | 9-11 | 35-40 | 15-20 | 11 |
| 4500'-TD | Chemical | 11-12 | 45 | 8-10 | 11 |

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A mud logging unit will be used. Samples will be collected every 10' from the base of the surface casing to 4000'. Samples will be collected every 5' from 4000' to TD.

6. One drill stem test (DST) will be run in the Upper Ismay (Pay). One DST will also be run in the Desert Creek if log calculations or mud log shows are favorable.

The following logs will be run:

DIL-SFL: Base of Surface Casing to Total Depth
BHC-GR - Sonic: 4000' to Total Depth
FDC-CNL: 4000' to Total Depth
Dipmeter: 4000' to Total Depth

Two 60' conventional cores will be taken in the Upper Ismay Pay and one in the Desert Creek if reservoir rock appears to be present. Full diameter analyses will be run.

7. No abnormal pressures, temperatures, or hydrogen sulfide are expected.
8. The anticipated spud date is November 25, 1985. It is expected it will take 16 days to drill the well and 10 days to complete the well.

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13 Point Surface Use Plan

1. EXISTING ROADS (See Pages 11-13)

From Hatch Trading Post go 2.5 miles north until the pavement ends. Then turn east on the Cross Canyon Road, crossing Montezuma Creek and Cross Creek in route, and go 6.3 miles east to MCOR's Canyon 2-36 State well.

All but the last 0.1 mile of existing access is across county roads which will need no upgrading. The final 0.1 mile is the lease road for the Canyon 2-36 State well. The roads will be maintained to a standard equal to their present condition. An Encroachment Permit has been approved by the San Juan County Road Dept.

2. PLANNED ACCESS ROAD (See Page 13)

From the southwest corner of the Canyon 2-36 State well pad, a road 0.2 miles long and 20' wide will be built southeast to the Canyon 3-36 State well. The road will be flat bladed. If the well is a producer, then the road may be crowned, ditched, and rocked. Maximum grade will be 4%. There will be no turnouts, culverts, or major cuts or fills.

3. EXISTING WELLS (See Page 12)

There is one producing well within a one mile radius:

Marathon Oil's Tin Cup 3-25: SESW Sec. 25, T. 38 S., R. 25 E.

There is one water injection well within a one mile radius:

Marathon Oil's Tin Cup 4-25: SESW Sec. 25, T. 38 S., R. 25 E.

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There is one well being tested (as of Nov. 13, 1985) within a one mile radius:

MCOR's Canyon 2-36 State: NWNE Sec. 36, T. 38 S., R. 25 E.

4. PROPOSED PRODUCTION FACILITIES

✓ The type and layout of the production facilities are not known now. A Sundry Notice will be submitted for approval before they are installed. Any proposed pipeline across Cross Creek will require an onsite before the Sundry is submitted.

The west side of the pad will be repaired if any rills or gullies form which are 2 or more feet deep. Repairs may take the form of seeding, slope reduction, riprap, *etc.* ✓

5. WATER SUPPLY (See Page 12)

Water will be trucked 2.1 miles from an artesian well in SENW Sec. 35, T. 38 S., R. 25 E. BLM has given MCOR permission to use this well. A temporary application to appropriate water has been filed with the State of Utah.

6. CONSTRUCTION MATERIALS AND METHODS

✓ All construction materials (riprap, *e.g.*) are native *in situ* soils on lease. If soil conditions warrant, a maximum of 300 cubic yards of sand and gravel will be removed from the arroyo during channel realignment and used to surface the new access road.

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No material will be removed from State land outside of the immediate construction area without the prior approval of the Utah Div. of State Lands and Forestry.

✓ Pat deGruyter (801-259-8151) of the Utah Div. of Oil, Gas, & Mining (UDOGM) will be notified at least 48 hours before the last construction equipment leaves the site. This will provide UDOGM the opportunity to determine if the "as built" construction conforms with the proposed construction.

7. WASTE DISPOSAL

Pat deGruyter (801-259-8151) of UDOGM will be notified at least 48 hours before the first fluids flow into the reserve pit. ✓

The reserve pit will be lined with 6 mil fiber reinforced plastic. It will be installed in such a manner so as to prevent air bubbles from forming beneath the liner. ✓ The pad edge of the liner will be installed under the mud tank, and the mud pumps if necessary, so no fluids can bypass the pit. All employees and contractors will be informed that the liner is to be neither cut nor trenched until the pit has dried. ✓

The reserve pit will be fenced on 3 sides with sheep-tight woven wire fence topped with barbed wire. The 4th side will be fenced once the rig moves off. ✓ The fence will be kept in good repair while the pit is drying.

All trash will be placed in a portable trash cage. When full, it will be hauled to an approved landfill in Montezuma County, Colorado.

Human waste will be disposed of in 20' deep ratholes or chemical toilets. The ratholes will be immediately filled when the trailers are removed.

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8. ANCILLARY FACILITIES

There will be no ancillary facilities.

9. WELL SITE LAYOUT

✓ See Pages 14-18 for depictions of the arroyo diversion, well pad, cross sections, cut and fill diagrams, reserve pit, burn pit, access road onto the pad, parking, living facilities, soil stockpile, and rig orientation.

10. RECLAMATION

Brush and the top 6" of topsoil will be stockpiled south of the pad for future reclamation.

All disturbed areas will be recontoured to a natural shape to blend with the surrounding topography. This includes returning the toe of the hill on the east side of the pad to its original grade. (The diverted arroyo will not be rediverted to its original channel.) Stockpiled topsoil will be evenly spread over the disturbed areas, and then ripped.

The following seed mix will be broadcast. A harrow or cable will be dragged over the area to assure seed cover.

| <u>Species</u> | <u>Pounds per Acre</u> |
|---------------------|------------------------|
| Indian Ricegrass | 2 |
| Fourwing Saltbush | 2 |
| Wild Sunflower | 2 |
| Sand Dropseed | 1 |
| Yellow Sweet Clover | 0.5 |

MCOR Oil and Gas Corp.
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After seeding is finished, the stockpiled brush will be scattered evenly over the disturbed areas. The reclaimed road will be blocked to prevent vehicular access.

If the well is a producer, then the reserve pit and any other areas not needed for workovers will be reclaimed in the preceding described manner. Once the reserve pit dries, the liner will be torn and perforated before it is backfilled.

✓ At the time of plugging and abandonment, a procedure will be developed in conjunction with and approved by UDOGM. This is intended to prevent any problems resulting from the arroyo meandering and exposing the conductor pipe.

11. SURFACE OWNER

The surface owner is the State of Utah.

12. OTHER INFORMATION

An exception is requested because of geology and topography. Dry holes in the NENE and NENW of Sec. 36 illustrate the narrowness of the target. An orthodox location could very well result in a third dry hole. Furthermore, the closest orthodox location to the geologically preferred target is on a 45 degree slope which would require at least an 80' high cut. Construction costs would be 400% more at the closest orthodox site than at MCOR's preferred site. Reclamation would be even more expensive.

A petroglyph was found during the archaeological clearance of the pad and road. It will be avoided.

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The nearest hospital is a 75 minute drive away in Monticello, Utah. It is 3 blocks northwest of the only stoplight in Monticello. Phone number is 801-587-2116.

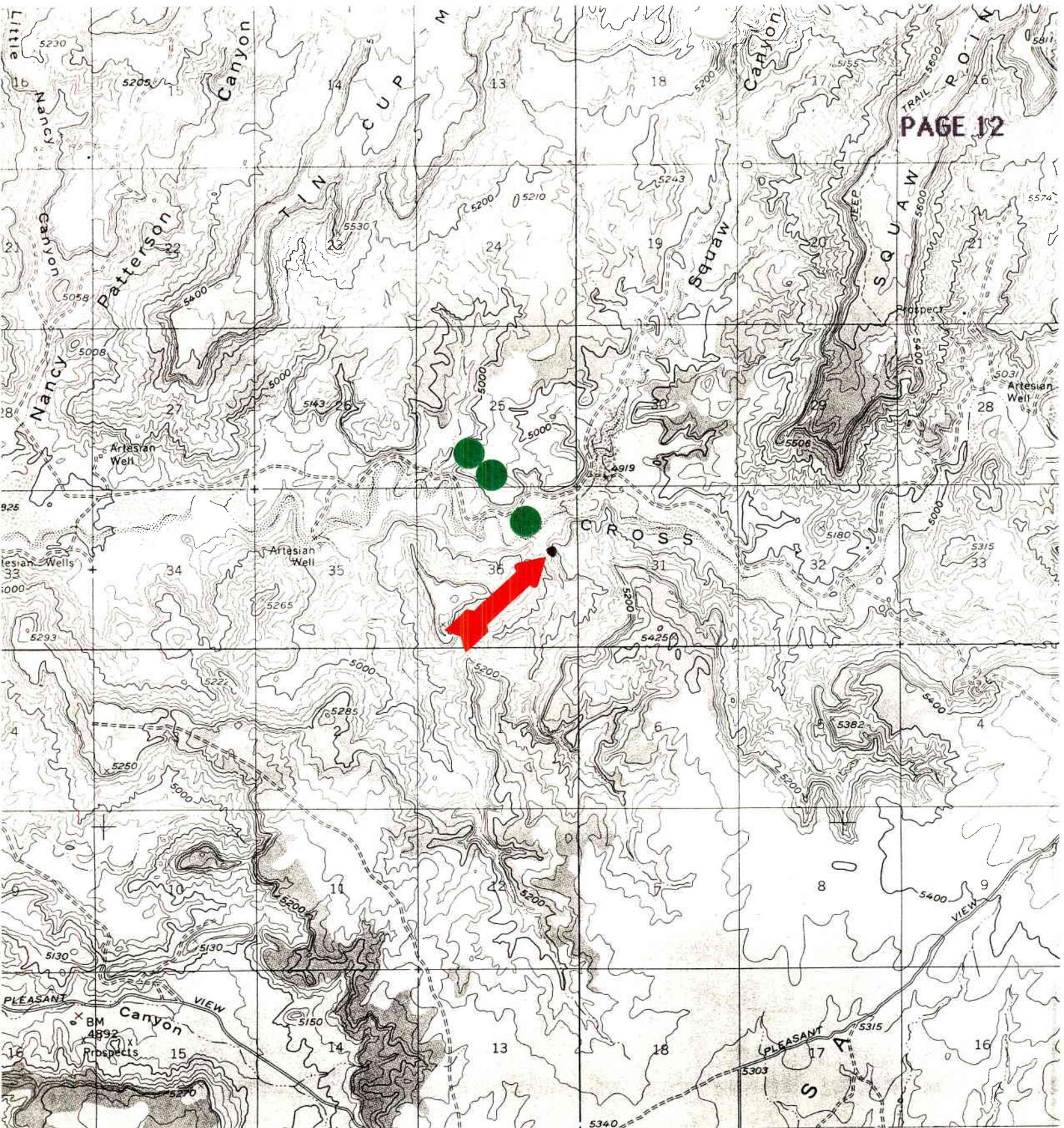
13. REPRESENTATION

For questions concerning the APD, please contact:

Brian Wood
Permits West, Inc.
P.O. Box 1105
Monticello, Utah 84535
(801) 587-2087

MCOR Oil and Gas Corporation's field representative is:

A. Jordan McNay, Manager - Drilling & Production, Western Region
MCOR Oil and Gas Corp.
5718 Westheimer Rd.
Houston, Tx. 77057
(713) 953-7777 [Office]
(713) 952-2056 [Home]



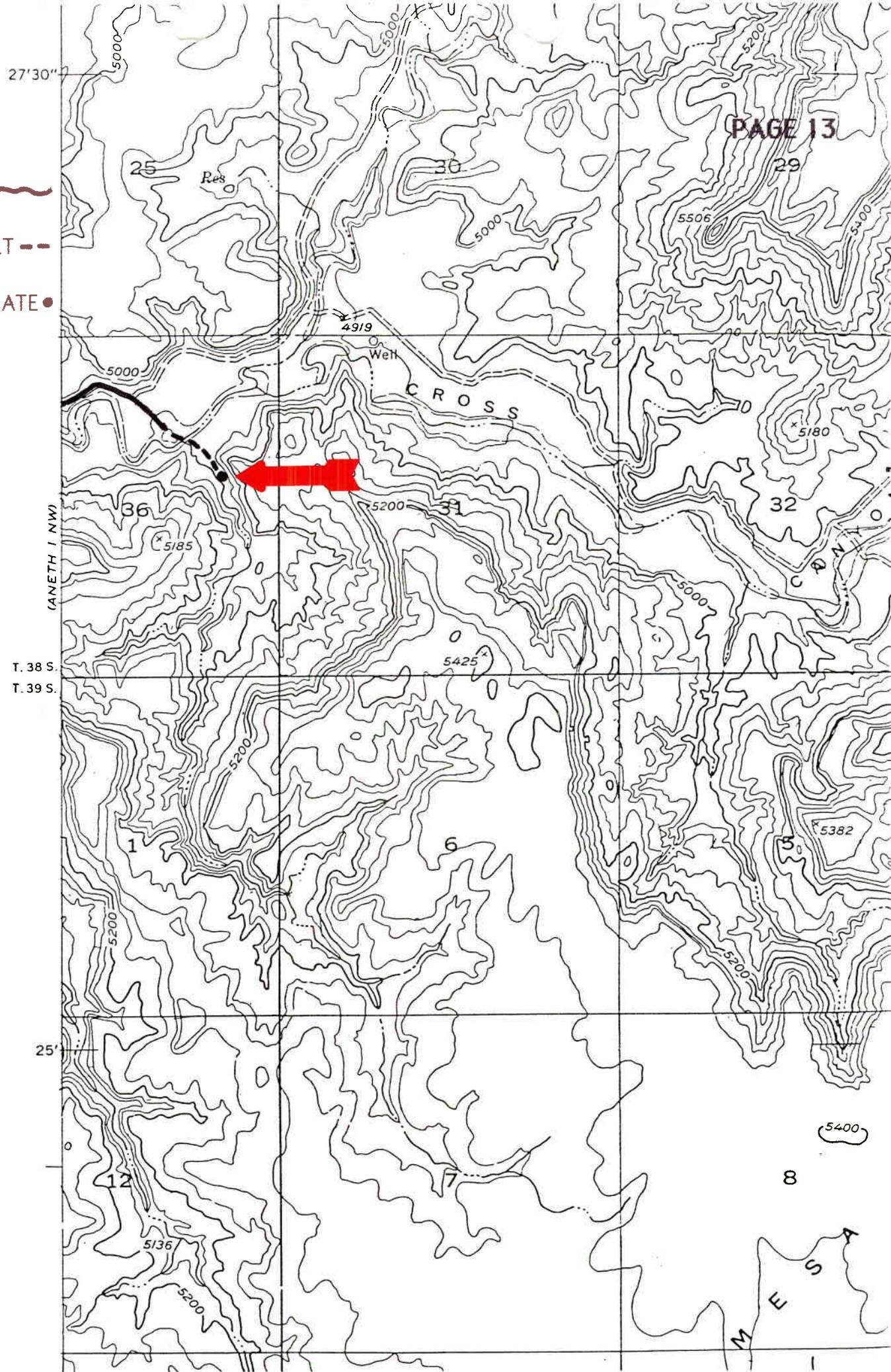
WELLS PRODUCING, INJECTING, OR BEING COMPLETED



PROPOSED CANYON 3-36 STATE WELL



EXISTING ROAD 
ROAD TO BE BUILT 
CANYON 3-36 STATE 



(ANETH / NW)

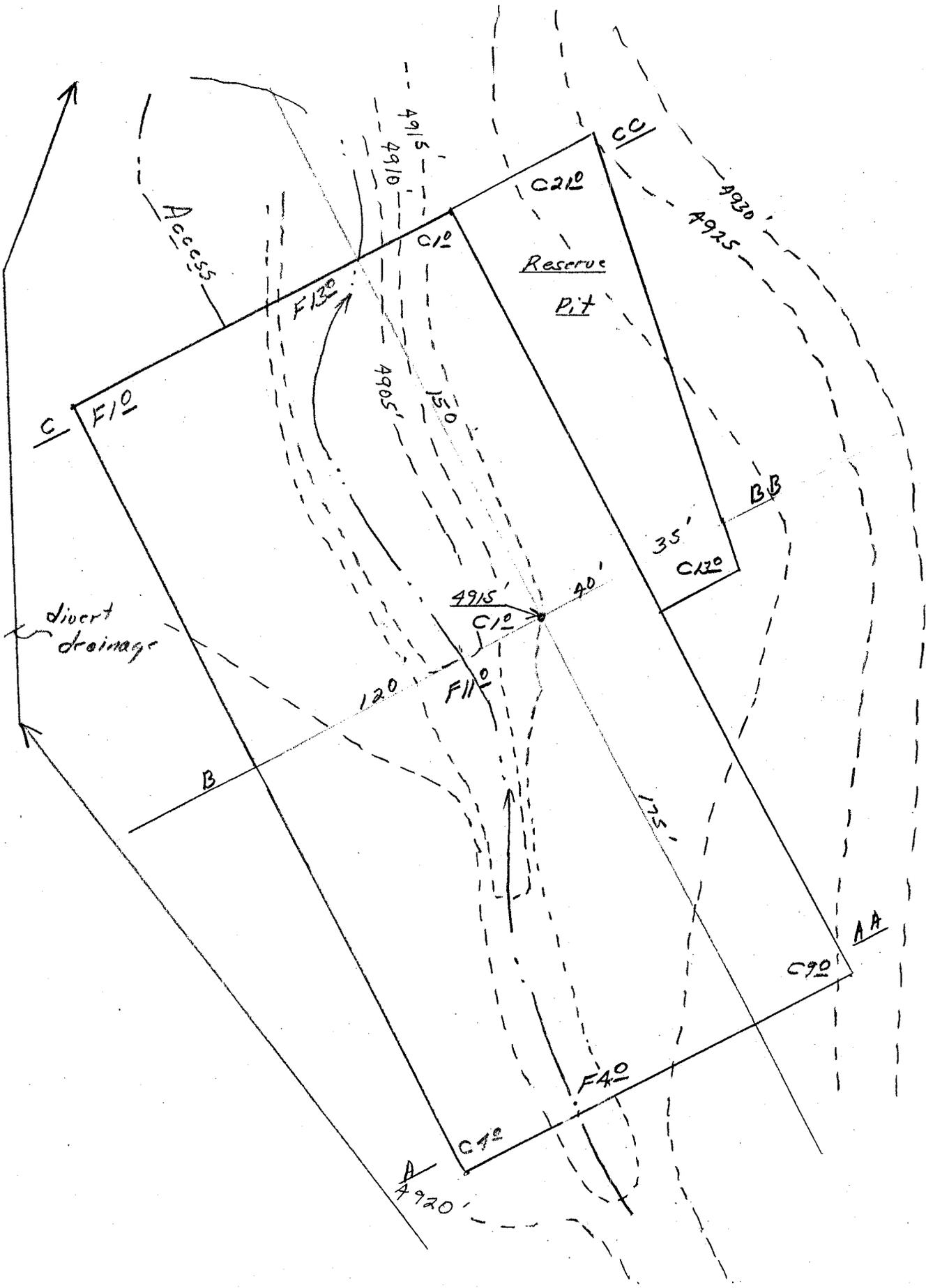
T. 38 S.
T. 39 S.

25'

MESA

WELL PAD PLAN VIEW

Well 3-36

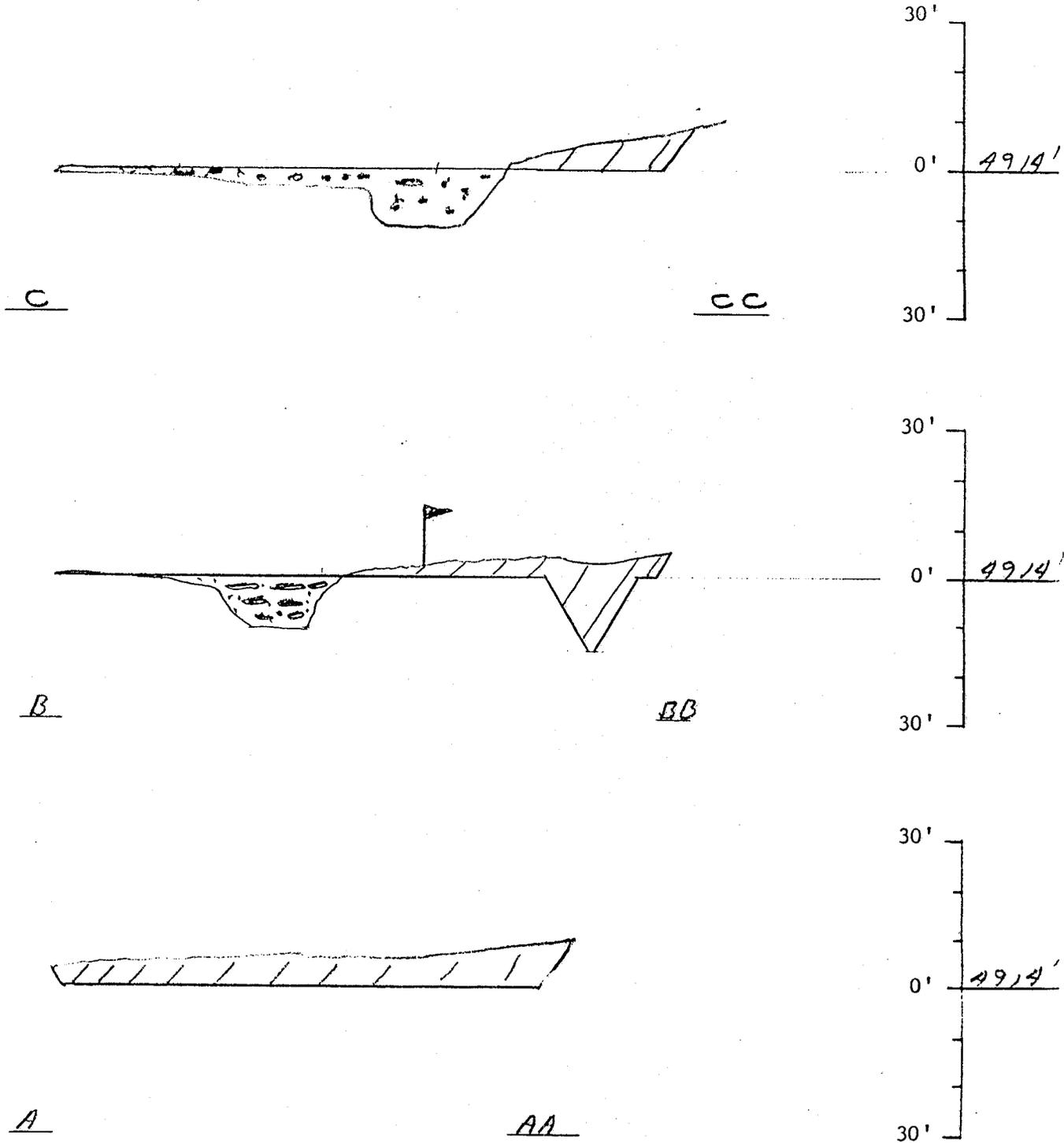


WELL PAD CROSS-SECTION

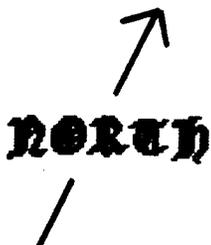
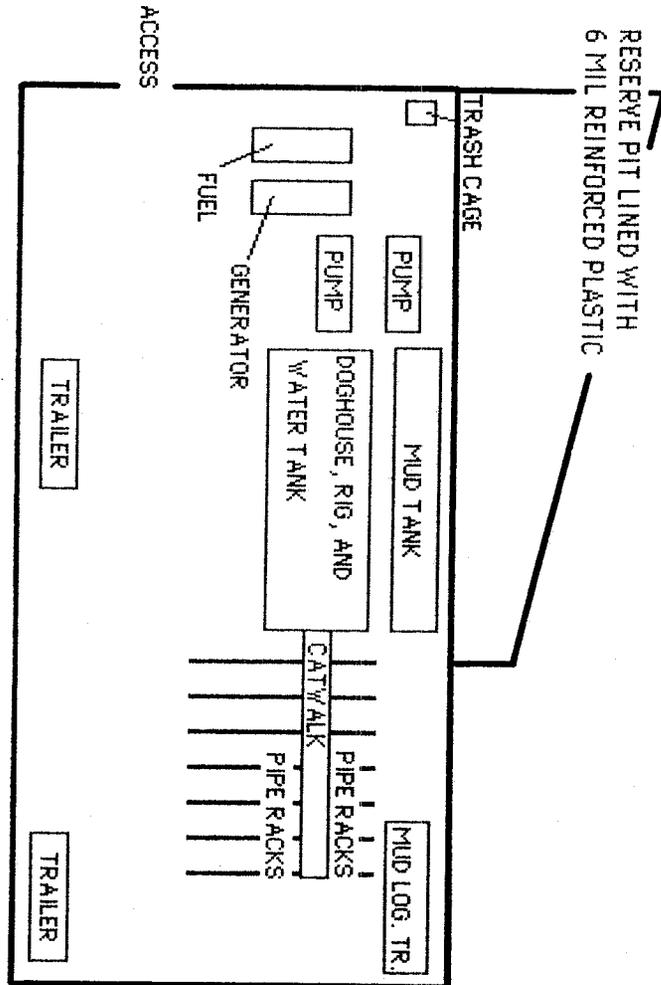
Well 3-36

