



POWERS ELEVATION

OIL WELL ELEVATIONS - LOCATIONS  
ENVIRONMENTAL-ARCHAEOLOGICAL SERVICES  
600 SOUTH CHERRY STREET, SUITE 1201  
DENVER, COLORADO 80222-1767  
PHONE NO. 303/321-2217

May 31, 1984

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

RE: Filing Application for Permit to Drill  
MCOR Oil and Gas Corp.  
Canyon #1-36 State  
NE NW Sec. 36 T38S R25E  
500'FNL & 2140'FWL  
San Juan County, Utah

Gentlemen:

Enclosed are three copies of State Form OGC-1a, the Location and Elevation Plat,, Ten-Point Compliance Program and the Blowout Preventer Diagram for the above-referenced well location.

Please return the approved copies to:

Ms. Althea Schultz  
MCOR Oil and Gas Corp.  
10880 Wilshire Boulevard  
Los Angeles, California 90024

If anything further is required, please advise.

Sincerely yours,

POWERS ELEVATION

*Connie L. Frailey*

Connie L. Frailey  
Vice President, Environmental Services

CLF/cw  
Enclosure

cc: Althea Schultz

**RECEIVED**

**JUN 4 1984**

**DIVISION OF OIL  
GAS & MINING**

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

SUBMIT IN TRIPLICATE\*  
(Other instructions on  
reverse side)

5. Lease Designation and Serial No.

ML-30593

6. If Indian, Allottee or Tribe Name

N/A

7. Unit Agreement Name

N/A

8. Farm or Lease Name

Canyon State

9. Well No.

#1-36

10. Field and Pool, or Wildcat

~~Tin Cup Mesa~~ UNDESIGNATED

11. Sec., T., R., M., or Blk.  
and Survey or Area

Sec. 36 T38S R25E

12. County or Parrish

San Juan

13. State

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.

3. Address of Operator

10880 Wilshire Blvd., Los Angeles, California 90024

4. Location of Well (Report location clearly and in accordance with any State requirements.\*)

At surface

500'FNL & 2140'FWL (NE NW)

At proposed prod. zone

same

14. Distance in miles and direction from nearest town or post office\*

Location is 14 miles northeast of Hatch Trading Post, Utah

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

160

18. Distance from proposed location\* to nearest well, drilling, completed, or applied for, on this lease, ft.

---

19. Proposed depth

5675'

20. Rotary or cable tools

Rotary

21. Elevations (Show whether DF, RT, GR, etc.)

4939'GR

22. Approx. date work will start\*

June 25, 1984

23.

PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
20"	16"	conductor pipe	80'	---
12 1/4"	8 5/8"	24#	1720'	650 sacks light
7 7/8"	4 1/2"	10.5#	5675'	371 sacks 50-50 poz

APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING  
DATE: 6/18/84  
BY: John R. Dyer

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

24.

Signed

J. C. Walton

Title

Manager - Operations  
Western Region

Date

5/31/84

(This space for Federal or State office use)

Permit No.

Approval Date

Approved by

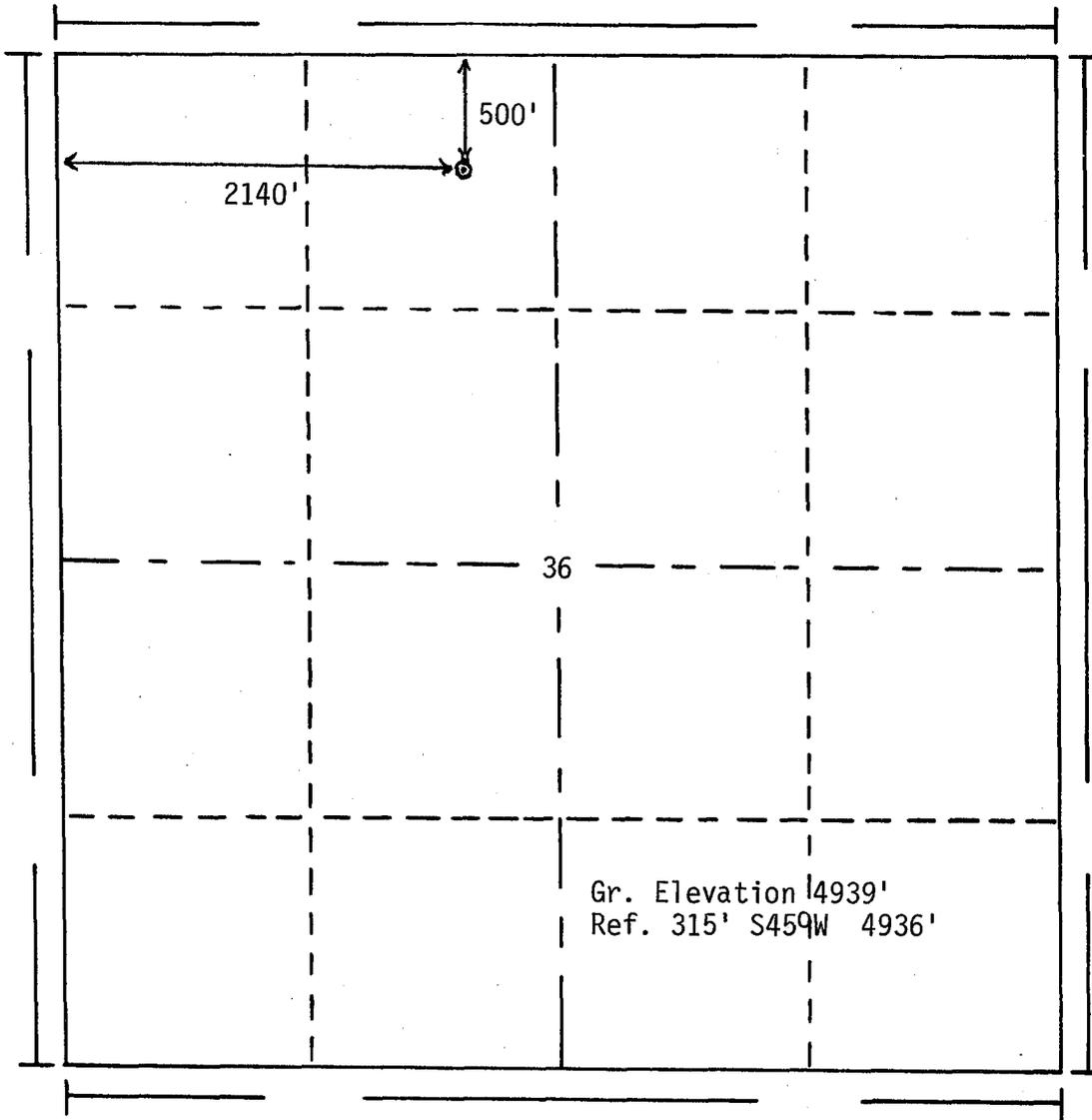
Title

Date

Conditions of approval, if any:



R. 25 E



T.  
38  
S

Scale... 1" = 1000'

**Powers Elevation of Denver, Colorado**

has in accordance with a request from Althea Schultz for MCOR Oil & Gas Corp.

determined the location of Canyon #1-36 State

to be 500' FNL & 2140' FWL Section 36 Township 38 S

Range 25 E of the Salt Lake Principal Meridian

San Juan County, Utah

I hereby certify that this plat is an accurate representation of a correct survey showing the location of Canyon #1-36 State

Date: 5/23/84

*T. Nelson*  
Licensed Land Surveyor No. 2711  
State of Utah

DRILLING PROGRAM

MCOR Oil and Gas Corp.  
Canyon #1-36 State  
NE NW Sec. 36 T38S R25E  
500'FNL & 2140'FWL  
San Juan County, Utah

1. The Geologic Surface Formation

The surface formation is the Morrison.

2. Estimated Tops of Important Geologic Markers

Chinle	1682'
Upper Ismay	5355'
Hovenweep Shale	5460'
Lower Ismay	5510'
Gothic Shale	5560'
Desert Creek	5580'
Lower Desert Ck.	5630'
Chimney Rock Shale	5650'
Akah	5670'
Total Depth	5675'

3. Estimated Depths (tops&bottoms) of Anticipated Water, Oil, Gas or Minerals and Lessee's or Operators Plans for Protection of Such Resources

Upper Ismay	5355' - 5460'	Oil
Lower Ismay	5510' - 5560'	Water
Lower Desert Creek	5630' - 5650'	Oil

4. The Proposed Casing Program

<u>HOLE SIZE</u>	<u>SETTING DEPTH (INTERVAL)</u>	<u>SECTION LENGTH</u>	<u>SIZE (OD)</u>	<u>WEIGHT, GRADE &amp; JOINT</u>	<u>NEW OR USED</u>
20"	0 - 80	80	16"	Conductor Pipe	New
12 1/4"	0 - 1720'	1720'	8 5/8"	24# K-55 ST&C	New
7 7/8"	0 - 5675'	5675'	4 1/2"	10.5# K-55 ST&C	New

4. Cement Program

Surface Casing: 650 sacks light cement with 2% CaCl<sub>2</sub>, + 1/4#/sx flocele followed by 200 sx Class "B" cement with 2% CaCl<sub>2</sub>. Linear fill-up - surface.

Production Casing: 371 sacks 50/50 pozmix cement with 10% salt, 2% Bentonite, 0.50% CFR-2 and 0.50% Halad 9. Linear fill-up - 1500'.

5. The Operator's Minimum Specifications for Pressure Control

EXHIBIT "C" is a schematic diagram of the blowout preventer equipment. The BOP's will be hydraulically tested to half of working pressure after nipling up and after any use under pressure. Pipe rams will be operationally checked each 24-hour period, as will blind rams each time pipe is pulled out of the hole. Such checks of BOP will be noted on daily drilling reports.

Accessories to BOP will include an upper and lower kelly cock, floor safety valve, drill string BOP and choke manifold with pressure rating equivalent to the BOP stack.

6. The Type and Characteristics of the Proposed Circulating Muds

Mud system will be gel-chemical with adequate stocks of sorptive agents on site to handle possible spills of fuel and oil on the surface. Heavier muds will be on location to be added if pressure requires.

<u>DEPTH</u>	<u>TYPE</u>	<u>WEIGHT#/gal.</u>	<u>VISCOSITY-sec./qt.</u>	<u>FLUID LOSScc</u>	<u>Ph</u>
0-1720	water w/ gel	8.8	35	N/C	8
1720-2500'	water	8.3	--	---	--
2500-5500'	chemical	11 - 12	40	15	11
5500-TD	chemical	11 - 12	45	8 - 10	11

7. The Auxiliary Equipment to be Used

- (a) An upper and lower kelly cock will be kept in the string.
- (b) A float will not be used at the bit.
- (c) A mud logging unit and gas detecting device will be monitoring the system.
- (d) A stabbing valve will be on the floor to be stabbed into the drill pipe when kelly is not in the string.

8. The Testing, Logging and Coring Programs to be Followed

- (a) Two Drill Stem Tests are anticipated: one in the Upper Ismay and one in the Lower Desert Creek formation.
- (b) The logging program will consist of the following:

DIL-SFL	0 to base of surface casing
BHC Sonic	0 to base of surface casing
DIL-SFL	base of surface casing to TD
BHC Sonic	base of surface casing to TD
FDL-CNL	4000' to TD
Dipmeter	4000' to TD
- (c) Three cores are anticipated: two in the Upper Ismay and one in the Lower Desert Creek
- (d) Stimulation Procedures will be determined after evaluation of logs. If treatment is indicated, appropriate Sundry Notice will be submitted for approval.

9. Any Anticipated Abnormal Pressures or Temperatures

No abnormal pressures or temperatures have been noted or reported in wells drilled in the area nor at the depths anticipated in this well. Bottom hole pressure expected is 2470.

