Form OGC-1b

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

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

5. LEASE DESIGNATION AND SERIAL NO.: U-13655

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.)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1. OIL WELL ☐ GAS WELL ☐ OTHER Injection Well-Pad Location

7. UNIT AGREEMENT NAME: Tin Cup Mesa

2. NAME OF OPERATOR: Marathon Oil Company

8. FARM OR LEASE NAME: Tin Cup Mesa

3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, Wyoming 82602

9. WELL NO.: 4-25

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 50' FSL & 2490' FWL

10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 25, T38S, R25E

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5037' GL

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

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

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

Permission is requested to construct approximately 20,000 sq. ft. of a drill pad in Section 36, T38S, R25E, San Juan County, Utah. It was decided that Tin Cup Mesa #4-25, an injection well, be drilled 50' FSL & 2490' FWL, Section 25, T38S, R25E, San Juan County, Utah, at a State Hearing on January 24, 1985.

Due to the proximity of the well to Section 36, approximately 20,000 sq. ft. of the drill pad will be located in Section 36. After the well is drilled, this area will be reclaimed and reseeded.

Attached for your reference please find a location plat and a schematic of the rig layout.

An archeological clearance report will be forwarded to you as soon as we receive one. Thank you for your cooperation in dealing with this project.

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 2/14/85
BY: John R. Baza

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

SIGNED Doyle L. Jones TITLE District Operations Manager DATE January 31, 1985

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

MARATHON OIL COMPANY
Tin Cup Mesa Water Injection Well #4-25
Drilling Operations Plan
50' FSL, 2,490' FWL, Section 25, T38S, R25E
San Juan County, Utah
Elevation: 5,058' K.B. (Est.)
5,046' G.L. (Est.)

1. Geologic name of surface:

Jurassic Morrison Formation

2. Estimated tops of important geologic markers:

Formation	Depth (K.B.)	Datum	Formation	Depth (K.B.)	(Datum)
Carmel	669'	+4,389'	Paradox	5,187'	- 129'
Navajo	694'	+4,364'	Upper Ismay	5,342'	- 284'
Kayenta	914'	+4,144'	Hovenweep	5,482'	- 424'
Wingate	1,077'	+3,981'	Lower Ismay	5,512'	- 454'
Chinle	1,462'	+3,596'	Gothic Shale	5,567'	- 509'
Shinarump	2,262'	+2,796'	Desert Creek	5,572'	- 514'
Moenkopi	2,312'	+2,746'	Chimney Rock	5,667'	- 609'
Cutler	2,392'	+2,666'	Akah	5,689'	- 631'
Honaker Trail	4,247'	+ 811'	T.D.	5,700'	- 642'

3. Estimated depths of anticipated water, oil, gas or other mineral bearing formations:

Formation/Member	Depth (G.L.)	Possible Content
Carmel	669'	Water
Navajo	694'	Water
Wingate	1,077'	Water
DeChelly**	2,392'	Brine
Honaker Trail	4,247'	Oil
Paradox	5,187'	Brine
Upper Ismay	5,342'	Oil***
Lower Ismay	5,512'	Oil
Desert Creek	5,572'	Oil

** The Cutler Formation may contain the DeChelly Member.
***Primary Objective.

4a. The casing program including the size, grade, weight, whether new or used, and a setting depth of each string:

Min. Hole Size	Casing O.D.	Grade	Weight	Setting Depth	New or Used	Cplg
20"	14"	Thinwall Steel Pipe		60'	New	N/A
12 1/4"	8 5/8"	K-55	24#	1,500'	New	ST&C
7 7/8"	5 1/2"	K-55	15.5#	4,700'	New	ST&C
	5 1/2"	K-55	17#	5,700'	New	ST&C

4b. The cementing program including type, amounts, and additives:

8 5/8" Casing

Cement Volume: 1,500' x .4127 ft^3/ft x 2.0 excess = 1,238 ft^3

Lead Slurry: 1,000' plug 100% excess - 503 sacks of high yield cement (35% fly ash, 65% cement, 6% bentonite) containing 1/4#/sack cellophane flakes and 2% $CaCl_2$.

Weight: 12.7 ppg
Yeild: 1.64 ft^3/sack
Water Requirement: 8.34 gal/sack

Tail Slurry: 500' plus 100% excess - 350 sacks of Class "B" cement containing 1/4#/sack cellophane flakes and 2% $CaCl^2$.

Weight: 15.6 ppg
Yeild: 1.18 ft^3/sack
Water Requirement: 5.2 gal/sack

Casing Equipment will include a float shoe, float collar, and three centralizers. WOC time will be minimum of 6 hours. If float equipment holds, closed-in pressure after cementing is not recommended.

5 1/2" Casing

Cement Volume: 4,250' x .1733 ft^3/ft x 1.25 excess = 921 ft^3. Actual cement volumes will be based on caliper log plus 25% excess.

Slurry Preflush: 20 barrels

Lead Slurry: (3,200' column height) 422 sacks "Lite" cement with 2% $CaCl_2$.

Weight: 12.7 ppg
Yeild: 1.64 ft^3/sack
Water Requirement: 8.34 gal/sack

Tail Slurry: (1,050' column height) 200 sacks Class "B" with 1% fluid loss additive.

Weight: 15.6 ppg
Yeild: 1.18 ft^3/sack
Water Requirement: 5.2 gal/sack

Casing Equipment will include a float shoe, float collar, and six centralizers.

5. B.O.P. specification and testing: (see the attached schematic diagram for size and pressure ratings):

BOP equipment will include a dual ram type preventer with pipe and blind rams and an annular preventer (API arrangement SRRA). All equipment will have a 3,000 psi or greater working pressure. Rams, valves, lines, choke manifold, and casing will be tested to 200 psi for 5 minutes and 1,500 psi for 5 minutes prior to drilling out from under 8 5/8" surface casing. After drilling casing shoe and 5' of additional hole, a shoe test will be performed to 13.5 ppg equivalent mud weight or leak off, whichever occurs first.

A visual check of BOP equipment will be made hourly. Functon pipe rams daily and blind rams on trips.

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

6. Mud program and anticipated pressures:

From	To	Type Mud	Weight	% Oil	Water Loss
0'	1,500'	Spud	8.5-9.0	0	No Control
1,500'	2,392' Cutler	Gel/Water	8.5-9.0	0	No Control
2,392' Cutler	5,342' U. Ismay	Gel/Chemical	9.4-10.3	0	10.0-12.0 cc's
5,342' U. Ismay	T.D.	Gel/Chemical	As Required	0	8.0-9.0 cc's

Mud weights will be kept at a minimum to maximum ROP and minimize lost circulation. However, the existence of water flows may necessitate an increase in mud weight while drilling. Sufficient barite should be kept on location prior to spud in order to increase the mud weight to 11.7 ppg if required.

7a. Type of drilling tools and auxiliary equipment:

A drilling rate recorder, calibrated to record drilling time for each one foot drilled will be used.

A kelly cock will be used and a full opening safety valve will be available on the rig floor.

The mud system will include a desander/desilter, gas buster or degasser.

A manual adjustable choke.

A single shot drift indicator will be used.

7b. Deviation Control:

From	To	Maximum Distance Between Surveys	Maximum Deviation From Vertical	Maximum Change Per 100' of Depth
0'	1,500'	250'	1^{o}	1^{o}
1,500'	T.D.	500'	5^{o}	1^{o}

8. Sample, logging, testing, and coring program:

Samples: 10' intervals from 1,500' to T.D. with a two-man mud logging unit, or as specified by a Marathon representative.

Logging: A DIL/GR/CAL will be run on the 12 1/4" surface hole prior to running casing.

1. DLL/MSFL/GR from T. D. to the surface casing with the GR to surface.
2. BHC Sonic/VDL/GR from T.D. to surface casing.
3. FDC/CNL/Spectral GR from T.D. to surface casing.

The Coriband (Cyberlook) service will be used from the top of the Honaker Trail to T.D.

Testing: Two DST's are anticipated in the top of the Upper Ismay and in the Desert Creek.

Coring: Two 60' cores are anticipated in the Upper Ismay.
One 60' core is anticipated in the Desert Creek.

9. Anticipated abnormal pressures or temperatures:

The DeChelly Member of the Cutler Formation, if penetrated, may contain overpressured salt water requiring 10.5 to 11.5 ppg mud weight to control.

Maximum anticipated bottom hole temperature is approximately 145° F.

Maximum anticipated bottom hole pressure is approximately 3,350 psi.

10. The anticipated starting date and duration of operation:

Starting Date: 1st Quarter, 1985

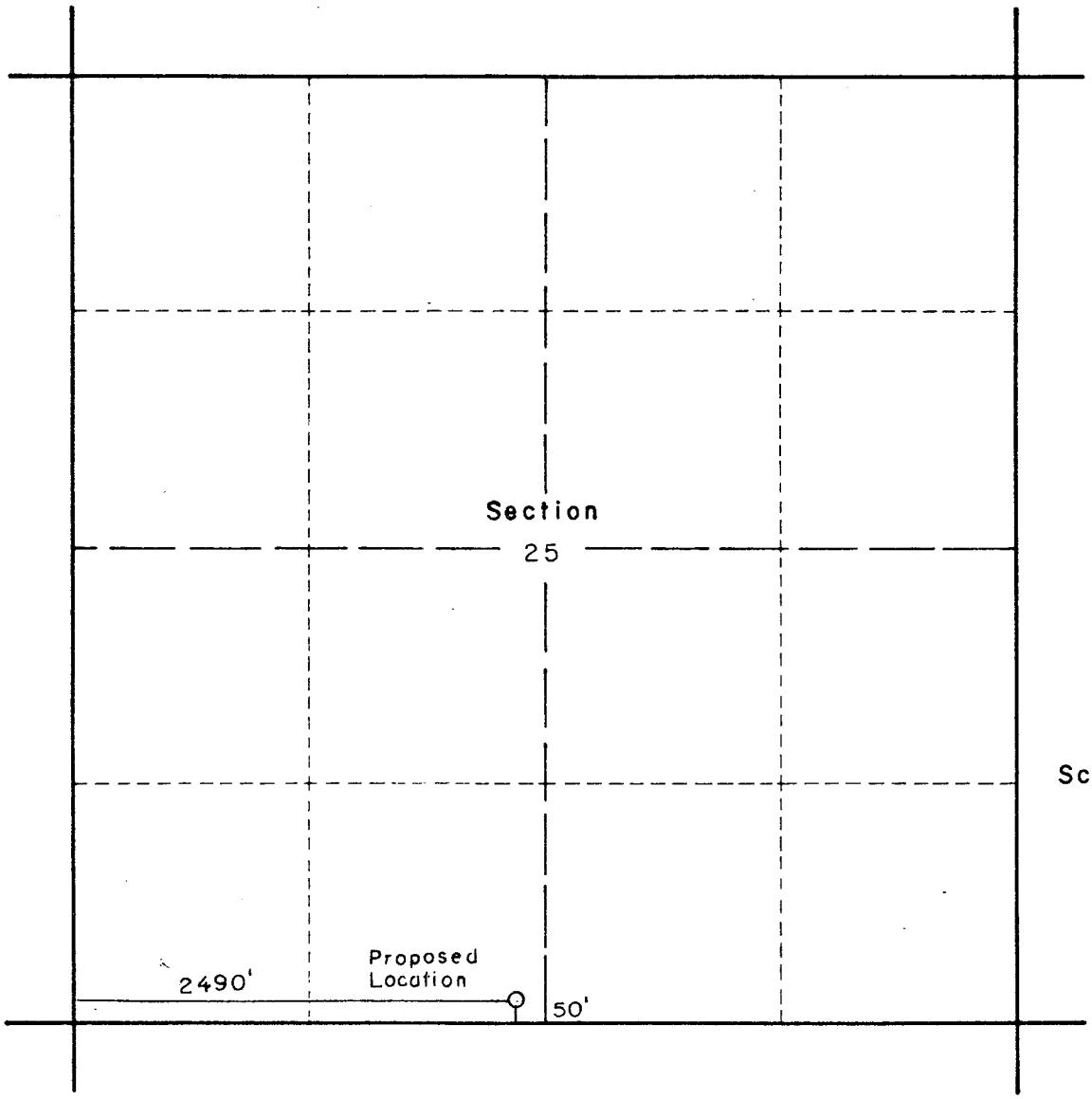
Duration: 22 days

DISTRICT APPROVALS		DIVISION APPROVALS	
Approved	Date	Approved	Date

CASING DESIGN

DESIGN FACTORS:
SF_c = 1.125 Pipe evacuated w/normal MW + .5 ppg. Consider collapse reduction due to tension.
SF_b = 1.250 The greater of : 1. Normal MW in annulus. Bottom hole pressure - .10 ppf gas gradient in gas filled pipe.
2. Normal MW in annulus. Maximum surface treating pressure + Hydrostatic of treating fluid.
SF_t = 1.50 No buoyancy.

CASING	API/NON-API DRIFT	SETTING DEPTH	SECTION LENGTH	TENSION - 1,000 lb.			COLLAPSE				BURST		
				STRENGTH	FORCE	S.F.	STRENGTH	FORCE	REDUCED STRENGTH	S.F.	STRENGTH	FORCE	S.F.
8 5/8", 24#, K-55, ST&C	7.972"	1,500'	1,500'	263	36	7.31	1,370	741	1,370	1.85	2,950	1,503	2.80
5 1/2", 15.5#, K-55, ST&C	4.825"	4,700'	4,700'	222	90	2.47	4,040	3,055	3,959	1.30	4,810	2,780	1.73
5 1/2", 17#, K-55, ST&C	4.767"	5,700'	1,000'	252	17	14.80	4,910	3,705	4,910	1.32	5,320	1,620	3.28



Scale: 1" = 1000'

LOCATION: MARATHON OIL CO. - TIN CUP MESA 4-25

Located 50 feet North of the South line and 2490 feet East of the West line of Section 25
Township 38 South Range 25 East Salt Lake Base & Meridian
San Juan County, Utah
Existing ground elevation determined at 5037 feet based on adjoining locations.

I hereby certify the above plat represents a survey made under my supervision and that it is accurate to the best of my knowledge and belief

Frederick H. Reed

FREDERICK H. REED
Registered Land Surveyor

MARATHON OIL COMPANY
Casper, Wyoming

TIN CUP MESA 4-25
SEC. 25, T 38 S, R 25 E
San Juan County, Utah

CLARK-REED & ASSOC.
Durango, Colorado

DATE: JAN. 22, 1985
FILE NO: 85003

Casper Division
Production United States

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

January 28, 1985

Chief, Branch of Fluid Minerals
Bureau of Land Management
Atten: Bob Henricks
Utah State Office
324 South State, Suite 301
Salt Lake City, Utah 84111-2303

Re: 1985 Plan of Development and 1984
Summary of Operations, Tin Cup
Mesa Unit, San Juan County, Utah

Dear Mr. Henricks:

Marathon Oil Company, as Unit Operator of the subject unit, herein submits (in triplicate), for your approval, the 1985 Plan of Development and the Summary of Operations for 1984.

Summary of Operations for 1984

Two oil wells were drilled during 1984, #2-25 and #3-25. These are "paying" wells and have been included in the Ismay Zone Participating Area. Pressure Maintenance was scheduled to begin in September, however, because of disagreement among working interest owners it was postponed and the entire field was shut-in by order of the Utah Board of Oil, Gas, and Mining on November 5, 1984. Short paragraphs on the gas facility and on the injection facility and a schematic drawing are attached.

Two coreholes, one near well #3-26 and another near the north edge of Section 25, were drilled and one rotary hole in SE NE of Section 26 was drilled in 1984 for research purposes. All three holes were drilled to a depth of approximately 2,000' and have been plugged and abandoned.

Operator

Plan of Development for 1985

Production resumed on January 24, 1985, by order of the Utah State Board and pressure maintenance commenced on January 26, 1985. Since injection began in January, the effective date of the Pressure Maintenance Participating Area is Janauary 1, 1985. It is planned to drill a third injection well to the Ismay Zone at 2,490' FWL and 50' FSL, Section 25, T38S, R25E, within the Ismay Zone Participating Area.

Very truly yours,

MARATHON OIL COMPANY

Doyle L. Jones
District Operations Manager

DLJ/WAW/kt
Attachments

1985

STATUS OF WELLS

TIN CUP MESA UNIT

Marathon Tin Cup Mesa #3-26	*POW (Ismay)
Marathon Tin Cup Mesa #1-25	Water Injector (Ismay)
MCOR Canyon Junction #1-25	P&A 2/1/81
Marathon Tin Cup Mesa #2-23	*POW (Ismay)
Marathon Tin Cup Mesa #3-23	Water Injector (Ismay)
Marathon Tin Cup Mesa #1-23	P&A (Evaporation Pit installed on Dry Hole Site)
Marathon Tin Cup Mesa #2-25	*POW (Ismay)
Marathon Tin Cup Mesa #4-26	*POW (Ismay)
Marathon Tin Cup Mesa #3-25	*POW (Ismay)

*Producing Oil Well

TIN CUP MESA GAS FACILITY

Since December 16, 1983, a dew point control gas processing facility has operated at Tin Cup Mesa. This facility includes on-site NGL removal and storage, compression of gas for pipeline transmission and process equipment to control sales gas dew point.

TIN CUP MESA WATER INJECTION FACILITY

A centralized water injection facility was installed in September 1984, at Tin Cup Mesa. This facility includes a self-supporting, enclosed injection pump house, all injection flow lines from the pump house to converted injection wells #1-25 and #3-23, and a water supply well with downhole submersible pump and generator building. Startup of the facility occured January 26, 1985.