Cut */////*
Fill

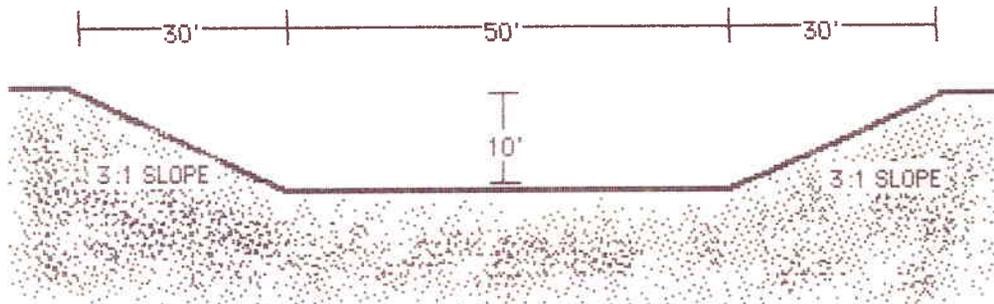
Scales: 1"=50' H. 1.7 Vertical Exaggeration
1"=30' V.



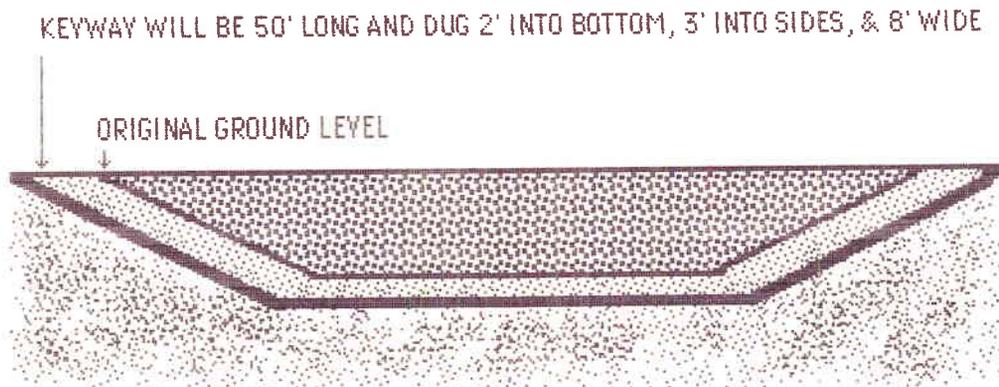
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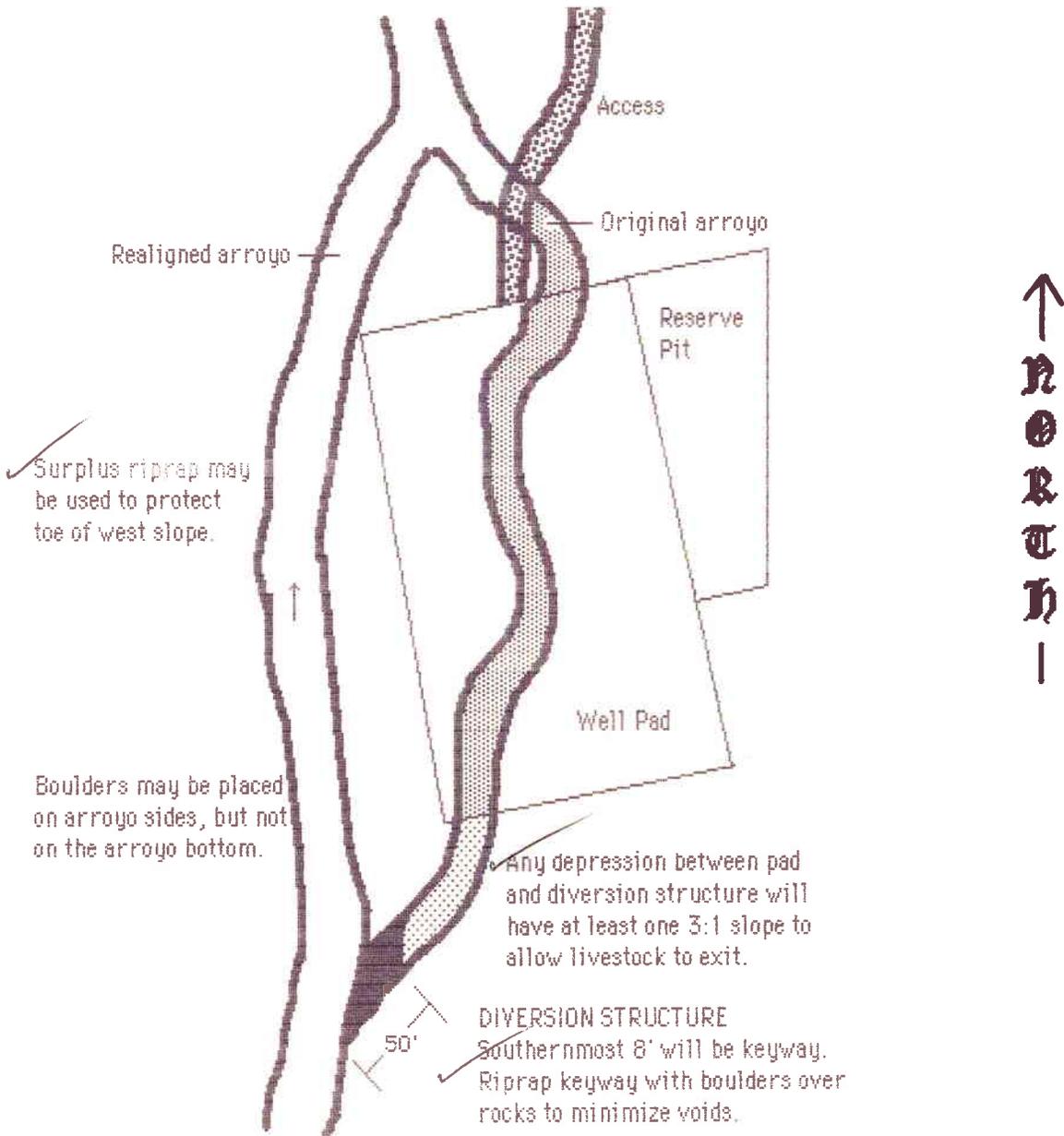


TYPICAL CROSS SECTION OF REALIGNED ARROYO CHANNEL



CROSS SECTION OF KEYWAY IN DIVERSION STRUCTURE

PLAN VIEW OF ARROYO REALIGNMENT



Total realignment ≈ 425' in length

ONSITE PREDRILL INSPECTION FORM

COMPANY MCOR WELL NO. Canyon State 3-36

950FEL 2140FNL
LOCATION: SECTION SENE36 TOWNSHIP 38S RANGE 25E COUNTY San Juan

LEASE NO. ML-36202 ONSITE INSPECTION DATE 4 November 1985

(A) PERSONS IN ATTENDANCE Brian Wood/Permits West, Tom Munson/DOGM, Pat deGruyter/DOGM, Stan Baker/State Lands, Dean McClellan & Eugene Atcitty/Wrights Roustabout, Junior Hickman/MCOR, Pat Hardin/La Plata Archaeologists

(B) SURFACE FORMATION AND CHARACTERISTICS Morrison Fm-med to coarse grain ss on canyon walls, poorly sorted sand & gravel (fine gr sand & silt to gravel) in canyon bottom

(C) BRIEF DESCRIPTION OF VEGETATION greasewood, wolfberry, rabbit brush, and cheat grass in canyon bottom; juniper and ^{some} pinyon on canyon walls and mesa tops

(D) ARCHAEOLOGICAL CLEARANCE: YES OR NO yes

(E) DESCRIPTION OF TOPOGRAPHY (drainages, slope, roads, etc.) canyon bottom with major drainage channel (10 plus feet deep/30-70 ft wide) drainage channel cuts through pad area and will be diverted to the west

(F) CONDITIONS FOR APPROVAL:

PIT LINING (YES OR NO) YES

TYPE OF LINING IF NEEDED fiber reinforced plastic at least 6 mil in thickness

ADDITIONAL REQUIREMENTS see attachments

Approximate spud date - 1 December 1985

SIGNATURE: Bruce D. Gough TITLE Oil & Gas Field Specialist

Wash Diversion cont . . .

- ✓ ⑨ There will be an on site final inspection & approval of diversion & pad construction prior to spudding well
- ✓ ⑩ If production results any unused portion of pad will be reclaimed
- ✓ ⑪ Submit a reclamation & reveg plan to State Lands / Stan Baker
- ✓ ⑫ The anticipated void (ie unfilled portion of existing channel between pad & plug) will be ramped at a 3:1 slope to protect wildlife & livestock
- ✓ ⑬ If well is productive a detailed plan showing proposed production facilities will be submitted for approval

NOTE: The above list of stipulations & requirements were discussed at the on site with Brian Wood / Permits West, agent for MCOE and it was agreed that they will be included in the APD / Surface Use Plan to be submitted to OEGM & State Lands.

Added 7
Nov 85

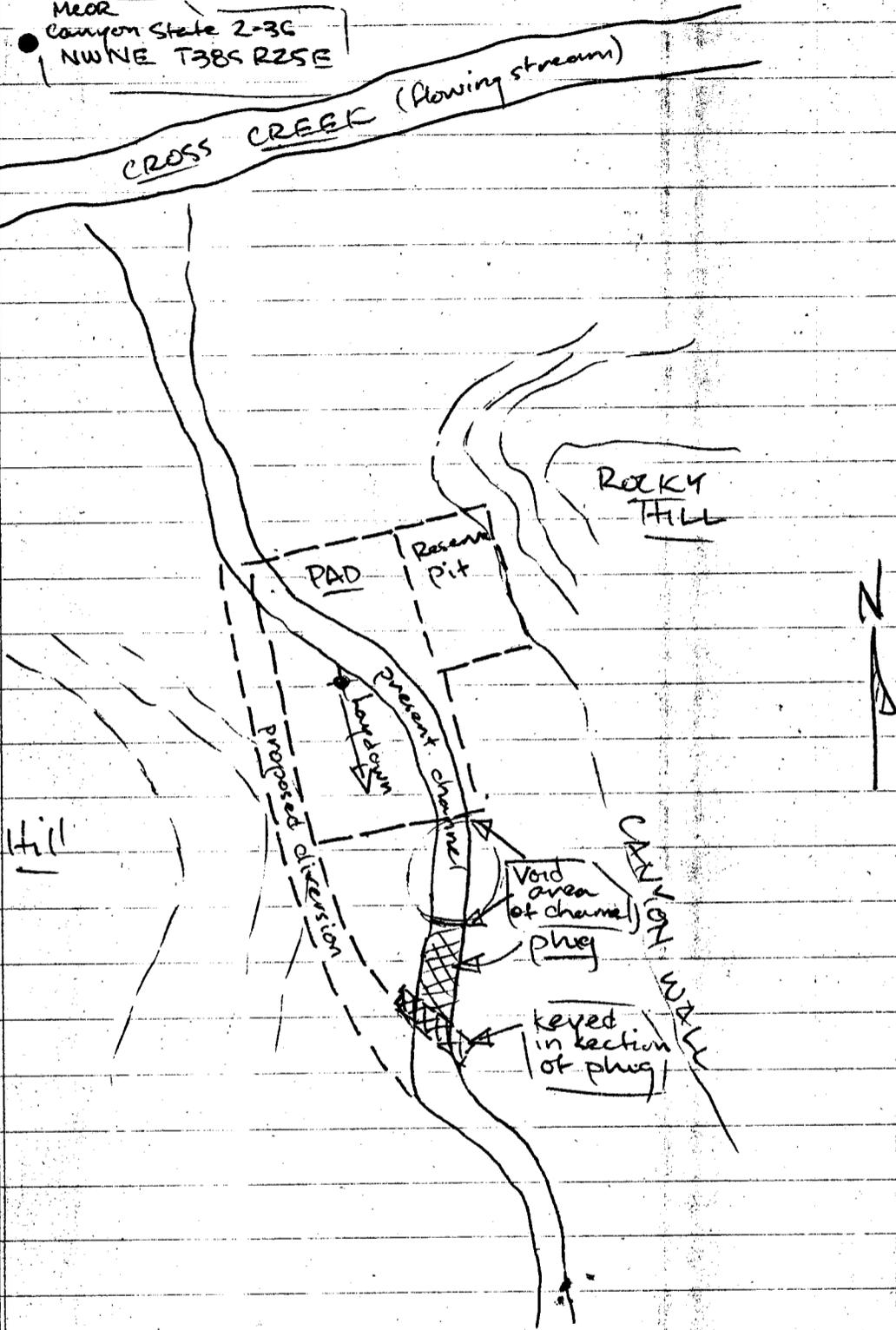
- ✓ Inform Brian Wood / Permits West - At time of P & A procedure will be developed & approved in conjunction with OEGM - special concern being cutting of stream channel into & exposing conductor pipe

MCOR
Canyon State 3-36

SENE36 T38S R25E

SKETCH OF PROPOSED LOCATION

NEAR
Canyon State 2-36
NW NE T38S R25E



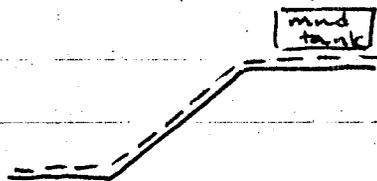
MEOR Canyon State 3-36
SENE 36 T385 R25E

- STIRULATIONS FOR APPROVAL OF APD

- Reserve Pit

✓ ① 48 hr notice prior to placing any fluid in pit in order that liner can be inspected & approved

✓ ② Edge of liner adjacent to rig will be of sufficient ~~to~~ length that mud tanks can be set on it



- care will be taken to prevent tearing of liner - on other 3 sides of pit liner ^{edges} will be covered with dirt

✓ ③ care will be exercised when installing liner to prevent air from being trapped underneath

✓ ④ liner will be at least 6 mil thickness, fiber reinforced plastic

✓ ⑤ pit will be fenced on three sides during drilling and on fourth side (adjacent to rig) prior to moving rig off

Added
7 Nov 85



✓ ⑥ Inform Brian Wood / Permits West that plastic liner needs to be torn and/or perforated prior to bumping when pit is reclaimed

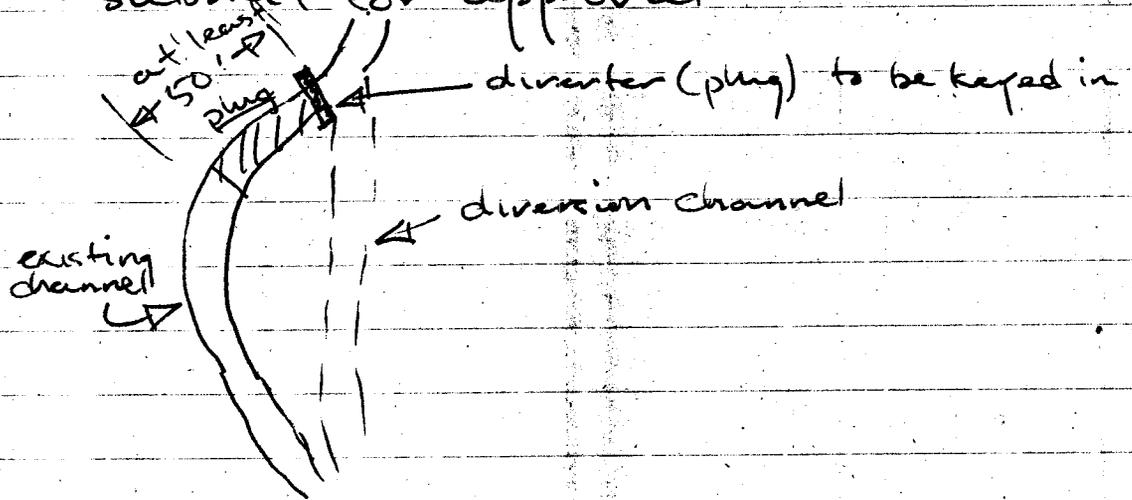
MCOR Canyon State 3-36
SENE 36 T385 R25E

Wash Diversion

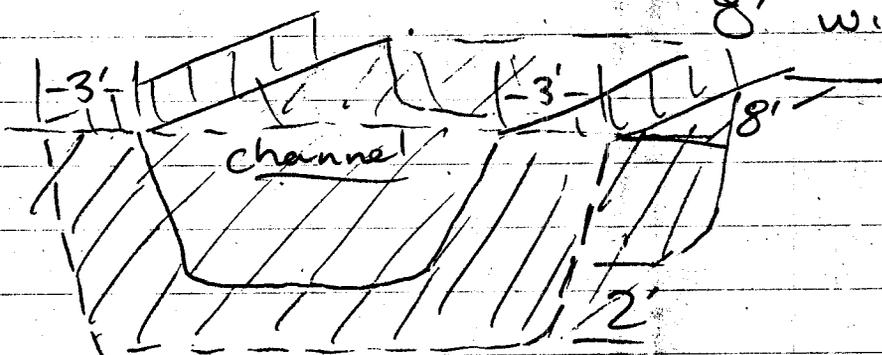
- 1 Submit complete cross section & plan diagram of proposed pad & diversion to include
- slope detail
 - dimensions

- 2 Submit detailed plans & description of plug construction to include
- slope detail
 - cross sections
 - dimensions

- 3 Key in diverter (plug)
- show specs on drawing
 - submit for approval



- key to be cut 3' into banks
- 2' into bottom
- 8' wide (width of dozer bucket)



- minimum length of plug to be 50'

Wash Diversion cont...

- ✓ 4 Rip Rap - rock to be well graded (6" to boulder size)
Method of application to be either
- layered - smallest on bottom to largest on top
- or well mixed
- intent being to avoid voids which water can come through
- ✓ 5 Any additional rip rap needed (ie taken from areas other than pad or reserve pit) → contact State Lands Moab/Stan Baker for appropriate sand & gravel permits
- ✓ 6 ~~Estimate~~ Sand & Gravel taken from stream bed for use on road - estimate of amount to be used will be submitted on APD subject to approval & any needed permits from State Lands Moab/Stan Baker
- ✓ 7 Any surplus rip rap to be used to protect toe of hill on W side of diversion channel or along pad side
- ⑧ ~~Minimum width~~
- ✓ 9 Minimum width of diversion channel bottom to be at least equal to average width of bottom of existing channel
- ✓ 10 If significant erosion along ~~existing~~ pad side of diversion results it will be repaired in an acceptable timely manner (significant defined as rills & gullies in excess of 2 ft depth)



MCOR Canyon State 3-36
SENE36 T38S R25E San Juan Co
4 November 1985
-looking S at point of
diversion

MCOR Canyon State 3-36
SENE36 38S 25E San Juan Co
4 November 1985
-looking NW from point of
diversion at pad area





MCOR Canyon State 3-36
SENE36 38S 25E San Juan Co
4 November 1985
-looking N at start of wash
diversion - diversion
channel to cut N across flat
grassy area



MCOR Canyon State 3-36
SENE36 38S 25E San Juan Co
4 November 1985
-looking NE at point that
diversion channel reenters
existing wash

OPERATOR MCOR Oil & Gas Corp DATE 11-20-85

WELL NAME Canyon 3-36 State

SEC SE NE 36 T 38S R 25E COUNTY San Juan

43-037-31225
API NUMBER

State
TYPE OF LEASE

CHECK OFF:

PLAT

BOND

NEAREST WELL

LEASE

FIELD

POTASH OR OIL SHALE

PROCESSING COMMENTS:

No other well within 1000'
Exception location requested
Need water permit
State History

APPROVAL LETTER:

SPACING: A-3 _____ UNIT

c-3-a _____ CAUSE NO. & DATE

c-3-b

c-3-c

STIPULATIONS:

1- Water
2- State History
3- The operator shall conduct operations as stated on the approved APD, drilling program, and surface use plan and the operator shall also perform any other operation in accordance with the Rules of the Board of Oil, Gas & Mining as amended from time to time.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TP
(Other Instruc-
verse side)

Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

ML-36202

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME

Canyon

9. WELL NO.

3-36 State

10. FIELD AND POOL, OR WILDCAT

Undesignated

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

36-38S-25E SLBM

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
MCOR Oil and Gas Corporation (713) 953-7777

3. ADDRESS OF OPERATOR
5718 Westheimer, Houston, Tx. 77057

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

2140' FNL & 950' FEL (SENE)

14. PERMIT NO.

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

4,915' GR (4,928' KB)

RECEIVED

NOV 21 1985

**DIVISION OF OIL
GAS & MINING**

12. COUNTY OR PARISH

13. STATE
San Juan 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
FRACTURE TREAT
SHOOT OR ACIDIZE
REPAIR WELL
(Other)

PULL OR ALTER CASING
MULTIPLE COMPLETE
ABANDON*
CHANGE PLANS

WATER SHUT-OFF
FRACTURE TREATMENT
SHOOTING OR ACIDIZING
(Other)

REPAIRING WELL
ALTERING CASING
ABANDONMENT*

(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.)*

Three culverts are being installed instead of a low water crossing where the new road crosses Cross Canyon Creek (Pages 5 & 13 of APD). Culverts are 48" in diameter and 40' long. Two 48" culverts proved adequate to span Cross Canyon Creek in Sec. 22, T. 38 S., R. 26 E. The extra culvert here will allow for the flow contributed by Squaw Canyon. Construction had revealed the creek bottom was softer than expected.