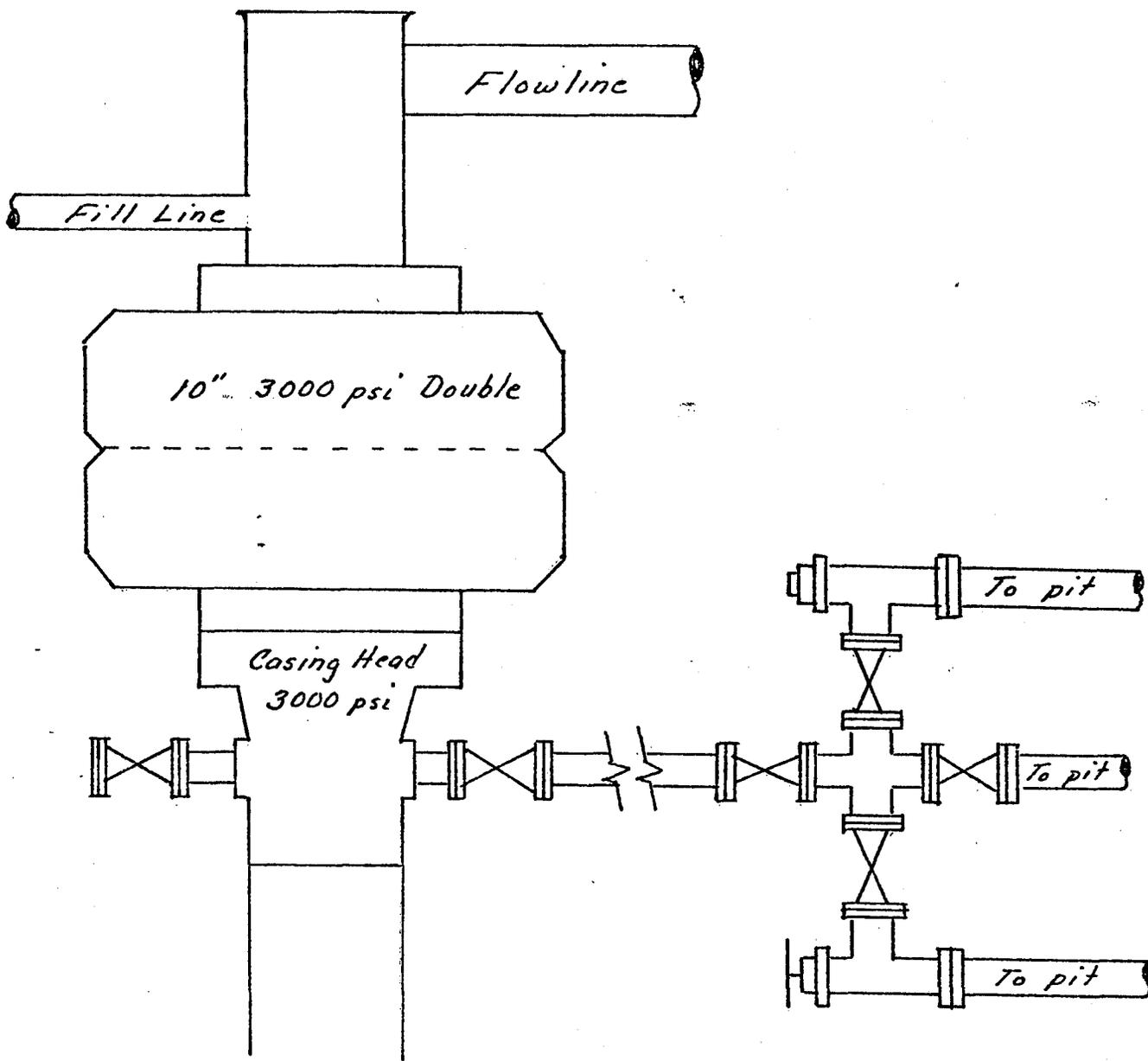
No hydrogen sulfide or other hazardous fluids or gases have been found, reported on known to exist at these depths in the area.

10. Anticipated Starting Date and Duration of the Operations

The anticipated starting date is set for June 25, 1984, or as soon as possible after examination and approval of drilling requirements. Operations will cover 20 days for drilling and 10 days for completion; up to six months for clean-up depending on weather.

EXHIBIT "C"

The Blowout Preventer Diagram



OPERATOR MCOR Oil & Gas DATE 6-8-84

WELL NAME Canyon State 1-36

SEC NE1/4 36 T 38S R 25E COUNTY San Juan

43-037-31022

API NUMBER

State

TYPE OF LEASE

POSTING CHECK OFF:

INDEX

HL

NID

PI

MAP

PROCESSING COMMENTS:

No oil wells closer than 1000'

Needs Water

APPROVAL LETTER:

SPACING:  A-3 \_\_\_\_\_ UNIT

c-3-a \_\_\_\_\_ CAUSE NO. & DATE

e-3-b

c-3-c

SPECIAL LANGUAGE:

1. Water

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

AUTHENTICATE LEASE AND OPERATOR INFORMATION

VERIFY ADEQUATE AND PROPER BONDING

AUTHENTICATE IF SITE IS IN A NAMED FIELD, ETC.

APPLY SPACING CONSIDERATION

ORDER \_\_\_\_\_

UNIT \_\_\_\_\_

c-3-b

c-3-c

CHECK DISTANCE TO NEAREST WELL.

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

IF POTASH DESIGNATED AREA, SPECIAL LANGUAGE ON APPROVAL LETTER

IF IN OIL SHALE DESIGNATED AREA, SPECIAL APPROVAL LANGUAGE.

June 8, 1964

MCCR Oil & Gas Corporation  
10880 Wilshire Blvd  
Los Angeles, CA 90024

RE: Well No. Canyon State 1-36  
NEW Sec. 36, T. 38S, R. 25E  
500' FWL, 2140' FWL  
San Juan County, Utah

Gentlemen:

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

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water.

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

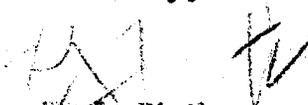
1. Spudding notification to the Division within 24 hours after drilling operations commence.
2. Submittal to the Division of completed Form CCG-8-X, Report of Water Encountered During Drilling.
3. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify R. J. Firth, Associate Director, Telephone (801) 533-5771 (Office), 571-6068 (Home).
4. Compliance with the requirements and regulations of Rule C-27, Associated Gas Flaring, General Rules and Regulations, Oil and Gas Conservation.

MOOR Oil & Gas Corp.  
Well No. Canyon State 1-36  
June 8, 1984  
Page 2

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

The API number assigned to this well is 43-037-31022.

Sincerely,



R. J. Firth  
Associate Director, Oil & Gas

RJF/gi  
cc: Branch of Fluid Minerals  
Enclosures

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

<p><b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (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.)</p>		<p>5. LEASE DESIGNATION AND SERIAL NO. <b>MI-30593</b></p>
<p>1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/></p>		<p>6. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>N/A</b></p>
<p>2. NAME OF OPERATOR <b>MCOR Oil and Gas Corporation</b></p>		<p>7. UNIT AGREEMENT NAME <b>N/A</b></p>
<p>3. ADDRESS OF OPERATOR <b>10880 Wilshire Boulevard, Los Angeles, California 90024</b></p>		<p>8. FARM OR LEASE NAME <b>Canyon State</b></p>
<p>4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface <b>500' FNL &amp; 2140' FWL (NE NW)</b></p>		<p>9. WELL NO. <b>#1-36</b></p>
<p>14. PERMIT NO. <b>---</b></p>		<p>10. FIELD AND POOL, OR WILDCAT <b>Tin Cup Mesa</b></p>
<p>15. ELEVATIONS (Show whether OF, RT, OR, etc.) <b>4939' GR</b></p>		<p>11. SEC., T., E., M., OR BLE. AND SUBVY OR AREA <b>Sec. 36, T38S, R25E</b></p>
		<p>12. COUNTY OR PARISH 13. STATE <b>San Juan Utah</b></p>

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) _____	

(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.)\*

Proposed Casing Program:

4600' of 5-1/2" 14.0# K-55 ST&C and  
1075' of 5-1/2" 15.5# K-55 ST&C will be run in place of 5675' of 4-1/2" casing.

**RECEIVED**

**JUN 15 1984**

**DIVISION OF OIL  
GAS & MINING**

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

SIGNED *J. F. Walton* TITLE Manager - Operations DATE 6/12/84  
J. F. Walton Western Region

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:



STATE OF UTAH  
NATURAL RESOURCES  
Water Rights

Scott M. Matheson, Governor  
Temple A. Reynolds, Executive Director  
Dee C. Hansen, State Engineer

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

**RECEIVED**

August 10, 1984

AUG 17 1984

DIVISION OF OIL  
GAS & MINING

MCOR Oil and Gas  
10880 Wilshire Boulevard  
Los Angeles, CA 90024

Dear Applicant:

RE: TEMPORARY APPLICATION  
NUMBER 09-1376 (T60099)

Enclosed is a copy of the above numbered approved Temporary Application. This is your authority to construct your works and to divert the water for the uses described.

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

This application will expire November 30, 1984, and it is expected that no diversion or use of the water will be done after that date unless another proposal has been made and approved.

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

Yours truly,

Dee C. Hansen, P. E.  
State Engineer

DCH:slm

Enclosure

**TEMPORARY**

# TEMPORARY

APPLICATION TO APPROPRIATE WATER

STATE OF UTAH

Application No. T60099 RECEIVED

09-1376

JUL 6 1984

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

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

- 1. Irrigation  Domestic  Stockwatering  Municipal  Power  Mining  Other Uses

2. The name of the applicant is MCOR Oil and Gas

3. The Post Office address of the applicant is 10880 Wilshire Blvd. Los Angeles, Calif. 90024

4. The quantity of water to be appropriated \_\_\_\_\_ second-feet and/or 1.5 acre-feet

5. The water is to be used for Exploration Drilling from July 1, 1984 to Aug. 31, 1984  
(Major Purpose) (Month) (Day) (Month) (Day)

other use period \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_  
(Minor Purpose) (Month) (Day) (Month) (Day)

and stored each year (if stored) from \_\_\_\_\_ to \_\_\_\_\_  
(Month) (Day) (Month) (Day)

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

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

which is tributary to \_\_\_\_\_, tributary to \_\_\_\_\_

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

8. The point of diversion from the source is in San Juan County, situated at a point\*  
S. 1975 ft. & W. 565 ft. from N $\frac{1}{4}$  Cor. Sec. 35, T38S, R25E, SLB&M.

(5 $\frac{1}{2}$  miles NE of Hatch Trading Post) Cajon Mesa Quad

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

9. The diverting and carrying works will consist of Tank truck

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

11. If application is for irrigation purposes, the legal subdivisions of the area irrigated are as follows:  
\_\_\_\_\_  
\_\_\_\_\_

Total \_\_\_\_\_ Acres

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

13. Is this water to be used supplementally with other water rights? Yes \_\_\_\_\_ No X

If "yes," identify other water rights on page 2.

14. If application is for power purposes, describe type of plant, size and rated capacity. \_\_\_\_\_

15. If application is for mining, the water will be used in \_\_\_\_\_ Mining District at  
the \_\_\_\_\_ mine, where the following ores are mined \_\_\_\_\_

16. If application is for stockwatering purposes, number and kind of stock watered \_\_\_\_\_

17. If application is for domestic purposes, number of persons \_\_\_\_\_, or families \_\_\_\_\_

18. If application is for municipal purposes, name of municipality \_\_\_\_\_

19. If application is for other uses, include general description of proposed uses \_\_\_\_\_  
Exploration drilling an oil and/or gas well.

20. Give place of use by legal subdivision of the United States Land Survey for all uses described in paragraphs 14 to 19, incl. Canyon 1-36 State. S. 500 ft. & E. 2140 ft. from NW Cor. Sec. 36, T38S, R25E, SLB&M.

21. The use of water as set forth in this application will consume 1.5 second-feet and/or acre-feet of water and \_\_\_\_\_ second feet and/ or acre feet will be returned to the natural stream or source at a point described as follows: \_\_\_\_\_

EXPLANATORY

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

Lined area for providing additional facts.

(Use page 4 if additional explanatory is needed.)

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

Signature of Applicant\* (with handwritten signature)

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

DECLARATION OF CITIZENSHIP

STATE OF UTAH,
County of..... } ss

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

My commission expires:

(SEAL)

YAPPA

Notary Public

**FEEES FOR APPLICATIONS TO APPROPRIATE WATER IN UTAH**

Flow rate — c.f.s.	Cost	
0.0 to 0.1 .....	\$ 15.00	
over 0.1 to 0.5 .....	30.00	
over 0.5 to 1.0 .....	45.00	
over 1.0 to 15.0 .....	45.00	plus \$7.50 for each cfs above the first cubic
over 15.0 .....	150.00	foot per second.

Storage — acre-feet		
0 to 20 .....	22.50	
over 20 to 500 .....	45.00	
over 500 to 7500 .....	45.00	plus \$7.50 for each 500 a.f. above the first
over 7500 .....	150.00	500 acre feet.