PUMP PRESSURES

Operating Pressure 3000 psig

Max Pressure 3200 psig

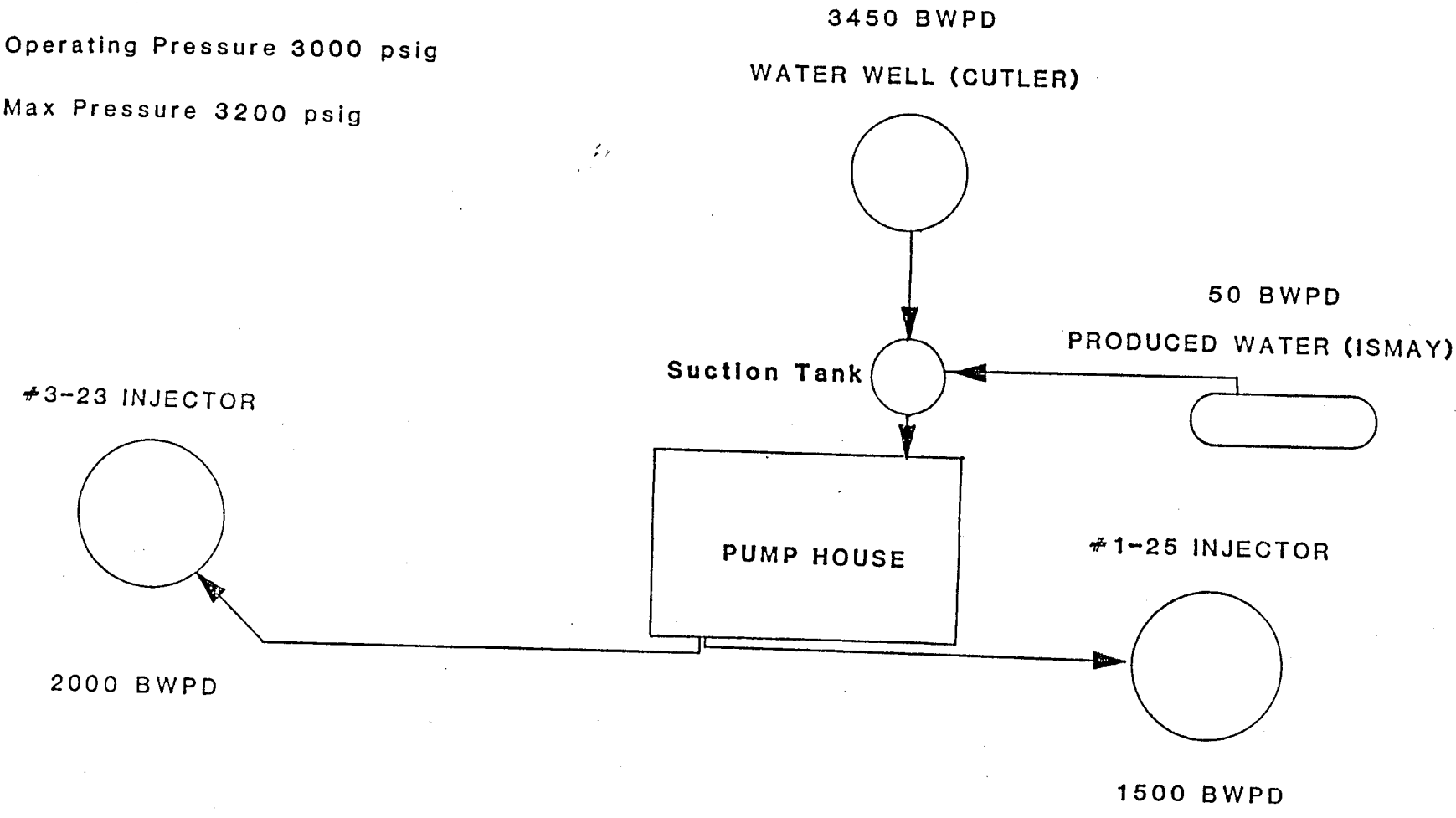
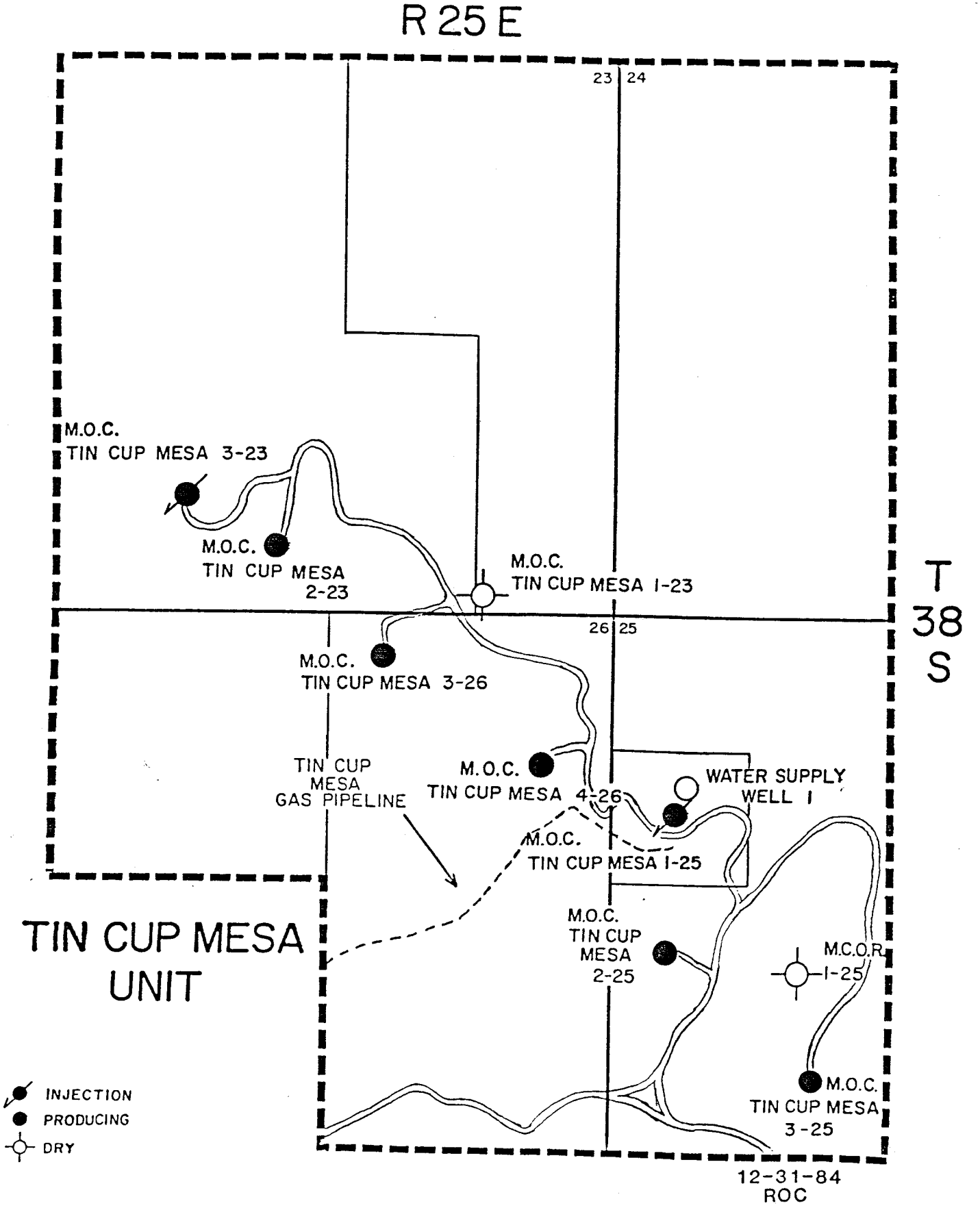
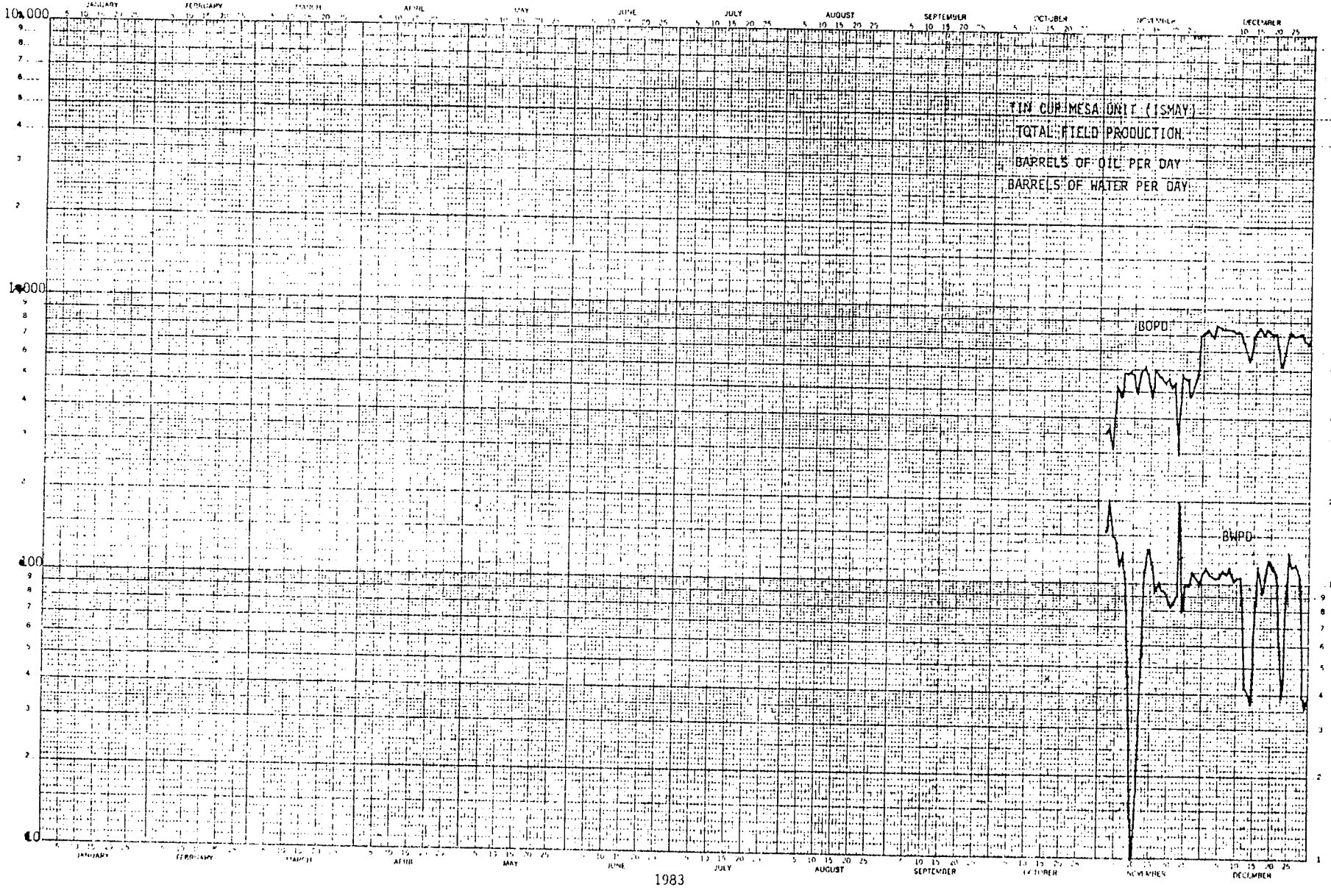
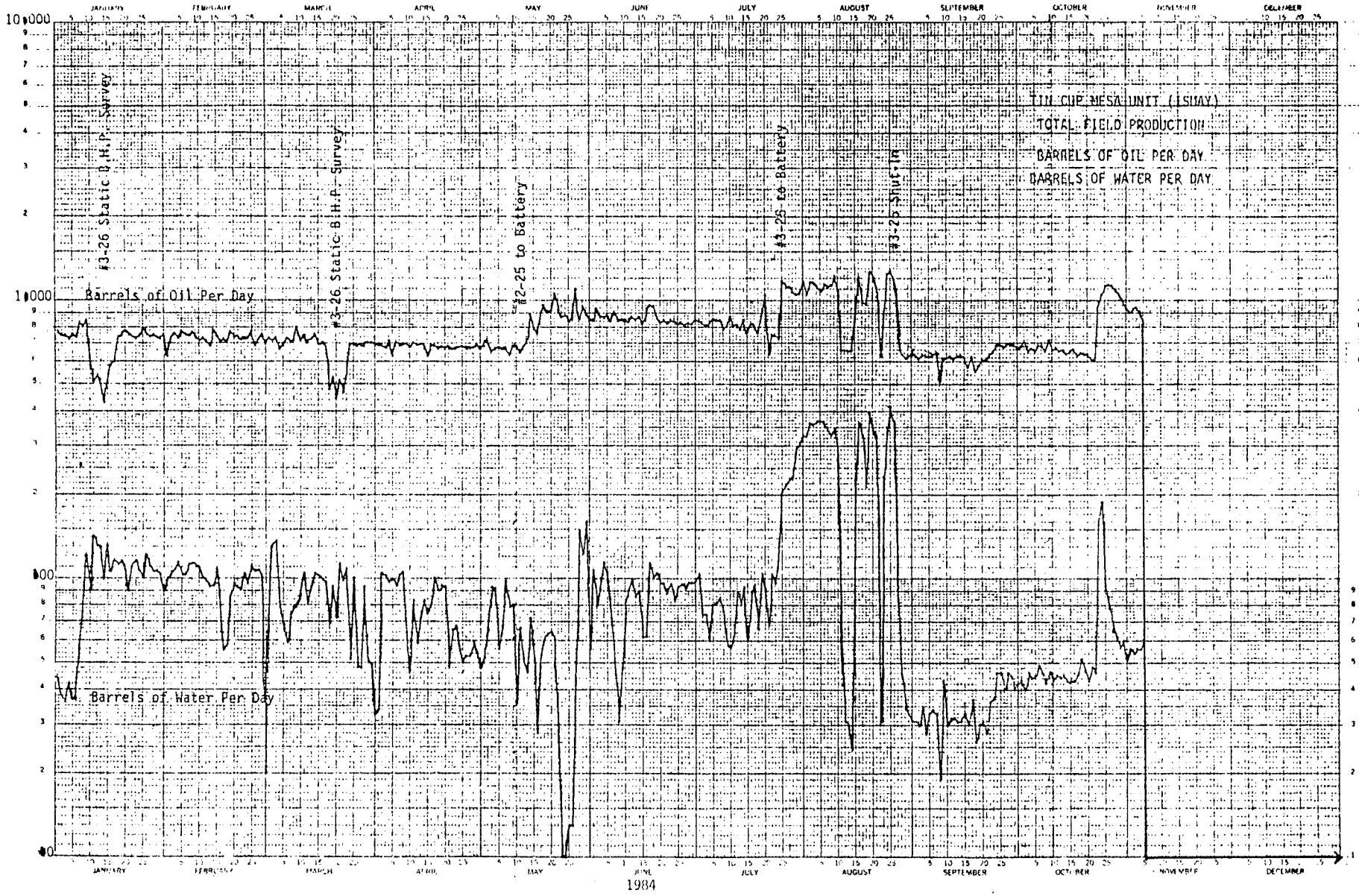


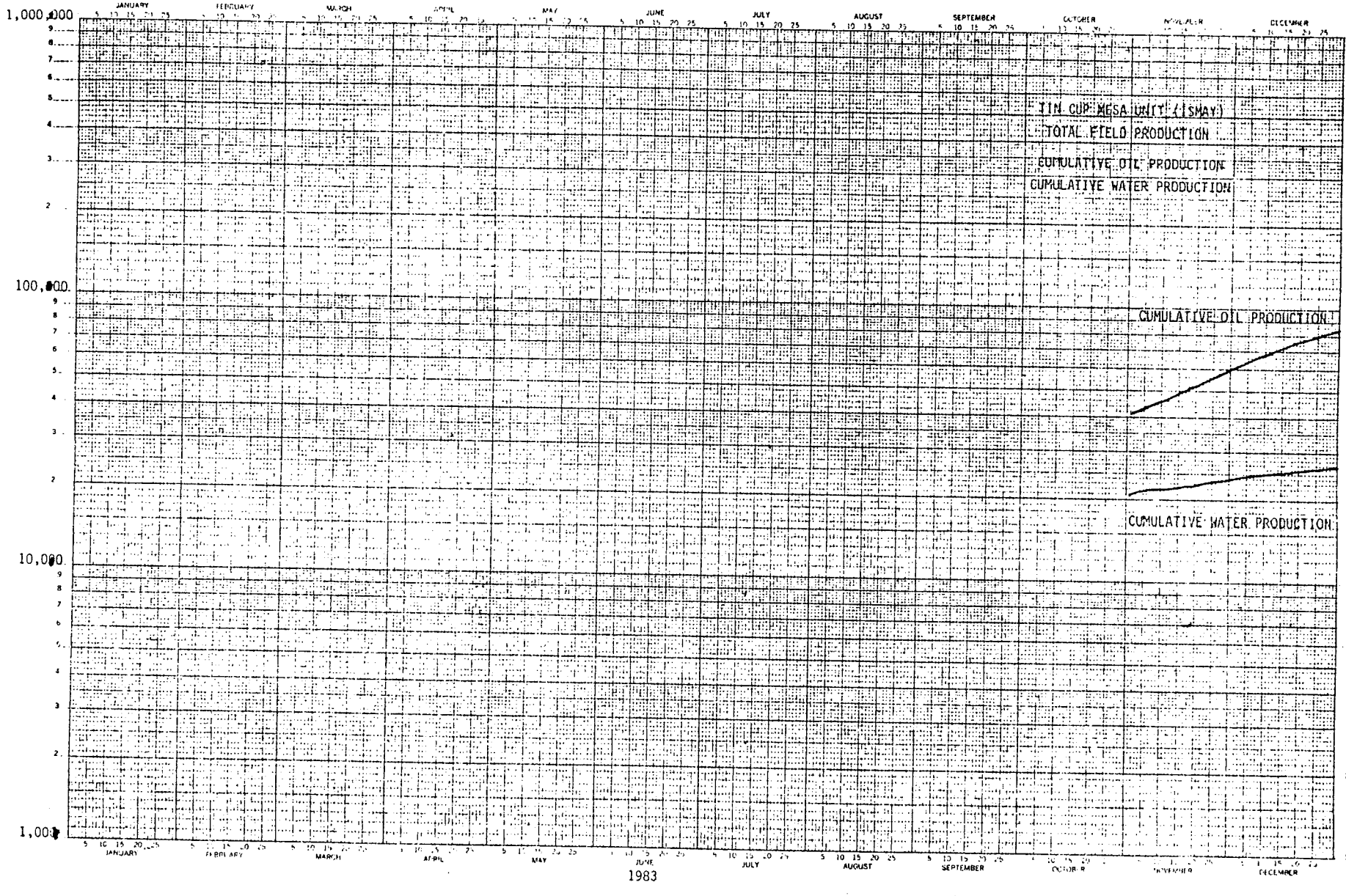
Exhibit E

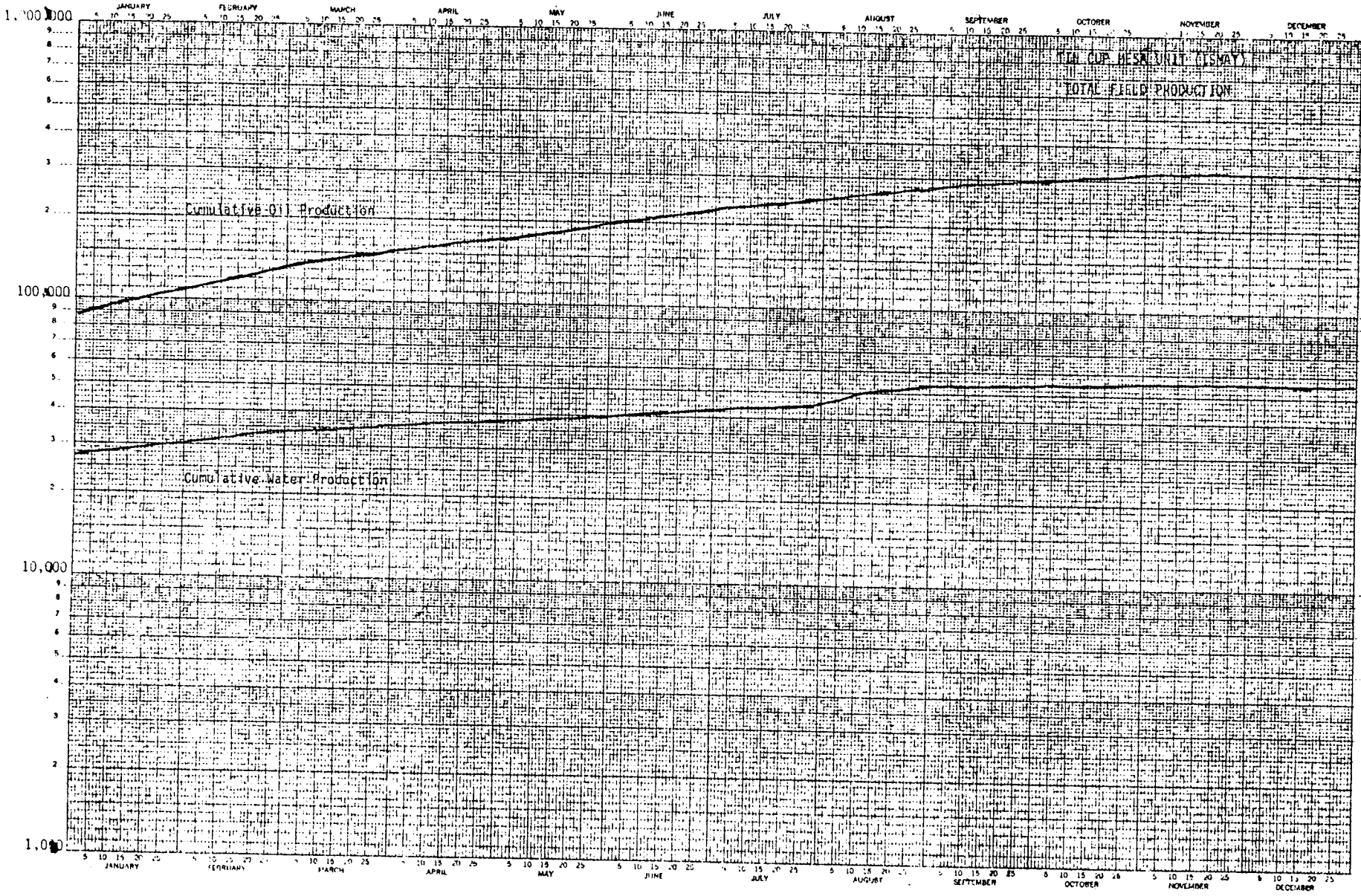
TIN CUP MESA WATER INJECTION FACILITY

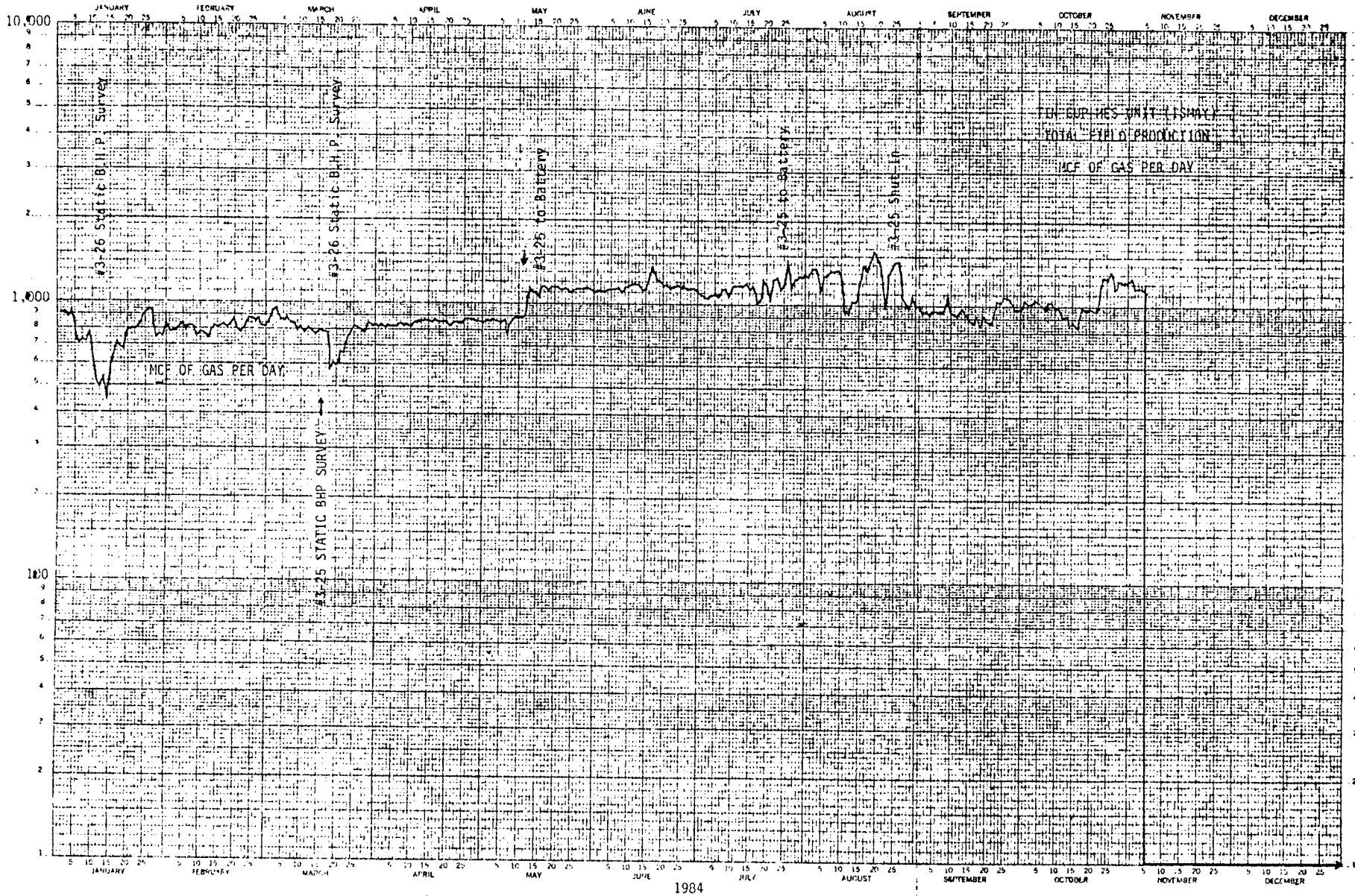

R 25 E
23
24
T
38
S
26
25
M.O.C.
TIN CUP MESA 3-23
M.O.C.
TIN CUP MESA
2-23
M.O.C.
TIN CUP MESA 1-23
M.O.C.
TIN CUP MESA 3-26
TIN CUP
MESA
GAS PIPELINE
M.O.C.
TIN CUP MESA 4-26
WATER SUPPLY
WELL 1
M.O.C.
TIN CUP MESA 1-25
TIN CUP MESA
UNIT
M.O.C.
TIN CUP
MESA
2-25
M.C.O.R.
1-25
M.O.C.
TIN CUP MESA
3-25
INJECTION
PRODUCING
DRY
12-31-84
ROC