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

SIGNED

Brian Wood

TITLE

Consultant

DATE

Nov. 18, 1985

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

cc: UDOGM-Moab (1), UDOGM-SLC (3)

TITLE

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

*See Instructions on Reverse Side

DATE: **11/22/85**
BY: *John R. Dase*



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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

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

November 21, 1985

MCOR Oil and Gas Corporation
5718 Westheimer Road
Houston, Texas 77057

Gentlemen:

Re: Well No. Canyon 3-36 State - SE NW Sec. 36, T. 38S, R. 25E
2140' FNL, 950' FEL - San Juan County, Utah

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

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water as required by Chapter 3, Title 73, Utah Code Annotated.
2. Prior to any ground-disturbing activity on state lands or lands owned or controlled by the state or its subdivisions, a cultural resource clearance report must be filed with and approved by the Division of State History, phone (801) 533-4563. A list of acceptable archaeological contractors is available from the Division of State History.
3. The operator shall conduct operations as stated on the approved application for permit to drill, drilling program, and surface use plan and the operator shall also perform any other operation in accordance with the Rules of the Board of Oil, Gas and Mining as amended from time to time.

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

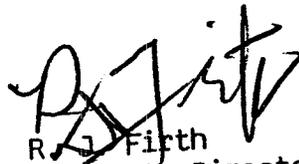
1. Spudding notification to the Division within 24 hours after drilling operations commence.
2. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.

Page 2
MCOR Oil and Gas Corporation
Well No. Canyon 3-36 State
November 21, 1985

3. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or R. J. Firth, Associate Director, (Home) 571-6068.
4. Compliance with the requirements and regulations of Rule C-27, Associated Gas Flaring, General Rules and Regulations, Oil and Gas Conservation.
5. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-037-31225.

Sincerely,



R. J. Firth
Associate Director, Oil & Gas

as
Enclosures
cc: State Lands

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instructions
verse side)

Form approved.
Budget Bureau No. 1604-0135
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. <input type="checkbox"/> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER | | 5. LEASE DESIGNATION AND SERIAL NO. ML-36202 |
| 2. NAME OF OPERATOR MCOR Oil and Gas Corporation | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A |
| 3. ADDRESS OF OPERATOR 5718 Westheimer, Houston, Tx. 77057 | | 7. UNIT AGREEMENT NAME N/A |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 2140' FNL & 950' FEL (SENE) | | 8. FARM OR LEASE NAME Canyon |
| 14. PERMIT NO. | | 9. WELL NO. 3-36 State |
| 15. ELEVATIONS (Show whether DF, RT, GR, etc.) 4,915' GR (4,928' KB) | | 10. FIELD AND POOL, OR WILD CAT Undesignated |
| 16. DIVISION OF OIL GAS & MINING | | 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA 36-38S-25E SLBM |
| | | 12. COUNTY OR PARISH San Juan |
| | | 13. STATE Utah |

RECEIVED
DEC 09 1985
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 <input type="checkbox"/> | PULL OR ALTER CASING <input type="checkbox"/> | WATER SHUT-OFF <input type="checkbox"/> | REPAIRING WELL <input type="checkbox"/> |
| FRACTURE TREAT <input type="checkbox"/> | MULTIPLE COMPLETE <input type="checkbox"/> | FRACTURE TREATMENT <input type="checkbox"/> | ALTERING CASING <input type="checkbox"/> |
| SHOOT OR ACIDIZE <input type="checkbox"/> | ABANDON* <input type="checkbox"/> | SHOOTING OR ACIDIZING <input type="checkbox"/> | ABANDONMENT* <input type="checkbox"/> |
| REPAIR WELL <input type="checkbox"/> | CHANGE PLANS <input checked="" type="checkbox"/> | (Other) <input type="checkbox"/> | (Other) <input type="checkbox"/> |

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

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting and 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.)*

After excavation and as discussed with Pat deGruyter (DOGM-Moab) on December 6, 1985, reserve pit will not be lined with plastic. Arroyo side of reserve pit will be lined with bentonite and a plastic apron. Toxic or corrosive completion fluids will not be placed in reserve pit. Such fluids will be placed in steel or similar impermeable tanks.

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 11/2/10/85
BY: John R. Deja

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

SIGNER: Brian Wood TITLE: Consultant DATE: Dec. 6, 1985

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:
cc: MCOB-Houston (3), MCOB-Pampa (1), UDOGM-Moab (1), UDOGM-SLC (3)

*See Instructions on Reverse Side

Verbal notice of PxA

12/30/85
0930 hrs.
JRB

MCOR
Canyon State 3-36
Sec. 36, T38S, R25E

Jordan McNair
(303) 565-3773
Ramada Inn
@ Cortez

TD = 5680'

Surf csg. @ 1520'

Chinle @ 1350'

Shinarump @ 2253'

Cutler @ 2469'

Hoover Tr @ 4260'

Ismay ϕ @ 5362' - 5460'

D.C. @ 5554

Akai @ 5651

① Plug 5300' - 5500'

② Plug 1470' - 1570' $\frac{1}{2}$ tag

③ Surf. plug of 10-15 SX

④ PxA marker.

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

SUBMIT TRIPPLICATE
(Other instructions on reverse side)

| | | |
|---|--|---|
| SUNDRY NOTICES AND REPORTS ON WELLS (Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.) | | 5. LEASE DESIGNATION AND SERIAL NO. ML 36202 |
| 1. <input checked="" type="checkbox"/> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME |
| 2. NAME OF OPERATOR MCOR OIL & GAS CORPORATION | | 7. UNIT AGREEMENT NAME |
| 3. ADDRESS OF OPERATOR 5718 Westheimer, Houston, Texas 77057 | | 8. FARM OR LEASE NAME CANYON |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 2140' FNL & 950' FEL (SE/NE) (Surface) | | 9. WELL NO. 3-36 STATE |
| 14. PERMIT NO. 43-037031225 | | 10. FIELD AND POOL, OR WILDCAT UNDESIGNATED |
| 15. ELEVATIONS (Show whether OF, ST, GR, etc.) | | 11. SEC., T., R. M., OR BLK. AND SUBST OR ABBA Sec. 36, T. 38S, R. 25E |
| | | 12. COUNTY OR PARISH San Juan |
| | | 13. STATE Utah |

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

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

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

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

Structural mapping and dipmeter data from the MCOR 3-36 Canyon State well. Suggest a location to the north of the 3-36 well will be located structurally higher and stratigraphically nearer the algal mound (reservoir) crest which should result in commercial oil production. Exact coordinates of the desired location at depth are 1850' FNL and 1200' FEL of Sec. 36, T. 38S, R. 25E, San Juan County, Utah

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 12/31/85
BY: J. K. Dafa

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

SIGNED [Signature] TITLE attorney for operator DATE 12/31/85

(This space for Federal or State office use)

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

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

| | | |
|---|--|--|
| 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.) | | 3. LEASE DESIGNATION AND SERIAL NO. ML 36202 |
| 1. <input checked="" type="checkbox"/> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME |
| 2. NAME OF OPERATOR MCOR OIL & GAS CORPORATION | | 7. UNIT AGREEMENT NAME |
| 3. ADDRESS OF OPERATOR 5718 Westheimer, Houston, Texas 77057 | | 8. FARM OR LEASE NAME CANYON |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 2140' FNL & 950' FEL (SE/NE) (Surface) | | 9. WELL NO. 3-36 STATE |
| 14. PERMIT NO. 43-037031225 | | 10. FIELD AND POOL, OR WILDCAT UNDESIGNATED |
| 15. ELEVATIONS (Show whether OF, ST, CR, etc.) | | 11. SEC., T., R., M., OR BLK. AND SUBVY OR ABBA Sec. 36, T. 38S, R. 25E |
| | | 12. COUNTY OR PARISH San Juan |
| | | 13. STATE Utah |

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

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

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

Structural mapping and dipmeter data from the MCOR 3-36 Canyon State well. Suggest a location to the north of the 3-36 well will be located structurally higher and stratigraphically nearer the algal mound (reservoir) crest which should result in commercial oil production. Exact coordinates of the desired location at depth are 1850' FNL and 1200' FEL of Sec. 36, T. 38S, R. 25E, San Juan County, Utah.

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 12/31/85
BY: *John R. Dapa*

18. I hereby certify that the foregoing is true and correct
SIGNED: *[Signature]* TITLE: *attorney for operator* DATE: *12/31/85*

(This space for Federal or State office use)

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

Structural mapping and dipmeter data from the MCOR #3-36 Canyon State Well suggest a location to the north of the #3-36 well will be located structurally higher and stratigraphically nearer the algal mound (reservoir) crest which should result in commercial oil production. Exact coordinates of the desired location at depth are 1,850' FNL and 1,200' FEL of Section 36 of Township 38 South, Range 25 East, San Juan County, Utah.

MC 35726 - 5/2
Jenneco Oil Co.

ML 36202 - NE/4
DXP Operating Co.
Statewide

ML 30593 - NW/4
Calsius

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

2. NAME OF OPERATOR
MCOR OIL & GAS CORPORATION

3. ADDRESS OF OPERATOR
5718 Westheimer, Houston, Texas 77057

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
2140' FNL & 950' FEL (SE/NE) (Surface)

14. PERMIT NO.
43-037031225

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

5. LEASE DESIGNATION AND SERIAL NO.
ML 36202

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
CANYON

9. WELL NO.
3-36 STATE

10. FIELD AND POOL, OR WILDCAT
UNDESIGNATED

11. SEC., T., R., M., OR BLK. AND SURVEY OR ABBA
Sec. 36, T. 38S, R. 25E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

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

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

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

Structural mapping and dipmeter data from the MCOR 3-26 Canyon State well. Suggest a location to the north of the 3-36 well will be located structurally higher and stratigraphically nearer the algal mound (reservoir) crest which should result in commercial oil production. Exact coordinates of the desired location at depth are 1850' FNL and 1200' FEL of Sec. 36, T. 38S, R. 25E, San Juan County, Utah

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 12/31/85
BY: [Signature]

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

SIGNED: [Signature] TITLE: Assistant for operator DATE: 12/31/85

(This space for Federal or State office use)

APPROVED BY: _____ TITLE: _____ DATE: _____

CONDITIONS OF APPROVAL, IF ANY:

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

| | | |
|--|--|--|
| 1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> | | 5. LEASE DESIGNATION AND SERIAL NO. ML 36202 |
| 2. NAME OF OPERATOR MCOR OIL AND GAS CORPORATION | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A |
| 3. ADDRESS OF OPERATOR 5718 Westheimer, Suite 1100, Houston, Texas 77057 | | 7. UNIT AGREEMENT NAME N/A |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 2140' FNL & 950' FEL (SE NE) | | 8. FARM OR LEASE NAME Canyon |
| 14. PERMIT NO. 43-037-31225 | | 9. WELL NO. 3-36 State |
| 15. ELEVATIONS (Show whether DF, RT, GR, etc.) 4915' GR | | 10. FIELD AND POOL, OR WILDCAT Undesignated |
| | | 11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA 36-38S-25E SLB&M |
| | | 12. COUNTY OR PARISH San Juan |
| | | 13. STATE Utah |

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

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

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

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

Spudded well at 9:00 pm, 12/12/85 with rotary tools.

Drilling contractor: Coleman Drilling Company, Rig #4

RECEIVED
JAN 03 1986
DIVISION OF OIL
& GAS & MINING

18. I hereby certify that the foregoing is true and correct
SIGNED J. McNay J. McNay TITLE Manager, Drilling & Production Western Region DATE 12/13/85

(This space for Federal or State office use)

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



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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

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

January 7, 1986

MCOR Oil and Gas Corporation
5718 Westheimer
Houston, Texas 77057

Gentlemen:

RE: Well No. Canyon State #3-36, Sec. 36, T. 38S, R. 25E,
San Juan County, Utah

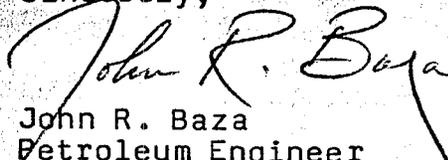
The Division of Oil, Gas and Mining recently received and approved a request from TXP Operating Company acting on behalf of MCOR to change the bottomhole location of the referenced well. As part of this approval, the Division requests MCOR to submit additional information describing the completed operations and verifying the actual new bottomhole location of the well.

The following information is requested in addition to the normal reporting requirements of the Oil and Gas Conservation General Rules:

1. A description of the plugging and deviation of the well (cement volumes, setting depths, method of kicking off).
2. Directional survey information accurately verifying the path of the deviated hole and the new bottomhole location.

Your prompt consideration of this request is appreciated.
please contact this office if additional information is required.

Sincerely,


John R. Baza
Petroleum Engineer

sb

cc: Ray Blunk, TXP Operating Company

D.R. Nielson

R.J. Firth

Well File

0155T-85



TXP Operating Company

A Limited Partnership
Transco Exploration Company, Managing General Partner

One United Bank Center
1700 Lincoln, Suite 2100
Denver, Colorado 80203
303-863-3600

RECEIVED

JAN 08 1986

DIVISION OF OIL
GAS & MINING

*Orig R. Firth for file
cc J. Baza*

3

January 6, 1986

Mrs. Dianne Nielson
Director of Oil, Gas & Minerals
355 West North Temple
3 Triad Center
Suite 350
Salt Lake City, Utah 84180-1203

RE: Southeast Tincup Prospect
#3-36 Canyon State Well Sidetrack
Township 38 South, Range 25 East
Section 36: NE/4
San Juan County, Utah

Dear Mrs. Nielson:

Mr. John Baza requested certain information be sent you when available. Said information is as follows:

Cement plugs were set as follows:

- 5,500' to 5,300' with 55 sacks class B cement.
- 3,900' to 3,600' with 121 sacks class H cement with 1/2% D65 plus 2% $CaCl_2$.

The kick off point was 3,780' with the drilling degree started at 1° building at 2 1/2° per hundred feet to an eventual 18° and a direction of N43W.

I talked to Ron Firth on Friday, January 3, 1986, and advised that all parties had decided the total depth of the deviation would be 1,800' FNL and 1,150' FEL of the captioned section.

If you have any questions concerning this information, please advise.

Very truly yours,

RAYMOND S. BLUNK
Area Land Manager
Southern Rockies Region

RSB:amr

- cc: Jordan McNay, MCOR-Houston
- Steven Curtis, TXC-Denver
- Keith Patton, TXC-Denver
- Fred Avila, TXC-Denver

* BHL

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

| | |
|--|------------------|
| 5. LEASE DESIGNATION AND SERIAL NO. | ML 36202 |
| 6. IF INDIAN, ALLOTTEE OR TRIBE NAME | N/A |
| 7. UNIT AGREEMENT NAME | N/A |
| 8. FARM OR LEASE NAME | Canyon |
| 9. WELL NO. | 3-36 State |
| 10. FIELD AND POOL, OR WILDCAT | Undesignated |
| 11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA | 36-38S-25E SLB&M |
| 12. COUNTY OR PARISH | San Juan |
| 13. STATE | Utah |

SUNDRY NOTICES AND REPORTS ON WELLS

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

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JAN 10 1986

DIVISION OF OIL
GAS & MINING

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
MCOB OIL AND GAS CORPORATION

3. ADDRESS OF OPERATOR
5718 Westheimer, Suite 1100, Houston, Texas 77057

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
2140' FNL & 950' FEL (SE NE)

14. PERMIT NO. 43-037-31225

15. ELEVATIONS (Show whether OF, RT, OR, etc.)
4915' GR

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

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

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

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

Set cement plug 5500-5300' (55 sx C1 "B" cement).
Set cement plug 3900-3600' (121 sx C1 "H" cement with 1/2% D-65 & 2% CaCl2).
Located top of cement @ 3768'. Cleaned out to 3780'.

Well being redrilled from KOP of 3780' to 1800' FNL & 1150' FEL, Sec. 36 at vertical depth of 5300'.

Proposed total depth - 5485'.

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 1-13-86
BY: John R. Bays

18. I hereby certify that the foregoing is true and correct
SIGNED A.J. McNay A.J. McNay TITLE Manager, Drilling & Production Western Region DATE 1/6/85

(This space for Federal or State office use)

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



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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

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

January 10, 1986

Mr. Chuck Farmer
Total Petroleum Company
999 18th Street, Suite #2201
Denver, Colorado 80201

Dear Mr. Farmer:

RE: Well No. Canyon State 2-36, Sec. 36, T. 38S, R. 25E,
San Juan County, Utah

A recent inspection of the referenced well revealed three items of concern to the Division of Oil, Gas and Mining. First, associated gas currently being vented needs to be burned in a suitable flare to prevent the possibility of gas accumulating in the area of the well. Second, a meter needs to be installed to measure the amount of gas being produced and subsequently vented or flared. Third, it is recommended that seals and locks be installed on the oil storage tanks as a security measure.

These items of concern were discussed with you in a telephone conversation on January 2, 1986, with Patrick deGruyter from our Moab Regional Office. From this conversation, it is our understanding that these concerns will be resolved upon completion of the Canyon State #3-36 because of plans to share production facilities of the two wells. It was estimated that drilling would be completed and TD reached on the Canyon State #3-36 approximately January 12, 1986. The size and layout of production facilities for the two wells should be determined and construction of the production facilities should take place as soon thereafter as possible.

Thank you for your attention to these items.

Sincerely,

John R. Baza
Petroleum Engineer

PD/sb
cc: D. R. Nielson
R. J. Firth
Well file
0127T-27

IGT

MCOR OIL & GAS CORPORATION
CANYON #3-36 STATE
SEC. 36, T38S-R25E
SAN JUAN COUNTY, UTAH

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JAN 27 1986

DIVISION OF OIL
GAS & MINING

INTERMOUNTAIN GEO-TECH, INC.
P. O. BOX 158
DELTA, CO 81416
303-874-7762

MCOR OIL & GAS CORPORATION
CANYON #3-36 STATE
SEC. 36, T38S-R25E
SAN JUAN COUNTY, UTAH

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(1) COPY, FINAL MUDLOG (5"=100')

(1) COPY, FINAL MUDLOG (2.5"=100')

DRILLING CONTRACTOR: COLEMAN DRILLING, RIG #4
FARMINGTON, NEW MEXICO

DRILLING FOREMEN: MR. J. R. HICKMAN
MR. LEO LEWIS

PUSHERS: MR. DON VESTAL
MR. JOHN RICHARDSON

GEO TECHNOLOGISTS: MR. JUSTIN ARO - MR. GEORGE NICHOLS
MR. TERRY DAOUST - MR. NICK LARKIN
INTERMOUNTAIN GEO-TECH, INC.
DELTA, CO 81416

DRILLING FLUID: MR. GARY DUNN - MR. PEN PENFIELD
N. L. BAROID
FARMINGTON, NEW MEXICO

DRILL STEM TESTS: MR. DAN AULD
HALLIBURTON
FARMINGTON, NEW MEXICO

CORING: MR. DON SANDERS
CHRISTENSEN
FARMINGTON, NEW MEXICO

WIRE LINE LOGS: MR. SCOTT YARBORO
WELEX
FARMINGTON, NEW MEXICO
GEARHART
FARMINGTON, NEW MEXICO

DIRECTIONAL ENGINEER: MR. NEIL LEMON
NORTON-CHRISTENSEN
FARMINGTON, NEW MEXICO

GEOLOGIST: MR. CONNIE KRIVANEK
FARMINGTON, NEW MEXICO

MCOR OIL & GAS CORPORATION
 CANYON #3-36 STATE
 SEC. 36, T38S-R25E
 SAN JUAN COUNTY, UTAH

SUMMARY OF DAILY ACTIVITY

| DATE | ACTIVITY | MIDNITE DEPTH | 24 HOUR FOOTAGE |
|----------|---|------------------|--------------------|
| 12/14/85 | IGT UNIT #1 ON LOCATION, RIGGED UP, WAITING ON SURFACE PIPE, WOC | -- | -- |
| 12/15/85 | WOC, DRLG, SURV, DRLG | 1530' | 348' |
| 12/16/85 | DRLG, SURV, DRLG, TOH NB #4, TIH, DRLG | 1878' | 947' |
| 12/17/85 | DRLG | 2825' | 432' |
| 12/18/85 | DRLG, SURV, DRLG | 3257' | 406' |
| 12/19/85 | DRLG, SURV | 3663' | 343' |
| 12/20/85 | DRLG | 4006' | 231' |
| 12/21/85 | DRLG, BIT #5 TRIP, DRLG, TRIP FOR PLUGGED JET | 4237' | 189' |
| 12/22/85 | DRLG | 4426' | 312' |
| 12/23/85 | DRLG, SURV | 4738' | 269' |
| 12/24/85 | DRLG, TRIP BIT #6(RR) | 5007' | 160' |
| 12/25/85 | DRLG, TRIP BIT #7, DRLG | 5167' | 147' |
| 12/26/85 | DRLG, TRIP/BIT #8, CORING | 5314' | 67' |
| 12/27/85 | CORING, CIRC FOR DST #1 | 5381' | 26' |
| 12/28/85 | DST #1, DRLG | 5407' | 87' |
| 12/29/85 | DRLG, T.D., E-LOGS | 5497' | 186' |
| 12/30/85 | E-LOGS | 5680' | -- |
| 12/31/85 | WOO | -- | -- |
| 1/01/86 | WOO, SET PLUGS | -- | -- |
| 1/02/86 | WOO, GREASED PLUG, POOH TRIP IN W/DYNA DRILL | 3780' | -- |
| 1/03/86 | COMMENCE DIRECTIONAL DRLG, TRIP BIT #14, DRLG | 3780' | 82' |
| 1/04/86 | DRLG, TRIP/BIT#15,DRLG, TRIP BIT #16, DRLG | 3862' | 65' |
| 1/05/86 | DRLG, SURV, DRLG, TRIP BIT #17, DRLG | 3927' | 105' |
| 1/06/86 | DRLG, TRIP BIT #18, DRLG | 4032' | 71' |