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

**STATE ENGINEER'S ENDORSEMENTS**

1. July 6, 1984 Application received by mail in State Engineer's office by SP
2. Priority of Application brought down to, on account of .....
3. 7-18-84 Application fee, \$15.00, received by J.H. Rec. No. 16144
4. Application microfilmed by ..... Roll No. ....
5. 7-18-84 Indexed by am Platted by .....
6. 7-11-84 Application examined by SP
7. Application returned, ..... or corrected by office .....
8. Corrected Application resubmitted by mail to State Engineer's office.
9. Application approved for advertisement by .....
10. Notice to water users prepared by .....
11. Publication began; was completed .....
12. Notice published in .....
13. Proof slips checked by .....
14. Application protested by .....
14. Publisher paid by M.E.V. No. ....
15. Hearing held by .....
16. Field examination by .....
17. 7-11-84 Application designated for approval SP S.G.
18. 8/10/84 Application copied or photostated by slm proofread by .....
19. 8/10/84 Application approved rejected
20. **Conditions:**

This Application is approved, subject to prior rights, as follows:

- a. Actual construction work shall be diligently prosecuted to completion.
- b. Proof of Appropriation shall be submitted to the State Engineer's office by NPR
- c. TEMPORARY APPROVAL -- EXPIRES November 30, 1984.

Dee C. Hansen  
Dee C. Hansen, P.E., State Engineer

21. Time for making Proof of Appropriation extended to .....
22. Proof of Appropriation submitted.
23. Certificate of Appropriation, No. ...., issued

**TEMPORARY**

Application No. T 60099

09-1376

DIVISION OF OIL, GAS AND MINING

SPODDING INFORMATION

API #43-037-31022

NAME OF COMPANY: MCOR

WELL NAME: Canyon State 1-36

SECTION NENW 6 TOWNSHIP 38S RANGE 25E COUNTY San Juan

DRILLING CONTRACTOR Bayless

RIG # 1

SPODDED: DATE 9-15-84

TIME 3:30 AM

How Rotary

DRILLING WILL COMMENCE \_\_\_\_\_

REPORTED BY Jordan McNay

TELEPHONE # 303-565-3773 (Holiday Inn)

DATE 9-17-84 SIGNED GL



MCO OIL AND GAS CORPORATION  
10880 Wilshire Boulevard  
Los Angeles, CA 90024 • (213) 879-5252

**RECEIVED**

**SEP 20 1984**

**DIVISION OF OIL  
GAS & MINING**

September 18, 1984

Mr. R. J. Firth  
Associate Director, Oil & Gas  
State of Utah Natural Resources  
4241 State Office Building  
Salt Lake City, Utah 84114

Dear Mr. Firth:

Re: Canyon #1-36 State  
NE NW Sec. 36, T38S, R25E  
500' FNL & 2140' FWL  
San Juan County, Utah  
API #43-037-31022

Enclosed is the spud notice for the referenced well.

Sincerely,

MCO OIL AND GAS CORPORATION

J. E. Walton  
Manager - Operations  
Western Region

JEW/ALS/als

Enc.

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

5. LEASE DESIGNATION AND SERIAL NO.

ML-30593

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME

Canyon State

9. WELL NO.

#1-36

10. FIELD AND POOL, OR WILDCAT

Tin Cup Mesa

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

Sec. 36, T38S, R25E

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 a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
MCOR Oil and Gas Corporation

3. ADDRESS OF OPERATOR  
10880 Wilshire Boulevard, Los Angeles, California 90024

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

14. PERMIT NO.  
API #43-037-31022

15. ELEVATIONS (Show whether OF, ST, GR, etc.)  
4939' GR

RECEIVED

DIVISION OF OIL  
GAS & MINING

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

Spud Report

(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 @ 3:30 AM 9/15/84 with Bayless Rig #1.

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

SIGNED

*J. E. Walton*  
J. E. Walton

TITLE

Manager - Operations  
Western Region

DATE

9/17/84

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

MCOR oil ~~W~~ AS  
Canyon 1-36 STATE  
SEC 36 T38S, R25E  
SAN JUAN County, Utah

Plugging 9-28-84

LEO LEWIS

formations

Honaker Trail	4285
Ismay	5302
Desert creek	5527
Akah	5670
TD	5675

- 1) 400 ft plug at bottom
- 2) 3200-3400 water zone  
100 ft plug above and 100 ft  
plug below.
- 3) ~~20~~ 10 SK plug at the top  
dry hole marker
- 4) 100 ft plug at surface pipe

Dean Jarvis

Well Plugged 10-1-84

DL



### EQUIPMENT & HOLE DATA

FORMATION TESTED: UPPER LOWER ISMAY  
 NET PAY (ft): \_\_\_\_\_  
 GROSS TESTED FOOTAGE: 53.0  
 ALL DEPTHS MEASURED FROM: KELLY BUSHING  
 CASING PERFS. (ft): \_\_\_\_\_  
 HOLE OR CASING SIZE (in): 7.875  
 ELEVATION (ft): 4951  
 TOTAL DEPTH (ft): 5484.0  
 PACKER DEPTH(S) (ft): 5425. 5431  
 FINAL SURFACE CHOKE (in): \_\_\_\_\_  
 BOTTOM HOLE CHOKE (in): 0.750  
 MUD WEIGHT (lb/gal): 11.20  
 MUD VISCOSITY (sec): 43  
 ESTIMATED HOLE TEMP. (°F): \_\_\_\_\_  
 ACTUAL HOLE TEMP. (°F): 130 @ 5480.0 ft

TICKET NUMBER: 68976000  
 DATE: 9-28-84 TEST NO: 1  
 TYPE DST: OPEN HOLE  
 HALLIBURTON CAMP: FARMINGTON  
 TESTER: H. BELL  
 WITNESS: LEO LEWIS  
 DRILLING CONTRACTOR: BAYLESS #1

### FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
<u>SAMPLER</u>	<u>0.420 @ 68 °F</u>	<u>5151 ppm</u>
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm

### SAMPLER DATA

Pstg AT SURFACE: 80  
 cu.ft. OF GAS: 0.06  
 cc OF OIL: 0  
 cc OF WATER: 2000  
 cc OF MUD: 0  
 TOTAL LIQUID cc: 2000

### HYDROCARBON PROPERTIES

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

### CUSHION DATA

TYPE	AMOUNT	WEIGHT
_____	_____	_____
_____	_____	_____

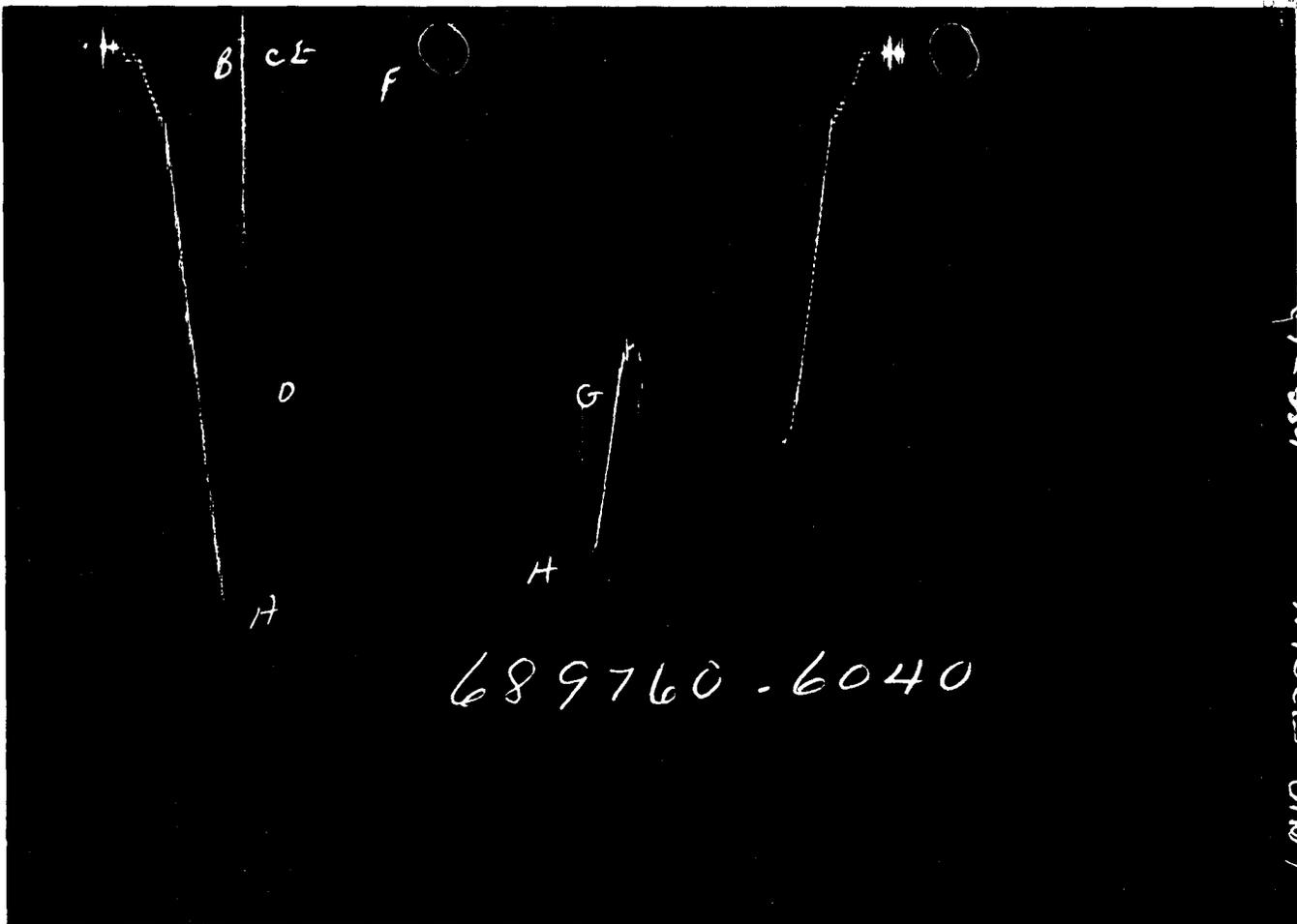
### RECOVERED:

4.5 BARRELS OF MUD  
 10 BARRELS OF MUD CUT WATER

MEASURED FROM  
 TESTER VALVE

### REMARKS:

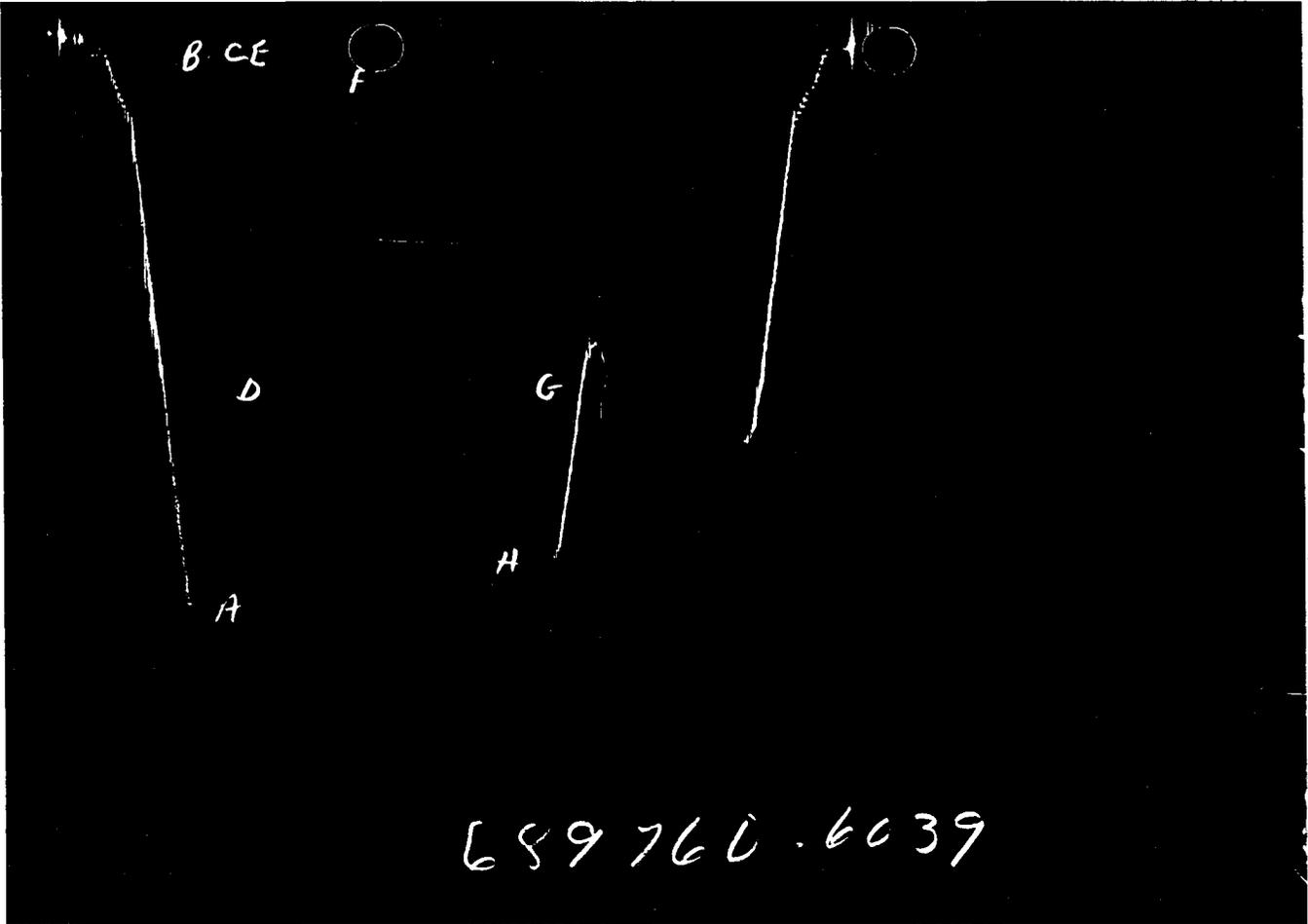
\_\_\_\_\_



689760-6040

GAUGE NO: 6040 DEPTH: 5412.4 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2966	2994.3			
B	INITIAL FIRST FLOW	54	19.8			
C	FINAL FIRST FLOW	81	92.1	15.0	15.0	F
C	INITIAL FIRST CLOSED-IN	81	92.1			
D	FINAL FIRST CLOSED-IN	1697	1695.1	32.0	29.8	C
E	INITIAL SECOND FLOW	108	114.0			
F	FINAL SECOND FLOW	270	285.6	120.0	118.0	F
F	INITIAL SECOND CLOSED-IN	270	285.6			
G	FINAL SECOND CLOSED-IN	1886	1904.5	235.0	239.2	C
H	FINAL HYDROSTATIC	2696	2716.9			