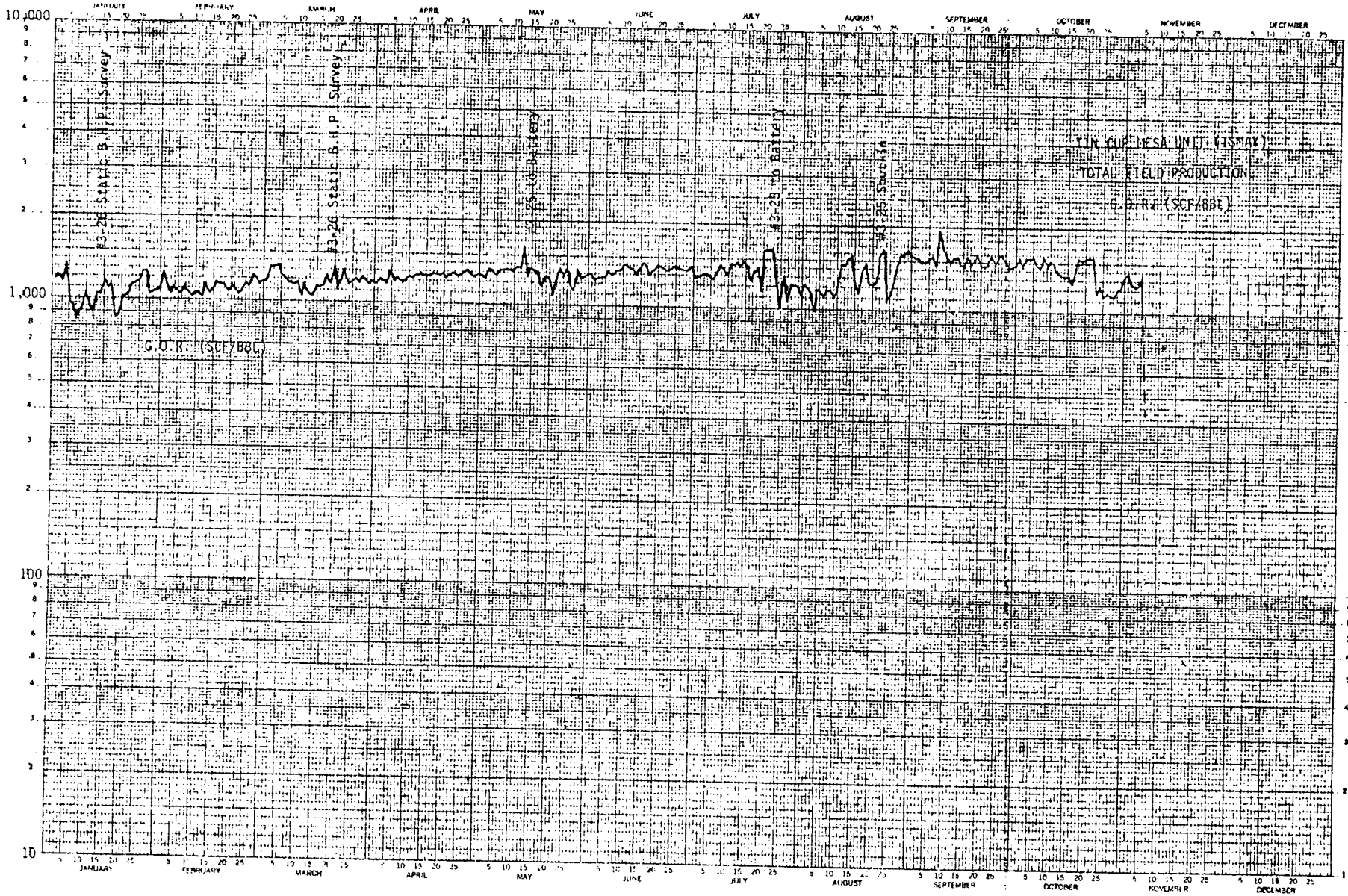

TIN CUP MESA UNIT (TSMAY)
TOTAL FIELD PRODUCTION
BARRELS OF OIL PER DAY
BARRELS OF WATER PER DAY
BOPD
BWPD
10,000
1,000
100
10
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
1983


TIN CUP MESA UNIT (ISMAY)
TOTAL FIELD PRODUCTION
BARRELS OF OIL PER DAY
BARRELS OF WATER PER DAY
#3-26 Static B.H.P. Survey
#3-26 Static B.H.P. Survey
#2-25 to Battery
#3-25 to Battery
#3-25 Shut-In
Barrels of Oil Per Day
Barrels of Water Per Day
10,000
1,000
100
0
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
1984


TIN CUP MESA UNIT (ISMAY)
TOTAL FIELD PRODUCTION
CUMULATIVE OIL PRODUCTION
CUMULATIVE WATER PRODUCTION
CUMULATIVE OIL PRODUCTION
CUMULATIVE WATER PRODUCTION
1,000,000
100,000
10,000
1,000
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
1983


TEN CUP MESA UNIT (TSMAV)
TOTAL FIELD PRODUCTION
Cumulative Oil Production
Cumulative Water Production
1,000,000
100,000
10,000
1,000
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER


JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
10,000
1,000
100
#3-26 Static B.H.P. Survey
#3-26 Static B.H.P. Survey
#3-25 to Battery
#3-25 to Battery
#3-25 Shut-In
MCF OF GAS PER DAY
#3-25 STATIC BHP SURVEY
TEN SURVEYS UNIT (1SHAY)
TOTAL FIELD PRODUCTION
MCF OF GAS PER DAY
1984


TIN CUP MESA UNIT (YSMAX)
TOTAL FIELD PRODUCTION
G.O.R. (SCF/BBL)
#3-28 Static B.H.P. Survey
#3-28 Static B.H.P. Survey
#3-28 to Battery
#3-28 to Battery
#3-25 Shut-in
10,000
1,000
100
10
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER

1984

Casper Division
Production United States

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

February 6, 1985

Estate of Charles Redd
c/o Charles Hardy Redd
La Sal, Utah 84530

Re: State Grazing Lease, GP21382

Dear Mr. Redd:

Marathon Oil Company is in the process of permitting an injection well to be drilled in Section 25, T38S, R25E, of San Juan County, Utah. This well will be located 50' FSL and 2490' FWL of Section 25. Due to the proximity of the well to Section 36, T38S, R25E, approximately 20,000 square feet of the drill pad will be located in Section 36, a State owned section.

The State of Utah Natural Resources and State Lands and Forestry Departments have been notified of the above situation. They suggested that you, the grazing lessee, also be notified. This letter is being sent to serve that purpose.

The land in Section 36 that will be disturbed during the drilling phase of the above well will be reclaimed and reseeded as soon as possible after the well has been drilled.

If you have any questions feel free to contact Mr. Frank Krugh at this number (307) 577-1555 extension #219.

Sincerely,

MARATHON OIL COMPANY

Frank M. Krugh

Frank M. Krugh
Regulatory Coordinator

FMK:mrt

La Plata Archeological Consultants, Inc.
P.O. Box 783
Dolores, Colorado 81323
303-882-4933

February 6, 1985

Mr. Chas Cartwright
Area Archeologist
Bureau of Land Management
P.O. Box 7
Monticello, Utah 84535

Mr. Cartwright:

Please find enclosed the archeological report pertaining to Marathon Oil Company's Tin Cup Mesa #4-25 well pad and access road. Archeological clearance for the project has been recommended.

Sincerely,

Patrick L. Harden
President

Distribution:
BLM - Salt Lake City
Division of State History
Marathon Oil Company

PLH/cs

ARCHEOLOGICAL INVESTIGATIONS FOR MARATHON OIL COMPANY'S TIN CUP MESA #4-25 WELL, SAN JUAN COUNTY, UTAH

LAC REPORT 8509

by
Patrick L. Harden

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

FEBRUARY 6, 1985

Fdederal Antiquities Permit
84-UT-54625

Prepared For:
Marathon Oil Company
P.O. Box 2659
Casper, Wyoming 82602

ABSTRACT

Archeological investigations for Marathon Oil Company's Tin Cup Mesa #4-25 well pad and access road were conducted by personnel of La Plata Archeolgoical Consultants, Inc. on January 29 and 31, 1985. The well pad is located in the extreme SE¼, SW¼ of section 25, and a small portion of the NE¼, NW¼ of section 36; T38S, R25E, San Juan County, Utah. The Bureau of Land Management - San Juan Resource Area administers the land in section 25, while section 36 is Utah State land. All of the SW¼ of section 25 had been previously inventoried for cultural resources by personnel of LAC, while the project area in section 36 was surveyed on the 31st. Approximately 600 feet of new access road will be required, beginning on the south side of Marathon's #3-25 well and running southeast to the new location. The access route was flagged during the on-site inspection held on the 29th, and effectively avoids archeological site 42SA11604/14587 located to the east of the #3-25 location. No cultural resources are in the project area. If the access route flagged is strictly adhered to during construction and well operation archeological clearance for the project is recommended.

INTRODUCTION

The archeological investigations for Marathon Oil Company's Tin Cup Mesa #4-25 well pad and access road were conducted by

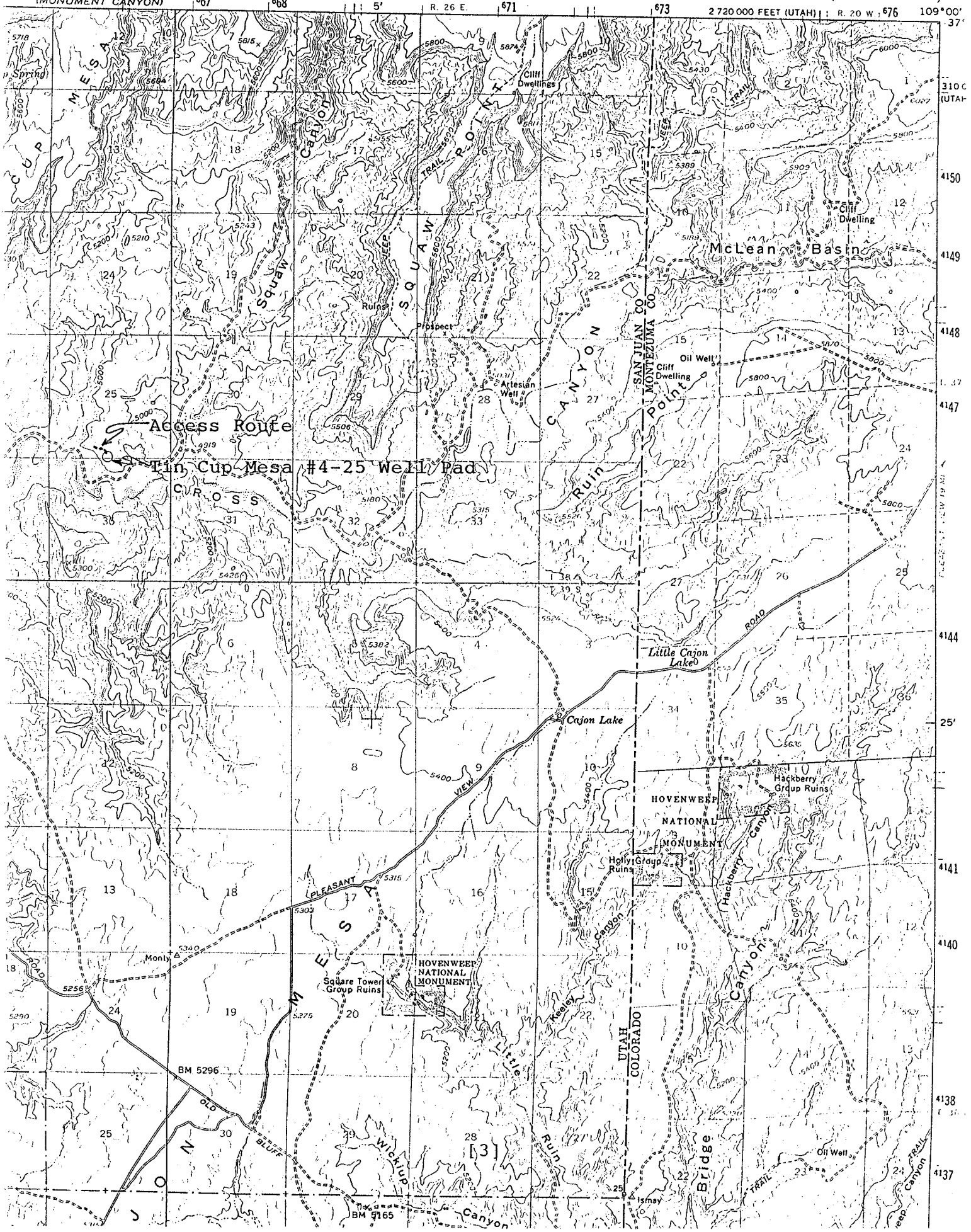
Patrick Harden of La Plata Archeological Consultants, Inc. of Dolores, Colorado on January 29 and 31, 1985. The investigations were requested by Mr. Frank Krugh of Marathon. Although the entire ¼ section in which most of the project is located had been previously inventoried for cultural resources Mr. Krugh requested that an archeologist be present during the pre-drill on-site inspection held on January 29th. Persons attending the predrill included Mr. Krugh (Marathon), Rich McClure (BLM), Howard Hughes (Hughes Construction), Jim Perkins (Reed Surveying), and Harden (LAC).

The project is located in the SE¼, SW¼ of section 25, and the NE¼, NW¼ of section 36; T38S, R25E, San Juan County, Utah. All but ca. 20,000 square feet of the entire project is located in section 25. All of the access is also located in section 25. The Bureau of Land Management - San Juan Resource Area administers the land in section 25, while State owned land is in section 36. The project consists of the construction of a single well pad ca. 325 X 250' in size. Ca. 600' of access road will also be constructed. The access road originates at Marathon's #3-25 well, and the access to that well provides the great majority of access to the #4-25 well.

The entire SW¼ of section 25 had been previously inventoried for cultural resources (Harden 1984a), and the #3-25 location and access road were also investigated (Harden 1984b).

UNITED STATES
MIC ENERGY COMMISSION

CAJON MESA QUADRANGLE
UTAH—COLORADO
15 MINUTE SERIES (TOPOGRAPHIC)



The reader should refer to the previous survey report for a description of the environment and results of the survey. The ca. 20,000 square feet of the project (and small buffer zone) located in section 36 was surveyed on January 31st. This area could not be investigated on the 29th during the pre-drill because of excessive snow cover.

RESULTS OF INVESTIGATIONS

It was known that an archeological site was located in the general vicinity of the proposed well pad, and just to the east of the #3-25 location. The west and north borders of the site had been fenced to protect it during construction of the #3-25 well. No other archeological sites had been previously found in the project area. The #4-25 well location is well to the southeast of archeological site 42SA11604/14587 (one site, but recorded by earlier surveys as two sites), although the access road to the well passes just to the south of the site (within ca. 75-100'). The access route was flagged during the pre-drill inspection by the dirt contractor (Hughes) and the archeologist, and will avoid disturbing any protion of the site.

An area ca. 200 X 200 feet in section 36 which includes the south portion of the well pad was archeologically surveyed on January 31st by walking a series of transects spaced 15m apart across the area. No cultural resources were found in

the area.

Provided that the access route flagged is strictly adhered to archeological clearance for the project is recommended. Also, the reader should refer to the archeological report for Marathon's #3-25 well (Harden 1984b) regarding strict avoidance of site 42SA11604/14587: i.e., if vandalism to the site occurs as a result of the proximity of the wells it should be fully excavated.

REFERENCES CITED

Harden, Patrick L.
1984a An Archeological Survey in the Cross Canyon Vicinity of Southeastern San Juan County, Utah for Marathon Oil Company. LAC Report 8401. Manuscript on file with the BLM, Monticello.

1984b Archeological Investigations for Marathon Oil Company's Tin Cup Mesa #3-25 Well Pad, San Juan County, Utah. LAC Report 8432. Manuscript on file with the BLM, Monticello.

Casper Division
Production, U.S. & Canada

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

February 7, 1985

State of Utah Natural Resources
Division of Water Rights
P.O. Box 718
Price, Utah 84501

Gentlemen:

Enclosed please find a Temporary Application to Appropriate Water to drill Tin Cup Mesa #4-25, located 50' FSL, 2490' FWL, Sec. 25, T38S, R25E, San Juan County, Utah. Also, enclosed please find a check in the amount of $15.00 to cover the application fee.

Marathon is presently in a situation that requires this well to be drilled in the most timely manner. Your expedient approval of this permit would be greatly appreciated. Please contact Mr. Frank Krugh 307-577-1555 if there are any questions.

Thank you for your cooperation in dealing with this permit.

Sincerely,

MARATHON OIL COMPANY

Frank M. Krugh

Frank M. Krugh
Regulatory Coordinator

FMK:mrt
Enclosures

Casper Division
Production, U.S. & Canada

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

February 8, 1985

Bureau of Land Management
Attn: Mr. Bob Graff
P.O. Box 970
Moab, Utah 84532

Dear Sir:

Enclosed please find a complete package for the "Application for Permit to Drill" Tin Cup Mesa #4-25, injection well. As you are aware, all parties are anxious for the drilling and completion of this well to ensure optimum pressure maintenance in the Tin Cup field. Your expeditious handling of this Application will be appreciated.

Sincerely,

MARATHON OIL COMPANY

Robert F. Unger
District Engineer

RFU:mrt
Enclosures

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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

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

7. UNIT AGREEMENT NAME: Tin Cup Mesa

8. FARM OR LEASE NAME: Tin Cup Mesa

2. NAME OF OPERATOR: Marathon Oil Company

9. WELL NO.: 4-25

3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, Wyoming 82602

10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: SE SE SW 50' FSL & 2490' FWL

At proposed prod. zone:

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 25, T38S, R25E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 8-1/2 miles northwest of Hatch Trading Post, Utah

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
50'	N/A	N/A
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
979'	5700' KB	0'-5700'

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5037' Ungraded Ground.

22. APPROX. DATE WORK WILL START*: First Quarter 1985

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
Please See Items #4A, #4B, and #6 of Drilling Operations Plan				

RECEIVED
FEB 11 1985
DIVISION OF OIL
GAS & MINING

Please See the following attachments:

1. Surveyor's Plat
2. Drilling Operations Program and 13-Point Surface Plan
3. Maps and Diagrams

The person responsible for the APD is Frank Krugh, Marathon.
OFFICE: (307) 577-1555
HOME: (307) 235-4506

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 Doyle L. Jones TITLE District Operations Manager DATE February 1, 1985

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

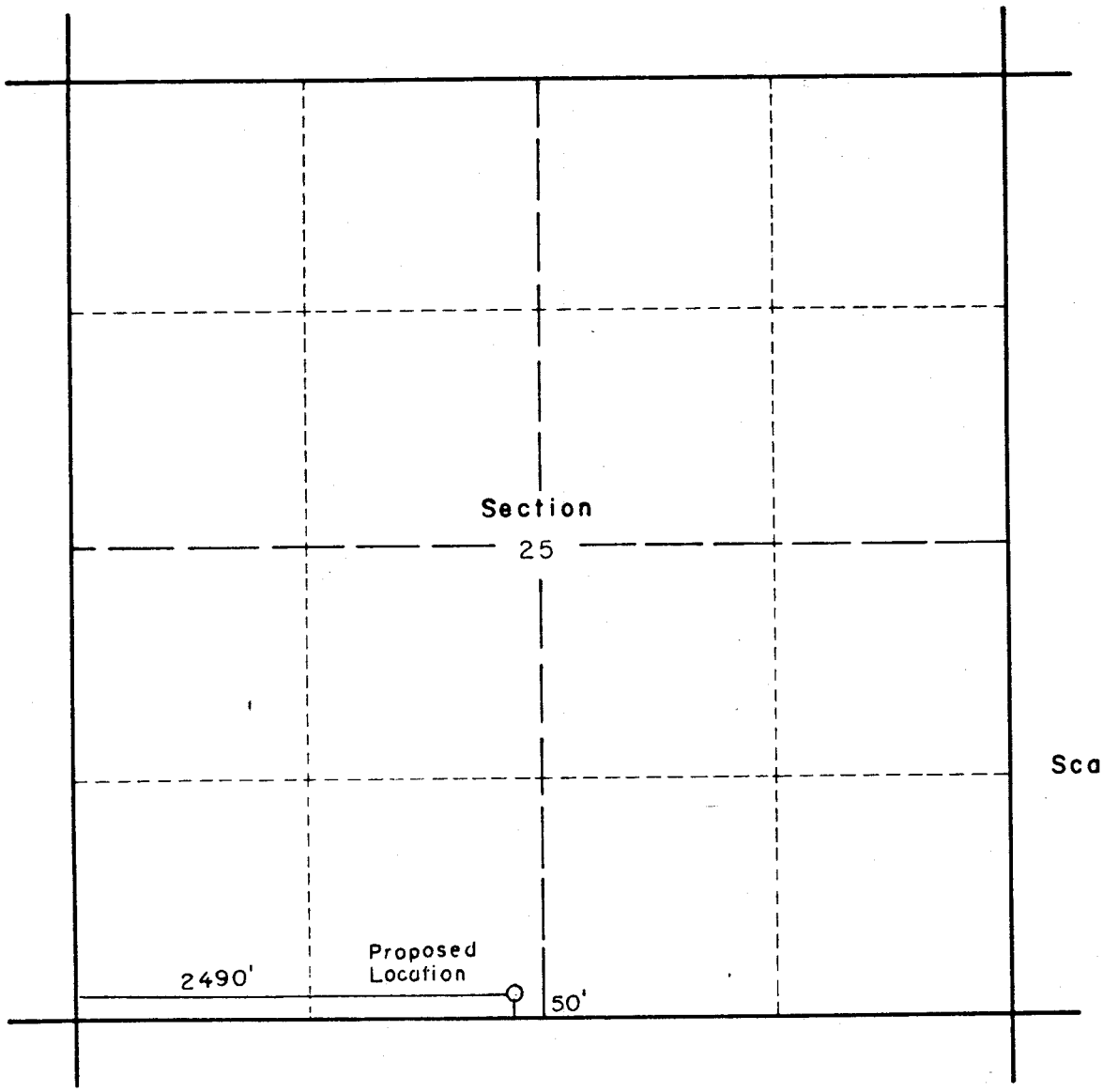
APPROVED BY _____ TITLE _____

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 2/14/85
BY: John R. Baza
WELL SPACING: #3 (unit well)

*See Instructions On Reverse Side

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



LOCATION: MARATHON OIL CO. - TIN CUP MESA 4-25

Located 50 feet North of the South line and 2490 feet East of the West line of Section 25
Township 38 South Range 25 East Salt Lake Base & Meridian
San Juan County, Utah
Existing ground elevation determined at 5037 feet based on adjoining locations.

I hereby certify the above plat represents a survey made under my supervision and that it is accurate to the best of my knowledge and belief.