MCOR OIL & GAS CORPORATION
 CANYON #3-36 STATE
 SUMMARY OF DAILY ACTIVITY (CONTINUED)

| DATE | ACTIVITY | MIDNITE DEPTH | 24 HOUR FOOTAGE |
|---------|--|------------------|--------------------|
| 1/07/86 | DRLG, TRIP BIT #19, LOST CONE TRIP W/MAG | 4163' | 38' |
| 1/08/86 | TRIP (CONT'D), DRLG, TRIP BIT #20, DRLG | 4141 | 141' |
| 1/09/86 | DRLG, TOH, BIT #21, TIH, DRLG | 4282' | 94' |
| 1/10/86 | DRLG, TRIP BIT #22, DRLG | 4376' | 92' |
| 1/11/86 | DRLG, TRIP FOR NEW SUB, DRLG | 4468' | 65' |
| 1/12/86 | DRLG, TRIP FOR POSSIBLE HOLE IN PIPE, DRLG | 4533' | 70' |
| 1/13/86 | DRLG, TRIP TO REAM 240' & FOR BIT #23, DRLG | 4603' | 78' |
| 1/14/86 | DRLG, TRIP FOR MOVED COLLAR, DRLG | 4681' | 185' |
| 1/15/86 | DRLG, TRIP BIT #24, DRLG | 4866' | 179' |
| 1/16/86 | DRLG, SURV, DRLG, SURV, DRLG | 5045' | 192' |
| 1/17/86 | DRLG, SURV, DRLG, CIRC UP SHOW #1, TOH | 5237' | 173' |
| 1/18/86 | TOH, TIH, DRLG, STUCK IN HOLE, DRLG, T.D. @ 5550', IGT UNIT #1 RELEASED | 5410' | 140' |

MCOR OIL & GAS CORPORATION
 CANYON #3=36 STATE
 SEC. 36, T38S-R25E
 SAN JUAN COUNTY, UTAH

BIT RECORD

| BIT | MAKE | SIZE | TYPE | DEPTH OUT | FOOTAGE USED | HOURS |
|--|---------|--------|-------------|--------------|-----------------|-------|
| 1 | STC | 12¼" | F-3 (RR) | 1352' | 1278' | 28 |
| 2 | SMITH | 12¼" | F-3 (RR) | 1530' | 178' | 6½ |
| 3 | VAREL | 7 7/8" | V537C | 2435' | 905' | 17¾ |
| 4 | VAREL | 7 7/8" | V537C | 4300' | 1865' | 103 |
| 5 | VAREL | 7 7/8" | V-537 | 5160' | 860' | 73½ |
| 6 | SANDVIK | 7 7/8" | CFS-30 (RR) | 5307' | 147' | 9¼ |
| 7 | HTC | 7 7/8" | J-33 (RR) | 5347' | 40' | 4½ |
| 8 | CHRIS | 7 7/8" | C-20 | 5407' | 60' | 24 |
| 9 | HTC | 7 7/8" | J-33 (RR) | 5680' | 273' | 29 |
| 10 - 12 WERE RERUNS TO REDIRECT DIRECTION FOR HOLE | | | | | | |
| 13 | CHRIS | 7 7/8" | D43ST | 3834' | 54' | 10½ |
| 14 | STC | 7 7/8" | FDT | 3874' | 39' | 9½ |
| 15 | STC | 7 7/8" | F-2 | 3901' | 27' | 6½ |
| 16 | STC | 7 7/8" | V2H | 3989' | 88' | 9½ |
| 17 | CHRIS | 7 7/8" | NC27 | 4049' | 60' | 14 |
| 18 | STC | 7 7/8" | F-27 | 4242' | 193' | 29½ |
| 19 | CHRIS | 7 7/8" | D-43ST | 4321' | 81' | 16½ |
| 20 | STC | 7 7/8" | F-27 | 4389' | 68' | 5½ |
| 21 | CHRIS | 7 7/8" | D-435-T | 4634' | 125' | 31½ |
| 22 | STC | 7 7/8" | F-27 | 4941' | 307' | 27 |
| 23 | REED | 7 7/8" | HS-51 | 5550' | 609' | 61¾ |

MCOR OIL & GAS CORPORATION
 CANYON #3-36 STATE
 SEC. 36, T38S-R25E
 SAN JUAN COUNTY, UTAH

DEVIATION SHEET FOR WELL. . . .

| <u>DEPTH</u> | <u>DEVIATION</u> | <u>DIRECTION</u> | <u>DEPTH</u> | <u>DEVIATION</u> | <u>DIRECTION</u> |
|--------------|------------------------|------------------|--------------|-------------------------|------------------|
| 196' | $\frac{1}{4}^{\circ}$ | | 4155' | $8\frac{3}{4}^{\circ}$ | N50W |
| 696' | $1\frac{1}{4}^{\circ}$ | | 4186' | $8\frac{1}{2}^{\circ}$ | N50W |
| 1198' | 2 $^{\circ}$ | | 4216' | $8\frac{3}{4}^{\circ}$ | N48W |
| 1352' | $2\frac{1}{4}^{\circ}$ | | 4245' | $8\frac{3}{4}^{\circ}$ | N45W |
| 1530' | 1 $^{\circ}$ | | 4276' | 9 $^{\circ}$ | N41W |
| 1809' | 1 $^{\circ}$ | | 4333' | $10\frac{1}{4}^{\circ}$ | N40W |
| 2259' | $\frac{1}{2}^{\circ}$ | | 4364' | $10\frac{1}{4}^{\circ}$ | N39W |
| 2688' | $1\frac{1}{4}^{\circ}$ | | 4397' | $10\frac{3}{4}^{\circ}$ | N37W |
| 3279' | $1\frac{1}{4}^{\circ}$ | | 4428' | 11 $^{\circ}$ | N38W |
| 3864' | $1\frac{1}{4}^{\circ}$ | | 4460' | $11\frac{1}{2}^{\circ}$ | N38W |
| 4300' | 1 $^{\circ}$ | | 4489' | $12\frac{1}{2}^{\circ}$ | N37W |
| 4800' | $1\frac{1}{2}^{\circ}$ | | 4521' | $12\frac{1}{2}^{\circ}$ | N37W |
| 5126' | 1 $^{\circ}$ | | 4552' | 13 $^{\circ}$ | N36W |
| 5652' | $1\frac{3}{4}^{\circ}$ | | 4583' | $13\frac{1}{4}^{\circ}$ | N34W |
| 1600' | $1\frac{3}{4}^{\circ}$ | N13W | 4625' | $14\frac{1}{4}^{\circ}$ | N34W |
| 2650' | 2 $^{\circ}$ | N36E | 4656' | $14\frac{1}{2}^{\circ}$ | N34W |
| 3720' | 1 $^{\circ}$ | N28E | 4717' | $14\frac{3}{4}^{\circ}$ | N34W |
| 3755' | $1\frac{1}{2}^{\circ}$ | N33E | 4780' | 15 $^{\circ}$ | N34W |
| 3819' | $1\frac{1}{4}^{\circ}$ | N38W | 4841' | $15\frac{3}{4}^{\circ}$ | N36W |
| 3893' | $3\frac{1}{4}^{\circ}$ | N41W | 4904' | $16\frac{1}{4}^{\circ}$ | N37W |
| 3934' | 4 $^{\circ}$ | N43W | 4998' | 17 $^{\circ}$ | N39W |
| 3964' | $4\frac{1}{4}^{\circ}$ | N42W | 5088' | $18\frac{1}{4}^{\circ}$ | N40W |
| 3997' | 5 $^{\circ}$ | N43W | 5180' | $19\frac{1}{4}^{\circ}$ | N44W |
| 4028' | $5\frac{3}{4}^{\circ}$ | N45W | 5272' | $20\frac{1}{4}^{\circ}$ | N42W |
| 4058' | $6\frac{3}{4}^{\circ}$ | N61W | 5363' | $21\frac{1}{2}^{\circ}$ | N44W |
| 4088' | $7\frac{1}{2}^{\circ}$ | N49W | 5453' | $22\frac{1}{4}^{\circ}$ | N44W |
| 4124' | $8\frac{1}{4}^{\circ}$ | N52W Projected | 5550' | $22\frac{1}{4}^{\circ}$ | N44W |

(IGT)
DST & SHOW SHEET

SHOW # 1A FROM 5395' TO 5407' DATE 12/27/85

COMPANY MCOR OIL & GAS CORPORATION
WELL CANYON #3-36 STATE
FIELD TIN CUP MESA

| | BEFORE SHOW | DURING SHOW | AFTER SHOW |
|-----------------|-------------|-------------|------------|
| DRILLING RATE | 37 min/ft | 6-9 min/ft | |
| TOTAL GAS UNITS | 7 Units | 72 Units | 20 Units |
| METHANE % | .08% | 1.33% | .20% |
| ETHANE % | .02% | .2% | .07% |
| PROFANE % | .015% | .11% | .04% |
| BUTANE (ISO) % | 0 | .05% | .02% |
| BUTANE (NOR) % | | | |
| PENTANE % | | | |

SAMPLE LITHOLOGY LS - TAN-CRM MICXL CLN SPTY FLOR

SAMPLE FLOR AND CUT TR IN SPL/SPTY DULL GN YEL FLOR MKY-OCC SLOW STMG CUT

DST # 1 FROM 5366' TO 5409' DATE 12/28/85

| | MINUTES | TOP CHART | BOTTOM CHART |
|---------------------|---------|-----------|--------------|
| INITIAL HYDROSTATIC | | 3062 | 3016 |
| INITIAL OPEN | 30 | 176-446 | 174-483 |
| INITIAL SHUT-IN | 62 | 2128 | 2139 |
| SECOND OPEN | 60 | 500-862 | 510-873 |
| SECOND SHUT-IN | 120 | 2128 | 2139 |
| FINAL HYDROSTATIC | | 3088 | 2989 |

1ST FLOW Open w/blow to BOB @5 min=4½#, @10 min=10#, @30 min=10#

2ND FLOW @5 min=10 oz, @10 min=18 oz, 15=13oz, 24 min=33oz, 30=6½#, 45=10#, 60=11#

REMARKS BHT^o 130^oF

DRILL PIPE RECOVERY Reversed out 17bbls SW, 1bbl oil, 1615 of OWCCDM

SAMPLE CHAMBER RECOVERY .9ft³ GAS at 645psi, 50cc Oil, 2150H2O

DRILL PIPE- TOP- R/W= at ^oF, MIDDLE- R/W= at ^oF,

DRILL PIPE- BOTTOM- R/W= at ^oF, 151 at 56^oF SAMPLE CHMBR- R/W= at ^oF, .05 at 65^oF

PIT MUD- R/W= at ^oF. 436 at 75^oF CL=54, 500PPM

GEO-TECH Justin Aro

(IGT)
DST & SHOW SHEET

SHOW # 1B FROM 5399 ' TO 5420 ' DATE 1/17/86

COMPANY MCOR OIL & GAS CORPORATION
WELL CANYON #3-36 STATE (DIRECTIONAL)
FIELD TIN CUP MESA

| | BEFORE SHOW | DURING SHOW | AFTER SHOW |
|-----------------|-------------|----------------------------|------------|
| DRILLING RATE | 5.5 min/ft | 2 min/ft | 4.5 min/ft |
| TOTAL GAS UNITS | 8 Units | 104/490 (Partial Trip Gas) | 20 Units |
| METHANE % | 0.1% | 1.74/4.48 " | .18% |
| ETHANE % | tr | .78% | .04% |
| PROFANE % | -- | .56% | tr |
| BUTANE (ISO) % | -- | .48% | -- |
| BUTANE (NOR) % | -- | tr | -- |
| PENTANE % | -- | -- | -- |

SAMPLE LITHOLOGY DOL - BRN GYBRN BF CRP-VFXL TR INTXL POR TO VUG PP POR

SAMPLE FLOR AND CUT RR TO TR YEL-GN FLOR W/RR TO FR G STMG CUT

DST # _____ FROM _____ ' TO _____ ' DATE _____
MINUTES TOP CHART BOTTOM CHART

INITIAL HYDROSTATIC

INITIAL OPEN

INITIAL SHUT-IN

SECOND OPEN

SECOND SHUT-IN

FINAL HYDROSTATIC

1ST FLOW

2ND FLOW

REMARKS BHT^o

DRILL PIPE RECOVERY

SAMPLE CHAMBER RECOVERY

DRILL PIPE- TOP- R/W= at ^oF, MIDDLE-R/W= at ^oF,

DRILL PIPE- BOTTOM-R/W= at ^oF, SAMPLE CHMBR- R/W= at ^oF,

PIT MUD-R/W= at ^oF

GEO-TECH Nick Larkin

(IGT)
DST & SHOW SHEET

SHOW # 2 FROM 5424' TO 5432' DATE 1/18/86

COMPANY MCOR OIL & GAS CORPORATION
WELL CANYON #3-36 STATE (DIRECTIONAL)
FIELD TIN CUP MESA

| | BEFORE SHOW | DURING SHOW | AFTER SHOW |
|-----------------|-------------|-------------|------------|
| DRILLING RATE | 4 min/ft | 3 min/ft | 4 min/ft |
| TOTAL GAS UNITS | 28 Units | 40 Units | 15 Units |
| METHANE % | .25% | .49% | .3% |
| ETHANE % | .05% | .13% | .07% |
| PROPANE % | tr | .04% | tr |
| BUTANE (ISO) % | -- | -- | -- |
| BUTANE (NOR) % | -- | -- | -- |
| PENTANE % | -- | -- | -- |

SAMPLE LITHOLOGY DOL - LTGYBRN BF MIC-CRPXL SL FOS RTHY HD PP VUG POR

SAMPLE FLOR AND CUT FR PP YEL FLOR NO CUT

DST # _____ FROM _____ ' TO _____ ' DATE _____
MINUTES TOP CHART BOTTOM CHART

INITIAL HYDROSTATIC

INITIAL OPEN

INITIAL SHUT-IN

SECOND OPEN

SECOND SHUT-IN

FINAL HYDROSTATIC

1ST FLOW

2ND FLOW

REMARKS BHT^o

DRILL PIPE RECOVERY

SAMPLE CHAMBER RECOVERY

DRILL PIPE- TOP- R/W= at ^oF, MIDDLE-R/W= at ^oF,

DRILL PIPE- BOTTOM-R/W= at ^oF, SAMPLE CHMBR.- R/W= at ^oF,

PIT MUD-R/W= at ^oF

GEO-TECH Terry Daoust

(IGT)
DST & SHOW SHEET

SHOW # 3

FROM 5438 ' TO 5451 '

DATE 1/18/86

COMPANY MCOR OIL & GAS CORPORATION
WELL CANYON #3-36 STATE (DIRECTIONAL)
FIELD TIN CUP MESA

| | BEFORE SHOW | DURING SHOW | AFTER SHOW |
|-----------------|-------------|-------------|------------|
| DRILLING RATE | 4 min/ft | 2.5 min/ft | 3 min/ft |
| TOTAL GAS UNITS | 10 Units | 106 Units | 36 Units |
| METHANE % | .19% | 1.49% | .53% |
| ETHANE % | .05% | .38% | .13% |
| PROPANE % | tr | .2% | .07% |
| BUTANE (ISO) % | -- | .06% | tr |
| BUTANE (NOR) % | -- | tr | -- |
| PENTANE % | -- | -- | -- |

SAMPLE LITHOLOGY DOL - LTGYBRN BF MIC-CRPXL RTHY SL FOS LMY HD PP VIUG POR

SAMPLE FLOR AND CUT RR PP YEL FLOR NO CUT

DST # _____ FROM _____ ' TO _____ ' DATE _____
MINUTES TOP CHART BOTTOM CHART

INITIAL HYDROSTATIC

INITIAL OPEN

INITIAL SHUT-IN

SECOND OPEN

SECOND SHUT-IN

FINAL HYDROSTATIC

1ST FLOW

2ND FLOW

REMARKS BHT^o

DRILL PIPE RECOVERY

SAMPLE CHAMBER RECOVERY

DRILL PIPE- TOP- R/W= at ^oF, MIDDLE-R/W= at ^oF,

DRILL PIPE- BOTTOM-R/W= at ^oF, SAMPLE CHMBR- R/W= at ^oF,

PIT MUD-R/W= at ^oF

GEO-TECH Terry Daoust

(IGT)
DST & SHOW SHEET

SHOW # 4 FROM 5450 ' TO 5468 ' DATE 1/18/86

COMPANY MCOR OIL & GAS CORPORATION
WELL CANYON #3-36 STATE (DIRECTIONAL)
FIELD TIN CUP MESA

| | BEFORE SHOW | DURING SHOW | AFTER SHOW |
|-----------------|-------------|-------------|------------|
| DRILLING RATE | 3 min/ft | 3 min/ft | 3 min/ft |
| TOTAL GAS UNITS | 44 Units | 64 Units | 30 Units |
| METHANE % | .53% | .78% | .39% |
| ETHANE % | .13% | .21% | .10% |
| PROFANE % | .06% | .17% | .06% |
| BUTANE (ISO) % | tr | tr | tr |
| BUTANE (NOR) % | tr | tr | tr |
| PENTANE % | | | |

SAMPLE LITHOLOGY LS - WH LT-MGY GYBRN MIC-CRPXL RTHY SL FOS SL SLTY HD PP VUG POR

SAMPLE FLOR AND CUT RR-TR PP YEL FLOR NO CUT

DST # _____ FROM _____ ' TO _____ ' DATE _____
MINUTES TOP CHART BOTTOM CHART

INITIAL HYDROSTATIC

INITIAL OPEN

INITIAL SHUT-IN

SECOND OPEN

SECOND SHUT-IN

FINAL HYDROSTATIC

1ST FLOW

2ND FLOW

REMARKS BHT^o

DRILL PIPE RECOVERY

SAMPLE CHAMBER RECOVERY

DRILL PIPE- TOP- R/W= at ^oF, MIDDLE-R/W= at ^oF,

DRILL PIPE- BOTTOM-R/W= at ^oF, SAMPLE CHMR. - R/W= at ^oF,

PIT MUD-R/W= at ^oF

GEO-TECH Terry Daoust

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
SERIAL No.: ML-36202

and hereby designates

TOTAL PETROLEUM, INC.
One Denver Place, Suite 3100
NAME: 999 18th Street
ADDRESS: P.O. Box 500
Denver, Colorado 80201

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 38 SOUTH - RANGE 25 EAST

Section 36: NE4

SAN JUAN 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.

MCOR OIL AND GAS CORPORATION

BY: 

(Signature of lessee)

Francis H. Roth
VICE PRESIDENT

5718 Westheimer, Houston, Tx. 77057

(Address)

01/23/86

(Date)

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

RECEIVED

JAN 29 1986

DIVISION OF OIL
GAS & MINING

CORE ANALYSIS REPORT

FOR

MCOR OIL & GAS CORP.