GAUGE NO: 6039 DEPTH: 5481.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	3044	3044.0			
B	INITIAL FIRST FLOW	54	71.0			
C	FINAL FIRST FLOW	134	136.0	15.0	15.0	F
C	INITIAL FIRST CLOSED-IN	134	136.0			
D	FINAL FIRST CLOSED-IN	1721	1733.9	32.0	29.8	C
E	INITIAL SECOND FLOW	134	164.8			
F	FINAL SECOND FLOW	322	328.6	120.0	118.0	F
F	INITIAL SECOND CLOSED-IN	322	328.6			
G	FINAL SECOND CLOSED-IN	1937	1947.3	235.0	239.2	C
H	FINAL HYDROSTATIC	2774	2767.4			



TICKET NO: 68976000  
 CLOCK NO: 7674 HOUR: 24



GAUGE NO: 6040  
 DEPTH: 5412.4

REF	MINUTES	PRESSURE	AP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW					
B 1	0.0	19.8			
2	3.0	42.4	22.6		
3	6.0	55.9	13.5		
4	9.0	67.7	11.8		
5	12.0	78.9	11.2		
C 6	15.0	92.1	13.2		
FIRST CLOSED-IN					
C 1	0.0	92.1			
2	2.0	158.3	66.2	1.8	0.933
3	4.0	244.0	151.9	3.1	0.679
4	6.0	393.4	301.2	4.3	0.545
5	8.0	660.6	568.5	5.2	0.459
6	10.0	936.2	844.1	6.0	0.398
7	12.0	1127.0	1034.9	6.7	0.352
8	14.0	1262.3	1170.2	7.3	0.316
9	16.0	1365.4	1273.3	7.7	0.287
10	18.0	1437.8	1345.7	8.2	0.264
11	20.0	1504.2	1412.1	8.6	0.244
12	22.0	1568.0	1475.9	8.9	0.226
13	24.0	1598.6	1506.4	9.2	0.211
14	26.0	1635.5	1543.4	9.5	0.198
15	28.0	1669.2	1577.1	9.8	0.187
D 16	29.8	1695.1	1603.0	10.0	0.177
SECOND FLOW					
E 1	0.0	114.0			
2	20.0	154.5	40.6		
3	40.0	187.0	32.4		
4	60.0	215.6	28.7		
5	80.0	240.2	24.6		
6	100.0	263.3	23.1		
F 7	118.0	285.6	22.3		
SECOND CLOSED-IN					
F 1	0.0	285.6			
2	15.0	860.1	574.4	13.5	0.993
3	30.0	1338.1	1052.4	24.5	0.735
4	45.0	1525.7	1240.1	33.6	0.597
5	60.0	1627.7	1342.0	41.3	0.507
6	75.0	1695.9	1410.2	48.0	0.443
7	90.0	1742.6	1457.0	53.7	0.394
8	105.0	1777.8	1492.2	58.7	0.355
9	120.0	1804.8	1519.1	63.1	0.324
10	135.0	1826.2	1540.6	67.0	0.298
11	150.0	1844.7	1559.0	70.5	0.276

REF	MINUTES	PRESSURE	AP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND CLOSED-IN - CONTINUED					
12	165.0	1859.4	1573.7	73.6	0.257
13	180.0	1872.0	1586.4	76.5	0.240
14	195.0	1882.3	1596.6	79.1	0.226
15	210.0	1890.8	1605.1	81.4	0.213
16	225.0	1898.4	1612.8	83.6	0.202
G 17	239.2	1904.5	1618.9	85.5	0.192

REMARKS:

TICKET NO: 68976000  
 CLOCK NO: 13741 HOUR: 24

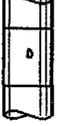


GAUGE NO: 6039  
 DEPTH: 5481.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW					
B 1	0.0	71.0			
2	3.0	94.6	23.6		
3	6.0	106.0	11.4		
4	9.0	116.8	10.9		
5	12.0	127.1	10.3		
C 6	15.0	136.0	8.8		
FIRST CLOSED-IN					
C 1	0.0	136.0			
2	2.0	206.0	70.0	1.8	0.932
3	4.0	291.4	155.4	3.1	0.679
4	6.0	435.8	299.8	4.3	0.543
5	8.0	716.9	580.9	5.2	0.460
6	10.0	1001.4	865.4	6.0	0.397
7	12.0	1184.9	1048.9	6.7	0.353
8	14.0	1311.4	1175.4	7.2	0.316
9	16.0	1417.3	1281.3	7.8	0.287
10	18.0	1492.3	1356.4	8.2	0.263
11	20.0	1556.5	1420.5	8.6	0.243
12	22.0	1606.6	1470.7	8.9	0.226
13	24.0	1648.4	1512.4	9.2	0.211
14	26.0	1684.6	1548.6	9.5	0.198
15	28.0	1711.9	1575.9	9.8	0.187
D 16	29.8	1733.9	1597.9	10.0	0.177
SECOND FLOW					
E 1	0.0	164.8			
2	20.0	197.7	32.9		
3	40.0	228.8	31.1		
4	60.0	254.8	26.0		
5	80.0	281.8	27.0		
6	100.0	306.6	24.8		
F 7	118.0	328.6	22.0		
SECOND CLOSED-IN					
F 1	0.0	328.6			
2	15.0	874.0	545.4	13.4	0.995
3	30.0	1368.4	1039.8	24.5	0.735
4	45.0	1559.8	1231.2	33.6	0.597
5	60.0	1666.3	1337.7	41.3	0.508
6	75.0	1736.5	1407.9	48.0	0.443
7	90.0	1785.3	1456.7	53.7	0.394
8	105.0	1819.9	1491.3	58.7	0.355
9	120.0	1846.3	1517.7	63.1	0.324
10	135.0	1867.9	1539.3	67.0	0.298
11	150.0	1886.2	1557.6	70.5	0.276

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND CLOSED-IN - CONTINUED					
12	165.0	1900.0	1571.4	73.6	0.257
13	180.0	1913.9	1585.3	76.5	0.240
14	195.0	1924.2	1595.6	79.1	0.226
15	210.0	1932.6	1604.0	81.4	0.213
16	225.0	1941.2	1612.6	83.6	0.202
G 17	239.2	1947.3	1618.7	85.5	0.192

REMARKS:

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	4716.7	
3		DRILL COLLARS.....	6.250	2.250	617.3	
50		IMPACT REVERSING SUB.....	6.000	3.000	1.0	5335.0
3		DRILL COLLARS.....	6.250	2.250	60.3	
5		CROSSOVER.....	6.000	3.000	1.0	
13		DUAL CIP SAMPLER.....	5.030	0.870	7.0	
60		HYDROSPRING TESTER.....	5.000	0.750	5.0	5408.4
80		AP RUNNING CASE.....	5.000	2.250	4.0	5412.4
15		JAR.....	5.030	1.750	5.0	
16		VR SAFETY JOINT.....	5.000	1.000	3.0	
70		OPEN HOLE PACKER.....	6.750	1.530	6.0	5425.0
70		OPEN HOLE PACKER.....	6.750	1.530	6.0	5431.0
5		CROSSOVER.....	6.000	3.000	1.0	
3		DRILL COLLARS.....	6.250	2.250	29.6	
5		CROSSOVER.....	6.000	3.000	1.0	
20		FLUSH JOINT ANCHOR.....	5.750	3.000	16.0	
81		BLANKED-OFF RUNNING CASE.....	5.750		4.0	5481.0
TOTAL DEPTH						5484.0

EQUIPMENT DATA

STATE OF UTAH  
 DEPARTMENT OF NATURAL RESOURCES  
 DIVISION OF OIL, GAS AND MINING  
 4241 State Office Building  
 Salt Lake City, UT 84114

\*REPORT OF WATER ENCOUNTERED DURING DRILLING\*

Well Name & Number Canyon #1-36 State

Operator MCOR Oil and Gas Corporation Address 10880 Wilshire Blvd., Los Angeles, Ca. 90024

Contractor Bayless Drilling Company Address P. O. Box 2669, Farmington, New Mexico 87401

Location NE 1/4 NW 1/4 Sec. 36 T. 38S R. 25E County San Juan

Water Sands

	<u>Depth</u>		<u>Volume</u>	<u>Quality</u>
	From	To	Flow Rate or Head	Fresh or Salty
1.	150'	---	Estimated 1/2 bbl/min	Fresh
2.	3030-3038'		Estimated 1 bbl/min	Salt Water
3.			Est Zone Pressure - 1623 psi.	
4.				
5.				

(Continue on reverse side if necessary)

Formation Tops

Remarks

- NOTE: (a) Report on this form as provided for in Rule C-20, General Rules and Regulations and Rules of Practice and Procedure.
- (b) If a water analysis has been made of the above reported zone, please forward a copy along with this form.

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. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <b>Dry Hole</b>		5. LEASE DESIGNATION AND SERIAL NO. ML-30593
2. NAME OF OPERATOR MCOR Oil and Gas Corporation		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR 10880 Wilshire Boulevard, Los Angeles, California 90024		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 500' FNL & 2140' FWL (NE NW)		8. FARM OR LEASE NAME Canyon State
14. PERMIT NO. API #43-037-31022	15. ELEVATIONS (Show whether OP, RT, GR, etc.) 4939' GR	9. WELL NO. #1-36
		10. FIELD AND POOL, OR WILDCAT Tin Cup Mesa
		11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA Sec. 36, T38S, R25E
		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 checked="" type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input checked="" type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) _____	(Other) _____

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

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

- Displaced hole w/11.2 ppg mud via drill pipe. Through drill pipe:
  - spotted 165 sx C1 "B" cmt from 5707-5200'
  - spotted 165 sx C1 "B" cmt from 3558-3200'
  - spotted 135 sx C1 "B" cmt from 1907-1650'
  - Spotted 10 sx C1 "B" mixed w/3% CaCl<sub>2</sub> from 47' to Surface.
- Cut off 8-5/8" casing and welded on steel plate and well marker.
- Fenced sump.
- Location will be restored when sump has dried out.

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

DATE: 10/13/84  
BY: John R. Baya

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

SIGNED: J. F. Walton TITLE: Manager - Operations DATE: 10/2/84  
J. F. Walton Western Region

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
 CONDITIONS OF APPROVAL, IF ANY:

```

=====
PROPERTY A139701 FOR 10-01-84 | WELL TYPE DEVELOPMENT
WELL NAME MCDR/BHP CNYN 1-36 S | WELL STATUS DRILLING
FIELD/PROSP CANYON JUNCTION PRO | WELL OBJECTIVE OIL
COUNTY NAME SAN JUAN,UT. OP-MCO | EST. DAYS 20 ELAPSD DAYS:15 HRS:13
TARGET ZONE UP. ISMAY-DESRT CREEK
PTD 5675' | INTEREST(S): BPO 25%,NRI 19.270
DEPTH 5708' TO | MUD WT: VIS:
AFE # 0884P01500 | AFE AMOUNT:DH $322,000
AFE CUM COST:$258,400
=====
  
```

===== OPERATIONS IN SEQUENCE =====

09-13-84 NEW LOCATION: 500' FNL & 2140' FWL, SEC. 36, T38S, R25E, SLM SAN JUAN COUNTY, UTAH.