Frederick H. Reed

FREDERICK H. REED
Registered Land Surveyor

MARATHON OIL COMPANY
Casper, Wyoming

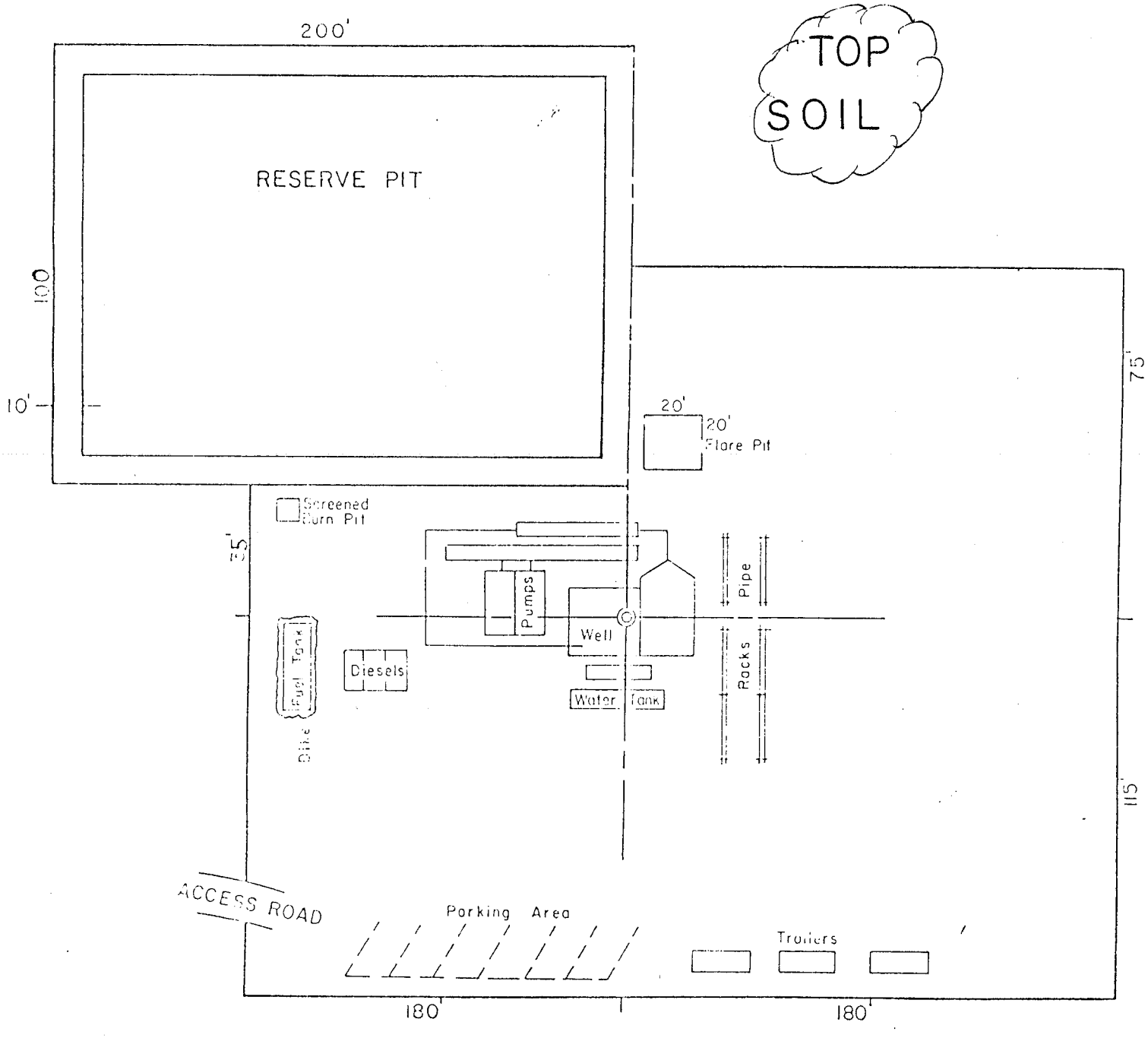
TIN CUP MESA 4-25
SEC. 25, T 38 S, R 25 E
San Juan County, Utah

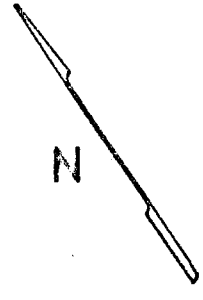
DATE: JAN. 22, 1985

SCHEMATIC
of
RIG LAYOUT

PROPOSED

DIAGRAM "C"





Tin Cup Mesa #4-25

Sec. 25 T 38 S R 25 E

San Juan Co., Utah

Casper Division
Production United States

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

January 28, 1985

Chief, Branch of Fluid Minerals
Bureau of Land Management
Atten: Bob Henricks
Utah State Office
324 South State, Suite 301
Salt Lake City, Utah 84111-2303

Re: 1985 Plan of Development and 1984
Summary of Operations, Tin Cup
Mesa Unit, San Juan County, Utah

Dear Mr. Henricks:

Marathon Oil Company, as Unit Operator of the subject unit, herein submits (in triplicate), for your approval, the 1985 Plan of Development and the Summary of Operations for 1984.

Summary of Operations for 1984

Two oil wells were drilled during 1984, #2-25 and #3-25. These are "paying" wells and have been included in the Ismay Zone Participating Area. Pressure Maintenance was scheduled to begin in September, however, because of disagreement among working interest owners it was postponed and the entire field was shut-in by order of the Utah Board of Oil, Gas, and Mining on November 5, 1984. Short paragraphs on the gas facility and on the injection facility and a schematic drawing are attached.

Two coreholes, one near well #3-26 and another near the north edge of Section 25, were drilled and one rotary hole in SE NE of Section 26 was drilled in 1984 for research purposes. All three holes were drilled to a depth of approximately 2,000' and have been plugged and abandoned.

RECEIVED
FEB 4 1985
CASPER DISTRICT
OPERATIONS
GOVERNMENT COMPLIANCE

APPROVED - EFFECTIVE JAN 31 1985
ACTING CHIEF, BRANCH OF FLUID MINERALS
BUREAU OF LAND MANAGEMENT

Operator

Plan of Development for 1985

Production resumed on January 24, 1985, by order of the Utah State Board and pressure maintenance commenced on January 26, 1985. Since injection began in January, the effective date of the Pressure Maintenance Participating Area is Janauary 1, 1985. It is planned to drill a third injection well to the Ismay Zone at 2,490' FWL and 50' FSL, Section 25, T38S, R25E, within the Ismay Zone Participating Area.

Very truly yours,

MARATHON OIL COMPANY

Doyle L. Jones
District Operations Manager

DLJ/WAW/kt
Attachments

1985

STATUS OF WELLS

TIN CUP MESA UNIT

Marathon Tin Cup Mesa #3-26	*POW (Ismay)
Marathon Tin Cup Mesa #1-25	Water Injector (Ismay)
MCOR Canyon Junction #1-25	P&A 2/1/81
Marathon Tin Cup Mesa #2-23	*POW (Ismay)
Marathon Tin Cup Mesa #3-23	Water Injector (Ismay)
Marathon Tin Cup Mesa #1-23	P&A (Evaporation Pit installed on Dry Hole Site)
Marathon Tin Cup Mesa #2-25	*POW (Ismay)
Marathon Tin Cup Mesa #4-26	*POW (Ismay)
Marathon Tin Cup Mesa #3-25	*POW (Ismay)

*Producing Oil Well

TIN CUP MESA GAS FACILITY

Since December 16, 1983, a dew point control gas processing facility has operated at Tin Cup Mesa. This facility includes on-site NGL removal and storage, compression of gas for pipeline transmission and process equipment to control sales gas dew point.

TIN CUP MESA WATER INJECTION FACILITY

A centralized water injection facility was installed in September 1984, at Tin Cup Mesa. This facility includes a self-supporting, enclosed injection pump house, all injection flow lines from the pump house to converted injection wells #1-25 and #3-23, and a water supply well with downhole submersible pump and generator building. Startup of the facility occured January 26, 1985.

PUMP PRESSURES

Operating Pressure **3000** psig

Max Pressure 3200 psig

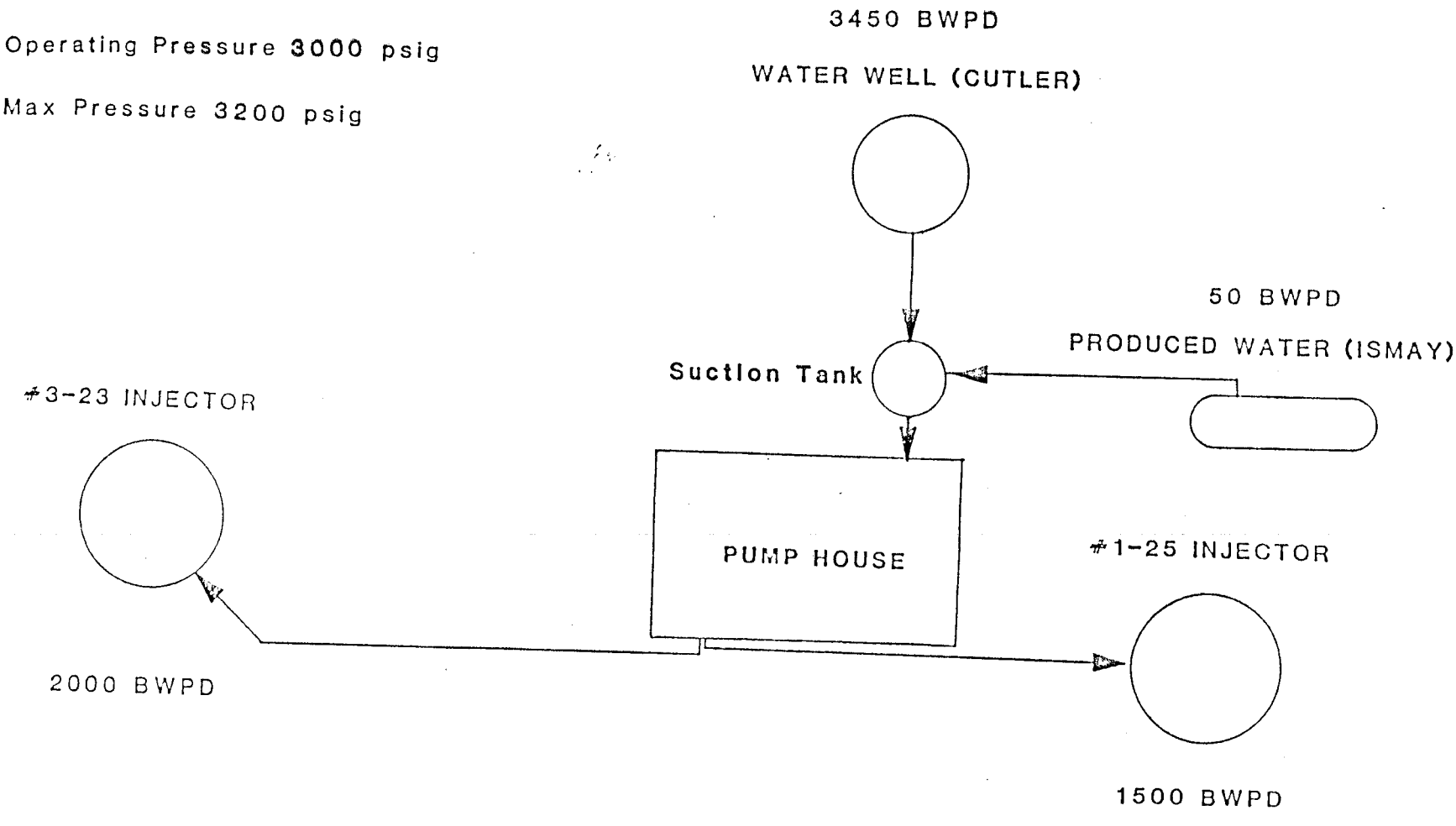
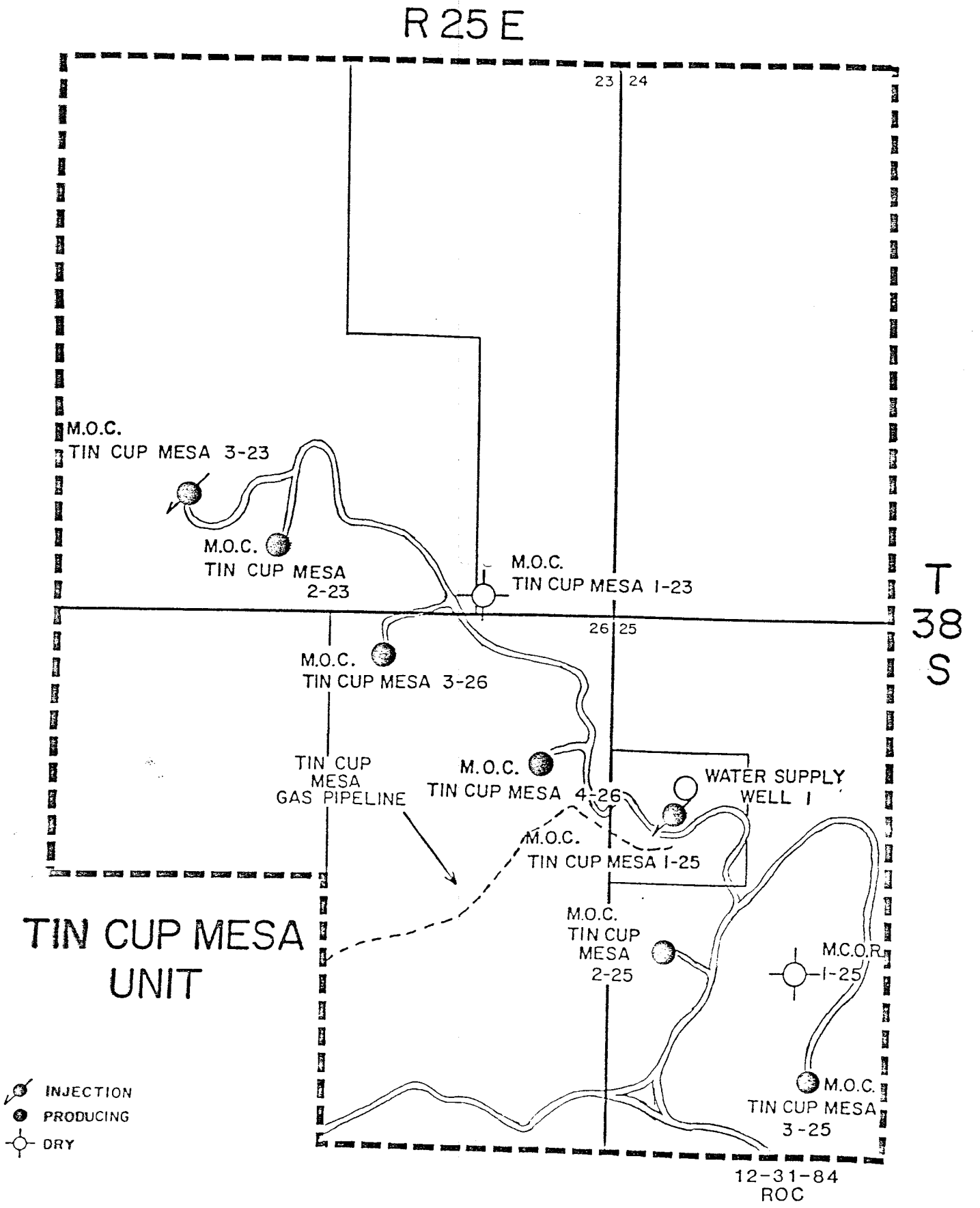
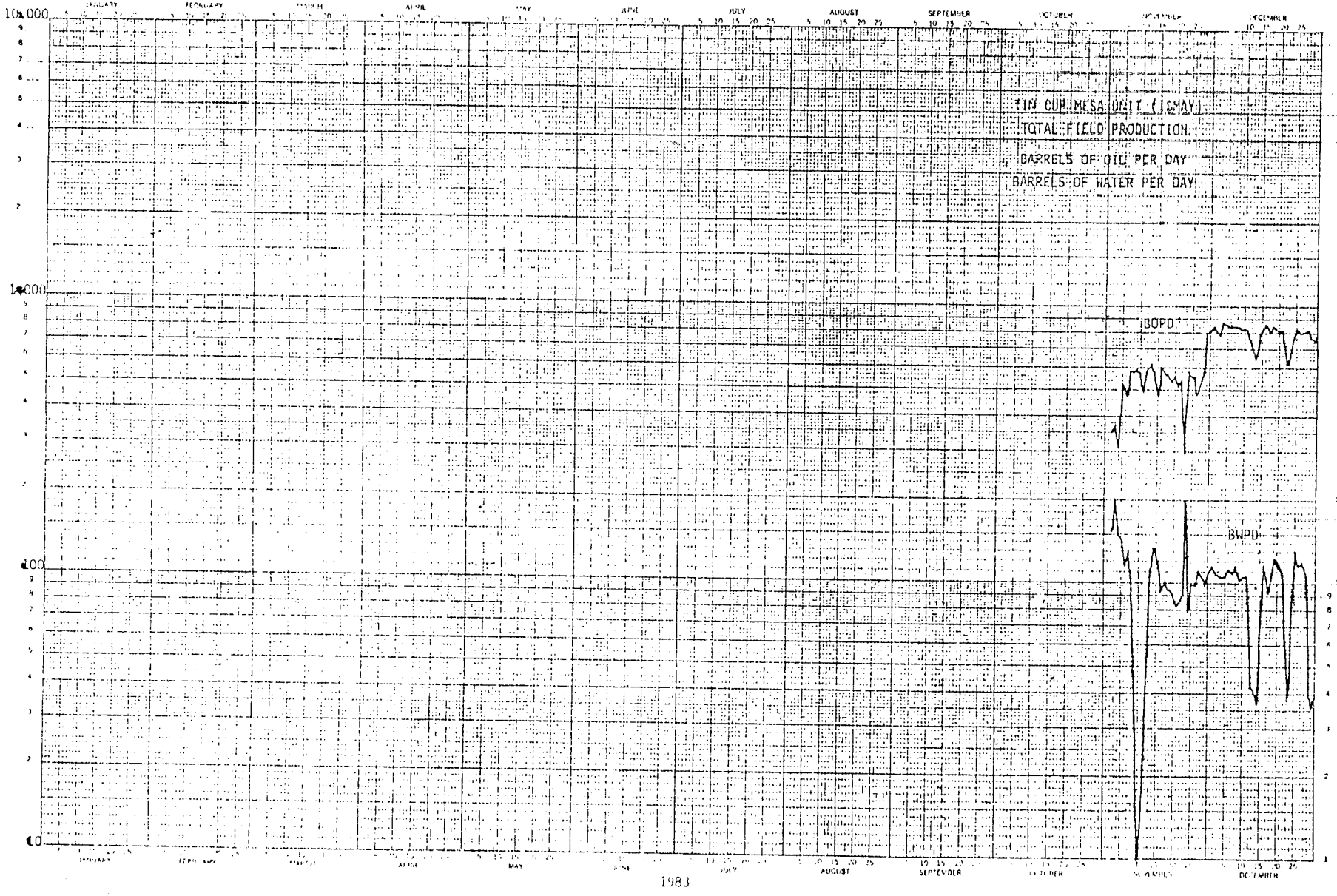