CANYON # 3-36 STATE
WILDCAT
SAN JUAN, UTAH

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering

DALLAS, TEXAS

MCOR OIL & GAS CORP.
 CANYON # 3-36 STATE
 WILDCAT
 SAN JUAN, UTAH

DATE : 31-DEC-1985
 FORMATION : PARADOX
 DRLG. FLUID: WBM
 LOCATION : SE,NE SEC. 38-T38S-R25E

FILE NO : 38030-003430
 ANALYSTS : DS;EV
 ELEVATION: 4929 KB

FULL DIAMETER ANALYSIS--BOYLE'S LAW POROSITY

| SAMPLE NUMBER | DEPTH | PERM. TO MAXIMUM | AIR (MD) 90 DEG | POR. He | FLUID OIL | SATS. WTR | GRAIN DEN | DESCRIPTION |
|-------------------------------------|-------------|------------------|-----------------|---------|-----------|-----------|-----------|-----------------------------|
| UPPER ISMAY ZONE CORE # 1 5347-5407 | | | | | | | | |
| | 5347.0-64.0 | | | | | | | ANHYDRITE -- NO ANALYSIS |
| 1 | 5364.0-65.0 | 0.96 | 0.89 | 12.6 | 8.4 | 31.6 | 2.82 | DOL LTBRN VFXLN |
| 2 | 5365.0-66.0 | 38. | 34. | 27.4 | 5.7 | 40.4 | 2.83 | DOL LTBRN VFXLN ANHY P-P |
| 3 | 5366.0-67.0 | 22. | 21. | 21.7 | 12.0 | 35.9 | 2.87 | DOL LTBRN VFXLN ANHY P-P |
| 4 | 5367.0-68.0 | 20. | 20. | 23.9 | 12.1 | 30.5 | 2.85 | DOL LTBRN VFXLN ANHY P-P |
| 5 | 5368.0-69.0 | 28. | 28. | 24.1 | 14.4 | 30.9 | 2.85 | DOL LTBRN VFXLN ANHY P-P |
| 6 | 5369.0-70.0 | 43. | 41. | 24.4 | 12.3 | 35.9 | 2.86 | DOL LTBRN VFXLN ANHY P-P |
| 7 | 5370.0-71.0 | 50. | 50. | 24.0 | 11.2 | 37.6 | 2.85 | DOL LTBRN VFXLN ANHY P-P |
| 8 | 5371.0-72.0 | 6.72 | 6.63 | 18.2 | 3.7 | 42.4 | 2.86 | DOL LTBRN VFXLN ANHY P-P |
| 9 | 5372.0-73.0 | 31. | 28. | 24.0 | 7.3 | 39.1 | 2.85 | DOL LTBRN VFXLN ANHY P-P |
| 10 | 5373.0-74.0 | 27. | 23. | 22.3 | 7.2 | 42.0 | 2.85 | DOL LTBRN VFXLN SL/ANHY |
| 11 | 5374.0-75.0 | 1.22 | 1.18 | 7.3 | 6.8 | 43.3 | 2.79 | DOL LTBRN VFXLN SL/ANHY |
| 12 | 5375.0-76.0 | 6.17 | 2.99 | 9.9 | 7.8 | 49.8 | 2.79 | DOL LTBRN VFXLN SL/ANHY |
| 13 | 5376.0-77.0 | 0.90 | 0.87 | 6.5 | 3.4 | 30.7 | 2.82 | DOL LTBRN VFXLN SL/ANHY |
| 14 | 5377.0-78.0 | 1.12 | 0.75 | 10.3 | 9.7 | 24.9 | 2.77 | DOL LTBRN VFXLN SL/ANHY |
| 15 | 5378.0-79.0 | 0.56 | 0.45 | 8.6 | 6.8 | 40.6 | 2.79 | DOL LTBRN VFXLN SL/ANHY |
| 16 | 5379.0-80.0 | 0.34 | 0.29 | 6.0 | 1.8 | 32.9 | 2.80 | DOL LTBRN VFXLN SL/ANHY |
| 17 | 5380.0-81.0 | 1.34 | 1.22 | 7.1 | 1.5 | 38.1 | 2.77 | DOL LTBRN VFXLN SL/ANHY |
| 18 | 5381.0-82.0 | 7.54 | 5.84 | 8.8 | 3.6 | 50.2 | 2.78 | DOL LTBRN VFXLN SL/ANHY ** |
| 19 | 5382.0-83.0 | 1.06 | 1.04 | 8.9 | 2.4 | 43.3 | 2.82 | DOL LTBRN VFXLN SL/ANHY |
| 20 | 5383.0-84.0 | 0.45 | 0.32 | 3.4 | 1.3 | 37.1 | 2.75 | LM GRY VFXLN SL/ANHY SL/VUG |
| 21 | 5384.0-85.0 | 0.79 | 0.63 | 5.8 | 3.7 | 22.5 | 2.75 | LM GRY VFXLN SL/ANHY SL/VUG |
| 22 | 5385.0-86.0 | 0.24 | 0.19 | 4.4 | 4.1 | 49.7 | 2.73 | LM GRY VFXLN SL/ANHY SL/VUG |
| 23 | 5386.0-87.0 | 0.48 | 0.44 | 3.0 | 2.0 | 52.6 | 2.73 | LM GRY VFXLN SL/ANHY SL/VUG |
| 24 | 5387.0-88.0 | 8.47 | 7.04 | 12.0 | 1.6 | 45.1 | 2.77 | LM GRY VFXLN SL/ANHY SL/VUG |

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering

DALLAS, TEXAS

MCOR OIL & GAS CORP.
 CANYON # 3-36 STATE

DATE : 31-DEC-1985
 FORMATION : PARADOX

FILE NO : 38030-003430
 ANALYSTS : DS#EV

FULL DIAMETER ANALYSIS---BOYLE'S LAW POROSITY

| SAMPLE NUMBER | DEPTH | PERM. TO AIR (MD) MAXIMUM | AIR (MD) 90 DEG | POR. He | FLUID OIL | SATS. WTR | GRAIN DEN | DESCRIPTION | |
|---------------|-------------|---------------------------|-----------------|---------|-----------|-----------|-----------|---------------------------|----|
| 25 | 5388.0-89.0 | 3.62 | 2.01 | 12.4 | 6.9 | 22.0 | 2.75 | LM GRY VFXLN SL/ANHY VUG | |
| 26 | 5389.0-90.0 | 12. | 5.27 | 12.7 | 6.0 | 29.2 | 2.75 | LM GRY VFXLN SL/ANHY VUG | |
| 27 | 5390.0-91.0 | 17. | 14. | 11.9 | 2.1 | 48.1 | 2.73 | LM GRY VFXLN SL/ANHY VUG | |
| 28 | 5391.0-92.0 | 14. | 3.28 | 10.1 | 2.8 | 55.1 | 2.79 | DOL BRN VFXLN SL/ANHY VUG | ** |
| 29 | 5392.0-93.0 | 2.55 | * | 5.1 | 1.3 | 37.8 | 2.81 | DOL BRN VFXLN SL/ANHY | ** |
| 30 | 5393.0-94.0 | 13. | 9.59 | 6.9 | 2.4 | 48.3 | 2.80 | DOL BRN VFXLN SL/ANHY | ** |
| 31 | 5394.0-95.0 | 40. | 26. | 14.8 | 0.8 | 52.9 | 2.85 | DOL BRN VFXLN ANHY | ** |
| 32 | 5395.0-96.0 | 0.13 | 0.11 | 5.1 | 1.7 | 59.6 | 2.73 | LM GRY VFXLN SL/ANHY VUG | |
| 33 | 5396.0-97.0 | 8.20 | 4.81 | 10.1 | 2.3 | 29.6 | 2.73 | LM GRY VFXLN SL/ANHY VUG | |
| 34 | 5397.0-98.0 | 15. | 1.40 | 10.7 | 1.9 | 36.5 | 2.74 | LM GRY VFXLN SL/ANHY VUG | ** |
| 35 | 5398.0-99.0 | 54. | 38. | 10.8 | 4.7 | 54.3 | 2.74 | LM GRY VFXLN SL/ANHY VUG | ** |
| 36 | 5399.0-00.0 | 13. | 5.31 | 10.2 | 4.8 | 58.0 | 2.75 | LM GRY VFXLN SL/ANHY VUG | |
| 37 | 5400.0-01.0 | 29. | 21. | 8.1 | 1.9 | 53.7 | 2.75 | LM GRY VFXLN SL/ANHY VUG | ** |
| 38 | 5401.0-02.0 | 3.47 | 2.58 | 7.3 | 3.8 | 45.0 | 2.75 | LM GRY VFXLN SL/ANHY VUG | |
| 39 | 5402.0-03.0 | 4.20 | 2.22 | 7.9 | 7.3 | 14.7 | 2.73 | LM GRY VFXLN SL/ANHY VUG | |
| 40 | 5403.0-04.0 | 5.94 | 2.92 | 9.2 | 9.0 | 41.0 | 2.74 | LM GRY VFXLN SL/ANHY VUG | ** |
| 41 | 5404.0-05.0 | 4.21 | 2.39 | 9.3 | 7.8 | 26.1 | 2.74 | LM GRY VFXLN SL/ANHY VUG | |
| 42 | 5405.0-06.0 | 4.04 | 2.65 | 7.7 | 1.6 | 2.3 | 2.73 | LM GRY VFXLN SL/ANHY VUG | |
| 43 | 5406.0-07.0 | 2.03 | 1.82 | 10.6 | 5.7 | 45.6 | 2.72 | LM GRY VFXLN SL/ANHY VUG | |

** DENOTES FRACTURE PERMEABILITY

* SAMPLE NOT SUITABLE FOR FULL DIAMETER ANALYSIS

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering

DALLAS, TEXAS

MCOR OIL & GAS CORP.
CANYON # 3-36 STATE

DATE : 31-DEC-1985
FORMATION : PARADOX

FILE NO. : 38030-003430
ANALYSTS : DS:EV

*** CORE SUMMARY AVERAGES FOR 1 ZONE ***

DEPTH INTERVAL: 5364.0 TO 5407.0

FEET OF CORE ANALYZED : 43.0 FEET OF CORE INCLUDED IN AVERAGES: 43.0

-- SAMPLES FALLING WITHIN THE FOLLOWING RANGES WERE AVERAGED --

PERMEABILITY MAXIMUM RANGE (MD.) : 0.00 TO 60. (UNCORRECTED FOR SLIPPAGE)
HELIUM POROSITY RANGE (%) : 0.0 TO 100.0
OIL SATURATION RANGE (%) : 0.0 TO 100.0
WATER SATURATION RANGE (%) : 0.0 TO 100.0

SHALE SAMPLES EXCLUDED FROM AVERAGES.

AVERAGES FOR DEPTH INTERVAL: 5364.0 TO 5407.0

| | | | |
|--|--------|--|--------|
| AVERAGE PERMEABILITY (MILLIDARCIES) | | PRODUCTIVE CAPACITY (MILLIDARCY-FEET) | |
| ARITHMETIC PERMEABILITY | : 13. | ARITHMETIC CAPACITY | : 543. |
| GEOMETRIC PERMEABILITY | : 4.9 | GEOMETRIC CAPACITY | : 210. |
| HARMONIC PERMEABILITY | : 1.4 | HARMONIC CAPACITY | : 59. |
| GEOMETRIC MAXIMUM & 90 DEG PERM. | : 3.8 | GEOMETRIC MAXIMUM & 90 DEG CAPACITY | : 161. |
| AVERAGE POROSITY (PERCENT) | : 11.8 | AVERAGE TOTAL WATER SATURATION (PERCENT OF PORE SPACE) | : 38.6 |
| AVERAGE RESIDUAL OIL SATURATION (PERCENT OF PORE SPACE) | : 6.5 | AVERAGE CONNATE WATER SATURATION ** (PERCENT OF PORE SPACE) | : 35.3 |

** ESTIMATED FROM TOTAL
WATER SAUTRATION.

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
 DALLAS, TEXAS

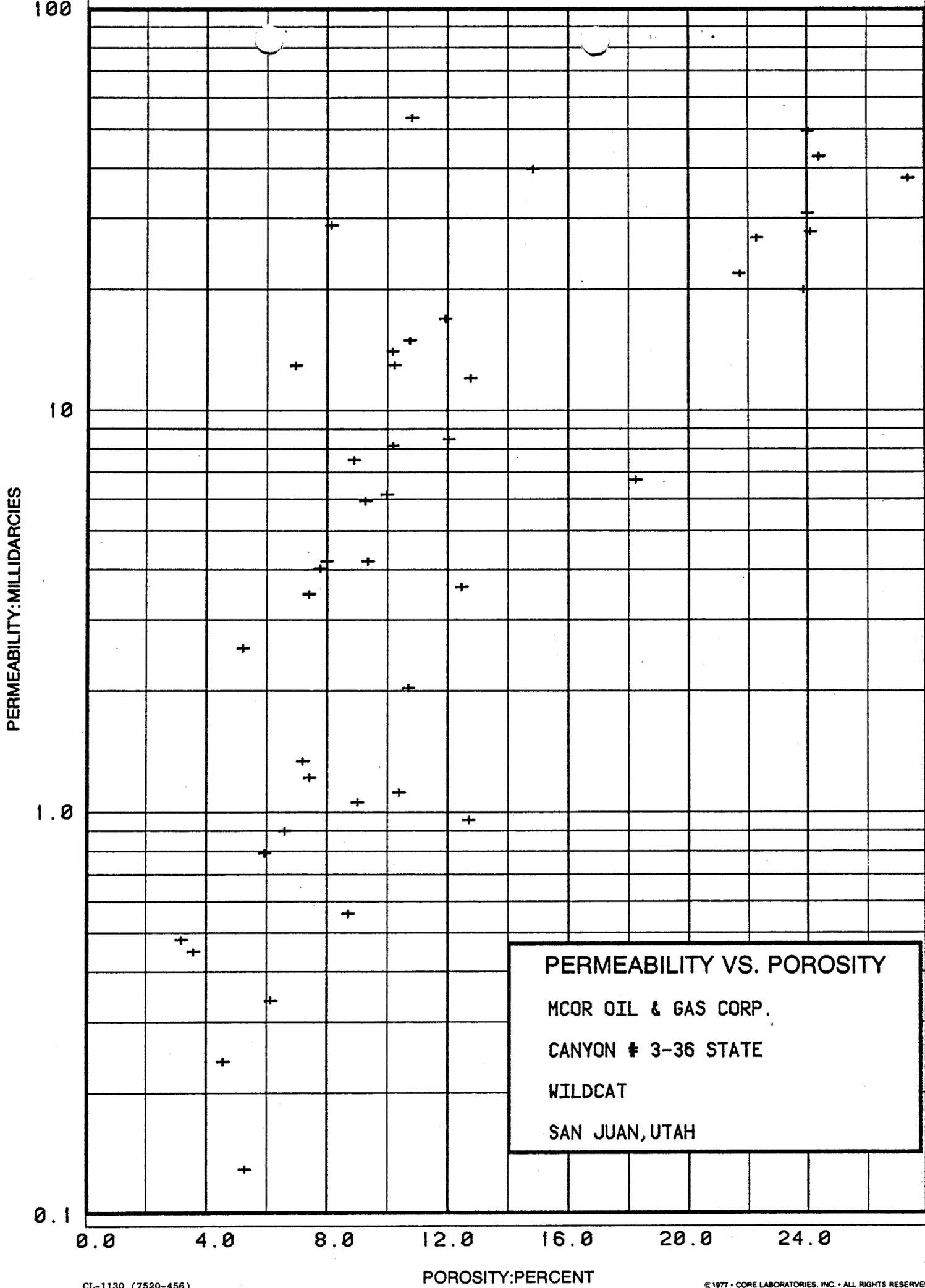
PERMEABILITY VS POROSITY

COMPANY: MCOR OIL & GAS CORP.
 FIELD : WILDCAT

WELL : CANYON # 3-36 STATE
 COUNTY, STATE: SAN JUAN, UTAH

AIR PERMEABILITY : MD - HORIZONTAL (UNCORRECTED FOR SLIPPAGE)
 POROSITY : PERCENT (HELIUM)

| DEPTH INTERVAL | RANGE & SYMBOL | PERMEABILITY | | POROSITY | | POROSITY AVERAGE | PERMEABILITY AVERAGES | | |
|-------------------|-------------------|--------------|---------|----------|------|---------------------|-----------------------|----------|-----------|
| | | MINIMUM | MAXIMUM | MIN. | MAX. | | ARITHMETIC | HARMONIC | GEOMETRIC |
| 5364.0 - 5407.0 | 1 (+) | 0.000 | 60.0 | 0.0 | 30.0 | 11.8 | 13. | 1.4 | 4.9 |



CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
 DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MCOR OIL & GAS CORP.
 FIELD : WILDCAT

WELL : CANYON # 3-36 STATE
 COUNTY, STATE: SAN JUAN, UTAH

AIR PERMEABILITY : MD. (HORIZONTAL) RANGE USED 0.000 TO 60.
 POROSITY : PERCENT (HELIUM) RANGE USED 0.0 TO 46.0

(PERMEABILITY UNCORRECTED FOR SLIPPAGE)

DEPTH LIMITS : 5364.0 - 5407.0 INTERVAL LENGTH : 43.0
 FEET ANALYZED IN ZONE : 43.0 LITHOLOGY EXCLUDED : NONE

DATA SUMMARY

| POROSITY AVERAGE | PERMEABILITY AVERAGES | | |
|---------------------|-----------------------|----------|-----------|
| | ARITHMETIC | HARMONIC | GEOMETRIC |
| 11.8 | 13. | 1.4 | 4.9 |

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
 DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MCOR OIL & GAS CORP.
 FIELD : WILDCAT

WELL : CANYON # 3-36 STATE
 COUNTY, STATE: SAN JUAN, UTAH

GROUPING BY POROSITY RANGES

| POROSITY RANGE | FEET IN RANGE | AVERAGE POROSITY | AVERAGE PERM. (GEOM.) | AVERAGE PERM. (ARITH) | FREQUENCY (PERCENT) | CUMULATIVE FREQUENCY (%) |
|----------------|---------------|------------------|-----------------------|-----------------------|---------------------|--------------------------|
| 2.0 - 4.0 | 2.0 | 3.2 | 0.465 | 0.465 | 4.7 | 4.7 |
| 4.0 - 6.0 | 4.0 | 5.1 | 0.501 | 0.928 | 9.3 | 14.0 |
| 6.0 - 8.0 | 8.0 | 7.1 | 2.1 | 3.6 | 18.6 | 32.6 |
| 8.0 - 10.0 | 7.0 | 9.0 | 4.1 | 7.8 | 16.3 | 48.8 |
| 10.0 - 12.0 | 8.0 | 10.6 | 9.1 | 16. | 18.6 | 67.4 |
| 12.0 - 14.0 | 4.0 | 12.4 | 4.3 | 6.3 | 9.3 | 76.7 |
| 14.0 - 16.0 | 1.0 | 14.8 | 40. | 40. | 2.3 | 79.1 |
| 18.0 - 20.0 | 1.0 | 18.2 | 6.7 | 6.7 | 2.3 | 81.4 |
| 20.0 - 22.0 | 1.0 | 21.7 | 22. | 22. | 2.3 | 83.7 |
| 22.0 - 24.0 | 2.0 | 23.1 | 23. | 24. | 4.7 | 88.4 |
| 24.0 - 26.0 | 4.0 | 24.1 | 37. | 38. | 9.3 | 97.7 |
| 26.0 - 28.0 | 1.0 | 27.4 | 38. | 38. | 2.3 | 100.0 |

TOTAL NUMBER OF FEET = 43.0

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MCOR OIL & GAS CORP.
 FIELD : WILDCAT

WELL : CANYON # 3-36 STATE
 COUNTY, STATE: SAN JUAN, UTAH

GROUPING BY PERMEABILITY RANGES

| PERMEABILITY RANGE | FEET IN RANGE | AVERAGE PERM. (GEOM.) | AVERAGE PERM. (ARITH) | AVERAGE POROSITY | FREQUENCY (PERCENT) | CUMULATIVE FREQUENCY (%) |
|-----------------------|------------------|--------------------------|--------------------------|---------------------|------------------------|-----------------------------|
| 0.078 - 0.156 | 1.0 | 0.130 | 0.130 | 5.1 | 2.3 | 2.3 |
| 0.156 - 0.312 | 1.0 | 0.240 | 0.240 | 4.4 | 2.3 | 4.7 |
| 0.312 - 0.625 | 4.0 | 0.450 | 0.457 | 5.3 | 9.3 | 14.0 |
| 0.625 - 1.250 | 6.0 | 0.998 | 1.0 | 8.6 | 14.0 | 27.9 |
| 1.250 - 2.500 | 2.0 | 1.6 | 1.7 | 8.8 | 4.7 | 32.6 |
| 2.500 - 5.000 | 6.0 | 3.6 | 3.7 | 8.3 | 14.0 | 46.5 |
| 5.- 10. | 6.0 | 7.1 | 7.2 | 11.4 | 14.0 | 60.5 |
| 10.- 20. | 6.0 | 14. | 14. | 10.4 | 14.0 | 74.4 |
| 20.- 40. | 7.0 | 27. | 28. | 21.6 | 16.3 | 90.7 |
| 40.- 80. | 4.0 | 46. | 47. | 18.5 | 9.3 | 100.0 |

TOTAL NUMBER OF FEET = 43.0

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MCOR OIL & GAS CORP.
 FIELD : WILDCAT

WELL : CANYON # 3-36 STATE
 COUNTY, STATE: SAN JUAN, UTAH

POROSITY--FEET OF STORAGE CAPACITY LOST FOR SELECTED POROSITY CUT OFF

| POROSITY CUT OFF | FEET LOST | CAPACITY LOST (%) | FEET REMAINING | CAPACITY REMAINING (%) | ARITH MEAN | MEDIAN |
|---------------------|--------------|----------------------|-------------------|---------------------------|---------------|--------|
| 0.0 | 0.0 | 0.0 | 43.0 | 100.0 | 11.8 | 10.1 |
| 2.0 | 0.0 | 0.0 | 43.0 | 100.0 | 11.8 | 10.1 |
| 4.0 | 2.0 | 1.3 | 41.0 | 98.7 | 12.2 | 10.4 |
| 6.0 | 6.0 | 5.3 | 37.0 | 94.7 | 12.9 | 10.9 |
| 8.0 | 14.0 | 16.5 | 29.0 | 83.5 | 14.6 | 11.9 |
| 10.0 | 21.0 | 28.9 | 22.0 | 71.1 | 16.3 | 13.5 |
| 12.0 | 29.0 | 45.7 | 14.0 | 54.3 | 19.6 | 22.0 |
| 14.0 | 33.0 | 55.5 | 10.0 | 44.5 | 22.5 | 24.0 |
| 16.0 | 34.0 | 58.5 | 9.0 | 41.5 | 23.3 | 24.3 |
| 18.0 | 34.0 | 58.5 | 9.0 | 41.5 | 23.3 | 24.3 |
| 20.0 | 35.0 | 62.1 | 8.0 | 37.9 | 24.0 | 24.5 |
| 22.0 | 36.0 | 66.4 | 7.0 | 33.6 | 24.3 | 24.8 |
| 24.0 | 38.0 | 75.5 | 5.0 | 24.5 | 24.8 | |
| 26.0 | 42.0 | 94.6 | 1.0 | 5.4 | 27.4 | |
| 28.0 | 43.0 | 100.0 | 0.0 | 0.0 | | |