MAKING LOCATION. PREP TO MI BAYLESS RIG #1. ELEVATION - 4939'. KB - GL - 12'. KB ELEVATION - 4951'.

09-14-84 MAKING LOCATION. PREP TO MI BAYLESS RIG #1.

09-15-84 108'. (48'). 2-1/2H. MW 8.4. VIS 27. DART. MOVED IN & RIGGED UP BAYLESS RIG #1. SPUDED @ 3:30 AM, 9/15/84. DRILLED 60' TO 108'. DART. NOTE: CORRECTION TO REPORT OF 9/13/84 - KB-GL IS 13'.

09-16-84 1182'. (1074'). 1D 2-1/2H. MW 8.4. VIS 27. DART. DRILLED 12-1/4" HOLE TO 336'. TRIPPED. SURVEYED @ 300' & CHANGED BIT. DRILLED. SURVEYED @ 800'. DRILLED TO 1182'. DART. FM: SD & SH. DEVIATION: 300' - 1/2 DEG, 800' - 1/2 DEG.

09-17-84 1837'. (655'). 2D 2-1/2H. MW 8.5. VIS 27. RUNNING 8-5/8" CASING ART. DRILLED 12-1/4" HOLE. SERVICED RIG. DRILLED. TRIPPED FOR WASHOUT. CHANGED BIT. DRILLED. SURVEYED @ 1340'. DRILLED TO 1837'. CIRCULATED & SURVEYED @ 1837'. POH. RIGGED UP TO RUN CASING. RUNNING 8-5/8" CASING ART. FM: CHINLE SHALE. DEVIATION: 1340' - 1/4 DEG, 1837' - 3/4 DEG.

09-18-84 2130'. (293'). 3D 2-1/2H. MW 8.5. VIS 28. DART. FINISHED RUNNING 43 JTS (1798.88') 8-5/8" 24# K-55 ST&C CSG W/HALLIBURTON GUIDE SHOE @ 1811.58'. INSERT FLOAT VALVE @ 1769.08'. RAN 5 CENTRALIZERS. RU HALLIBURTON. CIRC. MIXED & PUMPED 10 BW, 20 BBLs FLOCHEK, 10 BW, 700 SX HALLIBURTON LIGHT CEMENT W/2% CACL2 & 1/4#/SK FLOCELE. FOLLOWED BY 200 SX CL "B" CEMENT W/2% CACL2. BUMPED PLUG W/1200 PSI. NO CEMENT RETURNS TO SURFACE. CIP @ 9:47 AM, 9/17/84. RAN 1" PIPE DOWN 16" X 8-5/8" ANNULUS TO 80'. CEMENTED W/80 SX CL "B" CEMENT W/2% CACL2. NO CEMENT RETURNS TO SURFACE. RAN 1" PIPE TO 60'. CEMENTED W/60 SX CL "B" CEMENT W/3% CACL2. GOOD CEMENT RETURNS TO SURFACE. CIP @ 2:28 PM, 9/17/84. INSTALLED 8-5/8" X 11" - 3000# CASING HEAD & BOPE. TESTED TO 1000 PSI FOR 15 MIN. RIH W/BHA. TESTED PIPE RAMS TO 1000 PSI FOR 15 MIN - O.K. LOCATED TOP OF CEMENT @ 1758'. CO CEMENT, FLOAT VALVE & GUIDE SHOE TO 1811'. DRILLED 7-7/8" HOLE TO 2130'. DART.

09-19-84 3032'. (902'). 4D 2-1/2H. MW 8.6. VIS 28. DART. DRILLED 7-7/8" HOLE. SURVEYED @ 2186'. DRILLED. SERVICED RIG. DRILLED. SURVEYED @ 2659' & POH. CHANGED BIT. RIH. REAMED 100' TO BOTTOM. DRILLED TO 3032'. DART. FM: 20% SD, 80% SH. DEVIATION: 2186' - 1-1/4 DEG, 2659' - 2 DEG.

09-20-84 3870'. (838'). 5D 2-1/2H. MW 8.6. VIS 27. DART. DRILLED 7-7/8" HOLE. HIT 2" SALTWATER FLOW @ 3094'. CIRC & SURVEYED @ 3147'. DRILLED. SERVICED RIG. DRILLED. SERVICED RIG. DRILLED. SURVEYED @ 3657'. DRILLED TO 3870'. DART. FM: 75% SH, 20% SD, 5% LM. DEVIATION: 3147' - 1-1/4 DEG, 3657' - 1 DEG.

09-21-84 4375'. (505'). 6D 2-1/2H. MW 10.3. VIS 39. DART. DRILLED 7-7/8" HOLE. SERVICED RIG. DRILLED. TRIPPED - 13

=====

PROPERTY A139701 FOR 10-01-84 \*\*\*\*\*CONTINUED\*\*\*\*\*

WELL NAME MCO/BHP CNYN 1-36 S FIELD/PROSP CANYON JUNCTION PRO

COUNTY NAME SAN JUAN, UT. OP-MCO

09-21-84-----

JTS FOR WASHOUT. DRILLED. TRIPPED - 30 JTS FOR WASHOUT.  
DRILLED. SERVICED RIG & REPAIRED AIR LINE. DRILLED. CIRC &  
SURVEYED. DRILLED TO 4375'. DART. BG - 20 UNITS.  
FM: 60% LS, 20% SH, 20% SS.  
DEVIATION: 4300' - 1-1/2 DEG.

09-22-84-----

4642'. (267'). 7D 2-1/2H. MW 10.9. VIS 42. DART.  
DRILLED 7-7/8" HOLE. SERVICED RIG. DRILLED TO 4570'.  
TRIPPED, CHANGED BIT & SURVEYED. DRILLED TO 4642'. DART.  
BG - 1 UNIT.  
FM: 40% LS, 40% SS, 20% SH.  
DEVIATION: 4570' - 1-1/2 DEG.

09-23-84-----

4924'. (282'). 8D 2-1/2H. MW 10.8. VIS 37. DART.  
DRILLED 7-7/8" HOLE. SERVICED RIG. DRILLED TO 4924'. DART.  
BG - 5 UNITS.  
FM: 80% LS, 20% SLTS.

09-24-84-----

5147'. (223'). 9D 2-1/2H. MW 10.7. VIS 38. DART.  
DRILLED 7-7/8" HOLE. SERVICED RIG. DRILLED. SURVEYED @  
5116'. DRILLED TO 5147'. DART. BG - 5 UNITS.  
FM: 90% LS, 10% SH. (HONAKER TRAIL).  
DEVIATION: 5116' - 1 DEG.

09-25-84-----

5340'. (193'). 10D 2-1/2H. MW 11.1+. VIS 42. DART.  
DRILLED 7-7/8" HOLE. SERVICED RIG. DRILLED TO 5190'.  
TRIPPED FOR WASHOUT. CHANGED BIT. FILLED PIPE & SPUDED  
PAST JUNK. DRILLED TO 5340'. BG - 4-6 UNITS. DART.  
FM: ISMAY TOP OF ISMAY - 5316'.  
5340'. (193'). 10D 2-1/2H. MW 11.1+. VIS 42. DART.  
DRILLED 7-7/8" HOLE. SERVICED RIG. DRILLED TO 5190'.  
TRIPPED FOR WASHOUT. CHANGED BIT. FILLED PIPE & SPUDED  
PAST JUNK. DRILLED TO 5340'. DART. BG - 4-6 UNITS.  
FM: ISMAY. TOP OF ISMAY - 5316'.

09-26-84-----

5412'. (72'). 11D 2-1/2H. MW 11.2+. VIS 42. CORING ART.  
DRILLED 7-7/8" HOLE. CIRCULATED. PUMPED SLUG. POH. STEEL  
LINE MEASUREMENT - 5363' (13' CORRECTION). PU CORE BARREL &  
RIH. BROKE CIRCULATION & DROPPED BALL. CORING ART. TG - 24  
UNITS. BG - 3-5 UNITS.  
FM: ISMAY: 80% LM, 20% ANHYD.

09-27-84-----

5483'. (71'). 12D 2-1/2H. MW 11.2. VIS 43. POH W/CORE #2  
ART.  
CORED. POH W/CORE #1. LD CORE. SERVICED RIG. RIH W/CORE  
BARREL. CORED. PUMPED SLUG. POH W/CORE #2 ART.  
FM: ISMAY: 40% ANHYD, 50% LS, 10% SH.

09-28-84-----

5483'. (0'). 13D 2-1/2H. MW 10.9+. VIS 51. MIXING MUD  
ART.  
POH. LD CORE. LD CORE BARREL. RIH W/BIT TO 5483'. CIRC &  
COND MUD. POH. PU DST TOOLS. RIH W/TESTER. RU SURFACE  
EQUIPMENT. RAN DST #1: 5430-5483'. TOP PACKER @ 5424',  
BOTTOM PACKER @ 5430'. OPENED TESTER FOR 15 MIN IF W/VERY  
LIGHT BLOW. CLOSED TESTER FOR 30 MIN ISI. OPENED TESTER FOR  
2-HR FF. VERY LIGHT BLOW THROUGHOUT FF PERIOD. CLOSED  
TESTER FOR 4-HR FSI. WELL STARTED TO FLOW FROM ANNULUS  
DURING ISI PERIOD - SALT WATER. PULLED 30 STDS. DROPPED BAR  
& REVERSE CIRCULATED @ 3600'. RECOVERED 4 BM & 10 BBLs FM  
WATER. NO SHOWS OF OIL OR GAS. MIXED MUD. MIXING MUD ART.  
FM: ISMAY.

09-29-84-----

5681'. (197'). 14D 2-1/2H. MW 11.2. VIS 43. DART.  
REVERSE CIRCULATED. POH. LD TESTER. SERVICED RIG. RIH.  
WASHED 50' TO BOTTOM. DRILLED 7-7/8" HOLE TO 5681'. DART.  
BG - 3-5 UNITS. TG - 60 UNITS.  
FM: SH, LM, ANH. TOPS: 5483' - HOVENWEEP, 5520' - LOWER  
ISMAY, 5565' - GOTHIC SHALE, 5585' - DESERT CREEK, 5650' -  
LOWER DESERT CREEK, 5660' - CHIMNEY ROCK, 5680' - AKAH.  
DST #1 5430-5483'  
5412' 5483'

=====

PROPERTY A139701 FOR 10-01-84 \*\*\*\*\*CONTINUED\*\*\*\*\*

WELL NAME MCO/BHP CNYN 1-36 S FIELD/PROSP CANYON JUNCTION PRO

COUNTY NAME SAN JUAN,UT. OP-MCO

-----

09-29-84

IH	2966	3043
IF	54-81	53-134
ISI	1696	1721
FF	108-270	134-321
FSI	1885	1936
FH	2696	2773

RECOVERED 4 BM & 10 BBLs MUD-CUT WATER. CL - 38,500.  
SAMPLER: 80 PSI - 1.06 CF (2000 CC) WATER. CL - 65,000.  
RW - .42 @ 68 DEG. MAX TEMP - 130 DEG F.

09-30-84

5708' TD. (27'). 1SD 2-1/2H. MW 11.2. VIS 43. RIH ART.  
DRILLED 7-7/8" HOLE TO 5708'. CIRCULATED. WIPER TRIP - 10  
STDS. CIRCULATED & POH. LOGGED. RU SCHLUMBERGER. RAN OIL-  
BHC/GR 1811-5708', CNL-FDC/GR 4000-5708', HDT 4000-5708'.  
RIH W/DC. LD DC. PU 24 JTS DP. RIH. RIH ART.  
FM: SALT.  
DEVIATION: 5708' - 1 DEG.

10-01-84

5708' TD. (0'). 1SD 13-1/2H. RIG RELEASED. WELL P & A.  
RIH OPEN-ENDED & CIRCULATED. RU HOWCO. SET PLUG #1: WITH  
DP HUNG @ 5707', CEMENTED W/165 SX CL "B" CMT (195 CF). EST  
TOP OF CEMENT - 5200'. LD DP. SET PLUG #2: WITH DP HUNG @  
3558', CEMENTED W/165 SX CL "B" CEMENT (195 CF). ESTIMATED  
TOP OF CEMENT - 3200'. LD DP. SET PLUG #3: WITH DP @ 1907',  
CEMENTED W/135 SX CL "B" CEMENT (159 CF). ESTIMATED TOP OF  
CEMENT - 1650'. LD DP. SET PLUG #4: WITH DP @ 47',  
CEMENTED W/10 SX CL "B" CEMENT W/3X CACL2. TOP OF CEMENT @  
SURFACE. RIGGED DOWN. RELEASED RIG @ 5 PM, 9/30/84.  
WELL PLUGGED & ABANDONED.