Exhibit E

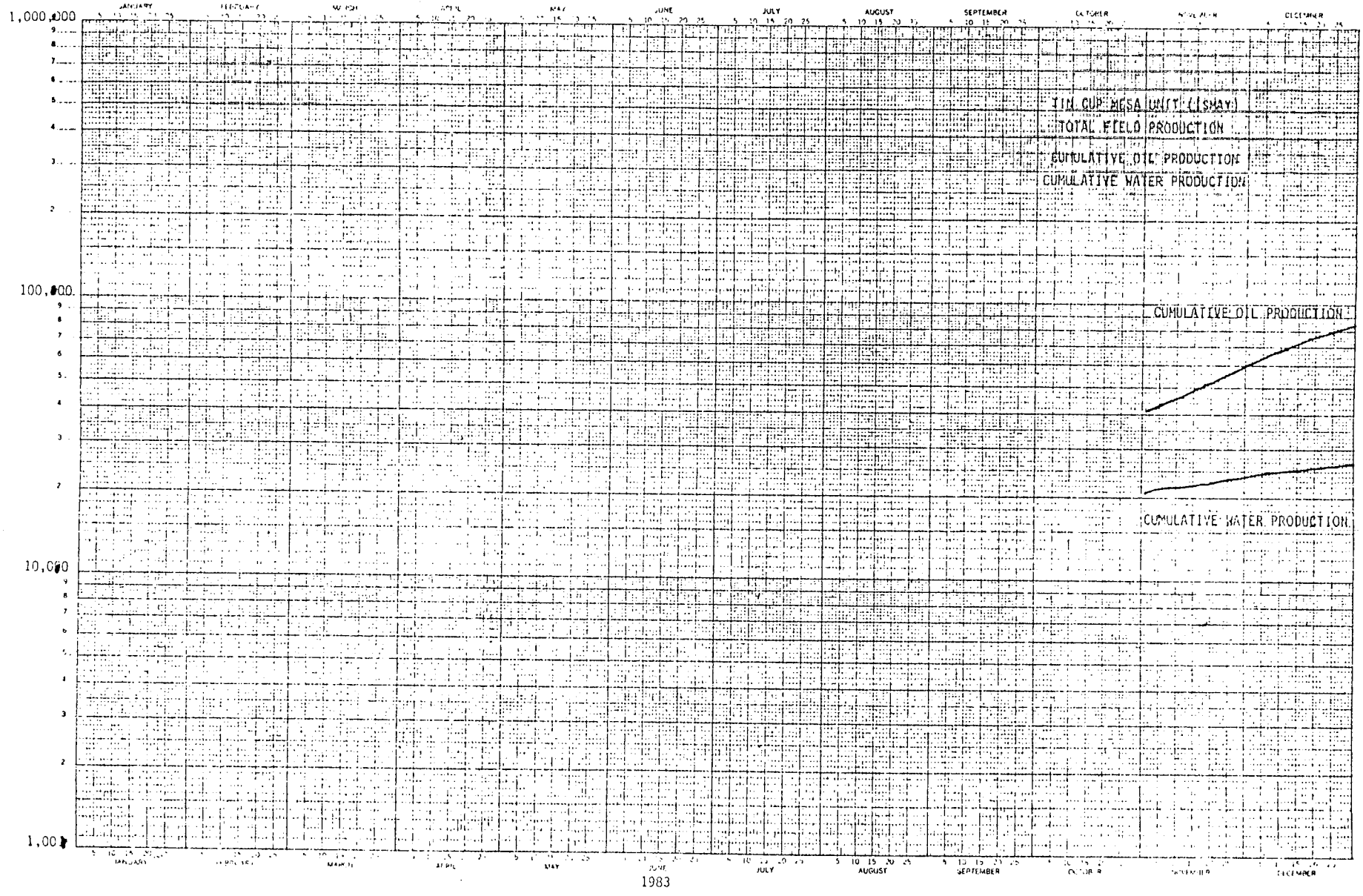
TIN CUP MESA WATER INJECTION FACILITY

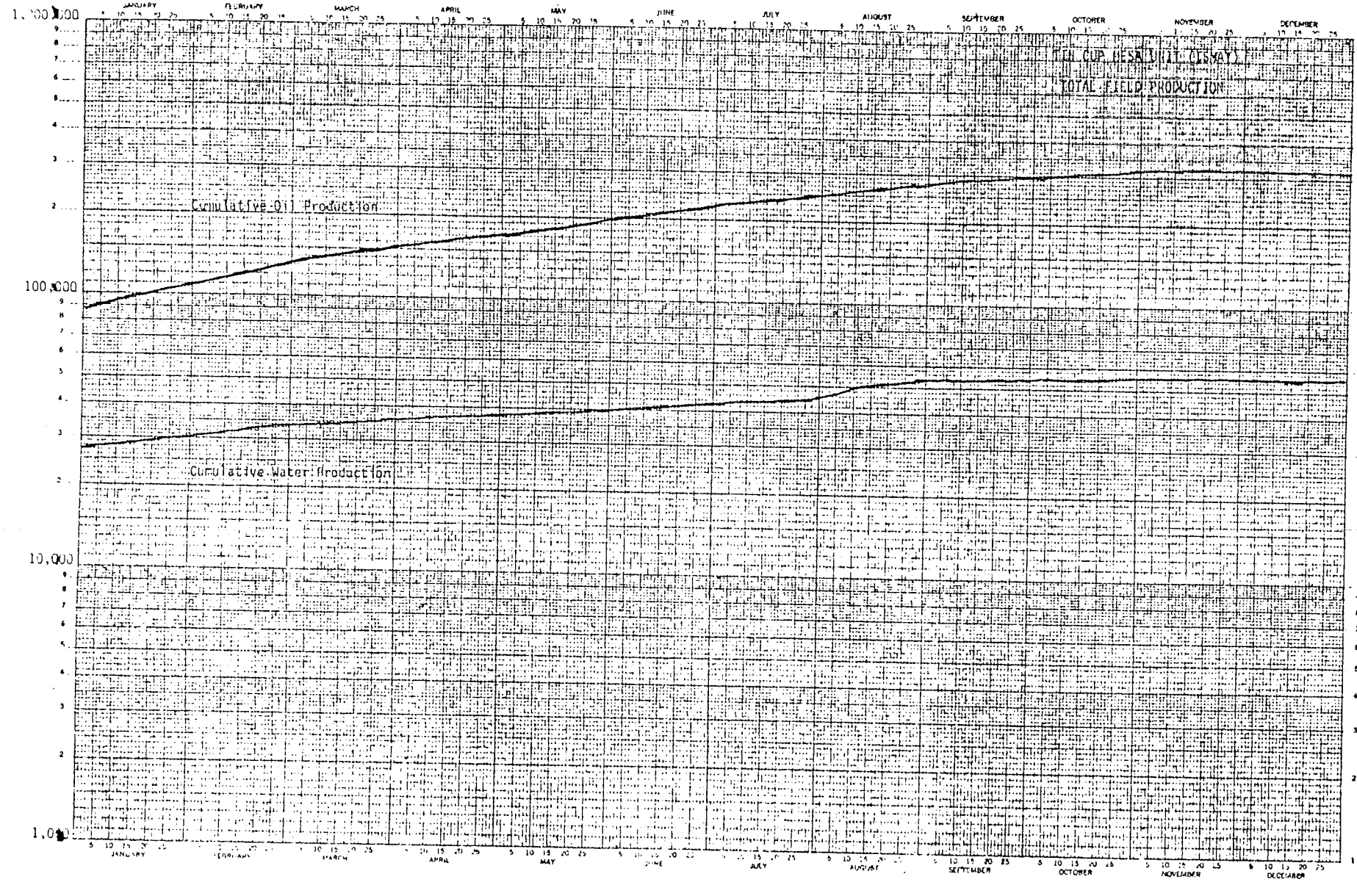

R 25 E
23
24
M.O.C.
TIN CUP MESA 3-23
M.O.C.
TIN CUP MESA
2-23
M.O.C.
TIN CUP MESA 1-23
T
38
S
26
25
M.O.C.
TIN CUP MESA 3-26
TIN CUP
MESA
GAS PIPELINE
M.O.C.
TIN CUP MESA 4-26
WATER SUPPLY
WELL 1
M.O.C.
TIN CUP MESA 1-25
TIN CUP MESA
UNIT
M.O.C.
TIN CUP
MESA
2-25
M.C.O.R.
1-25
M.O.C.
TIN CUP MESA
3-25
INJECTION
PRODUCING
DRY
12-31-84
ROC

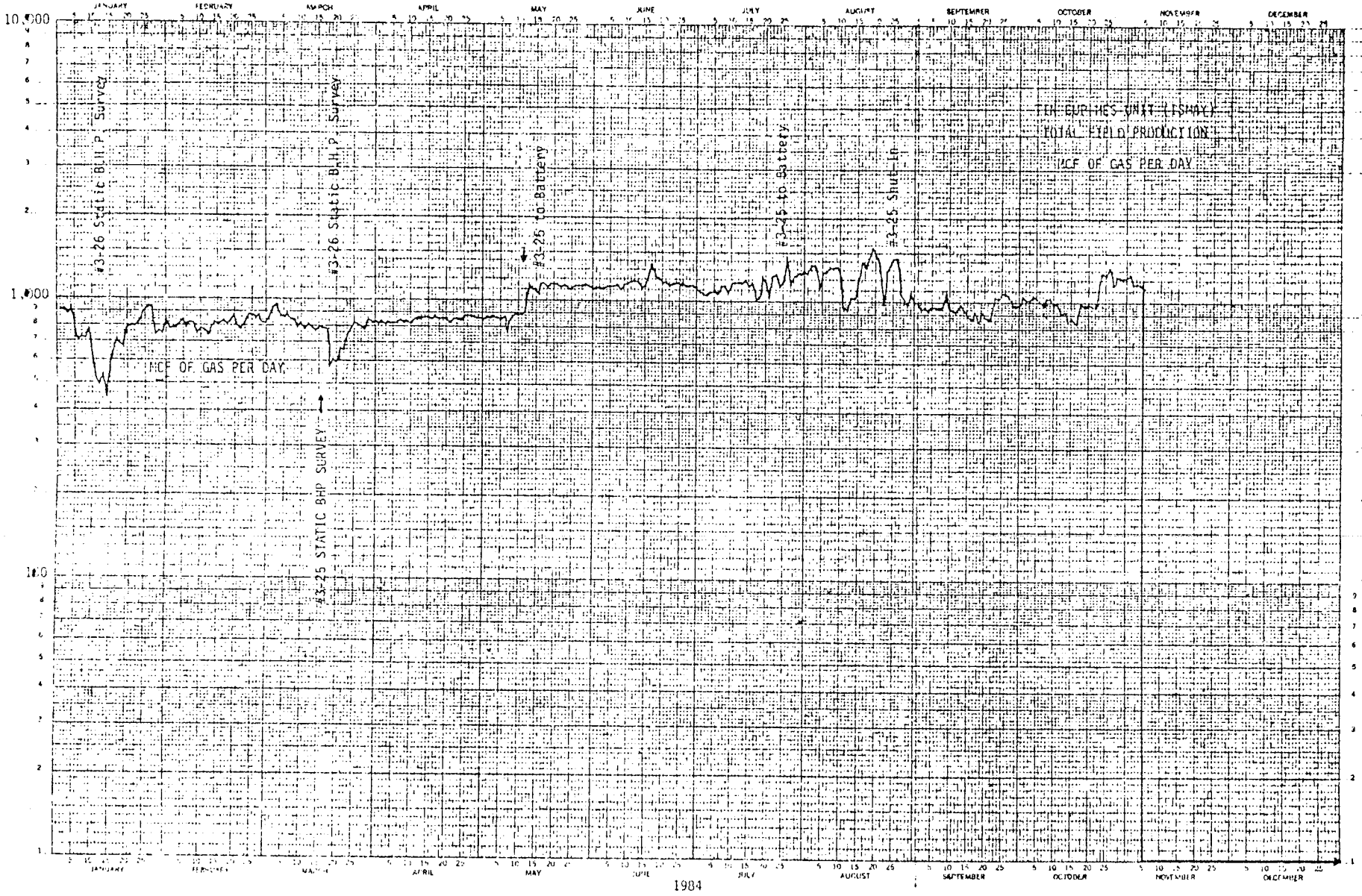

TIN CUP MESA UNIT (1 SWAY)
TOTAL FIELD PRODUCTION
BARRELS OF OIL PER DAY
BARRELS OF WATER PER DAY
BOPD
BWPD
10,000
1,000
100
10
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
1983

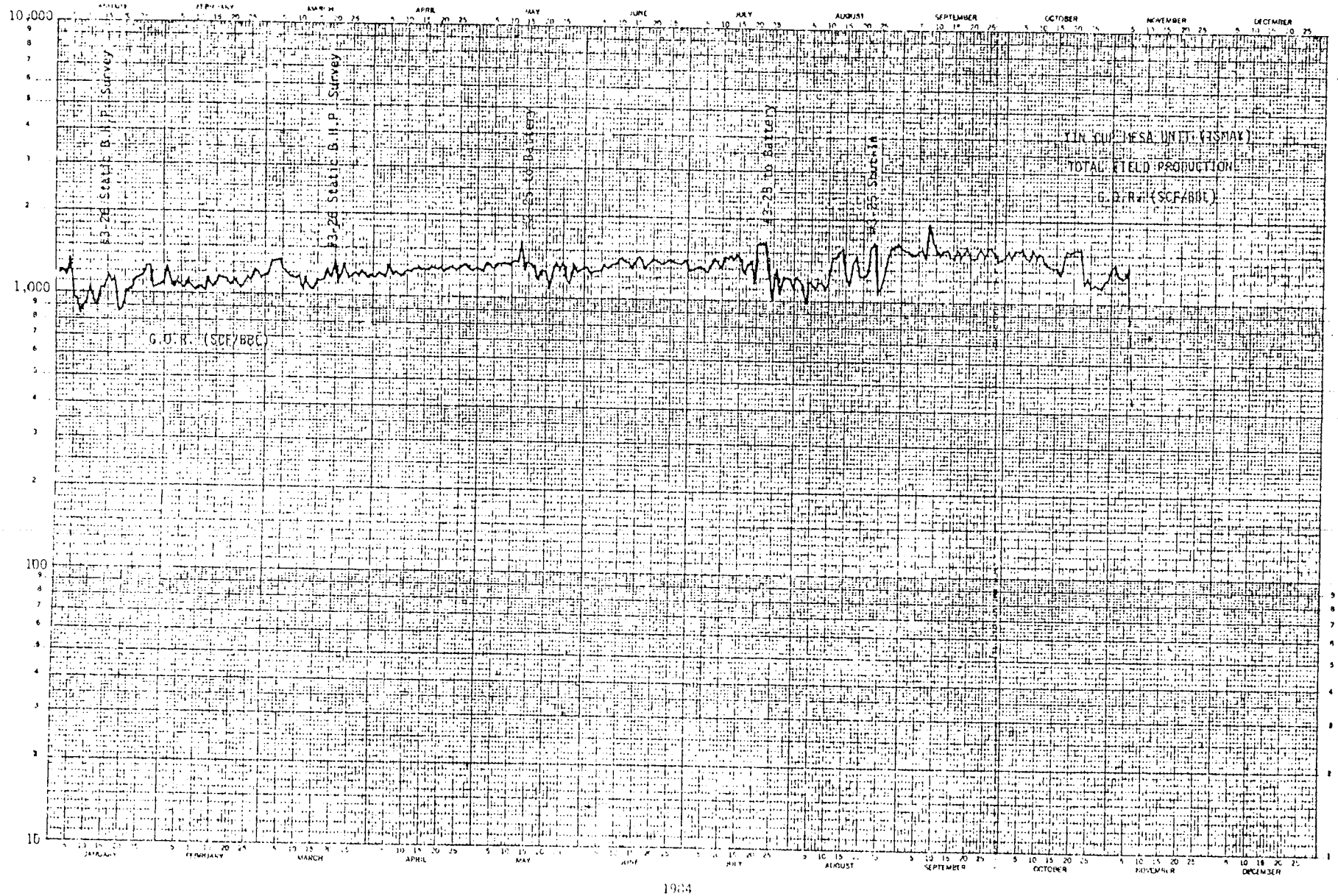

TIN CUP MESA UNIT (ISMAY)
TOTAL FIELD PRODUCTION
BARRELS OF OIL PER DAY
BARRELS OF WATER PER DAY
Barrels of Oil Per Day
Barrels of Water Per Day
#3-26 Static B.H.P. Survey
#3-26 Static B.H.P. Survey
#2-25 to Battery
#3-25 to Battery
#3-25 Shut-In
10,000
1,000
100
0
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER

1984


1,000,000
100,000
10,000
1,000
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
TIN CUP MESA UNIT (JSMAY)
TOTAL FIELD PRODUCTION
CUMULATIVE OIL PRODUCTION
CUMULATIVE WATER PRODUCTION
CUMULATIVE OIL PRODUCTION
CUMULATIVE WATER PRODUCTION
1983


JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
FIN CUP. RESV. (AT. CISMAY)
TOTAL FIELD PRODUCTION
Cumulative Oil Production
Cumulative Water Production
100,000
10,000
1,000


TIN CUP MES UNIT (ISMAY)
TOTAL FIELD PRODUCTION
MCF OF GAS PER DAY
#3-26 Static BHP Survey
#3-26 Static BHP Survey
#3-25 to Battery
#3-25 to Battery
#3-25 Shut-In
MCF OF GAS PER DAY
#3-25 STATIC BHP SURVEY
10,000
1,000
100
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
1984


10,000
1,000
100
10
G.O.R. (SCF/BBL)
TIN CUP MESA UNIT (TISMAX)
TOTAL FIELD PRODUCTION
G.O.R. (SCF/BBL)
#3-28 Static B.H.P. Survey
#3-28 Static B.H.P. Survey
#3-28 to Battery
#4-25 Static
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER

STIPULATIONS

EA No: UT-069-85-42X Project: Tin Cup Mesa 4-25 well

Applicant: Marathon

Description of Action Considered: TO DRILL A WATER INJECTION WELL.

The following stipulations have been developed through the above referenced Environmental Assessment to mitigate the environmental impacts of this action. The action referenced is the alternative indicated on the Decision Record and mentioned above, and is described fully in the Environmental Assessment.

1. The berm discussed in item 12 of your surface use plan must be constructed to prevent spills from leaving the immediate area of the well bore in any direction.

Casper Division
Production United States

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

February 8, 1985

State of Utah
Division of Oil, Gas, & Mining
Attn: Mr. John Baza
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Mr. Baza:

Enclosed please find a copy of our complete file for "Application for Permit to Drill" Tin Cup Mesa #4-25, along with the Archeological clearence for that portion of Section 36, T38S, R25E, San Juan County, which the rig location pad will be contructed on.

Also enclosed in the permit file is a copy of a letter sent to Mr. Charles Hardy Redd, grazing lessee, notifying him of our intentions to use approximately 20,000 square feet of Section 36 to construct our well pad.

An "Application to Appropriate Water" to be used in the drilling of Tin Cup Mesa #4-25 was sent to the State of Utah, Division of Water Rights, on February 7, 1985. Its approval will be forthcoming.

Thank you for your cooperation and help in dealing with this project.

Sincerely,

MARATHON OIL COMPANY

Frank M. Krugh

Frank M. Krugh
Regulatory Coordinator

FMK:mrt

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRI[illegible]E*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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

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

7. UNIT AGREEMENT NAME: Tin Cup Mesa

8. FARM OR LEASE NAME: Tin Cup Mesa

2. NAME OF OPERATOR: Marathon Oil Company

9. WELL NO.: 4-25

3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, Wyoming 82602

10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: SE SE SW 50' FSL & 2490' FWL

At proposed prod. zone:

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 25, T38S, R25E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 8-1/2 miles northwest of Hatch Trading Post, Utah

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
50'	N/A	N/A
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
979'	5700' KB	0'-5700'

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5037' Ungraded Ground.

22. APPROX. DATE WORK WILL START*: First Quarter 1985

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
Please See Items #4A, #4B, and #6 of Drilling Operations Plan				

RECEIVED
FEB 11 1985
DIVISION OF OIL
GAS & MINING

Please See the following attachments:

1. Surveyor's Plat
2. Drilling Operations Program and 13-Point Surface Plan
3. Maps and Diagrams

The person responsible for the APD is Frank Krugh, Marathon.
OFFICE: (307) 577-1555
HOME: (307) 235-4506

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 Doyle F. James TITLE District Operations Manager DATE February 1, 1985

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____

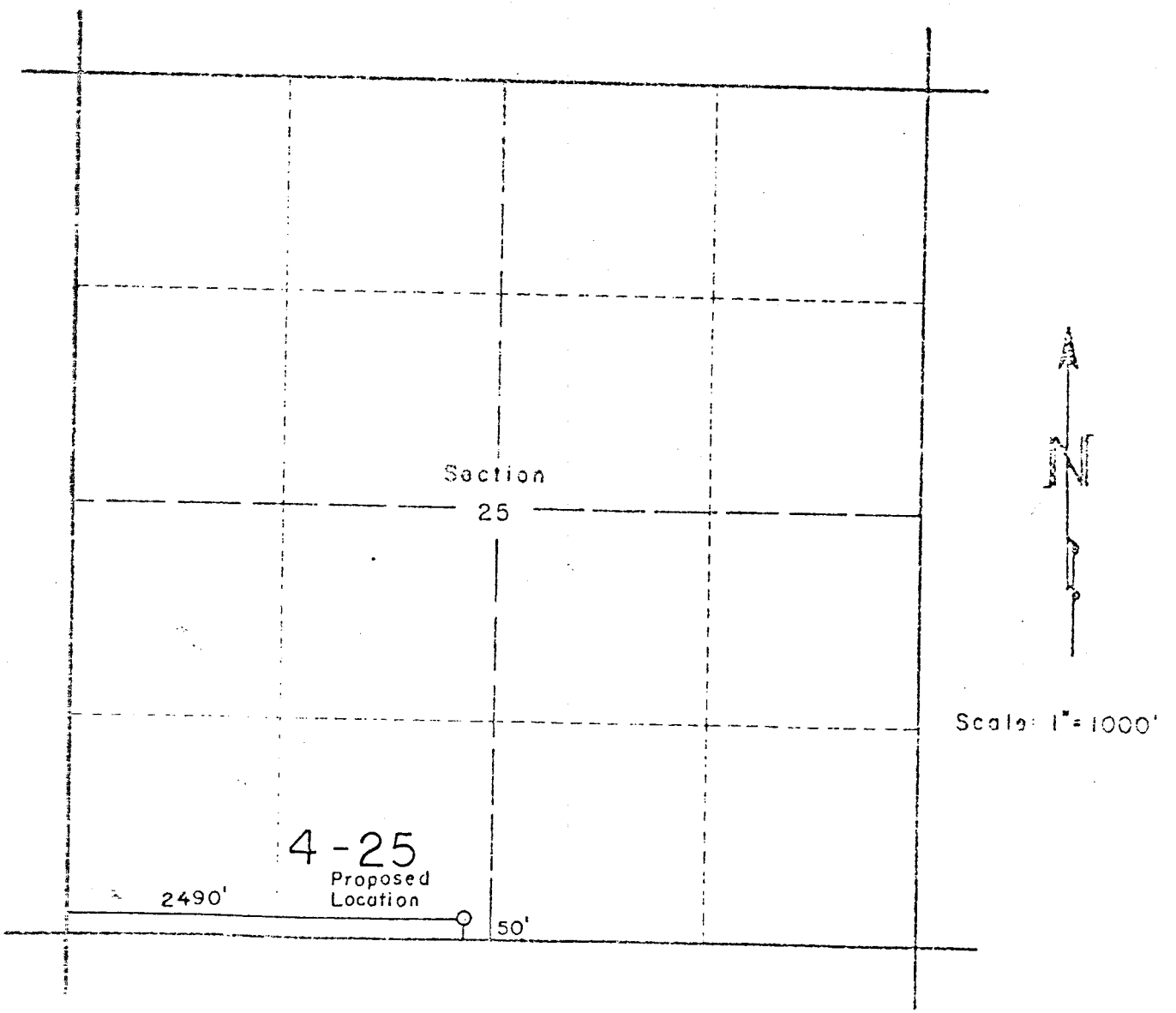
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 2/14/85
BY: John R. Baza
WELL SPACING: A-3 (Unit well)

*See Instructions On Reverse Side

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

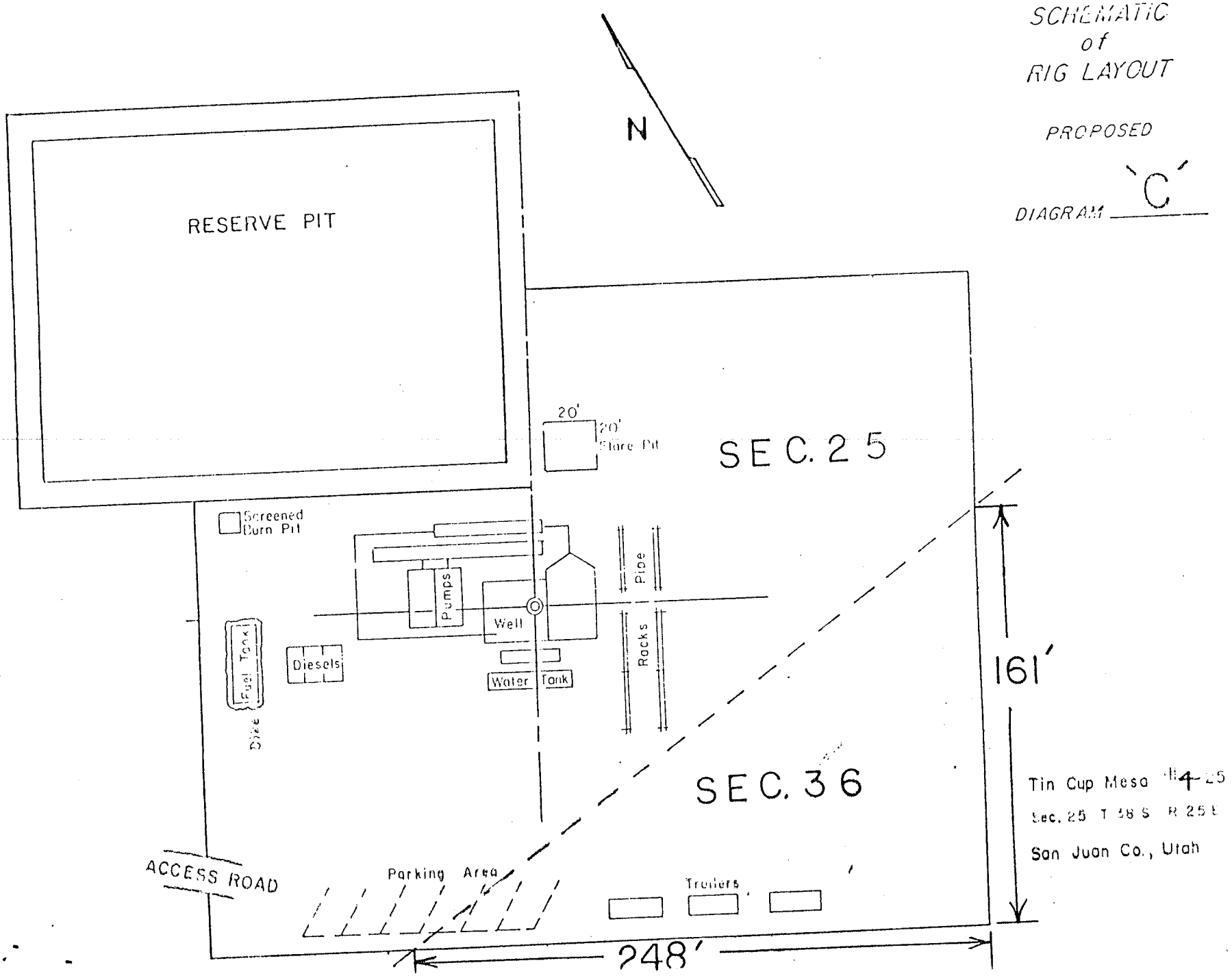
LOCATION PLAT



SCHEMATIC
of
RIG LAYOUT

PROPOSED

DIAGRAM "C"



Tin Cup Mesa 4-25

Sec. 25 T 38 S R 25 E

San Juan Co., Utah

MARATHON OIL COMPANY
Tin Cup Mesa Water Injection Well #4-25
Drilling Operations Plan
50' FSL, 2,490' FWL, Section 25, T38S, R25E
San Juan County, Utah
Elevation: 5,058' K.B. (Est.)
5,046' G.L. (Est.)