TOTAL STORAGE CAPACITY IN POROSITY-FEET = 505.5

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

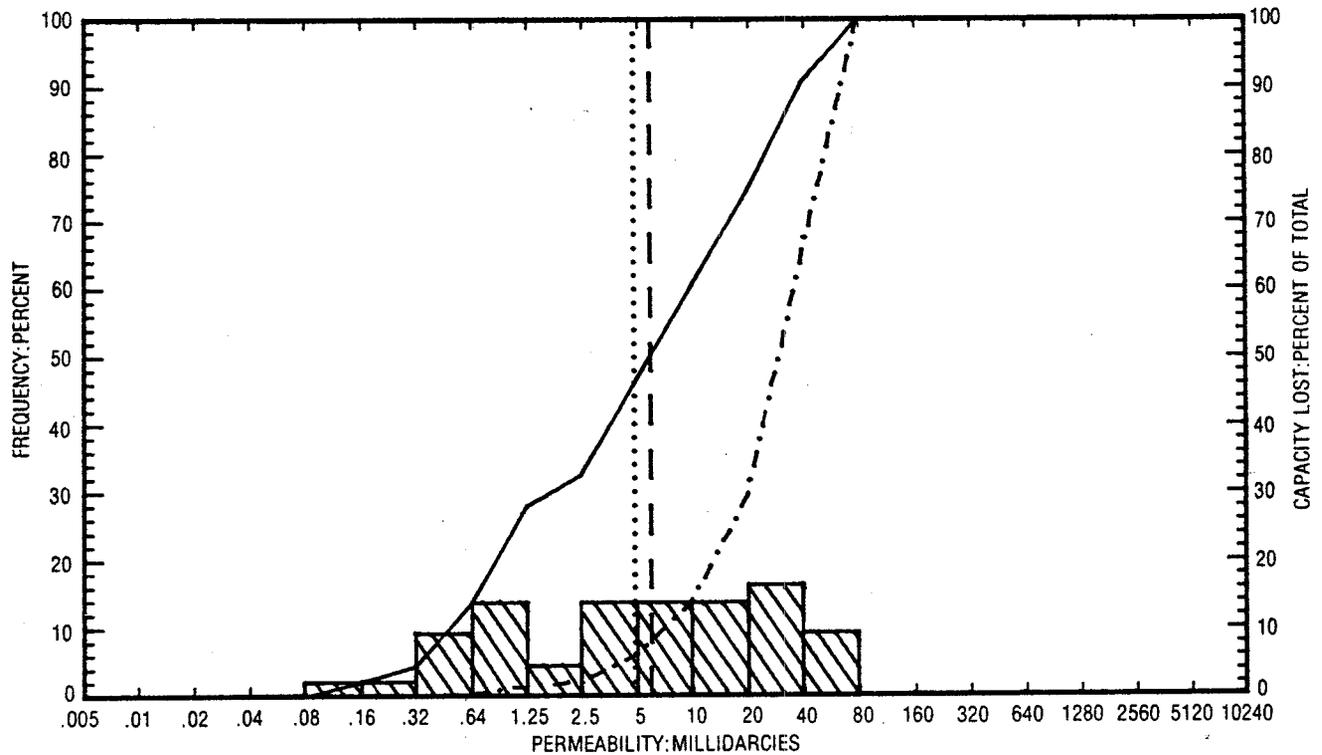
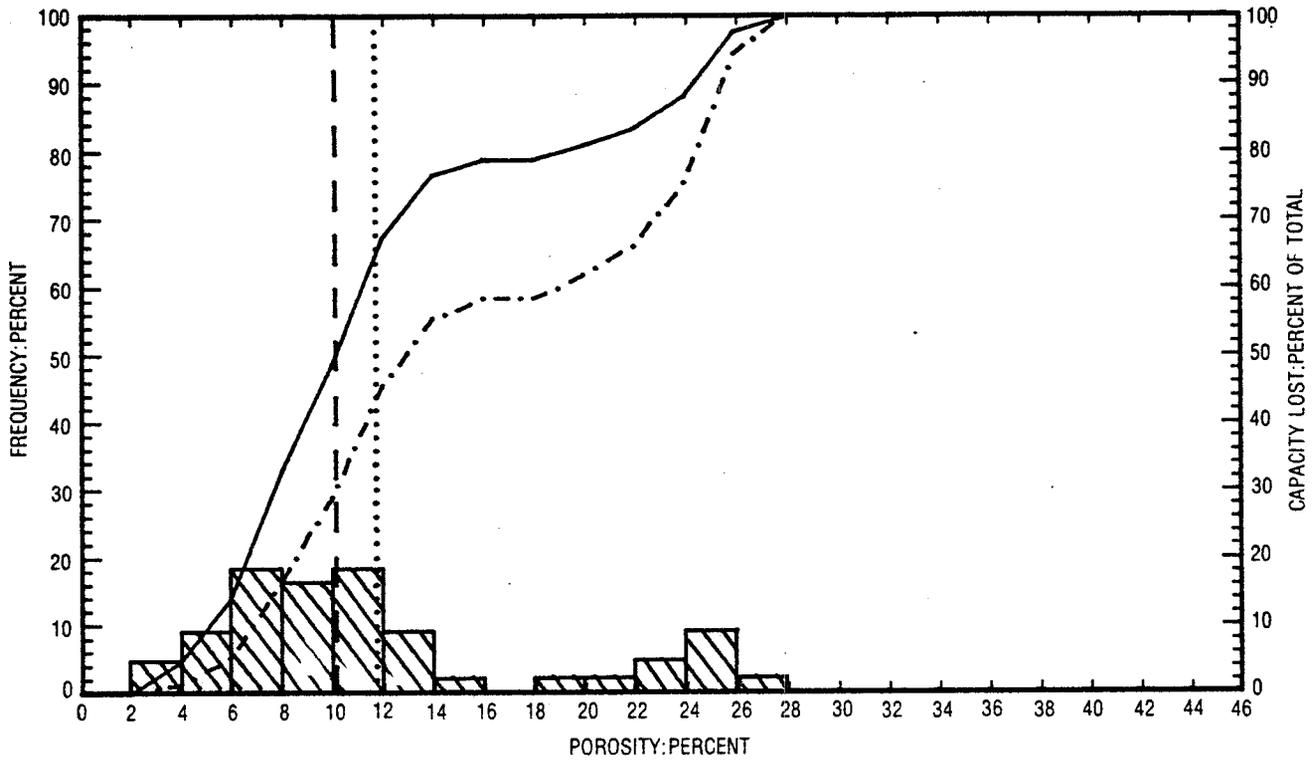
COMPANY: MCOR OIL & GAS CORP.
 FIELD : WILDCAT

WELL : CANYON # 3-36 STATE
 COUNTY, STATE: SAN JUAN, UTAH

MILLIDARCY-FEET OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

| PERMEABILITY CUT OFF | FEET LOST | CAPACITY LOST (%) | FEET REMAINING | CAPACITY REMAINING (%) | GEOM MEAN | MEDIAN |
|-------------------------|--------------|----------------------|-------------------|---------------------------|--------------|--------|
| 0.005 | 0.0 | 0.0 | 43.0 | 100.0 | 4.88 | 5.95 |
| 0.010 | 0.0 | 0.0 | 43.0 | 100.0 | 6.33 | 5.95 |
| 0.020 | 0.0 | 0.0 | 43.0 | 100.0 | 4.88 | 5.95 |
| 0.039 | 0.0 | 0.0 | 43.0 | 100.0 | 4.88 | 5.95 |
| 0.078 | 0.0 | 0.0 | 43.0 | 100.0 | 4.88 | 5.95 |
| 0.156 | 1.0 | 0.0 | 42.0 | 100.0 | 5.32 | 6.30 |
| 0.312 | 2.0 | 0.1 | 41.0 | 99.9 | 5.73 | 6.67 |
| 0.625 | 6.0 | 0.4 | 37.0 | 99.6 | 7.55 | 8.41 |
| 1.250 | 12.0 | 1.5 | 31.0 | 98.5 | 11.17 | 11.89 |
| 2.500 | 14.0 | 2.1 | 29.0 | 97.9 | 12.74 | 13.35 |
| 5. | 20.0 | 6.2 | 23.0 | 93.8 | 17.68 | 18.88 |
| 10. | 26.0 | 14.1 | 17.0 | 85.9 | 24.39 | 25.62 |
| 20. | 32.0 | 29.6 | 11.0 | 70.4 | 33.13 | |
| 40. | 39.0 | 65.5 | 4.0 | 34.5 | 46.42 | |
| 80. | 43.0 | 100.0 | 0.0 | 0.0 | | |

TOTAL FLOW CAPACITY IN MILLIDARCY-FEET (ARITHMETIC) = 542.75

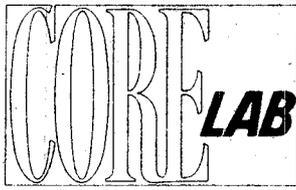


PERMEABILITY AND POROSITY HISTOGRAMS

**MCOR OIL & GAS CORP.
CANYON # 3-36 STATE
WILDCAT
SAN JUAN, UTAH**

LEGEND

- ARITHMETIC MEAN POROSITY (dotted line)
- GEOMETRIC MEAN PERMEABILITY (dotted line)
- MEDIAN VALUE ----- (dashed line)
- CUMULATIVE FREQUENCY _____ (solid line)
- CUMULATIVE CAPACITY LOST -.-.-.-.- (dash-dot line)



CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

COMPANY MCOR OIL & GAS CORP. FILE NO. 38030-003430
 WELL CANYON # 3-36 STATE DATE 31-DEC-1985
 FIELD WILDCAT FORMATION PARADOX ELEV. 4929 KB
 COUNTY SAN JUAN STATE UTAH DRLG. FLD. WBM CORES _____
 LOCATION SE, NE SEC. 38-T38S-R25E

CORRELATION COREGRAPH

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VERTICAL SCALE: 5" = 100'

Total Water _____
 PERCENT PORE SPACE
 100 80 60 40 20 0

Oil Saturation _____
 PERCENT PORE SPACE

Gamma Ray

RADIATION INCREASE →

Permeability _____

MILLIDARCIES

Porosity _____

PERCENT

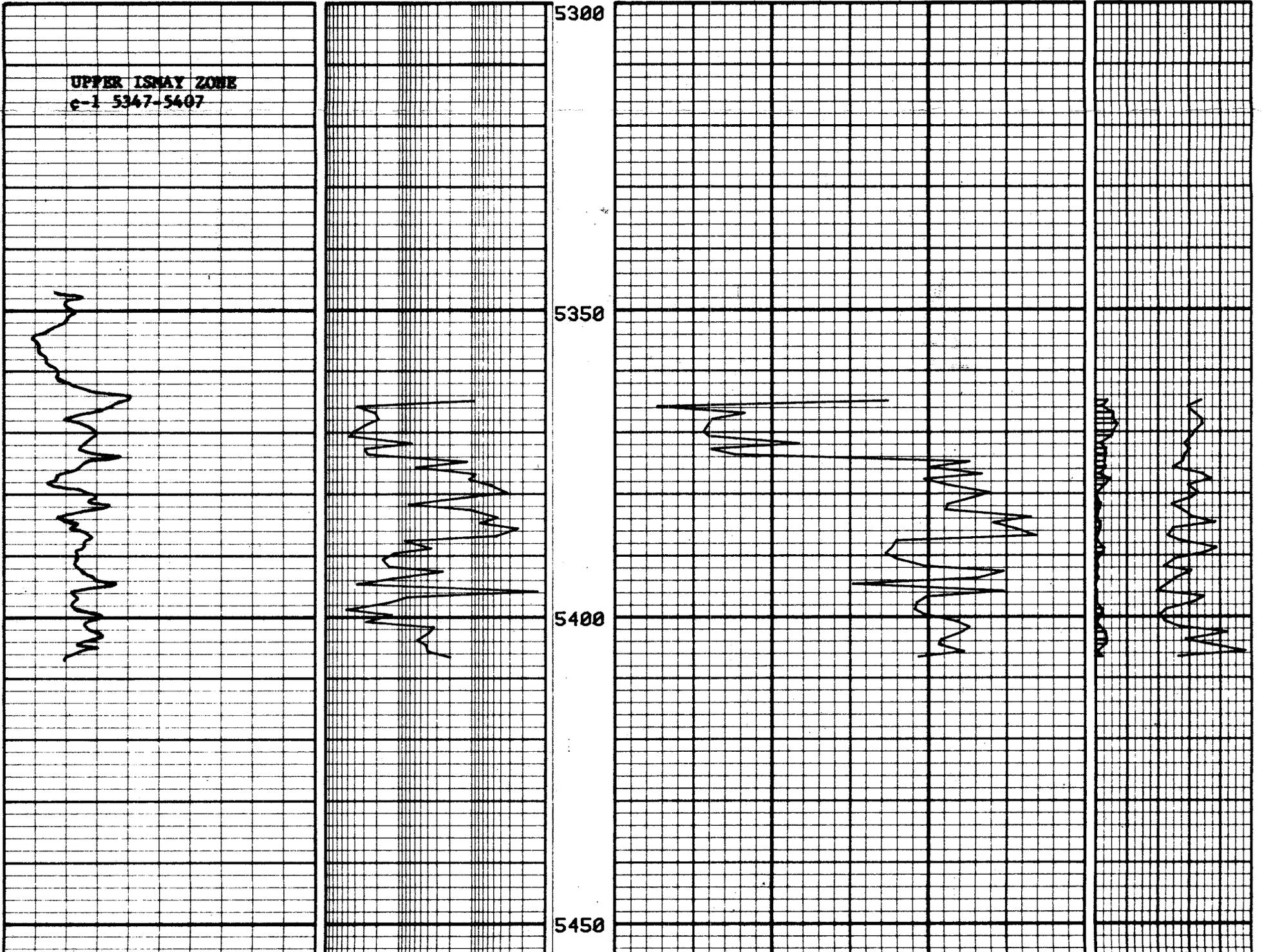
PARADOX FORMATION

100 10 1.0 .1

Depth Feet 30

20 10

0 0 20 40 60 80 100



©1972 - CORE LABORATORIES, INC.



CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

COMPANY MCOR OIL & GAS CORP. FILE NO. 38030-003430
 WELL CANYON # 3-36 STATE DATE 31-DEC-1985 ENGRS. DS;EV
 FIELD WILDCAT FORMATION PARADOX ELEV. 4929 KB
 COUNTY SAN JUAN STATE UTAH DRLG. FLD. WBM CORES _____

CoRes Log
CORE and RESISTIVITY EVALUATION

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom and for whose exclusive and confidential use this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc., all errors and omissions excepted. Core Laboratories, Inc., and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proven operation or profitability of any oil, gas or other mineral, net or sand in connection with which such reports are used or relied upon.

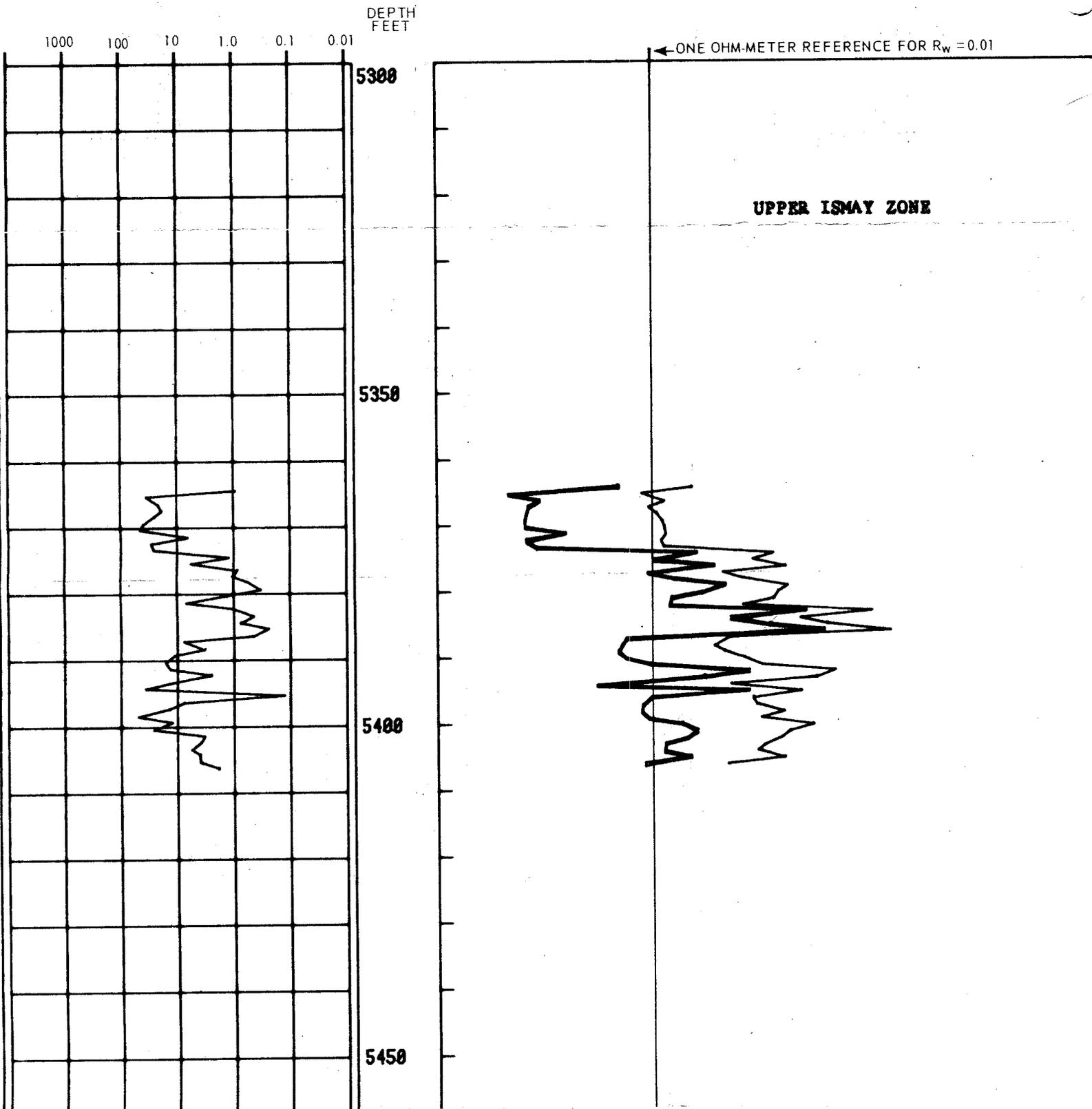
RESISTIVITY PARAMETERS: a = 1.0 m = 2.0 n = 2.0 . Depths 5364.0 to 5407.0
 a = _____ m = _____ n = _____ . Depths _____ to _____

PERMEABILITY
 MILLIDARCIES

CORE ANALYSIS CALCULATED RESISTIVITY

R₀ = OHM-METERS AT 100% S_w _____

R_{mp} = OHM-METERS AT CRITICAL S_w _____



| NAME | ACTION CODE(S) | INTL |
|------------|---------------------|-------------|
| NORM | | <i>W</i> |
| TAMI | | |
| VICKY | | |
| CLAUDIA | | |
| STEPHANE | | |
| CHARLES | | |
| RULA | <i>2-Data Entry</i> | <i>R-41</i> |
| MARY ALICE | | |
| CONNIE | | |
| MILLIE | | |
| PAM | <i>FILE</i> | |

Required Action Code

1. Data Entry
2. Filming
3. Posting
 - a. Card Index
 - b. File Label
 - c. Lists
4. Bonding Verification
5. Other (See Norm)

3/4/86

SRL

Total Petrol. Co.
Canyon State 3-36
Sec. 36, T38S, R25E
TD = 5550'

Johnny Hill
(303) 565-3773
x 124

8⁵/₈" @ 1520'

5¹/₂" @ 5552' cement @ 4000'

Perf @ 5415 - 20 sized w/ 35 SX

5408 - 12 sized w/ 30 SX

5399 - 5404 " " 35 SX

3' report.

CIBP @ 5380'

- ① Damp a plug on top of CIBP.
- ② Set surf. plug inside 8⁵/₈"
- ③ Squeeze annulus (8⁵/₈" - 5¹/₂") @ surf.
- ④ DP x A marker.

- Will start plugging today.

| NAME | ACTION CODE | INTL |
|------------|------------------------|-----------|
| NORM | | <i>27</i> |
| TAMI | <i>3A - RELOCATE-5</i> | <i>A</i> |
| VICKY | | |
| CLAUDIA | <i>/</i> | <i>lg</i> |
| STEPHANE | | <i>g</i> |
| CHARLES | | |
| RULA | | |
| MARY ALICE | | |
| CONNIE | | |
| MILLIE | | |
| PAM | <i>FILE - 5</i> | |

Required Action Code

1. Data Entry
2. Filming
3. Posting
 - a. Card Index
 - b. File Label
 - c. Lists
4. Bonding Verification
5. Other (See Norm)

*Please leave fill in chg until
WCR. Panel fill location on
card.*

TOTAL

Total Petroleum, Inc.

ONE DENVER PLACE - SUITE 3100
999 18TH STREET
DENVER, COLORADO

TELEPHONE 303 291-2000

MAILING ADDRESS

P. O. BOX 500
DENVER, COLORADO 80201-0500

March 12, 1986

RECEIVED
MAR 17 1986

Division of Oil, Gas & Mining
355 W. North Temple
Salt Lake City, UT 84180

DIVISION OF
OIL, GAS & MINING

Attn: John Baza

Dear John:

Please find enclosed the sundry notice for the abandonment operations of the Canyon 3-36 State well. Reclamation will follow the submitted plan. I will update you as to Total's negotiations with Koch Hydrocarbons on the possible gas pipeline installation to the State 2-36 well when something definite is decided.

Please call if you need any further information.

Sincerely,



J. Charles Farmer
Petroleum Engineer

JCF:c11

enc.

MAR 17 1986

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

1. oil well gas well other

2. NAME OF OPERATOR
Total Petroleum, Inc.

3. ADDRESS OF OPERATOR
P.O. Box 500, Suite 3100, Denver, CO 80201

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 2140' FNL, 950' FEL (SE NE)
AT TOP PROD. INTERVAL: See below
AT TOTAL DEPTH:

5. LEASE
ML-36202

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

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME
Canyon

9. WELL NO.
3-36 State Redrill #1

10. FIELD OR WILDCAT NAME
Undesignated

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 36, T38S, R25E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)
4915' GR, 4929' KB

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

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

(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.)*

Ismay Top: 5399' MD, 5351.3' TVD; 326' N, 208.8' W
 Total Depth: 5550' MD, 5491.2' TVD; 366.7' N, 248.2' W
 8-5/8", 24#, J-55 surface csg shoe @ 1,520'
 5 1/2", 15.5#, K-55, 17#, N-80 prod. csg shoe set @ T.D.
 Cement top @ 3700' MD.
 Completed the following operations per state instructions: Set 10,000 psi differential CIBP in 5 1/2" casing @ 5380' K.B. Spot 75' cement plug from 5305-5380'. Spot 50' cement plug from surface to 50'. All plugs Cl "B" neat cement. Attempt to pump into 5 1/2" - 8-5/8" csg annulus w/water @ 2000 psi. Unable to pump and no fluid leak off occurred. Total Petroleum will notify state when csghead is removed, dry hole marker is set and reclamation plans are in order.

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

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

SIGNED J. Charles Farmer TITLE Petroleum Engineer DATE 3/10/86
 (This space for Federal or State office use)

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

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

DATE: 3-19-86
 BY: [Signature]

*See Instructions on Reverse Side

CANYON 3-36 STATE #1
REDRILL

Acid Jobs Performed:

| | |
|------------|--|
| 5399-5401' | 150 gallons 28% HCl; 700 gallons 28% HCl w/ 4 gallons/1000 aquaflo + XR-22, 2 gallons/1000 CS-3 + I-15 inhibitor |
| 5399-5402' | 750 gallons 28% HCl w/3 gallons HAI-60, 3 gallons losurf-259, 1 gallon HC-2 |
| 5399-5404' | 500 gallons MSR-100, 15% HCl |
| 5408-5412' | 212 gallons MSR-100, 15% HCL w/1 gallon A-250, 1 gallon W521 |

Plugs were set in this well per the attached Form 9-331.

RECEIVED
MAR 17 1986

5 July

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DIVISION OF OIL, GAS & MINING

| | |
|--|-----------------------|
| 5. LEASE | ML-36202 |
| 6. INDIAN, ALLOTTEE OR TRIBE NAME | N/A |
| 7. UNIT AGREEMENT NAME | N/A |
| 8. FARM OR LEASE NAME | Canyon |
| 9. WELL NO. | 3-36 State Redrill #1 |
| 10. FIELD OR WILDCAT NAME | Undesignated |
| 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA | Sec. 36, T38S, R25E |
| 12. COUNTY OR PARISH | San Juan |
| 13. STATE | Utah |
| 14. API NO. | 4303731225 |
| 15. ELEVATIONS (SHOW DF, KDB, AND WD) | 4915' GR, 4929' KB |

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

1. oil well gas well other

2. NAME OF OPERATOR
Total Petroleum, Inc.

3. ADDRESS OF OPERATOR
P.O. Box 500, Suite 3100, Denver, CO 80201

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 2140' FNL, 950' FEL (SE NE)
AT TOP PROD. INTERVAL: See below
AT TOTAL DEPTH:

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

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

(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.)*

Ismay Top: 5399' MD, 5351.3' TVD; 326' N, 208.8' W
Total Depth: 5550' MD, 5491.2' TVD; 366.7' N, 248.2' W
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5 1/2", 15.5#, K-55, 17#, N-80 prod. csg shoe set @ T.D.
Cement top @ 3700' MD.