October 2, 1984

RECEIVED

OCT 09 1984

DIVISION OF OIL  
GAS & MINING

Mr. R. J. Firth  
Associate Director, Oil & Gas  
State of Utah Natural Resources  
4241 State Office Building  
Salt Lake City, Utah 84114

Dear Mr. Firth:

Re: Canyon #1-36 State  
NE NW Sec. 36, T38S, R25E  
500' FNL & 2140' FWL  
San Juan County, Utah  
API #43-037-31022

Enclosed is the Well Abandonment Notice, Well Completion Report (Plugged & Abandoned), Report of Water Encountered During Drilling, and Well History for the referenced well.

Copies of logs run, core analyses and DST reports will be sent direct to you by the service companies.

Sincerely,

MCOR OIL AND GAS CORPORATION

J. E. Walton  
Manager - Operations  
Western Region

JEW/ALS/als

Enc. 2 sets

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

7

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG \***

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  Other \_\_\_\_\_

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

2. NAME OF OPERATOR  
MCOR Oil and Gas Corporation

3. ADDRESS OF OPERATOR  
10880 Wilshire Boulevard, Los Angeles, Ca 90024

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface 500' FNL & 2140' FWL (NE NW)  
At top prod. interval reported below  
At total depth

5. LEASE DESIGNATION AND SERIAL NO.  
ML-30593

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

7. UNIT AGREEMENT NAME  
N/A

8. FARM OR LEASE NAME  
Canyon State

9. WELL NO.  
#1-36

10. FIELD AND POOL, OR WILDCAT  
Tin Cup Mesa

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

14. PERMIT NO. 43-037-31022 DATE ISSUED 6/8/84

12. COUNTY OR PARISH San Juan 13. STATE Utah

15. DATE SPUDDED 9/15/84 16. DATE T.D. REACHED 9/29/84 17. DATE COMPL. (Ready to prod.) 10/1/84 P & A 18. ELEVATIONS (OF, RES, RT, GR, ETC.)\* 4939' GR 19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD 5708' TD 21. PLUG, BACK T.D., MD & TVD 22. IF MULTIPLE COMPL., HOW MANY\* 23. INTERVALS DRILLED BY 0 - 5708' ROTARY TOOLS CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\* 25. WAS DIRECTIONAL SURVEY MADE  
No

26. TYPE ELECTRIC AND OTHER LOGS RUN  
DIL-BHC/GR 1811-5708', CNL-FDC/GR 4000-5708', HDT 4000-5708' Sample

27. WAS WELL CORED  
Yes

29. 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#	1811.58'	12-1/4"	700 sx Halliburton Light w/2% CaCl <sub>2</sub> & 1/4#/sk Flocele, followed by 200 sx C1 "B" w/2% CaCl <sub>2</sub>	0

29. LINER RECORD

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

31. PERFORATION RECORD (Interval, size and number)

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33. PRODUCTION

DATE FIRST PRODUCTION \_\_\_\_\_ PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) \_\_\_\_\_ WELL STATUS (Producing or shut-in) Plugged & Abandoned

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 J. E. Walton TITLE Manager - Operations Western Region DATE 10/2/84

\*(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.)

FORMATION		TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	GEOLOGIC MARKERS	
NAME	DEPTH	DEPTH	DEPTH	NAME	DEPTH	DEPTH
Upper Ismay	5316'	5483'		Tight & Wet Cored 5363 - 5423' - Core #1	Upper Ismay	5316'
Lower Ismay	5520'	5565'		Dry Cored 5423 - 5483' - Core #2	Hovenweep	5483'
Upper Dst Crk	5585'	5650'		Dry DST #1: 5430-5483'	Lower Ismay	5520'
Lower Dst Crk	5650'	5660'		Dry No water cushion	Gothic Shale	5565'
				5412'      5483'	Upper Dst Crk	5585'
				IH      2966	Lower Dst Crk	5650'
				15 min IF      54-81	Chimney Rock	5660'
				30 min ISI      1696	Akah	5680'
				120 min FF      108-270		
				240 min FSI      1885		
				FH      2696		
				3043		
				53-134		
				1721		
				134-321		
				1936		
				2773		

**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.

**TOOKE**

410 17th Street • Suite 1850 • Denver, CO 80202 • Ph. (303) 573-1295

October 5, 1984

R. J. Firth  
State of UT Natural Resources  
4241 State Office Bldg.  
Salt Lake City, UT 84114

**RECEIVED**

**OCT 09 1984**

**DIVISION OF OIL  
GAS & MINING**

Re: MCOR-BHP Canyon #1-36 State

Dear Mr. Firth;

Enclosed you will find the final prints per your request of the distribution list on MCOR-BHP Canyon #1-36 State.

Tooke Engineering thanks you for this business and anticipates being of service to you again in the future.

Log Distribution Department

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
DALLAS, TEXAS

CORE ANALYSIS REPORT

FOR

MCO RESOURCES, INC.

CANYON STATE 1-36  
EXT. TIN CUP MESA  
SAN JUAN, UTAH

**RECEIVED**

**NOV 02 1984**

**DIVISION OF OIL  
& MINING**

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*

DALLAS, TEXAS

MCO RESOURCES, INC.  
CANYON STATE 1-36  
EXT. TIN CUP MESA  
SAN JUAN, UTAH

DATE : 28-SEPT-1984  
FORMATION : ISMAY  
DRLG. FLUID: WBM  
LOCATION : NE, NW SEC. 36-T38S-R25W

FILE NO : 3803-003343  
ANALYSTS : DS, EV  
ELEVATION: 4951 KB

## FULL DIAMETER ANALYSIS-B.L. POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	AIR (MD) 90 DEG	POR. He	FLUID OIL	SATS. WTR	GRAIN DEN	DESCRIPTION
	5363.0-23.0							ANHYDRITE --- NO ANALYSIS
	5423.0-24.0							CORE LOSS
CORE # 2 ISMAY 5424-5484								
	5424.0-32.0							ANHYDRITE --- NO ANALYSIS
1	5432.0-33.0	<0.01	*	4.8	0.0	18.1	2.78	DOL BRN VFXLN SL/SHY
2	5433.0-34.0	0.07	0.04	10.5	0.0	65.2	2.81	DOL BRN FNXLN ERTY
3	5434.0-35.0	0.20	0.15	11.9	0.0	66.4	2.79	DOL BRN FNXLN ERTY
4	5435.0-36.0	0.98	*	20.9	0.0	43.9	2.77	DOL BRN FNXLN SL/LM
5	5436.0-37.0	1.10	*	9.0	0.0	84.5	2.84	DOL BRN FNXLN SL/ANHY
6	5437.0-38.0	0.31	0.28	5.8	0.0	79.4	2.83	DOL BRN FNXLN SL/ANHY
7	5438.0-39.0	0.19	0.17	5.0	0.0	72.6	2.82	DOL BRN FNXLN SL/ANHY
8	5439.0-40.0	0.43	0.41	15.9	0.0	62.1	2.79	DOL BRN FNXLN SL/ANHY
9	5440.0-41.0	1.20	1.20	19.4	0.0	87.3	2.79	DOL BRN FNXLN SL/LM
10	5441.0-42.0	0.09	*	19.1	3.0	72.2	2.77	DOL BRN FNXLN SL/LM
11	5442.0-43.0	1.30	0.97	15.3	0.0	76.9	2.82	DOL BRN FNXLN
12	5443.0-44.0	1.40	1.40	4.1	0.0	39.0	2.81	LM GRY-BRN VFXLN SL/DOL SL/ANHY
13	5444.0-45.0	0.93	*	7.2	0.0	48.3	2.80	LM GRY-BRN VFXLN SL/DOL SL/ANHY
14	5445.0-46.0	0.39	0.33	9.4	0.0	77.4	2.82	LM GRY-BRN VFXLN SL/DOL SL/ANHY
15	5446.0-47.0	0.05	0.05	5.3	0.0	88.0	2.80	DOL BRN FNXLN SL/LM SL/ANHY
16	5447.0-48.0	0.34	0.11	3.7	0.0	31.5	2.77	LM GRY-BRN VFXLN SL/DOL SL/ANHY
17	5448.0-49.0	0.59	0.50	4.3	0.0	57.2	2.75	LM GRY-BRN VFXLN SL/DOL SL/ANHY
18	5449.0-50.0	0.67	0.64	7.2	0.0	66.1	2.77	LM GRY-BRN VFXLN SL/DOL SL/ANHY
19	5450.0-51.0	1.00	1.00	7.9	0.0	87.5	2.78	LM GRY-BRN VFXLN SL/DOL SL/ANHY
20	5451.0-52.0	0.38	0.36	6.9	0.0	92.2	2.77	LM GRY-BRN VFXLN SL/DOL SL/ANHY
21	5452.0-53.0	2.10	*	3.5	0.0	52.0	2.79	LM GRY-BRN VFXLN SL/DOL SL/ANHY
22	5453.0-54.0	0.46	*	4.3	0.0	48.7	2.77	LM GRY-BRN VFXLN SL/DOL SL/ANHY

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*

DALLAS, TEXAS

MCO RESOURCES, INC.  
 CANYON STATE 1-36

DATE : 28-SEPT-1984  
 FORMATION : ISMAY

FILE NO : 3803-003343  
 ANALYSTS : DS/EV

FULL DIAMETER ANALYSIS-B.L. POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO MAXIMUM	AIR (MD) 90 DEG	POR. He	FLUID OIL	SATS. WTR	GRAIN DEN	DESCRIPTION
23	5454.0-55.0	0.42	*	6.5	0.0	38.0	2.79	LM GRY-BRN VFXLN SL/DOL SL/ANHY
24	5455.0-56.0	0.34	0.29	5.8	0.0	52.7	2.76	LM GRY-BRN VFXLN SL/DOL SL/ANHY
25	5456.0-57.0	0.78	0.75	6.2	0.0	50.7	2.79	LM GRY-BRN VFXLN SL/DOL SL/ANHY
26	5457.0-58.0	1.80	1.30	13.5	0.0	42.7	2.78	LM GRY-BRN VFXLN SL/DOL SL/ANHY
27	5458.0-59.0	0.08	*	10.2	0.0	46.4	2.77	LM GRY-BRN VFXLN SL/DOL SL/ANHY
28	5459.0-60.0	0.42	0.39	9.4	2.1	79.5	2.74	LM GRY-BRN VFXLN SL/DOL SL/ANHY
29	5460.0-61.0	0.09	*	4.6	0.0	64.8	2.78	LM GRY-BRN VFXLN SL/DOL SL/ANHY
30	5461.0-62.0	0.06	*	5.5	0.0	58.4	2.73	LM GRY-BRN VFXLN SL/DOL SL/ANHY
31	5462.0-63.0	1.70	1.50	9.3	0.0	51.1	2.77	LM GRY-BRN VFXLN SL/DOL SL/ANHY
32	5463.0-64.0	6.30	2.50	3.7	0.0	59.4	2.76	LM GRY-BRN VFXLN SL/DOL SL/ANHY **
33	5464.0-65.0	0.08	*	3.0	0.0	51.2	2.75	LM GRY-BRN VFXLN SL/DOL SL/ANHY
34	5465.0-66.0	2.20	*	5.9	0.0	69.2	2.76	LM GRY-BRN VFXLN SL/DOL SL/ANHY
35	5466.0-67.0	0.30	0.29	3.3	0.0	20.7	2.76	LM GRY-BRN VFXLN SL/DOL SL/ANHY
36	5467.0-68.0	0.14	0.10	1.8	0.0	23.4	2.75	LM GRY-BRN VFXLN SL/DOL SL/ANHY
37	5468.0-69.0	0.26	*	15.9	0.0	60.7	2.81	DOL BRN FNXLN SL/LM ERTY
38	5469.0-70.0	0.12	*	12.4	0.0	65.6	2.78	DOL LTBRN FNXLN SL/LM ERTY
39	5470.0-71.0	0.77	0.76	15.5	0.0	51.2	2.80	DOL LTBRN FNXLN SL/LM
40	5471.0-72.0	1.50	1.20	17.5	0.0	64.0	2.80	DOL LTBRN FNXLN SL/LM
41	5472.0-73.0	0.08	*	13.7	0.0	44.8	2.79	DOL BRN FNXLN SL/LM
42	5473.0-74.0	1.10	1.00	17.3	0.0	51.5	2.80	DOL LTBRN FNXLN SL/LM
43	5474.0-75.0	1.70	*	15.9	0.0	64.1	2.83	DOL LTBRN FNXLN SL/LM
44	5475.0-76.0	0.08	*	13.8	0.0	69.4	2.81	DOL LTBRN FNXLN SL/LM
45	5476.0-77.0	0.21	0.18	2.5	0.0	14.4	2.79	LM GRY-BRN VFXLN SL/DOL SL/ANHY
46	5477.0-78.0	0.17	*	3.9	0.0	31.3	2.83	LM GRY-BRN VFXLN SL/DOL SL/ANHY
47	5478.0-79.0	0.27	0.18	1.5	0.0	34.1	2.80	LM GRY-BRN VFXLN SL/DOL SL/ANHY
48	5479.0-80.0	0.24	*	2.1	0.0	34.7	2.81	LM GRY-BRN VFXLN SL/DOL SL/ANHY
49	5480.0-81.0	0.17	*	15.0	0.0	71.7	2.81	DOL BRN FNXLN
50	5481.0-82.0	0.17	0.16	10.0	0.0	66.8	2.80	DOL BRN FNXLN
51	5482.0-83.0	0.17	0.11	9.2	2.2	65.1	2.79	DOL BRN FNXLN
52	5483.0-84.0	<0.01	*	2.9	0.0	50.0	2.72	LM DKGRY VFXLN SL/SHY