1. Geologic name of surface:

Jurassic Morrison Formation

2. Estimated tops of important geologic markers:

Formation	Depth (K.B.)	Datum	Formation	Depth (K.B.)	(Datum)
Carmel	669'	+4,389'	Paradox	5,187'	- 129'
Navajo	694'	+4,364'	Upper Ismay	5,342'	- 284'
Kayenta	914'	+4,144'	Hovenweep	5,482'	- 424'
Wingate	1,077'	+3,981'	Lower Ismay	5,512'	- 454'
Chinle	1,462'	+3,596'	Gothic Shale	5,567'	- 509'
Shinarump	2,262'	+2,796'	Desert Creek	5,572'	- 514'
Moenkopi	2,312'	+2,746'	Chimney Rock	5,667'	- 609'
Cutler	2,392'	+2,666'	Akah	5,689'	- 631'
Honaker Trail	4,247'	+ 811'	T.D.	5,700'	- 642'

3. Estimated depths of anticipated water, oil, gas or other mineral bearing formations:

Formation/Member	Depth (G.L.)	Possible Content
Carmel	669'	Water
Navajo	694'	Water
Wingate	1,077'	Water
DeChelly**	2,392'	Brine
Honaker Trail	4,247'	Oil
Paradox	5,187'	Brine
Upper Ismay	5,342'	Oil***
Lower Ismay	5,512'	Oil
Desert Creek	5,572'	Oil

** The Cutler Formation may contain the DeChelly Member.
***Primary Objective.

4a. The casing program including the size, grade, weight, whether new or used, and a setting depth of each string:

Min. Hole Size	Casing O.D.	Grade	Weight	Setting Depth	New or Used	Cplg
20"	14"	Thinwall Steel Pipe		60'	New	N/A
12 1/4"	8 5/8"	K-55	24#	1,500'	New	ST&C
7 7/8"	5 1/2"	K-55	15.5#	4,700'	New	ST&C
	5 1/2"	K-55	17#	5,700'	New	ST&C

4b. The cementing program including type, amounts, and additives:

8 5/8" Casing

Cement Volume: 1,500' x .4127 ft^3/ft x 2.0 excess = 1,238 ft^3

Lead Slurry: 1,000' plug 100% excess - 503 sacks of high yield cement (35% fly ash, 65% cement, 6% bentonite) containing 1/4#/sack cellophane flakes and 2% $CaCl_2$.

Weight: 12.7 ppg
Yeild: 1.64 ft^3/sack
Water Requirement: 8.34 gal/sack

Tail Slurry: 500' plus 100% excess - 350 sacks of Class "B" cement containing 1/4#/sack cellophane flakes and 2% $CaCl^2$.

Weight: 15.6 ppg
Yeild: 1.18 ft^3/sack
Water Requirement: 5.2 gal/sack

Casing Equipment will include a float shoe, float collar, and three centralizers. WOC time will be minimum of 6 hours. If float equipment holds, closed-in pressure after cementing is not recommended.

5 1/2" Casing

Cement Volume: 4,250' x .1733 ft^3/ft x 1.25 excess = 921 ft^3. Actual cement volumes will be based on caliper log plus 25% excess.

Slurry Preflush: 20 barrels

Lead Slurry: (3,200' column height) 422 sacks "Lite" cement with 2% $CaCl_2$.

Weight: 12.7 ppg
Yeild: 1.64 ft^3/sack
Water Requirement: 8.34 gal/sack

Tail Slurry: (1,050' column height) 200 sacks Class "B" with 1% fluid loss additive.

Weight: 15.6 ppg
Yeild: 1.18 ft^3/sack
Water Requirement: 5.2 gal/sack

Casing Equipment will include a float shoe, float collar, and six centralizers.

5. B.O.P. specification and testing: (see the attached schematic diagram for size and pressure ratings):

BOP equipment will include a dual ram type preventer with pipe and blind rams and an annular preventer (API arrangement SRRA). All equipment will have a 3,000 psi or greater working pressure. Rams, valves, lines, choke manifold, and casing will be tested to 200 psi for 5 minutes and 1,500 psi for 5 minutes prior to drilling out from under 8 5/8" surface casing. After drilling casing shoe and 5' of additional hole, a shoe test will be performed to 13.5 ppg equivalent mud weight or leak off, whichever occurs first.

A visual check of BOP equipment will be made hourly. Functon pipe rams daily and blind rams on trips.

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

6. Mud program and anticipated pressures:

From	To	Type Mud	Weight	% Oil	Water Loss
0'	1,500'	Spud	8.5-9.0	0	No Control
1,500'	2,392' Cutler	Gel/Water	8.5-9.0	0	No Control
2,392' Cutler	5,342' U. Ismay	Gel/Chemical	9.4-10.3	0	10.0-12.0 cc's
5,342' U. Ismay	T.D.	Gel/Chemical	As Required	0	8.0-9.0 cc's

Mud weights will be kept at a minimum to maximum ROP and minimize lost circulation. However, the existence of water flows may necessitate an increase in mud weight while drilling. Sufficient barite should be kept on location prior to spud in order to increase the mud weight to 11.7 ppg if required.

7a. Type of drilling tools and auxiliary equipment:

A drilling rate recorder, calibrated to record drilling time for each one foot drilled will be used.

A kelly cock will be used and a full opening safety valve will be available on the rig floor.

The mud system will include a desander/desilter, gas buster or degasser.

A manual adjustable choke.

A single shot drift indicator will be used.

7b. Deviation Control:

From	To	Maximum Distance Between Surveys	Maximum Deviation From Vertical	Maximum Change Per 100' of Depth
0'	1,500'	250'	1^{o}	1^{o}
1,500'	T.D.	500'	5^{o}	1^{o}

8. Sample, logging, testing, and coring program:

Samples: 10' intervals from 1,500' to T.D. with a two-man mud logging unit, or as specified by a Marathon representative.

Logging: A DIL/GR/CAL will be run on the 12 1/4" surface hole prior to running casing.

1. DLL/MSFL/GR from T. D. to the surface casing with the GR to surface.
2. BHC Sonic/VDL/GR from T.D. to surface casing.
3. FDC/CNL/Spectral GR from T.D. to surface casing.

The Coriband (Cyberlook) service will be used from the top of the Honaker Trail to T.D.

Testing: Two DST's are anticipated in the top of the Upper Ismay and in the Desert Creek.

Coring: Two 60' cores are anticipated in the Upper Ismay.
One 60' core is anticipated in the Desert Creek.

9. Anticipated abnormal pressures or temperatures:

The DeChelly Member of the Cutler Formation, if penetrated, may contain overpressured salt water requiring 10.5 to 11.5 ppg mud weight to control.

Maximum anticipated bottom hole temperature is approximately 145° F.

Maximum anticipated bottom hole pressure is approximately 3,350 psi.

10. The anticipated starting date and duration of operation:

Starting Date: 1st Quarter, 1985

Duration: 22 days

DISTRICT APPROVALS		DIVISION APPROVALS	
Approved	Date	Approved	Date

CASING DESIGN

DESIGN FACTORS:
SF_c = 1.125 Pipe evacuated w/normal MW + .5 ppg. Consider collapse reduction due to tension.
SF_b = 1.250 The greater of : 1. Normal MW in annulus. Bottom hole pressure - .10 ppf gas gradient in gas filled pipe.
2. Normal MW in annulus. Maximum surface treating pressure + Hydrostatic of treating fluid.
SF_t = 1.50 No buoyancy.

CASING	API/NON-API DRIFT	SETTING DEPTH	SECTION LENGTH	TENSION - 1,000 lb.			COLLAPSE				BURST		
				STRENGTH	FORCE	S.F.	STRENGTH	FORCE	REDUCED STRENGTH	S.F.	STRENGTH	FORCE	S.F.
8 5/8", 24#, K-55, ST&C	7.972"	1,500'	1,500'	263	36	7.31	1,370	741	1,370	1.85	2,950	1,503	2.80
5 1/2", 15.5#, K-55, ST&C	4.825"	4,700'	4,700'	222	90	2.47	4,040	3,055	3,959	1.30	4,810	2,780	1.73
5 1/2", 17#, K-55, ST&C	4.767"	5,700'	1,000'	252	17	14.80	4,910	3,705	4,910	1.32	5,320	1,620	3.28

Casper Division
Production United States

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

February 12, 1985

Mr. John Anderson
Clyde, Pratt, Gibbs and Cahoon
200 American Savings Plaza
77 West Second South
Salt Lake City, Utah 84101

Re: Injection Well
Tin Cup Mesa Unit #4-25
Section 25, T38S, R25E
San Juan County, Utah

Dear Mr. Anderson:

Attached as per your request is the full application for permit to drill Tin Cup Mesa Unit #4-25. The only operator of a producing leasehold within one-half (1/2) mile of #4-25 is Marathon Oil Company, P.O. Box 2659, Casper, Wyoming 82602. As for surface owners within one-half (1/2) mile of #4-25, B.L.M. is the surface owner of Sections 25, 26, 35 and the State of Utah is the surface owner of Section 36. The grazing rights for Sections 25, 26, 35, 36 are held by Mr. Charles Hardy Redd, Box 247, La Sal, Utah 84530.

I trust this information will meet with your satisfaction. If you have any questions, please advise.

Very truly yours,

MARATHON OIL COMPANY

W. A. Willoughby

W. A. Willoughby
Engineering Technician

WAW/kt

xc: R. F. Unger

Treatment

The perforations 5514' - 5530' were acidized with a total of 800 gallons of 15% FE acid containing LO-Surf 259 and HAI-60.

The perforations 5484' - 5504' were acidized with a total of 1080 gallons of 15% FE Acid containing additives. A total of 235 barrels of water was lost to the formation during these two acid jobs.

Injection Test

Date	Hours Tested	Inj. Rate	Inj. Total	Tubing Pressure
* 6-21-85	8	3BPM	1431 BBLS.	1186 PSI

*Please Note. The tubing pressure reported was the tubing pressure that was recorded at the end of the test period. At the beginning of the test, the tubing was on a vacuum and pressure was increased throughout the test period in order to sustain an injection rate of 3 BPM.

Record of Formations Drilled Through

Formation	Log Top	Subsea Elevation
Carmel	811	4238
Navajo	837	4212
Kayenta	1130	3919
Chinle	1478	3571
Shinarump	2352	2697
Moenkopi	2399	2650
Cutler	2465	2584
Honaker Trail	4310	739
Paradox	5243	-194
Upper Ismay	5396	-347
Hovenweep	5552	-503
Lower Ismay	5586	-537
Gothic	5636	-587
Desert Creek	5644	-595
Chimney Rock	5733	-684
Akah	5754	-705
T.D. - Driller	5778	
T.D. - Logger	5778	

Tin Cup Mesa #4-25

Water Injection Well

Production Perforations and Treatment

Perforations

Ismay Zone	5430' - 5436'	
Ismay Zone	5443' - 5463'	ALL Perforations 4JSPF
Ismay Zone	5470' - 5484'	

Treatment

All production perforations 5430' - 5484' were acidized with 200 gallons of 15% HCL acid containing non-emulsifier, corrosion inhibitor, and iron sequestoring agent immediately following perforating.

The perforations 5470' - 5484' were acidized with 700 gallons of 15% HCL acid.

The perforations 5443' - 5463' were acidized with a total of 1000 gallons of 15% HCL acid.

The perforations 5430' - 5436' were acidized with a total of 300 gallons of 15% HCL.

During the above acid jobs it is estimated that the Ismay formation consumed 200 barrels of water with Bacteriacide added.

After each individual acid job the well went on vacuum.

Production Rates

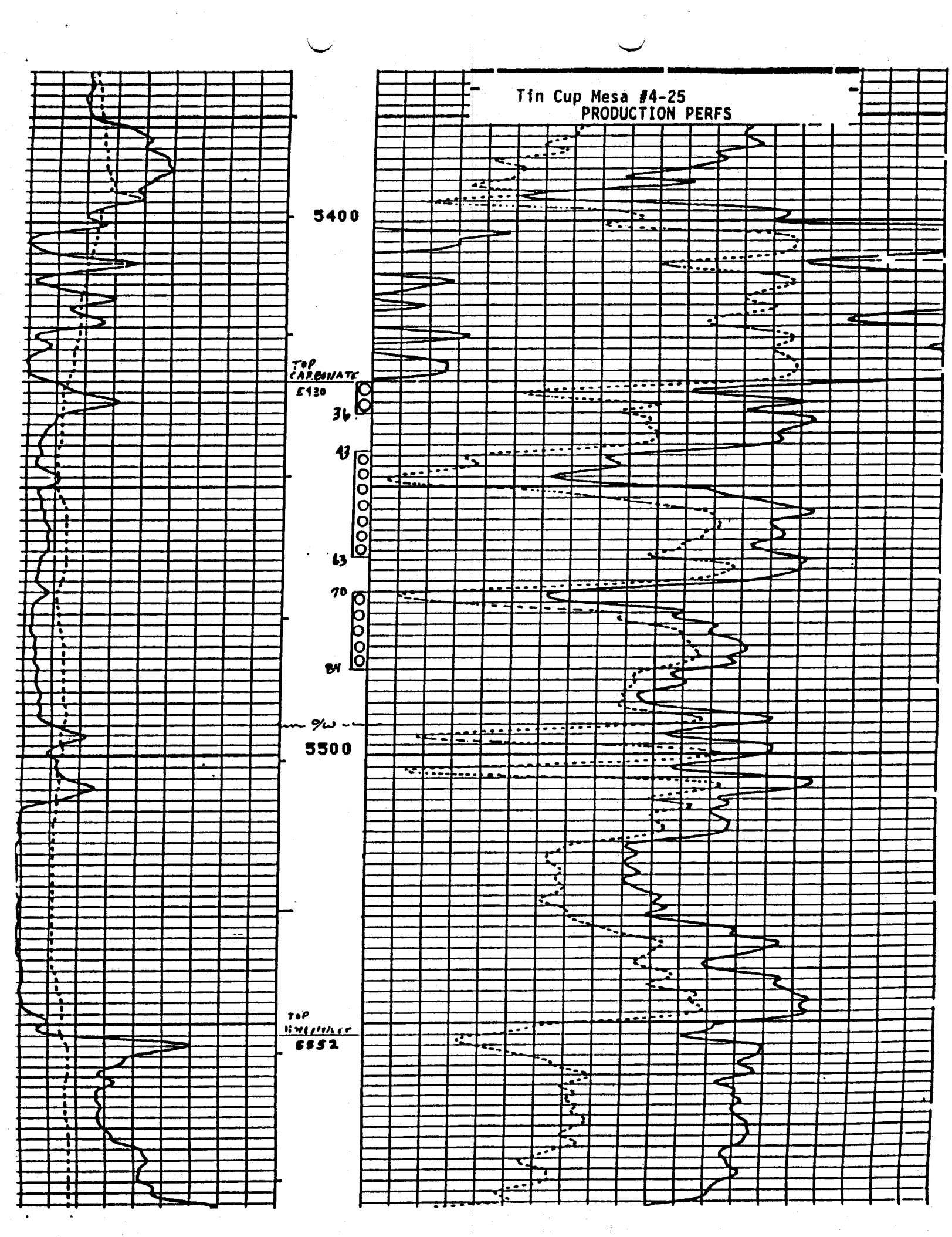
The well was swabbed in after he acid jobs and started flowing. The production rates are reported on Form DOGM-UIC-2.

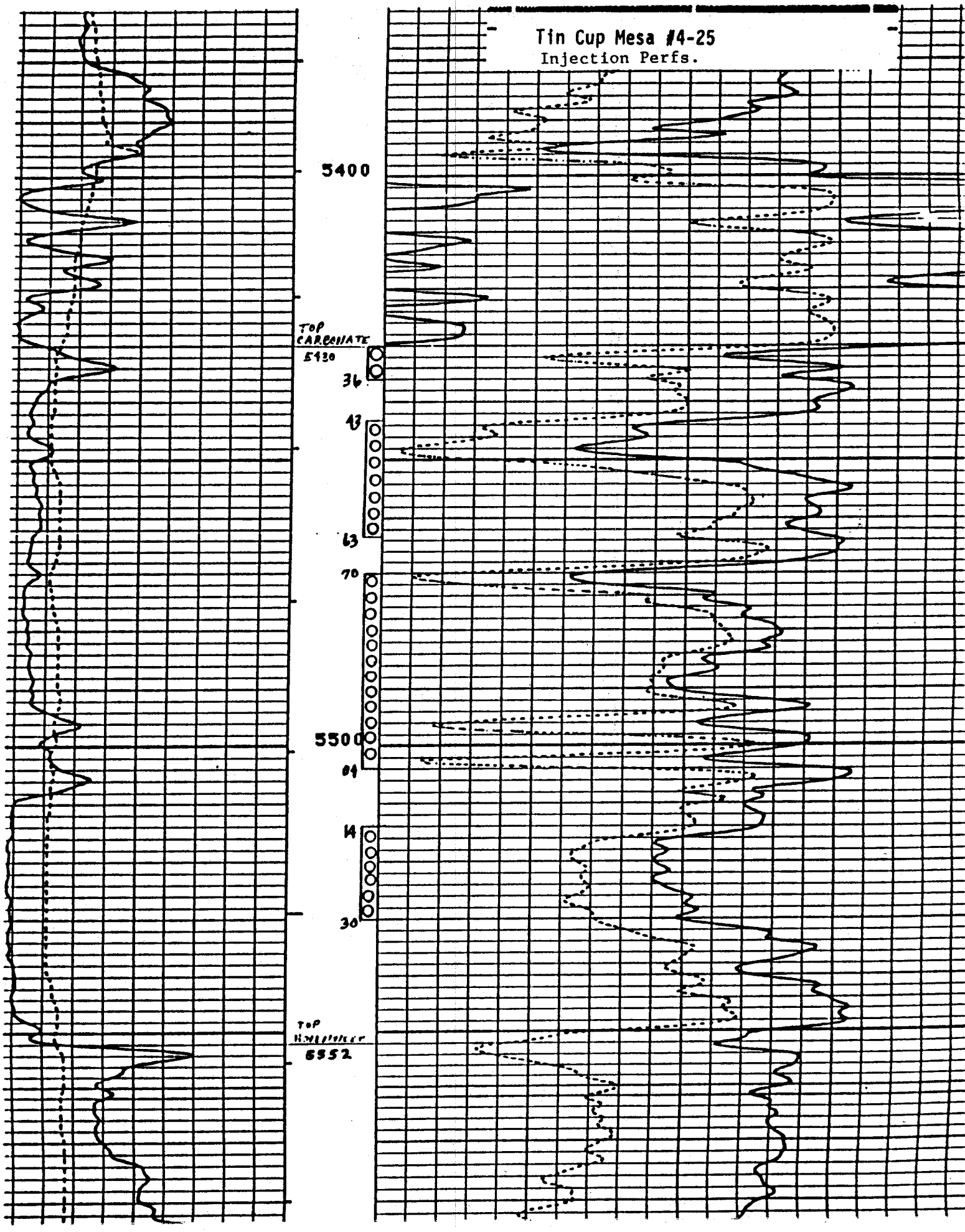
Injection Perforations and Treatment

After a production rate from the Ismay perforations 5430' - 5484' was established, the Ismay was additionally perforated for water injection.

The perforations are:

Ismay	5484' - 5504'	
Ismay	5514' - 5530'	All perforations 4JSPF


Tin Cup Mesa #4-25
PRODUCTION PERFS
5400
TOP CARBONATE
5430
36
43
63
70
84
G/W
5500
TOP
5552

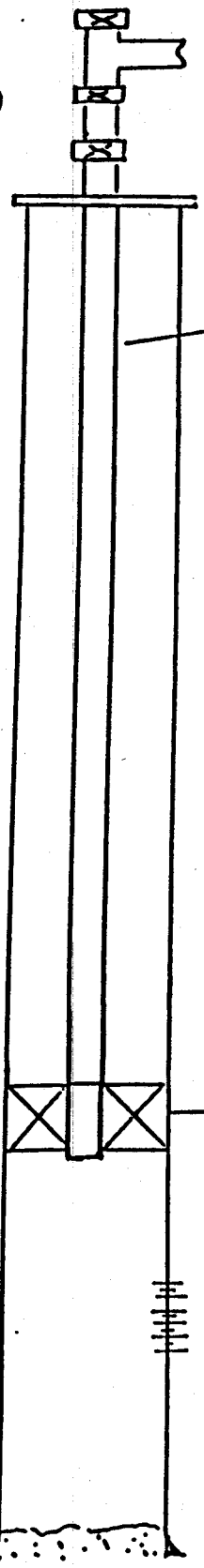

Tin Cup Mesa #4-25
Injection Perfs.
5400
TOP CARBONATE
5430
36
43
63
70
5500
84
14
30
TOP
6552

TIN CUP MESA #4-25

ISMAY COMPLETION

Elevation 5036' GL (13'KB)

5049' KB



3600 # Tree

2 7/8", J-55, 6.5# EUE Tbg
Internally Coated

Baker "AL-2" Large Bore Lok-Set P
2.38"ID Set at 538

Ismay Perfs

5430-5436'KB
5443-5463'KB
5470-5504'KB
5514-5530'KB

5 1/2", K-55, 17# STC Csg

PBTD 5701 'KB

TD 5778 ' KB

Tincup Mesa #4-25

Water Injection Well

Directional Survey

Depth	Angle	Depth	Angle
73'	0°	2016'	1/4°
266'	3/4°	2545'	1/2°
477'	3/4°	2850'	3/4°
689'	3/4°	3153'	3/4°
903'	1°	3630'	1°
996'	1°	4129'	1°
1372'	1°	4625'	1°
1485'	3 1/4°	4967'	1°
1500'	1°	TD 5778'	1°

Cores

Core Number	From	To	Recovered
Core #1	5432'	5492'	57.0'
Core #2	5492'	5552'	58.5'
Core #3	5716'	5758'	42.0'

Drill Stem Test

DST #1
4-22-85
Upper Ismay Formation
Bottom Packer 5510'KB
Top Packer 5429'KB

Cushion consisted of 118 gallons of H_2O. Top choke 16/64", bottom choke 3/4". This test was reverse circulated. IF 10 min., ISI30 min., FF 180 min., FSI 180 min. Recovered: 182' of 40° API oil, 500' of fresh H_2O, 1,007' of Salt H_2O, CL 132,000 PPM, Nitrates 15 PPM.