Completed the following operations per state instructions: Set 10,000 psi differential CIBP in 5 1/2" casing @ 5380' K.B. Spot 75' cement plug from 5305-5380'. Spot 50' cement plug from surface to 50'. All plugs Cl "B" neat cement. Attempt to pump into 5 1/2" - 8-5/8" csg annulus w/water @ 2000 psi. Unable to pump and no fluid leak off occurred. Total Petroleum will notify state when csghead is removed, dry hole marker is set and reclamation plans are in order.

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

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

SIGNED J. Charles Farmer TITLE Petroleum Engineer DATE 3/10/86
J. Charles Farmer
(This space for Federal or State office use)

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

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

DATE: 3-12-86
BY: John R. Bay

*See Instructions on Reverse Side



MCO RESOURCES, INC.

MCO PLAZA
5718 Westheimer, Houston, Texas 77057
713 - 953-7777

March 17, 1986

RECEIVED
MAR 24 1986

DIVISION OF
OIL, GAS & MINING

Mr. John R. Baza
Petroleum Engineer
STATE OF UTAH NATURAL RESOURCES
Division of Oil, Gas & Mining
355 W. North Temple
3 Triad Center, Suite 350
Salt Lake City, UT. 84180-1203

RE: Canyon State #3-36
Sec. 36, T38S, R25E, SLB&M
San Juan County, Utah

In accordance with the request in your letter of January 7, 1986 the following information is attached re the referenced well's redrill.

1. Directional Survey verifying the path of deviated hole and new bottom hole location.

A Sundry Notice giving a description the plugging and deviation plan for the well was filed by us on January 6, 1986 and approved by you on January 13, 1986.

I believe this satisfies MCO's requirements re this well.

A conversation on March 13, 1986 with an Administrative Analyst on your staff (Arlene) confirmed that Total Petroleum, Inc. would be responsible for filing the Completion Report, as they took over as Operator of this well on January 20, 1986.

Sincerely,

MCO OIL AND GAS CORPORATION

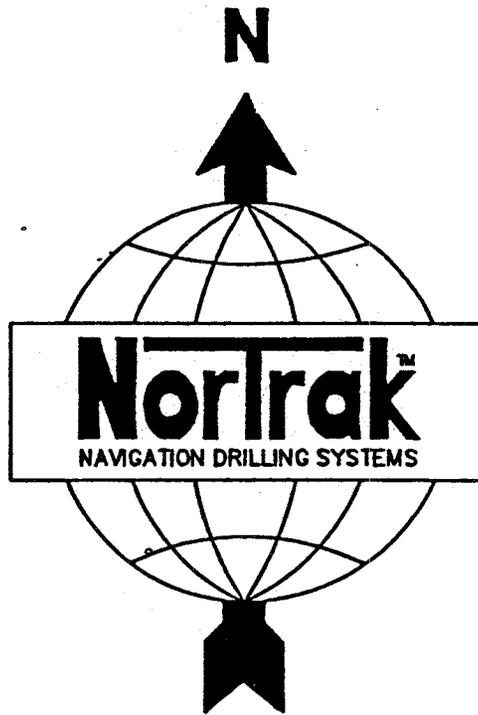
A. J. McNay
Manager, Drilling & Production
Western Region

AJMcN/ALS/sgp

enclosure

2/2/86

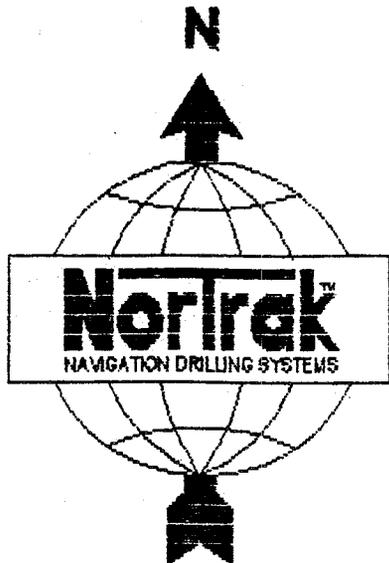
Company Name MCOR
Well Name & Number Canyon 3-36 State
Coordinates Sec. 36 T38S R25E
Date January, 1986
Company Rep. Jordon McNay



NORTON CHRISTENSEN

1400
1600
1800
2000
2200
2400
2600
2800
3000
3200
3400
3600
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600

TRUE VERTICAL DEPTH



NORTON CHRISTENSEN

PROPOSED KOP TVD - 3780

EOB TVD - 4534 (PROPOSED)

AVERAGE ANGLE = 19 DEG 13 MIN (PROPOSED)

PROPOSED

ACTUAL

TARGET
TVD = 5300 MD = 5359 VS = 394

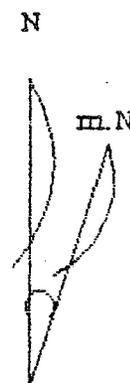
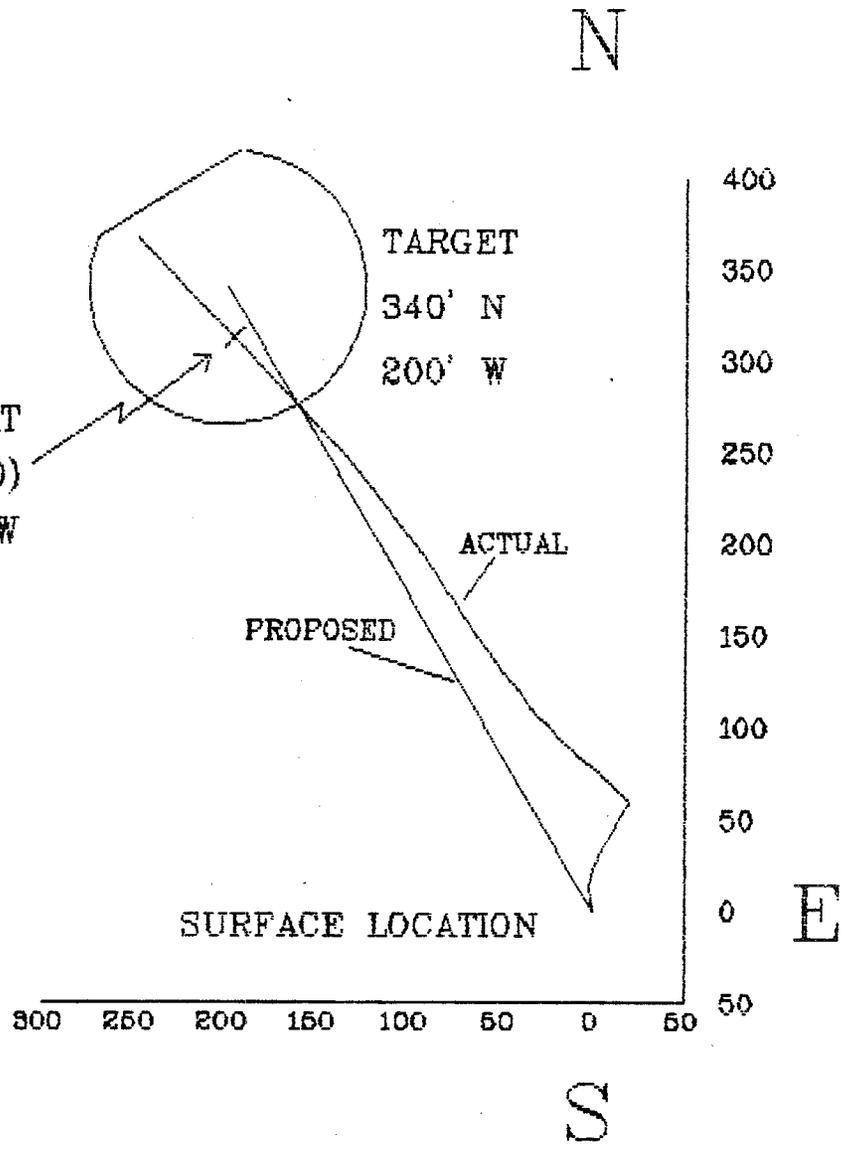
ACTUAL BOTTOM HOLE LOCATION
TVD = 5491 MD = 5550 VS = 442

0 200 400 800

VERTICAL SECTION

MCOR
CANYON #3-36 STATE
SEC 36 T38S R25E
SAN JUAN COUNTY, UTAH

ACTUAL B H LOCATION
367' N 248' W
N 34.1 W, 443'
HOLE LOCATION AT
TARGET TOP (TVD = 5300)
312' N 195' W



DECLINATION = 13 DEG E

Date: 1/23/1987 Time: 10:11:59 PAGE: 1
 Filename: "C:\WELLPLAN\MCDR.SRV" Description: "MCDR"
 Target Coordinates: 340.0 N 200.0 W Target TVD: 5300.000
 Using 1 - Radius of curvature method.

| S # | MEASURD DEPTH (feet) | DRIFT ANGLE (deg) | DRIFT DIRECTION (deg) | COURSE LENGTH (feet) | TRUE | | RECTANGULAR COORDINATES (feet) | DOGLEG SEVERITY DG/100FT |
|--------|----------------------------|-------------------------|-----------------------------|----------------------------|-----------------------------|-------------------------------|--------------------------------------|--------------------------------|
| | | | | | VERTICAL DEPTH (feet) | VERTICAL SECTION (feet) | | |
| 0 | 1521.0 | 0.00 | - 0 - | 0.0 | 1521.0 | 0.0 | 0.0 N | 0.0 E 0.00 |
| 1 | 1630.0 | 1.75 | N 15.00 W | 109.0 | 1630.0 | 1.6 | 1.6 N | 0.4 W 1.61 |
| 2 | 2651.0 | 2.00 | N 34.00 E | 1021.0 | 2650.4 | 26.4 | 33.6 N | 4.9 E 0.15 |
| 3 | 3720.0 | 1.00 | N 26.00 E | 1069.0 | 3719.1 | 40.2 | 57.8 N | 18.9 E 0.10 |
| 4 | 3755.0 | 1.50 | N 31.00 E | 35.0 | 3754.0 | 40.6 | 58.4 N | 19.3 E 1.46 |
| 5 | 3787.0 | 1.00 | N 7.00 W | 32.0 | 3786.0 | 41.1 | 59.1 N | 19.4 E 2.94 |
| 6 | 3819.0 | 1.25 | N 40.00 W | 32.0 | 3818.0 | 41.7 | 59.7 N | 19.2 E 2.13 |
| 7 | 3893.0 | 3.25 | N 43.00 W | 74.0 | 3892.0 | 44.6 | 61.9 N | 17.2 E 2.71 |
| 8 | 3934.0 | 4.00 | N 45.00 W | 41.0 | 3932.9 | 47.1 | 63.7 N | 15.4 E 1.85 |
| 9 | 3964.0 | 4.25 | N 44.00 W | 30.0 | 3962.8 | 49.2 | 65.3 N | 13.9 E 0.87 |
| 10 | 3997.0 | 6.00 | N 45.00 W | 33.0 | 3995.7 | 52.1 | 67.4 N | 11.9 E 5.31 |
| 11 | 4028.0 | 5.75 | N 47.00 W | 31.0 | 4026.5 | 55.1 | 69.6 N | 9.6 E 1.04 |
| 12 | 4058.0 | 6.75 | N 48.00 W | 30.0 | 4056.3 | 58.2 | 71.8 N | 7.2 E 3.35 |
| 13 | 4088.0 | 7.50 | N 51.00 W | 30.0 | 4086.1 | 61.8 | 74.2 N | 4.3 E 2.79 |
| 14 | 4124.0 | 8.25 | N 54.00 W | 36.0 | 4121.8 | 66.3 | 77.2 N | 0.4 E 2.38 |
| 15 | 4155.0 | 8.75 | N 52.00 W | 31.0 | 4152.4 | 70.6 | 80.0 N | 3.2 W 1.87 |
| 16 | 4186.0 | 8.50 | N 52.00 W | 31.0 | 4183.1 | 74.9 | 82.8 N | 6.9 W 0.81 |
| 17 | 4216.0 | 8.75 | N 50.00 W | 30.0 | 4212.7 | 79.1 | 85.6 N | 10.4 W 1.30 |
| 18 | 4245.0 | 8.75 | N 47.00 W | 29.0 | 4241.4 | 83.3 | 88.6 N | 13.7 W 1.57 |
| 19 | 4276.0 | 9.00 | N 43.00 W | 31.0 | 4272.0 | 87.9 | 92.0 N | 17.1 W 2.15 |
| 20 | 4333.0 | 10.25 | N 42.00 W | 57.0 | 4328.2 | 97.2 | 99.0 N | 23.5 W 2.21 |
| 21 | 4364.0 | 10.25 | N 41.00 W | 31.0 | 4358.7 | 102.7 | 103.1 N | 27.2 W 0.57 |
| 22 | 4397.0 | 10.75 | N 39.00 W | 33.0 | 4391.2 | 108.6 | 107.7 N | 31.0 W 1.87 |
| 23 | 4428.0 | 11.00 | N 40.00 W | 31.0 | 4421.6 | 114.4 | 112.2 N | 34.8 W 1.01 |
| 24 | 4460.0 | 11.50 | N 40.00 W | 32.0 | 4453.0 | 120.5 | 117.0 N | 38.8 W 1.56 |
| 25 | 4489.0 | 12.50 | N 39.00 W | 29.0 | 4481.4 | 126.5 | 121.7 N | 42.6 W 3.52 |
| 26 | 4521.0 | 12.50 | N 39.00 W | 32.0 | 4512.6 | 133.3 | 127.0 N | 47.0 W 0.00 |
| 27 | 4552.0 | 13.00 | N 38.00 W | 31.0 | 4542.8 | 140.1 | 132.4 N | 51.2 W 1.76 |
| 28 | 4583.0 | 13.25 | N 36.00 W | 31.0 | 4573.0 | 147.1 | 138.0 N | 55.5 W 1.67 |
| 29 | 4625.0 | 14.25 | N 34.00 W | 42.0 | 4613.8 | 157.0 | 146.2 N | 61.2 W 2.64 |
| 30 | 4656.0 | 14.50 | N 34.00 W | 31.0 | 4643.9 | 164.7 | 152.6 N | 65.5 W 0.81 |
| 31 | 4717.0 | 14.75 | N 34.00 W | 61.0 | 4702.9 | 180.1 | 165.3 N | 74.1 W 0.41 |
| 32 | 4780.0 | 15.00 | N 34.00 W | 63.0 | 4763.8 | 196.2 | 178.8 N | 83.2 W 0.40 |
| 33 | 4841.0 | 15.75 | N 36.00 W | 61.0 | 4822.6 | 212.4 | 192.0 N | 92.4 W 1.51 |
| 34 | 4904.0 | 16.25 | N 37.00 W | 63.0 | 4883.2 | 229.6 | 206.0 N | 102.8 W 0.91 |

Date: 02/23/1987 Time: 10:13:10 PAGE: 2

Filename: "C:\WELLPLAN\MCOR.SRV" Description: "MCOR"
 Target Coordinates: 340.0 N 200.0 W Target TVD: 5300.000
 Using 1 - Radius of curvature method.

| S # | MEASURD DEPTH (feet) | DRIFT ANGLE (deg) | DRIFT DIRECTION (deg) | COURSE LENGTH (feet) | TRUE | | VERTICAL SECTION (feet) | RECTANGULAR COORDINATES (feet) | DOGLEG SEVERITY DG/100FT |
|--------|----------------------------|-------------------------|-----------------------------|----------------------------|-----------------|--------------------|-------------------------------|--------------------------------------|--------------------------------|
| | | | | | DEPTH (feet) | VERTICAL (feet) | | | |
| 35 | 4998.0 | 17.00 | N 39.00 W | 94.0 | 4973.2 | 256.3 | 227.2 N 119.3 W | 1.00 | |
| 36 | 5088.0 | 18.25 | N 40.00 W | 90.0 | 5059.0 | 283.2 | 248.2 N 136.6 W | 1.43 | |
| 37 | 5180.0 | 19.25 | N 44.00 W | 92.0 | 5146.1 | 312.2 | 270.2 N 156.4 W | 1.77 | |
| 38 | 5272.0 | 20.25 | N 42.00 W | 92.0 | 5232.7 | 342.5 | 292.9 N 177.6 W | 1.31 | |
| 39 | 5363.0 | 21.50 | N 44.00 W | 91.0 | 5317.7 | 374.2 | 316.6 N 199.7 W | 1.58 | |
| 40 | 5397.0 | 21.00 | N 44.00 W | 34.0 | 5349.4 | 386.1 | 325.5 N 208.3 W | 1.47 | |
| 41 | 5453.0 | 22.25 | N 44.00 W | 56.0 | 5401.5 | 406.2 | 340.3 N 222.6 W | 2.23 | |
| 42 | 5550.0 | 22.75 | N 44.00 W | 97.0 | 5491.1 | 442.3 | 367.0 N 248.4 W | 0.52 | |

--- Final Closure Direction: N 34.09 W
 --- Final Closure Distance: 443.184 feet



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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

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

June 27, 1986

Total Petroleum, Inc.
P.O. Box 500, Suite 3100
Denver, Colorado 80201

Gentlemen:

Re: Well No. Canyon State 3-36 State - Sec. 36, T. 38S, R. 25E
San Juan County, Utah - API No. 43-037-31225

Rule 312 of the Oil and Gas Conservation General Rules requires that Form DOGM-3 "Well Completion or Recompletion Report and Log", along with copies of logs and tests run, be filed with this office not later than 90 days after completion of drilling and abandonment procedures.

Please complete and return the enclosed Form DOGM-3 or the equivalent federal form, including copies of logs and tests which may have been run on the referenced well, not later than July 18, 1986. Address the response to:

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

Respectfully,

A handwritten signature in cursive script, appearing to read "Norman C. Stout".

Norman C. Stout
Records Manager

ts

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

0413/14

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

SUBMIT IN DUPLI
(See other instructions
on reverse side)

56 64 01

071719

8

5. LEASE DESIGNATION AND SERIAL NO.
ML 36202
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME
Canyon
9. WELL NO.
3-36 State #1 Redrill
10. FIELD AND POOL, OR WILDCAT
Undesignated
11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
36-38S-25E SLB&M

12. COUNTY OR PARISH
San Juan
13. STATE
Utah

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

RECEIVED
JUL 14 1986

1a. TYPE OF WELL: OIL WELL GAS WELL DRY

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

2. NAME OF OPERATOR
Total Petroleum, Inc.

3. ADDRESS OF OPERATOR
P.O. Box 500 Denver, Colorado 80201-0500

DIVISION OF
OIL, GAS & MINING

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface 2140' FNL & 950' FEL (SENE)

At top prod. interval reported below

At total depth

See Below

14. PERMIT NO. 43-037-31225
DATE ISSUED

15. DATE SPUDDED 12/12/85
16. DATE T.D. REACHED 1/20/86
17. DATE COMPL. (Ready to prod.)
18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 4915' GR, 4929' KB
19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD 5550' MD 5491.2 TVD
21. PLUG, BACK T.D., MD & TVD Surface
22. IF MULTIPLE COMPL., HOW MANY*
23. INTERVALS DRILLED BY
ROTARY TOOLS X
CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
None
25. WAS DIRECTIONAL SURVEY MADE
Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN
DIL, CNL/FDC, Perf Record, Plug Record, Cement Evaluation, GR Spec. *Sample*
27. WAS WELL CORED.
Yes

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

| CASING SIZE | WEIGHT, LB./FT. | DEPTH SET (MD) | HOLE SIZE | CEMENTING RECORD | AMOUNT PULLED |
|-------------|-----------------|----------------|-----------|-------------------------|---------------|
| 8-5/8 | 24# J-55 | 1520' | 1 1/4 | 720 sx lite, 200 sx "B" | |
| 5 1/2 | 15.5 & 17# | 5550 | 7-7/8 | 280 sx 50-50 POZ | |

29. LINER RECORD

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

30. TUBING RECORD

| SIZE | DEPTH SET (MD) | PACKER SET (MD) |
|------|----------------|-----------------|
| | | |

31. PERFORATION RECORD (Interval, size and number)

5408-5410' 4 JSPF 9 holes
5399-5404' 4 JSPF 21 holes
5415-5420' 4 JSPF 9 holes
5410-5412' 4 JSPF 9 holes

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

| DEPTH INTERVAL (MD) | AMOUNT AND KIND OF MATERIAL USED |
|---------------------|----------------------------------|
| SEE ATTACHED | |

33. PRODUCTION

| DATE FIRST PRODUCTION | PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) | WELL STATUS (Producing or shut-in) | | | | | |
|-----------------------|--|------------------------------------|-------------------------|----------|------------|-------------------------|---------------|
| N/A | | PA | | | | | |
| 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

[Signature]

TITLE Petroleum Engineer

DATE 7/9/86

860718 *CP*

*(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. |
|-----------|------|--------|---|
| Ismay | 5343 | 5390 | See core analysis |
| Ismay | 5366 | 5407 | IH 3016 3062 IF 174-483 176-446 ISI 2139 2128 FF 510-873 500-862 FSI 2139 2128 FHP 2989 3028 Sampler: rec 3150 cc water, 50 cc oil, 0.9 cubic feet gas Chlorides 54,500 ppm Opened 30 minutes; GTS in 30 minutes; closed 60 minutes ISI; opened 60 minutes FF; had lite blow of gas FP 11 psi in 1/8" choke |

Note: core and DST were run on Canyon 3-36 State prior to setting plug and redrilling well original TD was 5680' reached 12/30/85; well plugged back to 3600' and drilled to TD of 5550'

38.

GEOLOGIC MARKERS

| NAME | TOP | |
|-------------|-------------|------------------|
| | MEAS. DEPTH | TRUE VERT. DEPTH |
| Ismay | 5330 | |
| Hovenweep | 5508 | |
| Lower Ismay | 5548 | |

CORE LABORATORIES, INC.



March 6, 1986

Total Petroleum, Inc.
999 18th Street, Suite 2201
Denver, CO 80201

Attention: Mr. Don Newman

Subject:

Special Core Analysis Study
Canyon No. 3-36 State Well
Wildcat 385 25 E Sec 36
Paradox Formation
San Juan County, Utah
File Number: SCAL 203-860014

RECEIVED
JUL 14 1986

Reservoir Geology
and Petrographic Services

DIVISION OF
OIL, GAS & MINING

Gentlemen:

On February 4, Mr. Don Newman of Total Petroleum, Inc. requested Core Laboratories to perform Formation Resistivity Factor as a Function of Overburden Pressure and Formation Resistivity Index on core material recovered from the subject well. Enclosed are the final results of these analyses.