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**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*

DALLAS, TEXAS

MCO RESOURCES, INC.  
 CANYON STATE 1-36

DATE : 28-SEPT-1984  
 FORMATION : ISMAY

FILE NO : 3803-003343  
 ANALYSTS : DS/EV

FULL DIAMETER ANALYSIS-B.L. POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD)		FOR. He	FLUID SATS.		GRAIN DEN	DESCRIPTION
		MAXIMUM	90 DEG		OIL	WTR		

\*\* DENOTES FRACTURE PERMEABILITY

\* SAMPLE NOT SUITABLE FOR FULL DIAMETER ANALYSIS

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*

DALLAS, TEXAS

MCO RESOURCES, INC.  
CANYON STATE 1-36

DATE : 28-SEPT-1984  
FORMATION : ISMAY

FILE NO. : 3803-003343  
ANALYSTS : DS#EV

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

DEPTH INTERVAL: 5432.0 TO 5484.0

FEET OF CORE ANALYZED : 52.0 FEET OF CORE INCLUDED IN AVERAGES: 50.0

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

PERMEABILITY MAXIMUM RANGE (MD.)	:	0.00 TO	7.0	(UNCORRECTED FOR SLIPPAGE)
HELIUM POROSITY RANGE (%)	:	1.0 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: 5432.0 TO 5484.0

AVERAGE PERMEABILITY (MILLIDARCIES)		PRODUCTIVE CAPACITY (MILLIDARCY-FEET)	
ARITHMETIC PERMEABILITY	: 0.72	ARITHMETIC CAPACITY	: 36.
GEOMETRIC PERMEABILITY	: 0.38	GEOMETRIC CAPACITY	: 19.
HARMONIC PERMEABILITY	: 0.22	HARMONIC CAPACITY	: 11.
GEOMETRIC MAXIMUM & 90 DEG PERM.	: 0.12	GEOMETRIC MAXIMUM & 90 DEG CAPACITY:	5.8
AVERAGE POROSITY (PERCENT)	: 9.0	AVERAGE TOTAL WATER SATURATION	: 61.8
		(PERCENT OF PORE SPACE)	
AVERAGE RESIDUAL OIL SATURATION	: 0.2	AVERAGE CONNATE WATER SATURATION	:
(PERCENT OF PORE SPACE)		(PERCENT OF PORE SPACE)	

PERMEABILITY VS POROSITY

COMPANY: MCO RESOURCES, INC.  
 FIELD : EXT. TIN CUP MESA

WELL : CANYON STATE 1-36  
 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
5432.0 - 5484.0	1 (+)	0.001	7.0	1.0	22.0	8.8	0.69	0.02	0.30

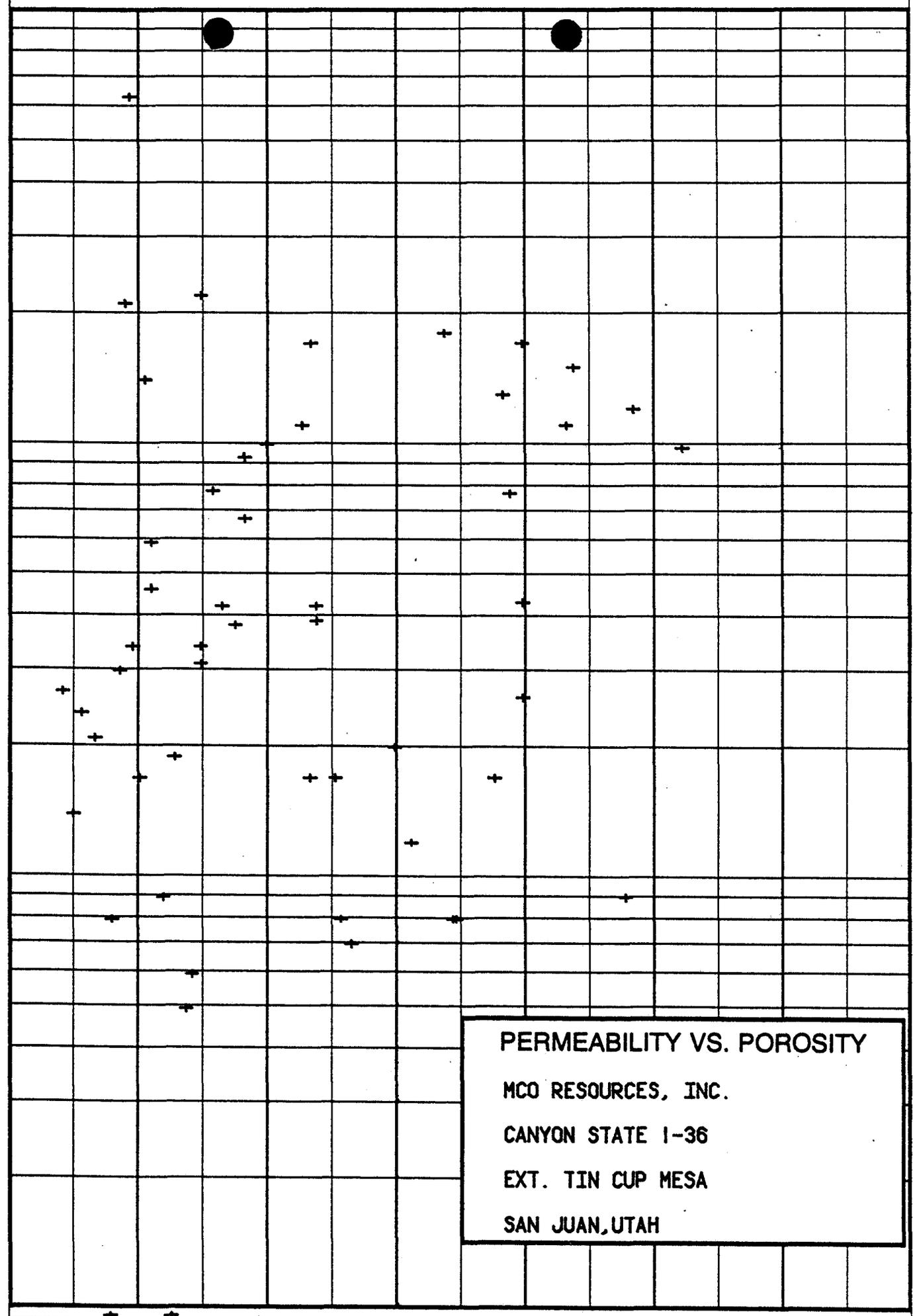
10

PERMEABILITY: MILLIDARCIES

1

0.1

0.01



PERMEABILITY VS. POROSITY  
 MCO RESOURCES, INC.  
 CANYON STATE 1-36  
 EXT. TIN CUP MESA  
 SAN JUAN, UTAH

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MCO RESOURCES, INC.  
 FIELD : EXT. TIN CUP MESA

WELL : CANYON STATE 1-36  
 COUNTY, STATE: SAN JUAN, UTAH

AIR PERMEABILITY : MD. ( HORIZONTAL ) RANGE USED 0.001 TO 7.  
 POROSITY : PERCENT ( HELIUM ) RANGE USED 1.0 TO 46.0

(PERMEABILITY UNCORRECTED FOR SLIPPAGE)

DEPTH LIMITS : 5432.0 - 5484.0 INTERVAL LENGTH : 52.0  
 FEET ANALYZED IN ZONE : 52.0 LITHOLOGY EXCLUDED : NONE

DATA SUMMARY

POROSITY AVERAGE -----	PERMEABILITY AVERAGES		
	ARITHMETIC -----	HARMONIC -----	GEOMETRIC -----
8.8	0.69	0.02	0.30

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MCO RESOURCES, INC.  
 FIELD : EXT. TIN CUP MESA

WELL : CANYON STATE 1-36  
 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 (%)
0.0 - 2.0	2.0	1.6	0.194	0.205	3.8	3.8
2.0 - 4.0	9.0	3.2	0.255	1.1	17.3	21.2
4.0 - 6.0	11.0	5.0	0.201	0.518	21.2	42.3
6.0 - 8.0	6.0	7.0	0.653	0.697	11.5	53.8
8.0 - 10.0	5.0	9.3	0.554	0.756	9.6	63.5
10.0 - 12.0	4.0	10.6	0.117	0.130	7.7	71.2
12.0 - 14.0	4.0	13.3	0.193	0.520	7.7	78.8
14.0 - 16.0	6.0	15.6	0.564	0.772	11.5	90.4
16.0 - 18.0	2.0	17.4	1.3	1.3	3.8	94.2
18.0 - 20.0	2.0	19.3	0.329	0.645	3.8	98.1
20.0 - 22.0	1.0	20.9	0.980	0.980	1.9	100.0

TOTAL NUMBER OF FEET = 52.0

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MCO RESOURCES, INC.  
 FIELD : EXT. TIN CUP MESA

WELL : CANYON STATE 1-36  
 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 (%)
0.005 - 0.010	2.0	0.005	0.005	3.8	3.8	3.8
0.039 - 0.078	3.0	0.059	0.060	7.1	5.8	9.6
0.078 - 0.156	8.0	0.093	0.095	9.8	15.4	25.0
0.156 - 0.312	12.0	0.216	0.222	7.2	23.1	48.1
0.312 - 0.625	9.0	0.413	0.419	7.4	17.3	65.4
0.625 - 1.250	9.0	0.932	0.948	12.3	17.3	82.7
1.250 - 2.500	8.0	1.7	1.7	10.6	15.4	98.1
5.- 10.	1.0	6.3	6.3	3.7	1.9	100.0

TOTAL NUMBER OF FEET = 52.0

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MCO RESOURCES, INC.  
 FIELD : EXT. TIN CUP MESA

WELL : CANYON STATE 1-36  
 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	52.0	100.0	8.8	7.3
2.0	2.0	0.7	50.0	99.3	9.1	7.7
4.0	11.0	6.9	41.0	93.1	10.4	9.4
6.0	22.0	19.0	30.0	81.0	12.4	12.0
8.0	28.0	28.1	24.0	71.9	13.8	13.5
10.0	33.0	38.2	19.0	61.8	14.9	14.5
12.0	37.0	47.5	15.0	52.5	16.1	15.2
14.0	41.0	59.1	11.0	40.9	17.1	
16.0	47.0	79.5	5.0	20.5	18.8	18.5
18.0	49.0	87.1	3.0	12.9	19.8	
20.0	51.0	95.4	1.0	4.6	20.9	
22.0	52.0	100.0	0.0	0.0		