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : TIN CUP MESA NO. 4-25 Page 1 of 7

Field : TIN CUP MESA File 2-17057-BU&FO

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1985 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	Wellhead Pressure Tbg	Csg	BHP @ 5547' Psig
6-19	Arrived on location rig running tubing	10:30			0	0	
	Tandem instruments @ 5547'	15:40	0	00			
		15:40	0	00			
		16:00	0	20	0	418	2029
	Start injection step rate test, 1st 4ate @.20 bbl/min	16:00	0	00			
		16:15	0	15	TSTM	467	2063
		16:30	0	30	TSTM	465	2067
		16:45	0	45	TSTM	469	2072
		17:00	1	00	TSTM	471	2078
	2nd rate @.40 bbl/min	17:00	0	00			
		17:15	0	15	TSTM	470	2108
		17:30	0	30	TSTM	459	2119
		17:45	0	45	Vac.	449	2127
		18:00	1	00	Vac.	432	2131
	3rd rate @.80 bbl/min	18:00	0	00			
		18:15	0	15	Vac.	423	2195
		18:30	0	30	Vac.	414	2210
		18:45	0	45	Vac.	412	2218
		19:00	1	00	Vac.	412	2222
	4th rate @2.0 bbl/min	19:00	0	00			
		19:15	0	15	85	412	2471
		19:30	0	30	172	438	2555
		19:45	0	45	209	458	2589
		20:00	1	00	250	471	2615
	5th rate @2.6 bbl/min	20:00	0	00			
		20:15	0	15	499	510	2801
		20:30	0	30	545	520	2846
		20:45	0	45	568	540	2876
		21:00	1	00	611	540	2899
	6th rate @3.6 bbl/min	21:00	0	00			
		21:15	0	15	1097	549	3240
		21:30	0	30	1176	545	3304
		21:45	0	45	1220	545	3353
		22:00	1	00	1233	550	3384
	7th rate @ 4.6 bbl/min	22:00	0	00			
		22:15	0	15	1774	600	3717
		22:30	0	30	1860	600	3811
		22:45	0	45	1875	618	3826
		22:53	0	53	1870	618	3823
	Pump truck shut down/out of water	22:53	0	00			

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : TIN CUP MESA NO. 4-25 Page 2 of 7

Field : TIN CUP MESA File 2-17057-BU&FO

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1985 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	Wellhead Pressure Tbg	Csg	BHP @ 5547' Psig
6-19	Start fall off						
		22:59	0	06			2733
		23:05	0	12			2604
		23:11	0	18			2528
		23:17	0	24			2517
		23:23	0	30			2453
		23:29	0	36			2422
		23:35	0	42			2396
		23:41	0	48			2373
		23:47	0	54			2358
		23:53	1	00			2343
6-20		00:08	1	15			2301
		00:23	1	30			2275
		00:38	1	45			2256
		00:53	2	00			2237
		01:08	2	15			2225
		01:23	2	30			2207
		01:38	2	45			2195
		01:53	3	00			2184
		02:23	3	30			2169
		02:53	4	00			2154
		03:23	4	30			2138
		03:53	5	00			2131
		04:23	5	30			2119
		04:53	6	00			2112
		05:23	6	30			2104
		05:53	7	00			2102
	Off bottom with instruments	06:15	7	22			2097
	On bottom @ 5547'	07:30					
		07:30	8	37	Vac.	631	2085
		08:05	9	12	Vac.	631	2081
	Start injecting @ 3.0 bbl/ min	08:05	0	00			
		08:20	0	15	407	511	2633
		08:35	0	30	613	495	2844
		08:40	0	45	663	490	2894
		09:05	1	00	764	500	3023
		09:20	1	15	836	520	3087
		09:35	1	30	866	535	3141
		09:50	1	45	913	540	3170
		10:05	2	00	908	545	3182

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : TIN CUP MESA NO. 4-25

Field : TIN CUP MESA

File 2-17057-BU&FO

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1985 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	Wellhead Pressure Tbg	Csg	BHP @ 5547' Psig
6-20		10:20	2	15	934	555	3209
		10:35	2	30	977	570	3257
	Pumping (3 BWPM)	10:50	2	45	985	585	3259
		11:05	3	00	978	590	3270
	Bleed off casing pressure	11:20	3	15	994	Open	3284
		11:35	3	30	1023		3309
		12:05	4	00	1047		3317
		12:35	4	30	1057		3340
		12:50	4	45	1071		3348
		13:05	5	00	1096		3367
		13:20	5	15	1108		3375
		13:35	5	30	1125		3390
		13:50	5	45	1122		3400
		14:05	6	00	1145		3421
		14:20	6	15	1132		3417
		14:35	6	30	1165		3429
		14:50	6	45	1126		3421
		15:05	7	00	1130		3427
		15:20	7	15	1147		3429
		15:35	7	30	1149		3432
		15:50	7	45	1173		3446
		16:05	8	00	1186		3456
	Stop pumping and start fall off	16:06	8	01	1186		3456
		16:06	0	00			
		16:12	0	06			2784
		16:18	0	12			2703
		16:24	0	18			2647
		16:30	0	24			2614
		16:36	0	30			2579
		16:42	0	36			2550
		16:48	0	42			2531
		16:54	0	48			2515
		17:00	0	54			2502
		17:06	1	00			2483
		17:21	1	15			2450
		17:36	1	30			2427
		17:51	1	45			2402
		18:00	2	00			2382

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : TIN CUP MESA NO. 4-25

Field : TIN CUP MESA

File 2-17057-BU&FO

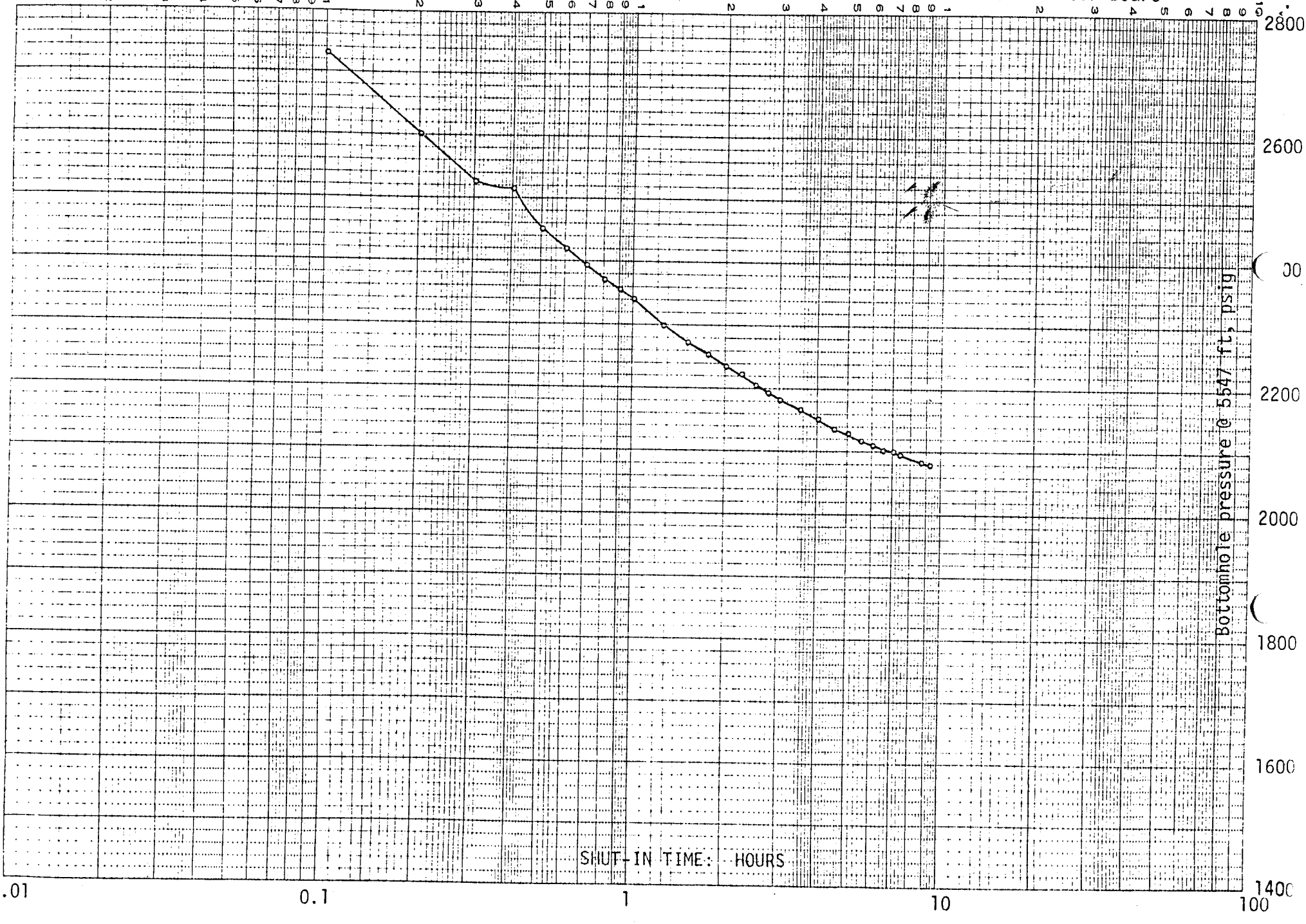
CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1985 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	Wellhead Pressure Tbg	Csg	BHP @ 5547' Psig
6-20		18:36	2	30			2348
		19:06	3	00			2322
		19:36	3	30			2301
		20:06	4	00			2282
		21:06	5	00			2255
		22:06	6	00			2228
		23:06	7	00			2212
6-21		00:06	8	00			2197
		01:06	9	00			2185
		02:06	10	00			2174
		04:06	12	00			2158
		06:06	14	00			2139
		08:06	16	00			2127
		10:06	18	00			2120
		12:06	20	00			2116
		16:06	24	00			2102
		20:06	28	00			2091
6-22		00:06	32	00			2085
		04:06	36	00			2075
		08:06	40	00			2070
		12:06	44	00			2066
		16:06	48	00			2062
		20:06	52	00			2060
6-23		-0:06	56	00			2058
	Clocks ran out	02:18	58	12			2056
6-24	On bottom @ 5547 with static gradient traverse	17:00	96	54			2019

MARATHON OIL COMPANY
TIN CUP MESA NO. 4-25

FALL OFF PLOT

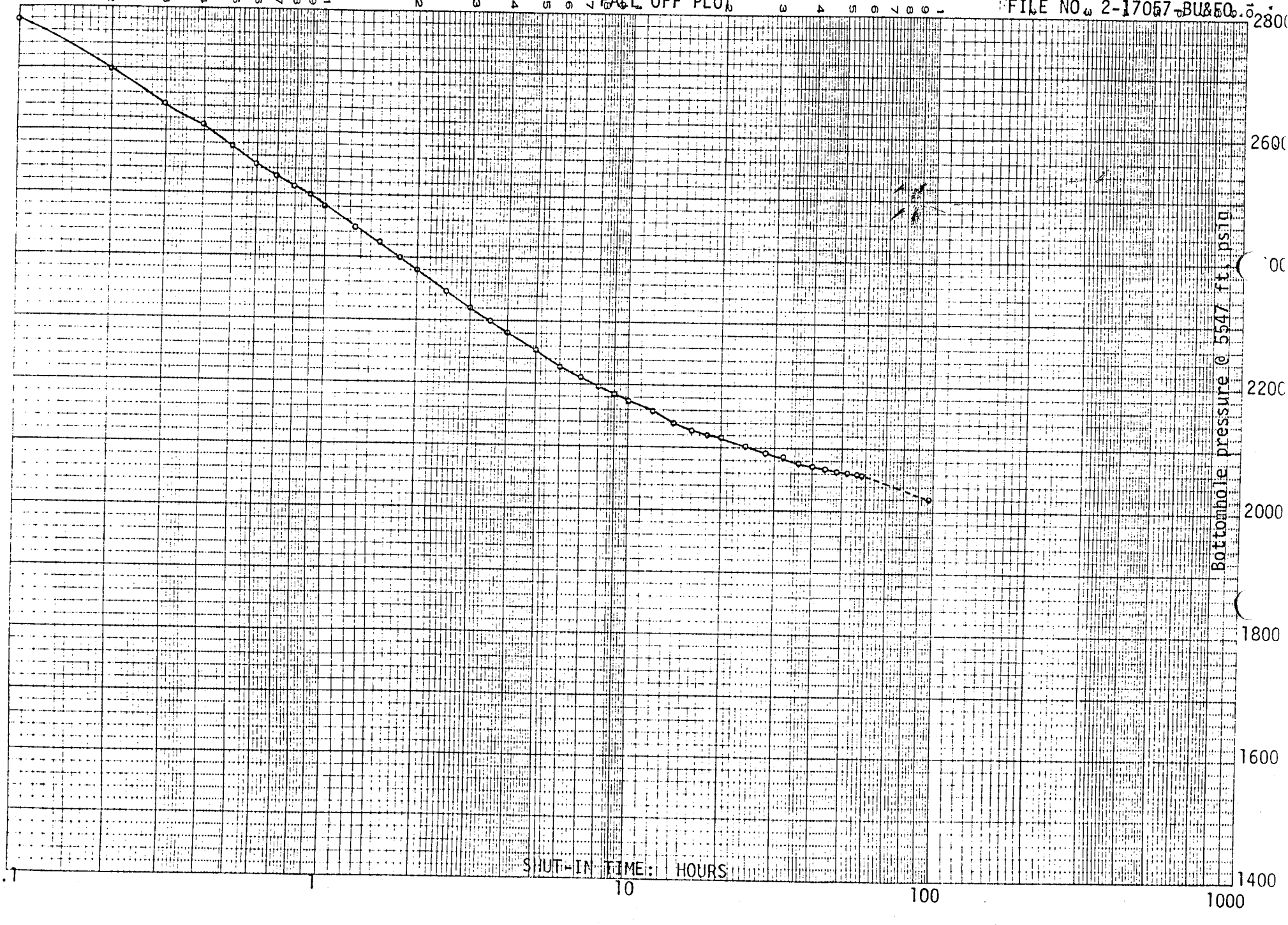
TEFTELLER, INC.
FILE NO. 2-17057-BU&FO



MARATHON OIL COMPANY
TIN CUP MESA NO. 4-25

FALL OFF PLOT

TEFTELLER, INC.
FILE NO. 2-17057-BU&EO



File 2-17057-BU&FO

EFTELLER, INC.

reservoir engineering data

MIDLAND, TEXAS

Company MARATHON OIL COMPANY Lease TIN CUP MESA Well No. 4-25

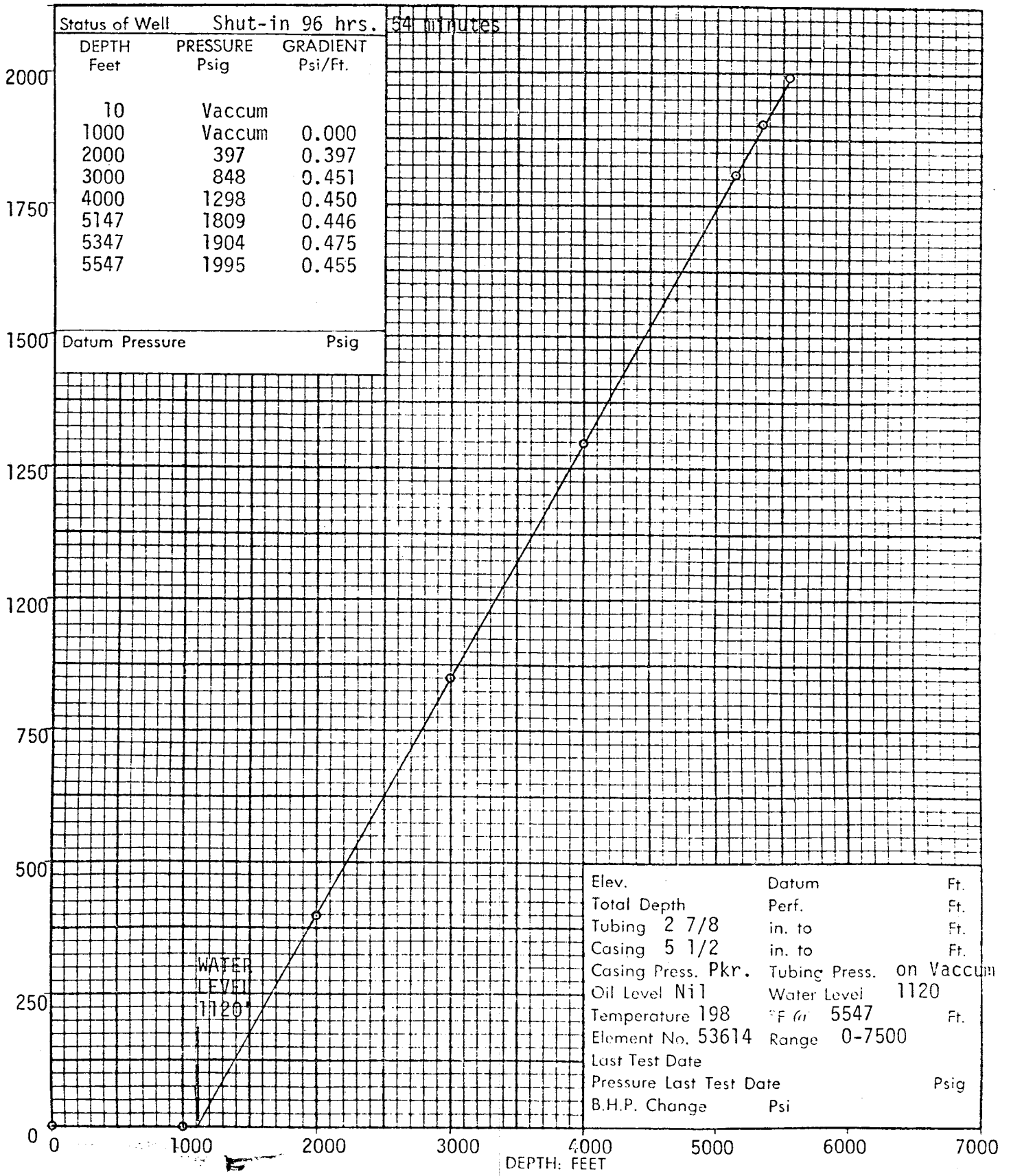
Field TIN CUP MESA County SAN JUAN State UTAH

Formation ISMAY Test Date JUNE 24, 1985

Status of Well Shut-in 96 hrs. 54 minutes

DEPTH Feet	PRESSURE Psig	GRADIENT Psi/Ft.
10	Vaccum	
1000	Vaccum	0.000
2000	397	0.397
3000	848	0.451
4000	1298	0.450
5147	1809	0.446
5347	1904	0.475
5547	1995	0.455

Datum Pressure Psig



Elev.		Datum	Ft.
Total Depth		Perf.	Ft.
Tubing	2 7/8	in. to	Ft.
Casing	5 1/2	in. to	Ft.
Casing Press.	Pkr.	Tubing Press.	on Vaccum
Oil Level	Nil	Water Level	1120
Temperature	198 °F @	5547	Ft.
Element No.	53614	Range	0-7500
Last Test Date			
Pressure Last Test Date			Psig
B.H.P. Change		Psi	

OPERATOR Marathon Oil Co. DATE 2-13-85

WELL NAME Ivi Cup Mesa Unit #4-25

SEC SE SW 25 T 38 S R 25 E COUNTY San Juan

43-037-31145
API NUMBER

Fed
TYPE OF LEASE

CHECK OFF:

- [✓] PLAT
- [✓] BOND
- [✓] NEAREST WELL
- [✓] LEASE
- [✓] FIELD
- [✓] POTASH OR OIL SHALE

PROCESSING COMMENTS:
Unit well
Need water permit

APPROVAL LETTER:

SPACING: [✓] A-3 Ivi Cup Mesa UNIT [ ] c-3-a _____ CAUSE NO. & DATE

[ ] c-3-b [ ] c-3-c

STIPULATIONS:
1- Water
2- Special stip. (see attached)

11/2/84
25020

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

February 14, 1985

Marathon Oil Company
P. O. Box 2659
Casper, Wyoming 82602

Gentlemen:

Re: Well No. Tin Cup Mesa Unit #4-25 - SE SW Sec. 25, T. 38S, R. 25E
50' FSL, 2490' FWL - San Juan County, Utah

Approval to drill the above referenced oil well is hereby granted in accordance with Section 40-6-18, Utah Code Annotated, as amended 1983; and predicated on Rule A-3, 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.

2. Because of the proximity of the proposed well to the unit boundary, the Division requires documentation of concurrence with the proposed location from the offset leaseholder in order to ensure protection of correlative rights. Therefore, Marathon shall obtain and submit to the Division written authorization from the owners of leases within a 500' radius of the proposed well. In addition, if the proposed well intersects a sufficient amount of productive pay to warrant expansion of the unit, Marathon shall take the appropriate steps to proceed with such action.

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

1. Spudding notification to the Division within 24 hours after drilling operations commence.

2. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.

3. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695 or R. J. Firth, Associate Director, (Home) 571-6068.

4. Compliance with the requirements and regulations of Rule C-27, Associated Gas Flaring, General Rules and Regulations, Oil and Gas Conservation.

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 43-037-31145.

Sincerely,

R. J. Firth
Associate Director, Oil & Gas

as
Enclosures
cc: Branch of Fluid Minerals

United States Department of the Interior

IN REPLY REFER TO
3162 (U-065)
(U-13655)

BUREAU OF LAND MANAGEMENT
Moab District
P. O. Box 970
Moab, Utah 84532

FEB 15 1985

Marathon Oil Company
P. O. Box 2659
Casper, WY 82602

Re: Application for Permit to Drill
Well No. Tin Cup Mesa 4-25
Sec. 25, T. 38 S., R. 25 E.
San Juan County, Utah
Lease U-13655

Gentlemen:

The above referenced application was received February 11, 1985. Your application for Permit to Drill has been determined to be technically and administratively adequate.