Sample Preparation

Two, unpreserved full diameter core segments were obtained from Total Petroleum, Inc. for use in this study. A one and one-half inch diameter core plug was drilled from each core segment with a diamond drill bit and trimmed with a diamond trim saw utilizing tap water as the coolant and lubricant. These two core plugs are identified as to depth and are lithologically described on Page 1. Each sample was extracted of hydrocarbons using cool toluene and leached of salt using cool methyl alcohol in a centrifuge solvent reflux apparatus. The core plugs were then dried in a controlled humidity oven at 40 to 45 percent relative humidity and 140°F until the individual sample weights stabilized. Due to the vugular nature of the core plugs, each sample was encased in a Teflon™ wrap to maintain the cylindrical nature of the plug. Permeability to air and Boyle's Law porosity values utilizing helium as the gaseous medium were obtained with the resultant data presented in tabular and graphic form on Pages 2 and 3.

The core plugs were evacuated and pressure saturated with a sodium chloride brine, as requested by Mr. Newman, containing 295,000 ppm total solids and having a resistivity of 0.040 ohm-meters at 77°F.

Total Petroleum, Inc.

March 6, 1986

Page two

Formation Resistivity Factor as a Function of Overburden Pressure

The resistances of the brine and the brine saturated core plugs were measured at regular intervals of two to three days until the resistivities of the core plugs stabilized indicating ionic equilibrium had been attained. The resultant formation resistivity factors are presented in tabular form on Page 4 and are graphed as a function of porosity on Page 5. The cementation exponent "m" calculated from this data is 1.86.

Each sample was placed into a hydrostatic core holder at 200 psi effective overburden pressure and flushed with the sodium chloride brine to ensure complete saturation. The resistance of each sample was measured with the resultant formation resistivity factors presented on Page 4.

The formation resistivity factors are graphed as a function of porosity on Page 6. The cementation exponent "m" calculated from this data is 2.04.

The effective overburden pressure applied to each sample was increased to 2700 psi and the resistances of the plugs were remeasured. As the overburden pressure was increased, pore volume reduction was monitored for each plug by measuring the amount of brine displaced. The porosity of the samples were then calculated as a function of the overburden stress. The formation resistivity factors calculated from this data are presented in tabular form on page 4 and are presented as a function of the overburden corrected porosity on Page 7. The cementation exponent "m" calculated from this data is 2.20.

Formation Resistivity Index

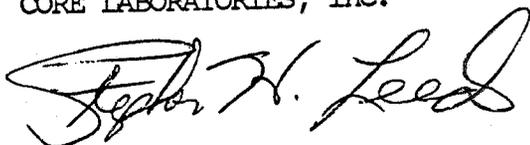
Sample number 1 was selected for formation resistivity index testing. The core plug was placed on a brine saturated porous, ceramic plate in a pressure cell and partially desaturated with humidified air at pressures ranging from 8 to 35 psi. At each established pressure, the sample was removed from the cell, weighed to gravimetrically determine the saturation and the sample resistance was measured. Formation resistivity index data was calculated from the resistance data. The resultant data is presented in tabular form on Page 8. The formation resistivity index data generated on sample number 1 is graphed as a function of the brine saturation on Page 9. The saturation exponent "n" calculated from this data is 1.83.

Total Petroleum, Inc.
March 6, 1986
Page three

It has been a pleasure working with Total Petroleum, Inc. on this study. Should you have any questions pertaining to these test results or if we may be of further assistance, please do not hesitate to contact us at (303)751-9334.

Very truly yours,

CORE LABORATORIES, Inc.

A handwritten signature in cursive script that reads "Stephen H. Leeds". The signature is written in dark ink and is positioned above the typed name and title.

Stephen H. Leeds
Special Core Analysis Supervisor

SHL/sso
4 cc addressee

IDENTIFICATION AND LITHOLOGICAL DESCRIPTION OF SAMPLES

Company: Total Petroleum, Inc.
Formation: Paradox
County, State: San Juan, Utah

Well: Canyon No. 3-36 State
Field: Wildcat

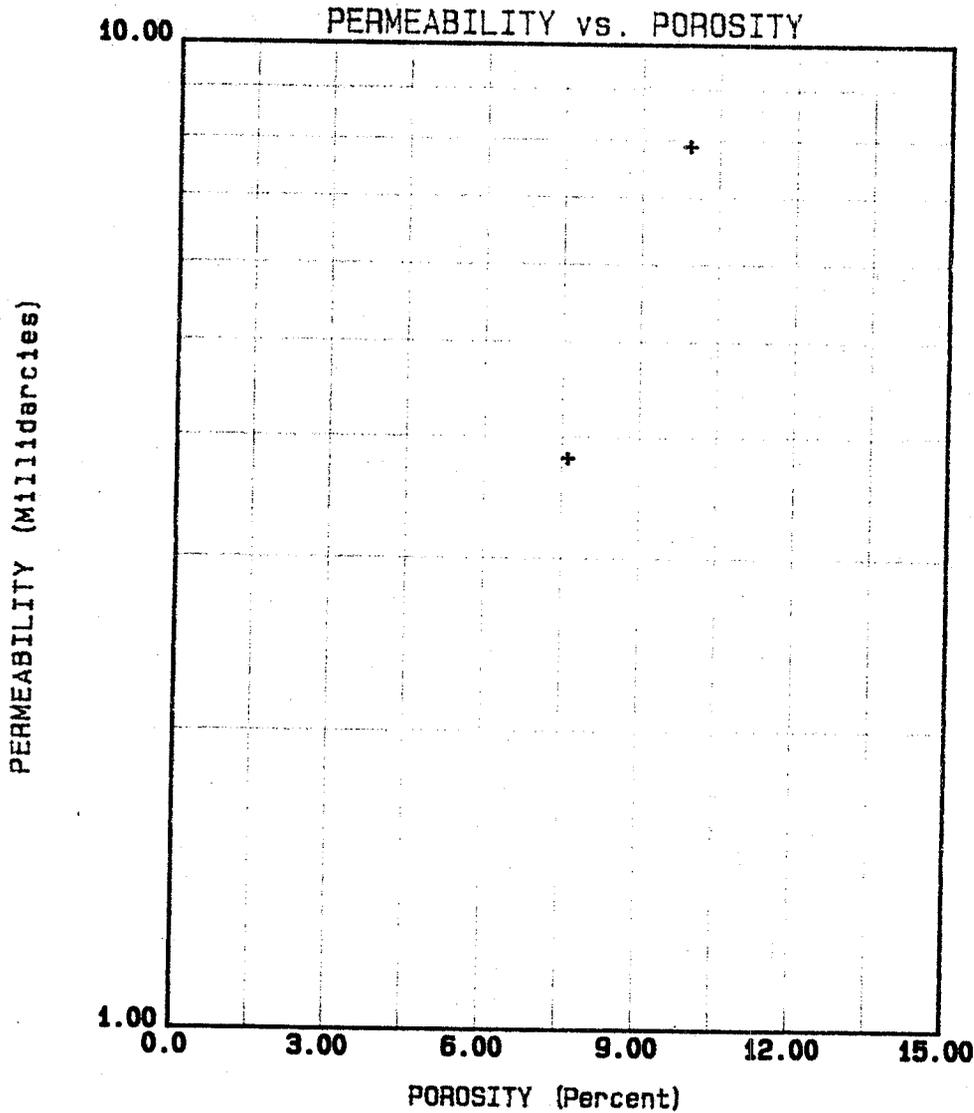
| <u>Sample Identification</u> | <u>Depth, feet</u> | <u>Lithological Description</u> |
|------------------------------|--------------------|-----------------------------------|
| 1 | 5390.5-5390.7 | DOL, gry, pkst, wl ind, mott, vug |
| 2 | 5400.9-5401.1 | DOL, gry, pkst, wl ind, mott, vug |

PERMEABILITY TO AIR AND POROSITY

Company: Total Petroleum, Inc.
Formation: Paradox
County, State: San Juan, Utah

Well: Canyon No. 3-36 State
Field: Wildcat

| <u>Sample Identification</u> | <u>Depth, feet</u> | <u>Permeability to Air, millidarcys</u> | <u>Porosity, percent</u> |
|----------------------------------|--------------------|---|------------------------------|
| 1 | 5390.5-5390.7 | 7.9 | 9.9 |
| 2 | 5400.9-5401.1 | 3.8 | 7.6 |



TOTAL PETROLEUM, INC.
CANYON NO. 3-36 STATE WELL
WILDCAT PARADOX FORMATION
SAN JUAN COUNTY, UTAH

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted), but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitability of any oil, gas or other mineral or sand in connection with such report is used or relied upon.

FORMATION RESISTIVITY FACTOR AS A FUNCTION OF OVERBURDEN PRESSURE

Company: Total Petroleum, Inc. Well: Canyon No. 3-36 State
 Formation: Paradox Field: Wildcat
 County, State: San Juan, Utah

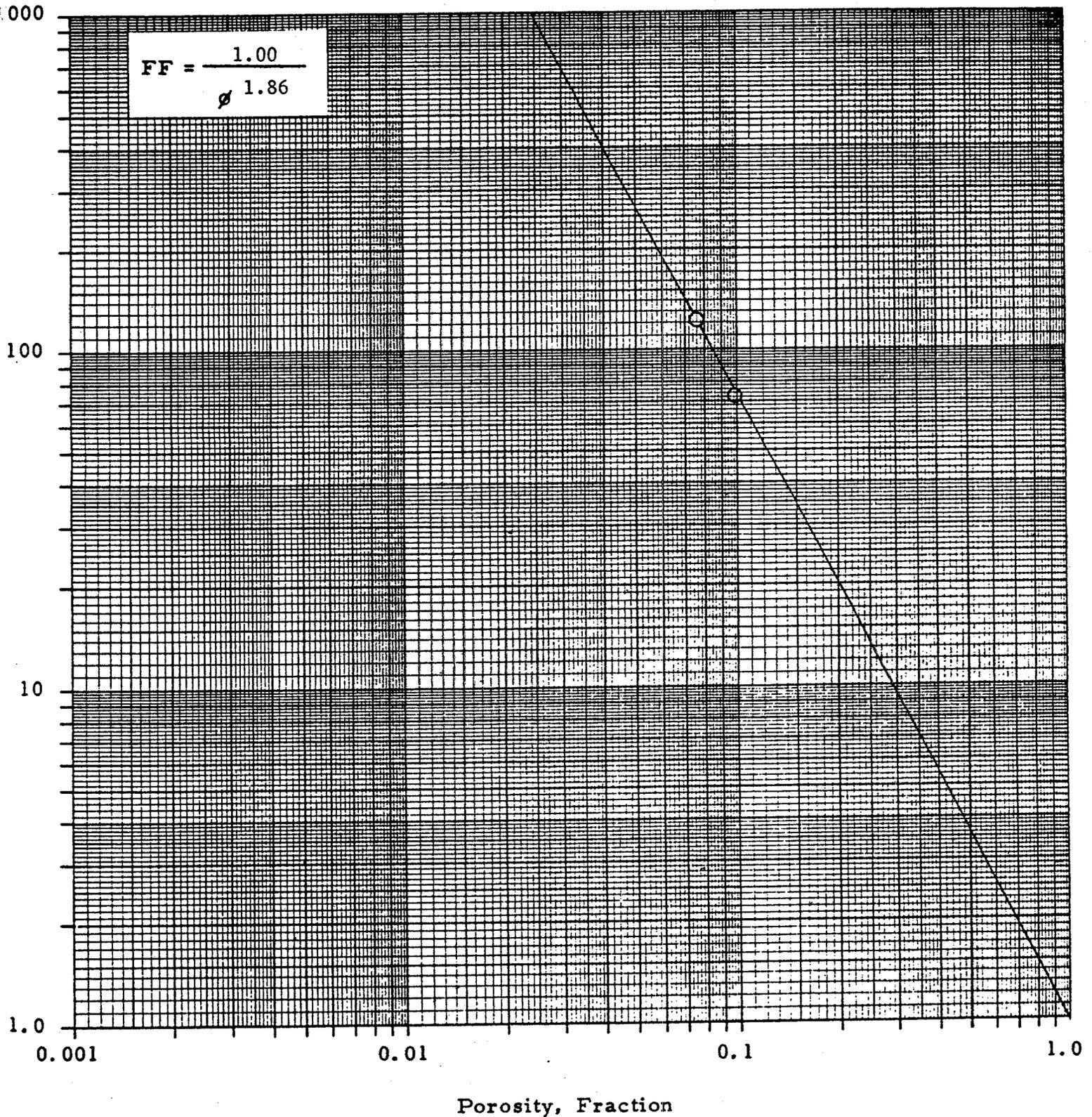
Saturant: 295,000 ppm NaCl
 Resistivity of Saturant: 0.040 ohm-meters at 77°F

| <u>Sample I.D.</u> | <u>Depth, feet</u> | <u>Permeability to Air, millidarcys</u> | <u>Porosity, percent</u> | <u>Overburden Pressure, psi</u> | | | <u>Formation Resistivity Factor</u> |
|------------------------|------------------------|---|------------------------------|---------------------------------|------------|-------------|-------------------------------------|
| | | | | <u>0.0</u> | <u>200</u> | <u>2700</u> | |
| 1 | 5390.5-90.7 | 7.9 | 9.9 9.0* | 73.2 | 114 | 206 | |
| 2 | 5400.9-01.1 | 3.8 | 7.6 6.8* | 122 | 187 | 340 | |

* Indicates measured, reduced porosity

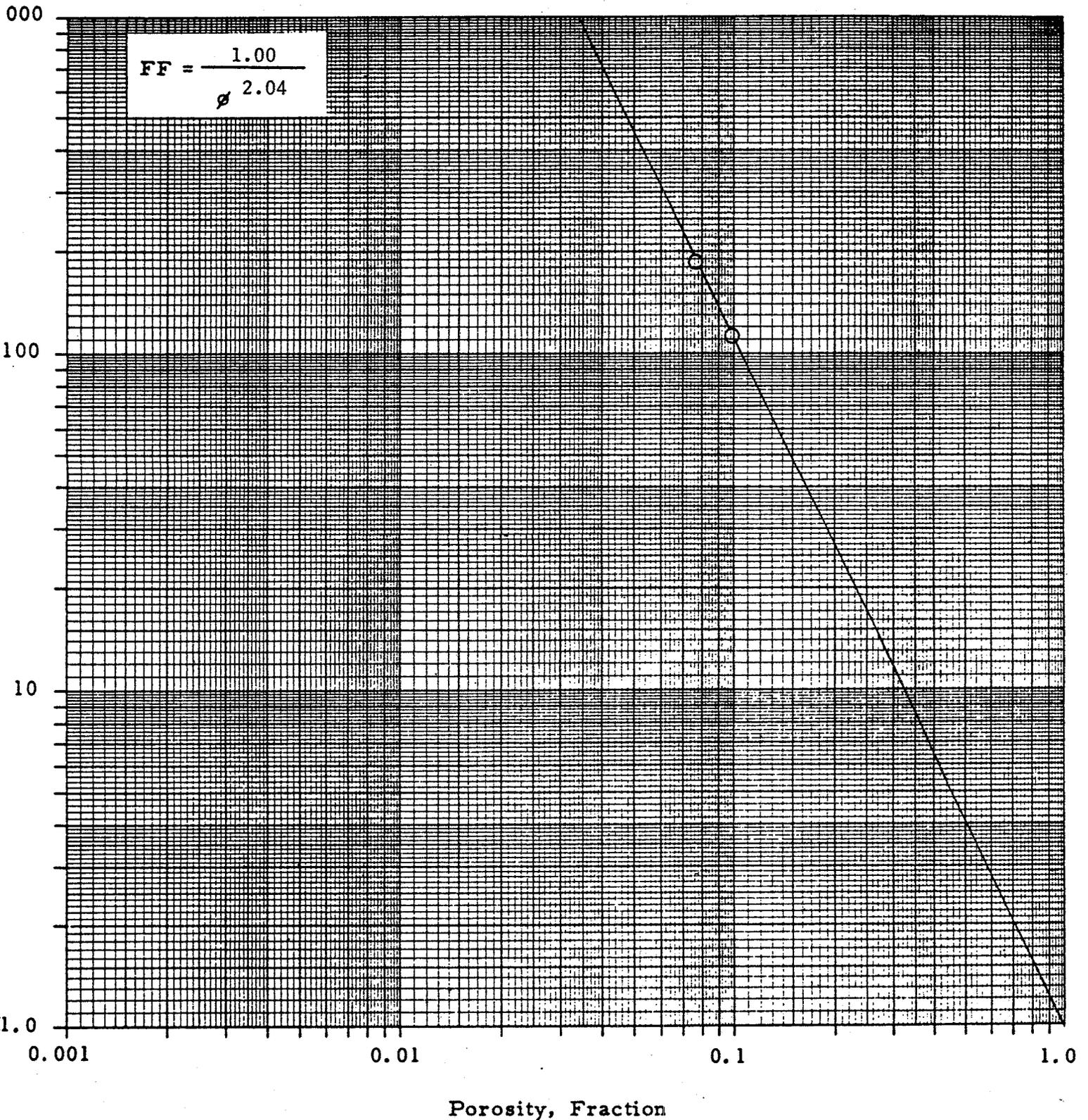
Company Total Petroleum, Inc. Formation Paradox
Well Canyon No. 3-36 State County San Juan
Field Wildcat State Utah

0.0 psi Effective Overburden



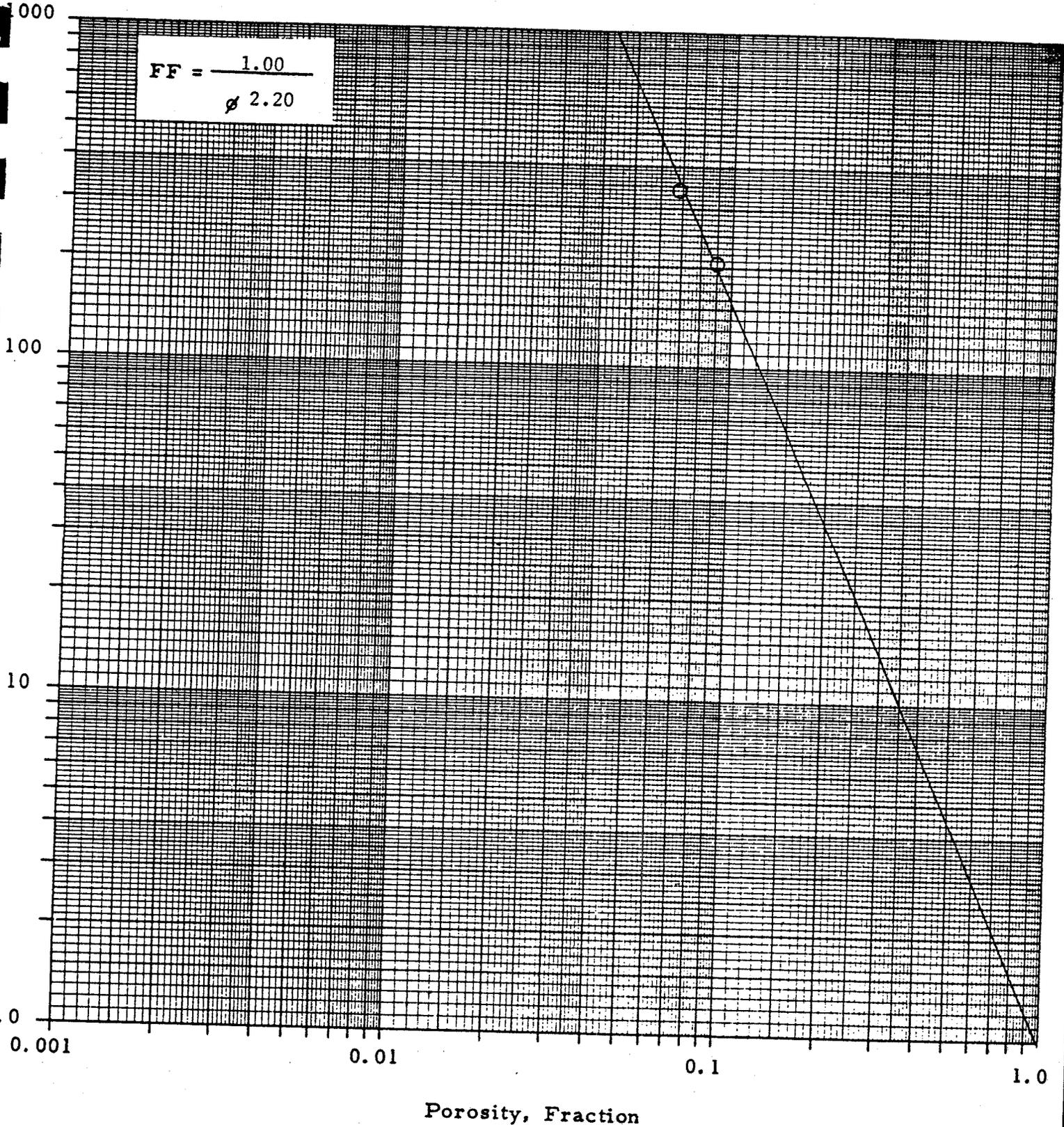
Company Total Petroleum, Inc. Formation Paradox
Well Canyon No. 3-36 State County San Juan
Field Wildcat State Utah

200 psi Effective Overburden



Company Total Petroleum, Inc. Formation Paradox
Well Canyon No. 3-36 State County San Juan
Field Wildcat State Utah

2700 psi Effective Overburden



FORMATION RESISTIVITY INDEX

Company: Total Petroleum, Inc.
Formation: Paradox
County, State: San Juan, Utah

Well: Canyon No. 3-36 State
Field: Wildcat

Saturant: 295,000 ppm NaCl
Resistivity of Saturant: 0.040 ohm-meters at 77°F

| <u>Sample I.D.</u> | <u>Depth, feet</u> | <u>Permeability to Air millidarcys</u> | <u>Porosity percent</u> | <u>Brine Saturation percent pore space</u> | <u>Resistivity Index</u> |
|--------------------|--------------------|--|-------------------------|--|--------------------------|
| 1 | 5390.5-90.7 | 7.9 | 9.9 | 100.0 | 1.00 |
| | | | | 50.5 | 3.48 |
| | | | | 46.7 | 3.98 |
| | | | | 34.2 | 7.49 |

Company Total Petroleum, Inc. Formation Paradox
Well Canyon No. 3-36 State County San Juan
Field Wildcat State Utah

Sample - 1