TOTAL STORAGE CAPACITY IN POROSITY-FEET = 459.2

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

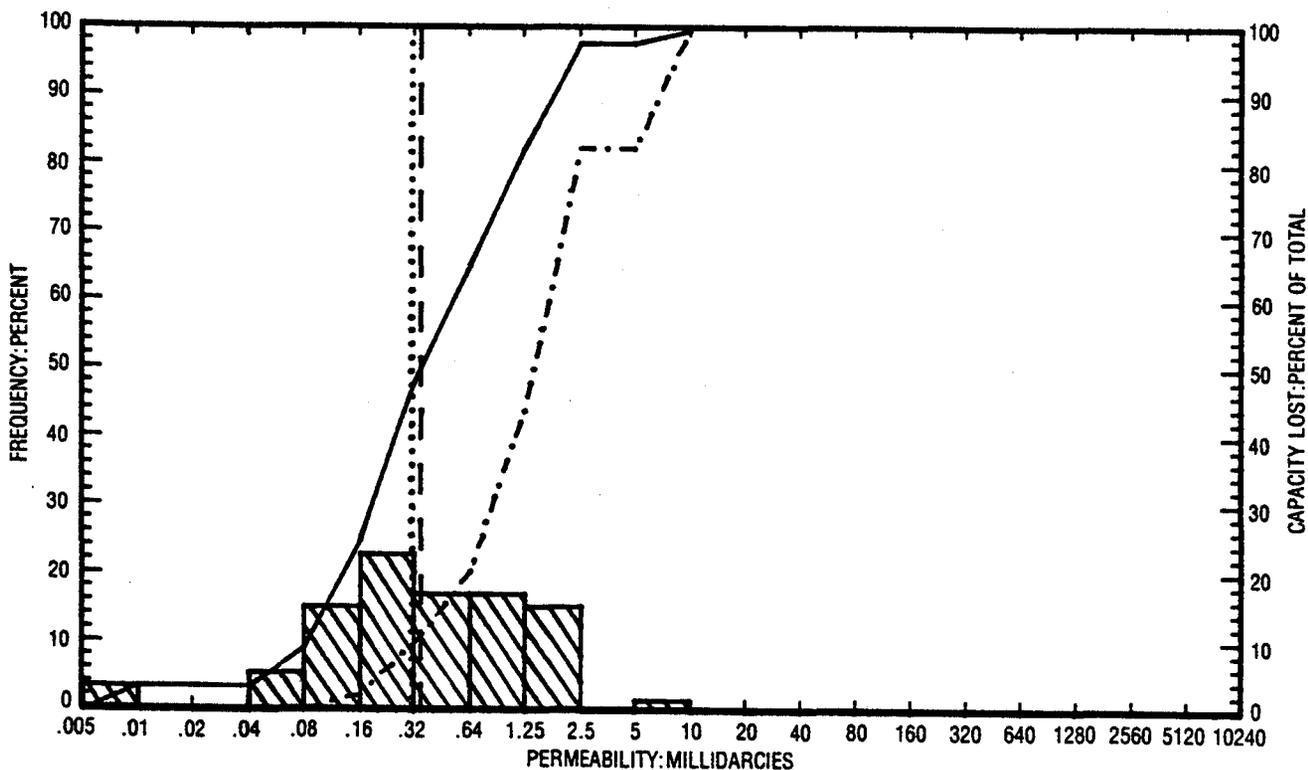
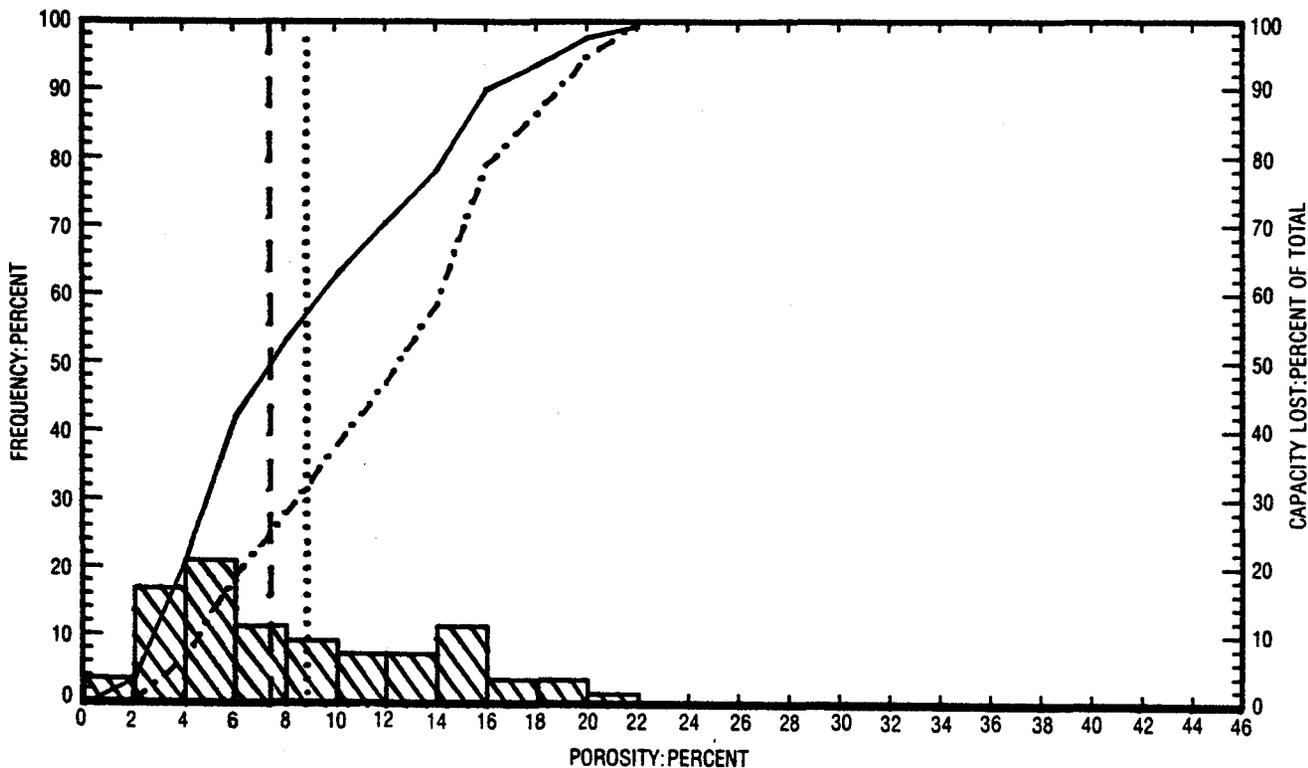
COMPANY: MCO RESOURCES, INC.  
 FIELD : EXT. TIN CUP MESA

WELL : CANYON STATE 1-36  
 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	52.0	100.0	0.30	0.34
0.010	2.0	0.0	50.0	100.0	0.39	0.36
0.020	2.0	0.0	50.0	100.0	0.38	0.36
0.039	2.0	0.0	50.0	100.0	0.38	0.36
0.078	5.0	0.5	47.0	99.5	0.43	0.41
0.156	13.0	2.6	39.0	97.4	0.58	0.56
0.312	25.0	10.1	27.0	89.9	0.91	0.88
0.625	34.0	20.6	18.0	79.4	1.35	1.25
1.250	43.0	44.3	9.0	55.7	1.95	
2.500	51.0	82.5	1.0	17.5	6.30	
5.	51.0	82.5	1.0	17.5	6.30	
10.	52.0	100.0	0.0	0.0		

TOTAL FLOW CAPACITY IN MILLIDARCY-FEET (ARITHMETIC) = 35.90



### PERMEABILITY AND POROSITY HISTOGRAMS

**MCO RESOURCES, INC.**  
**CANYON STATE 1-36**  
**EXT. TIN CUP MESA**  
**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)



Petroleum Reservoir Engineering

**CORE LABORATORIES, INC.**

COMPANY MOO RESOURCES, INC. FILE NO. 3803-00343  
 WELL CANYON STATE 1-36 DATE 28-SEPT-1964 ENGRS. DAIKY  
 FIELD EKT. TIN CUP MESA FORMATION PARADOX ELEV. 4951.13  
 COUNTY SAN JUAN STATE UTAH ORLG. FLD. VEN CORES

**Cores Log**  
**CORE and RESISTIVITY EVALUATION**

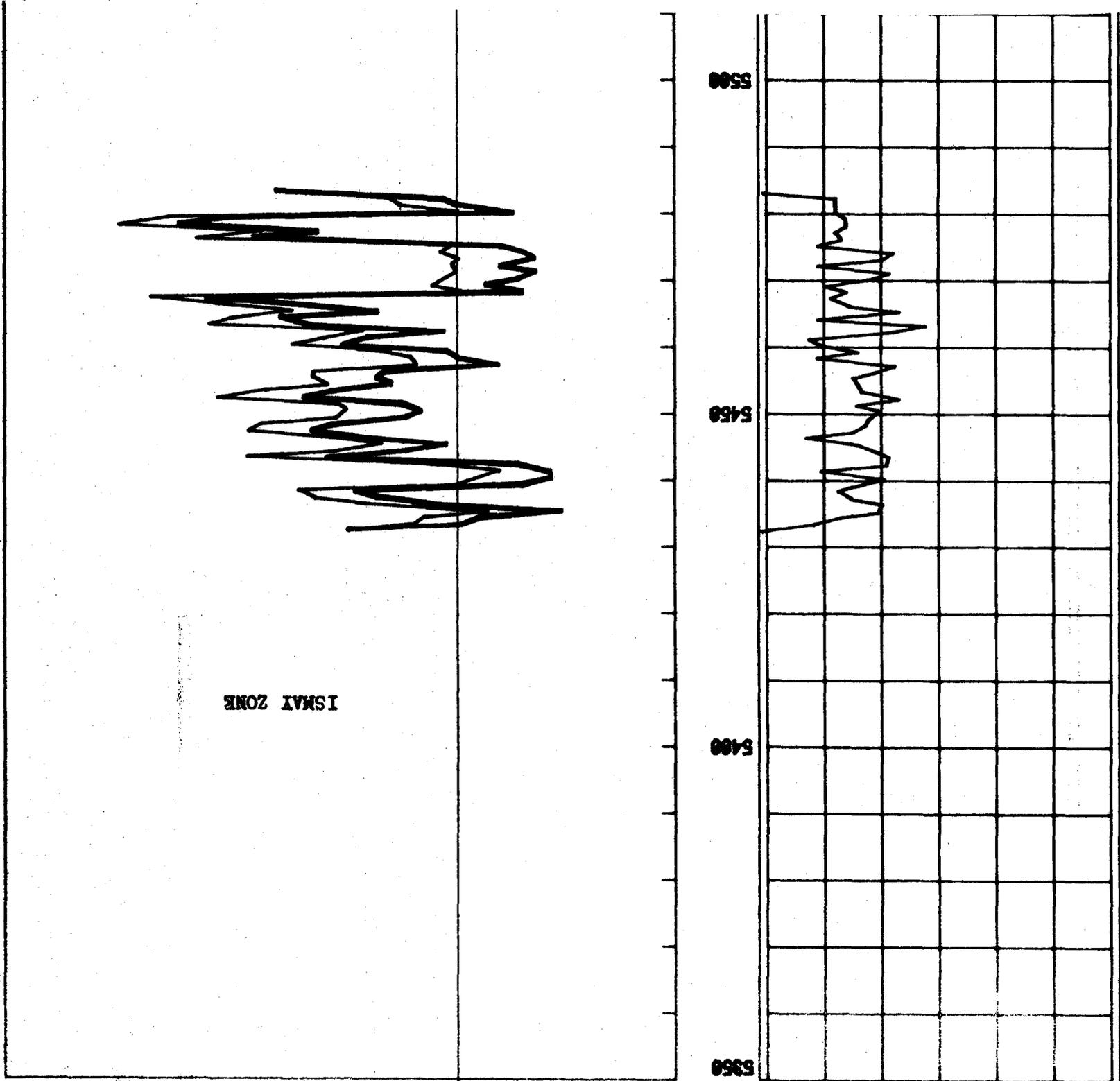
These resistivity logs are based on observations and resistivity logs supplied by the client to whom, and for whose exclusive and confidential use they are prepared. The resistivity logs are prepared by CORE LABORATORIES, INC. and its officers and employees, assuming no responsibility for the accuracy of the data or the resistivity logs. The resistivity logs are prepared by CORE LABORATORIES, INC. and its officers and employees, assuming no responsibility for the accuracy of the data or the resistivity logs.

RESISTIVITY PARAMETERS:  $a = 1.0$   $m = 2.0$   $n = 2.0$   $m = 2.0$   $n = 2.0$   
 Depths 5432.0 to 5484.0  
 Depths \_\_\_\_\_ to \_\_\_\_\_

CORE ANALYSIS CALCULATED RESISTIVITY  
 $R_p = \text{OHM-METERS AT 100\% S}^*$   
 $R_{cp} = \text{OHM-METERS AT CRITICAL S}^*$

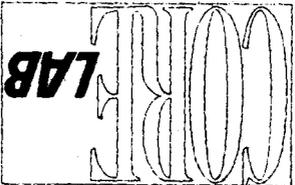
← ONE OHM-METER REFERENCE FOR  $R_p = 0.01$

PERMEABILITY  
 MILLIDARCIES  
 DEPTH FEET



ISMAT ZONE

**CORE LABORATORIES, INC.**



*Petroleum Reservoir Engineering*

COMPANY MCO RESOURCES, INC.

FILE NO. 3803-00343

WELL CANYON STATE 1-36

DATE 28-SEPT-1984

FIELD EXT. TIN CUP MESA

ELEV. 4851 KB

COUNTY SAN JUAN STATE UTAH

FORMATION ISMAY WBM

LOCATION NE, NW SEC. 36-138S-R25W

CORES

**CORRELATION COREGRAPH**

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VERTICAL SCALE: 5" = 100'