We anticipate approval to drill the well will be granted within 30 days in accordance with Onshore Oil and Gas Order 1.

If you have any questions, please contact the Branch of Fluid Minerals (801) 259-6111.

Sincerely,

ACTING District Manager

cc: San Juan Resource Area

RECEIVED
FEB 19 1985
CASPER DISTRICT
OPERATIONS
GOVERNMENT COMPLIANCE

CONSERVE AMERICA'S ENERGY

Save Energy and You Serve America!

EXHIBIT "C"

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

February 20, 1985

Marathon Oil Company
P. O. Box 2659
Casper, Wyoming 82602

AMENDED APPROVAL

Gentlemen:

Re: Well No. Tin Cup Mesa Unit #4-25 - SE SW Sec. 25, T. 38S, R. 25E
50' FSL, 2490' FWL - San Juan County, Utah

Approval to drill the above referenced water injection well is hereby granted in accordance with Section 40-6-18, Utah Code Annotated, as amended 1983; and predicated on Rule A-3, General Rules and Regulations and Rules of Practice and Procedure and the Order of Cause No. 211-1 dated January 24, 1985.

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

1. Spudding notification to the Division within 24 hours after drilling operations commence.

2. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.

3. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695 or R. J. Firth, Associate Director, (Home) 571-6068.

4. Compliance with the requirements and regulations of Rule C-27, Associated Gas Flaring, General Rules and Regulations, Oil and Gas Conservation.

RECEIVED

FEB 26 1985

CASPER DISTRICT
OPERATIONS
GOVERNMENT COMPLIANCE

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 43-037-31145.

Sincerely,

R. J. Firth
Associate Director, Oil & Gas

as
Enclosures
cc: Branch of Fluid Minerals

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Received FEB 11 1985

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

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

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [ ] OTHER Water Injection SINGLE ZONE [ ] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: Marathon Oil Company

3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, Wyoming 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: SE SE SW 50' FSL & 2490' FWL
At proposed prod. zone:

5. LEASE DESIGNATION AND SERIAL NO.: U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME: Tin Cup Mesa

8. FARM OR LEASE NAME: Tin Cup Mesa

9. WELL NO.: 4-25

10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 25, T38S, R25E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 8-1/2 miles northwest of Hatch Trading Post, Utah

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 50'

16. NO. OF ACRES IN LEASE: N/A

17. NO. OF ACRES ASSIGNED TO THIS WELL: N/A

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 979'

19. PROPOSED DEPTH: 5700' KB

20. ROTARY OR CABLE TOOLS: 0'-5700'

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5037' Ungraded Ground

22. APPROX. DATE WORK WILL START*: First Quarter 1985

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
Please See Items #4A, #4B, and #6 of Drilling Operations Plan				

Please See the following attachments:

1. Surveyor's Plat
2. Drilling Operations Program and 13-Point Surface Plan
3. Maps and Diagrams

The person responsible for the APD is Frank Krugh, Marathon.
OFFICE: (307) 577-1555
HOME: (307) 235-4506

RECEIVED
FEB 22 1985
CASPER DISTRICT
OPERATIONS
GOVERNMENT COMPLIANCE

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 Doyle F. Jones TITLE District Operations Manager DATE February 1, 1985

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY Jon Kadlec TITLE District Manager DATE 2/20/85

CONDITIONS OF APPROVAL, IF ANY:

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

CONDITIONS OF APPROVAL ATTACHED

STIPULATIONS

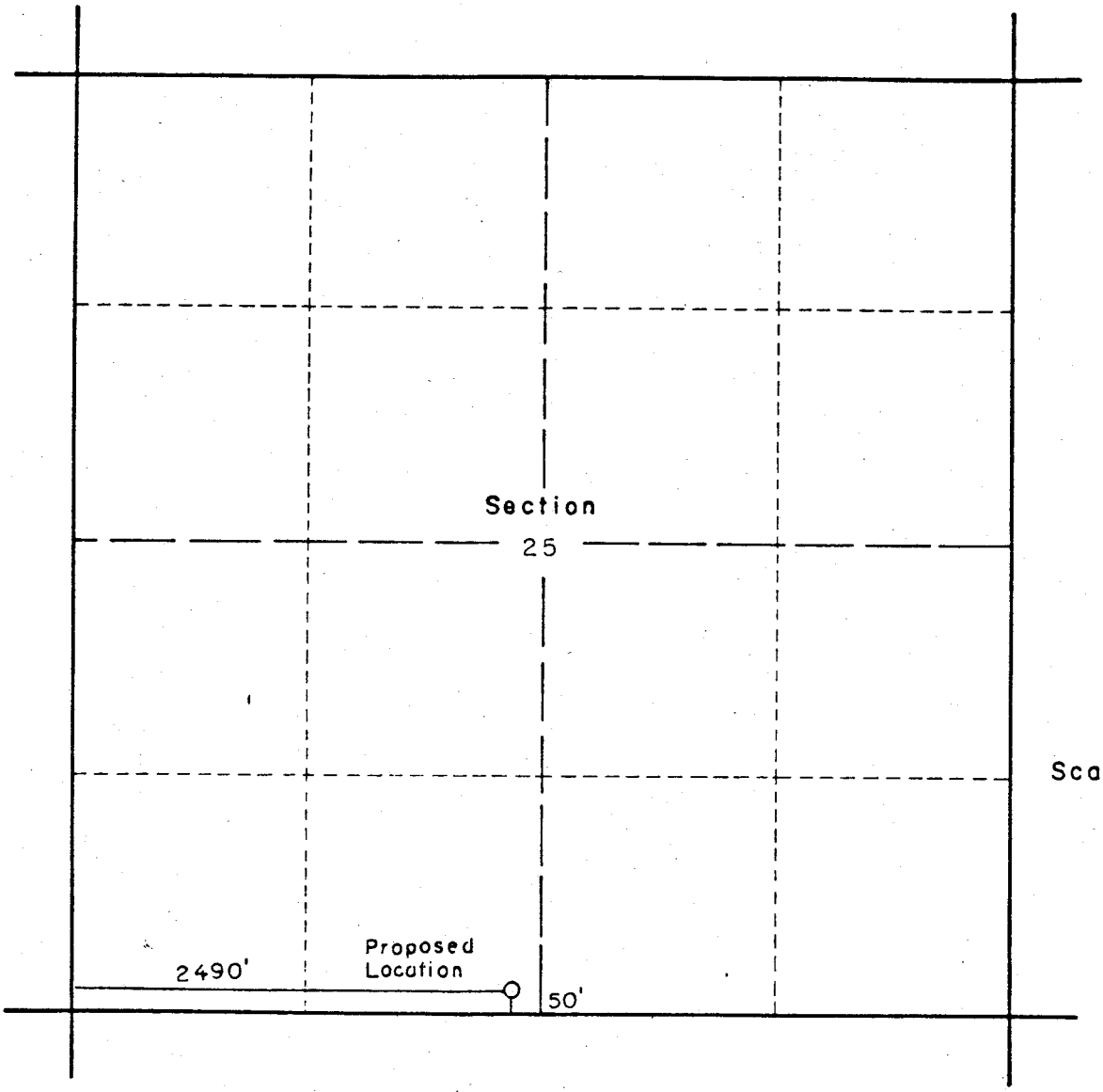
EA No: UT-069-85-42X Project: Tin Cup Mesa 4-25 well

Applicant: Marathon

Description of Action Considered: TO DRILL A WATER INJECTION WELL.

The following stipulations have been developed through the above referenced Environmental Assessment to mitigate the environmental impacts of this action. The action referenced is the alternative indicated on the Decision Record and mentioned above, and is described fully in the Environmental Assessment.

1. The berm discussed in item 12 of your surface use plan must be constructed to prevent spills from leaving the immediate area of the well bore in any direction.



Scale: 1" = 1000'

LOCATION: MARATHON OIL CO. - TIN CUP MESA 4-25

Located 50 feet North of the South line and 2490 feet East of the West line of Section 25
Township 38 South Range 25 East Salt Lake Base & Meridian
San Juan County, Utah
Existing ground elevation determined at 5037 feet based on adjoining locations.

I hereby certify the above plat represents a survey made under my supervision and that it is accurate to the best of my knowledge and belief

Frederick H. Reed

MARATHON OIL COMPANY
Casper, Wyoming

TIN CUP MESA 4-25
SEC. 25, T 38 S, R 25 E
San Juan [illegible]

MOAB DISTRICT

CONDITIONS OF APPROVAL FOR PERMIT TO DRILL

Company Marathon Oil Company Well Name Tin Cup Mesa #4-25

Location Sec. 25 , T. 38 S., R. 25 E. Lease No. U- 13655

SE SW 50' F S L, 2490' F WL

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Order No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

A. DRILLING PROGRAM.

1. Surface Formation and Estimated Formation Tops: Refer to Item #2 in attachment "Drilling Operations Plan"

2. Estimated Depth at Which Oil, Gas, Water, or Other Mineral Bearing Zones Are Expected to be Encountered:

	Formation	Zone
Expected oil zones:	Refer to Item #3 in attachment "Drilling Operations Plan"	
Expected gas zones:		
Expected water zones:		
Expected mineral zones:		

All fresh water and prospectively valuable minerals (as described by BLM at onsite) encountered during drilling, will be recorded by depth, cased, and cemented. All oil and gas shows will be tested to determine commercial potential.

3. Pressure Control Equipment: Refer to Item #5 in attachment "Drilling Operations Plan"

BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventor controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.

4. Casing Program and Auxiliary Equipment: Refer to Items #4A, #4B, #7A, and #7B in attachment "Drilling Operations Plan"

Anticipated cements tops will be reported as to depth, not the expected number of sacks.

5. Mud Program and Circulating Medium: Refer to Item #6 in attachment "Drilling Operations Plan"

6. Coring, Logging and Testing Program: Refer to Item #8 in attachment "Drilling Operations Plan"

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analysis, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. If requested, samples (cuttings, fluids, and/or gases) will be submitted to the District Manager.

7. Abnormal Conditions, Bottom Hole Pressures and Potential Hazards: Refer to Item #9 in attachment "Drilling Operations Plan"

8. Anticipated Starting Dates and Notifications of Operations

The operator will contact the San Juan Resource Area at 801-587-2201, 48 hours before beginning any dirt work.

No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the District Manager. If operations are to be suspended, prior approval of the District Manager will be obtained and notification given before resumption of operations.

The spud date will be reported orally to the San Juan Area Manager, a minimum of 24 hours before spudding. A Sundry Notice (Form 3160-5) will be sent w/in 24 hours after spudding, reporting the spud date and time. The Sundry will be sent to the District Manager. If the spudding is on a weekend or holiday, the Sundry will be submitted on the following regular work day.

In accordance with Onshore Oil and Gas Order No. 1, this well will be reported on Form 9-329 "Monthly Report of Operations," starting with the month in which operations begin and continue each month until the well is physically plugged and abandoned. This report will be sent to the BLM District Office, P.O. Box 970, Moab, Utah 84532.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported to the Resource Area in accordance with requirements of NTL-3A.

If a replacement rig is planned for completion operations, a Sundry Notice (Form 3160-5) to that effect will be filed, for prior approval of the District Manager. All conditions of this approved plan are applicable during all operations conducted with the replacement rig. In emergencies, verbal approval can be given by the District Petroleum Engineer.

If the well is successfully completed for production, then the District Manager will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, not later than 5 business days following the date on which the well is placed on production.

No well abandonment operations will begin without the prior approval of the District Manager. In the case of newly drilled dry holes or failures, and in emergencies, oral approval will be obtained from the District Petroleum Engineer. A "Subsequent Report of Abandonment" (Form 3160-5), will be filed with the District Manager, within 30 days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration.

Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the San Juan Area Manager, or the appropriate surface manager.

Approval to vent/flare gas during initial well evaluation will be obtained from the District Office. This preliminary approval will not exceed 30 days or 50 MMCF gas. Approval to vent/flare beyond this initial test period will require District Office approval pursuant to guidelines in NTL-4A.

Upon completion of approved plugging, a regulation marker will be erected in accordance with 43 CFR 3162.6. The following information will be permanently beaded-on with a welding torch: Fed, Well number, location by ¼¼ section, township and range, Lease number.

A first production conference will be scheduled within 15 days after receipt of the first production notice. The San Juan Area Manager will schedule the conference.

Other: _____

B. THIRTEEN POINT SURFACE USE PLAN

1. Existing Roads:

a. Location of proposed well in relation to town or other reference point: See Diagram "A", color coded red.

b. Proposed route to location: See Diagram "A", color coded red. See copy of Surveyor's Plat of Proposed Access Road, ~~Diagrams "B" and "B-1"~~

c. Plans for improvement and/or maintenance of existing roads: Existing roads will be maintained as needed.

The maximum total disturbed width will be 20 feet.

d. An encroachment permit will be obtained from the San Juan County Road Dept., (801) 587-2231, ext. 43.

e. Other: _____

2. Planned Access Roads:

a. The maximum total disturbed width will be 30 feet.

b. Maximum grade: N/A

c. Turnouts: N/A

d. Location (centerline): Has been flagged and staked

e. Drainage: Normal Water Drainage

f. Surface Materials: Gravel will be hauled if needed

g. Other: The road will be ditched and crowned where possible.

Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance by the San Juan Area Manager.

The access road will be water barred or brought to Class III Road Standards within 60 days of dismantling of the drill rig. If this time frame cannot be met, the San Juan Area Manager will be notified so that temporary drainage control can be installed along the access road.

The Class III Road Standards which ensure drainage control over the entire road through the use of natural, rolling topography; ditch turnouts; drainage dips; outsloping; crowning; low water crossings; and culverts will be determined at the appropriate field inspection.

3. Location of Existing Wells: See Diagram "A"

4. Location of Tank Batteries and Production Facilities:

All permanent (on site for 6 months or longer) above ground facilities (including pump jacks) will be painted a flat, nonreflective, earthtone color to match the standard environmental colors, as determined by the Rocky Mountain 5-State Interagency Committee. All facilities will be painted within 6 months of

installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The color will be Sandstone.

All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.

5. Location and Type of Water Supply:

All water needed for drilling purposes will be obtained from:

Primary-Cross Creek. or Secondary Sources-Application for Permit has been filed

Use of water for this operation will be approved by obtaining a temporary use permit from the Utah State Engineer, (801) 637-1303 and by receiving permission from the land owner or surface management agency to use the land containing the water source.

6. Source of Construction Material:

Pad Construction material will be obtained from: N/A

The use of materials under BLM jurisdiction will conform to 43 CFR 3610.2-3. Construction material (will/will not) be located on lease.

7. Methods of Handling Waste Disposal:

The reserve pit (will/~~will not~~) be lined with commercial bentonite sufficient to prevent seepage. At least half of the capacity will be in cut.

Three sides of the reserve pit will be fenced with four strands of barbed wire before drilling starts. The fourth side will be fenced as soon as the drilling is completed. The fence will be kept in good repair while the pit is drying.

A trash basket will be placed on location and emptied in a proper way as needed.

The road and pad will be kept litter free.

A burning permit is required for burning trash between May 1 and October 31. This can be acquired by contacting the State Fire Warden, John Baker, at (801) 587-2705.

Produced waste water will be confined to a (lined/~~unlined~~) pit for a period not to exceed 90 days after initial production. During the 90 day period an application for approval of a permanent disposal method and location, along with the required water analysis, will be submitted for the District Manager's approval pursuant to Onshore Oil and Gas Order No. 3 (NTL-2B).

8. Ancillary Facilities:

Camp facilities (~~will~~/will not) be required. They will be located:

9. Well Site Layout:

The reserve pit will be located: Northern Side-See Diagram "C"

The top 6 inches of soil material will be removed from the location and stockpiled separate from the trees on the North side. Topsoil along the access will be reserved in place. See Diagram "C"

Access to the well pad will be from: West - See Diagram "B"

10. Reclamation:

a. Immediately on completion of drilling, all trash and debris will be collected from the location and surrounding area. All trash and debris will be disposed of in the trash pit and will then be compacted and buried under a minimum of two feet of compacted soil.

b. The operator /holder or his contractor will contact the San Juan Resource Area office in Monticello, Utah, (801) 587-2201, 48 hours before starting reclamation work that involves earthmoving equipment and upon completion of restoration measures.

c. Before any dirt work to restore the location takes place, the reserve pit must be completely dry.

d. All disturbed areas will be recontoured to blend as nearly as possible with the natural topography. This includes removing all berms and refilling all cuts.

e. The stockpiled topsoil will be spread evenly over the disturbed area. All disturbed areas will be ripped 12 inches deep with the contour.

f. Water bars will be built as follows to control erosion.

	Grade	Spacing
→	2%	Every 200 feet
	2-4%	Every 100 feet
	4-5%	Every 75 feet
	5+%	Every 50 feet

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

____	lbs/acre Indian ricegrass (Oryzopsis hymenoides)
4	lbs/acre Galleta (Hilaria jamesii)
____	lbs/acre crested wheatgrass (Agropyron desertorum)
____	lbs/acre Western wheatgrass (Agropyron smithii)
____	lbs/acre Alkali sacaton (Sporobolus airoides)
____	lbs/acre Sand dropseed (Sporobolus cryptandrus)
2	lbs/acre Fourwing saltbush (Atriplex canescens)
____	lbs/acre Shadscale (Atriplex confertifolia)
____	lbs/acre Green ephedra (Ephedra viridis)
____	lbs/acre Cliffrose (Cowania mexicana)
____	lbs/acre Desert bitterbrush (Purshia glandulosa)
____	lbs/acre Winterfat (Eurotia lanata)
____	lbs/acre Globemallow (Sphaeralcea ambigua)
____	lbs/acre Wild sunflower (Helianthus annuus)
1/4	lbs/acre Yellow Sweet Clover

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

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

* 11. Surface Ownership: Federal Section 25

Mineral Ownership: Federal

12. Other Information: A berm will be built around the southern side of the location to prevent any spills from running over the cliff. The injection line will parallel the access road leadin from TCM #3-25 to TCM #4-25 and will be kept within the 30 foot road limits. These items were discussed between Mr. Rich McClure, BLM, Monticello, and Mr. Frank Krugh, Marathon Oil Company, Casper, on January 29, 1985.

There will be no change from the proposed drilling and/or workover program without prior approval from the District Manager. Safe drilling and operating practices must be used. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.2.

"Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3164.

The dirt contractor will be provided with an approved copy of the surface use plan.

If subsurface cultural materials are exposed during construction, work in that spot will stop immediately and the San Juan Resource Area Office will be contacted. All people who are in the area will be informed by the operator/holder that they are subject to prosecution for disturbing archaeological sites or picking up artifacts. Salvage or excavation of identified archaeological sites will be done by a BLM approved archaeologist only if damage occurs.

This permit will be valid for a period of one year from the date of approval. After permit termination a new application will be filed for approval for any future operations.

* Approximately 20,000 sq. ft. of the drill pad will lie in State owned land, Section 36. This area will not be used after the well has been drilled. It will be reclaimed and reseeded as soon as possible after the well has been drilled. The State of Utah is

Your contact with the District Office is: Bob Graff
Office Phone: 801-259-6111 Address: P.O. Box 970, Moab UT 84532

Resource Area Manager's address and contacts:
Address: P.O. Box 7, Monticello, UT 84535

Your contact is: Rich McClure
Office Phone: 801-587-2201

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

Representative

Name: Guy Whitlock
Address: P.O. Box 2659, Casper, Wyoming 82602
Phone No.: 307-577-1555

Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by

Marathon Oil Company
Operator's Name

and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Guy R Whitlock

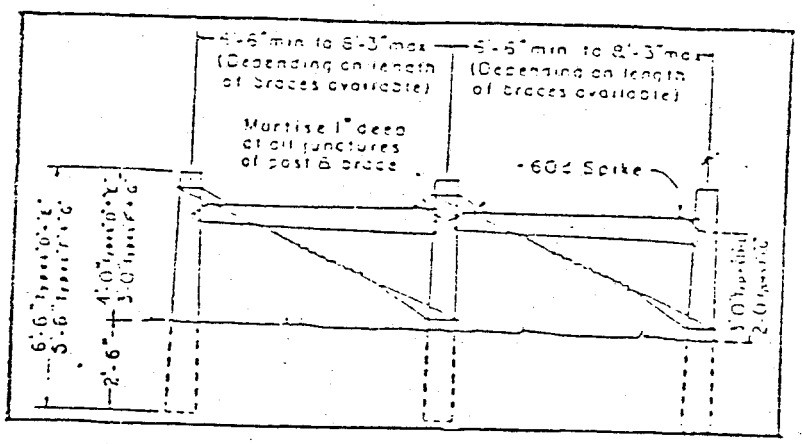
February 1, 1985 — Drilling Engineer
Date — Name and Title

ON-SITE

DATE: January 29, 1985

PARTICIPANTS:	REPRESENTING:
Rich McClure	BLM-Monticello
Patrick Harden	La Plata Archeology
Howard Hughes	Howard Hughes Construction
Jim Perkins, Lou Jobe	Surveyors-Clark Reed & Associates
Jim VanGilder, Carl Baisch	

PANEL AT GATES & CATTLEGUARDS



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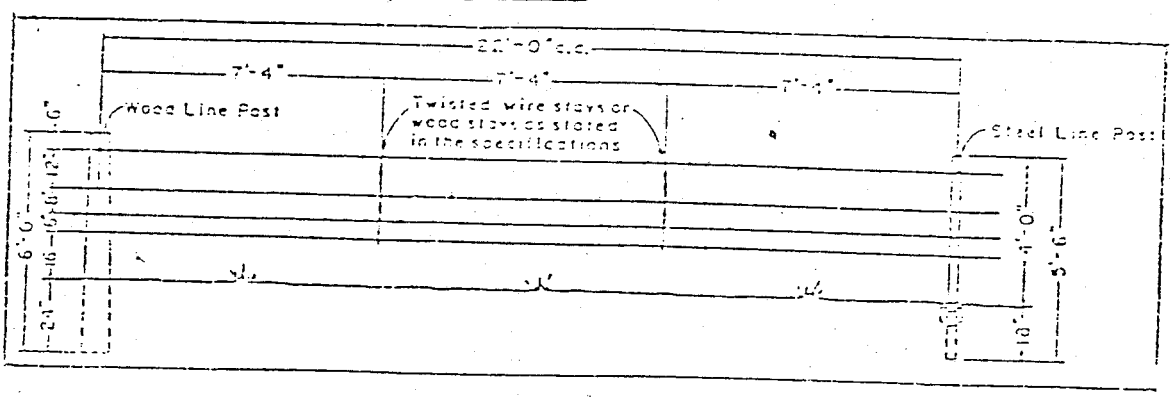
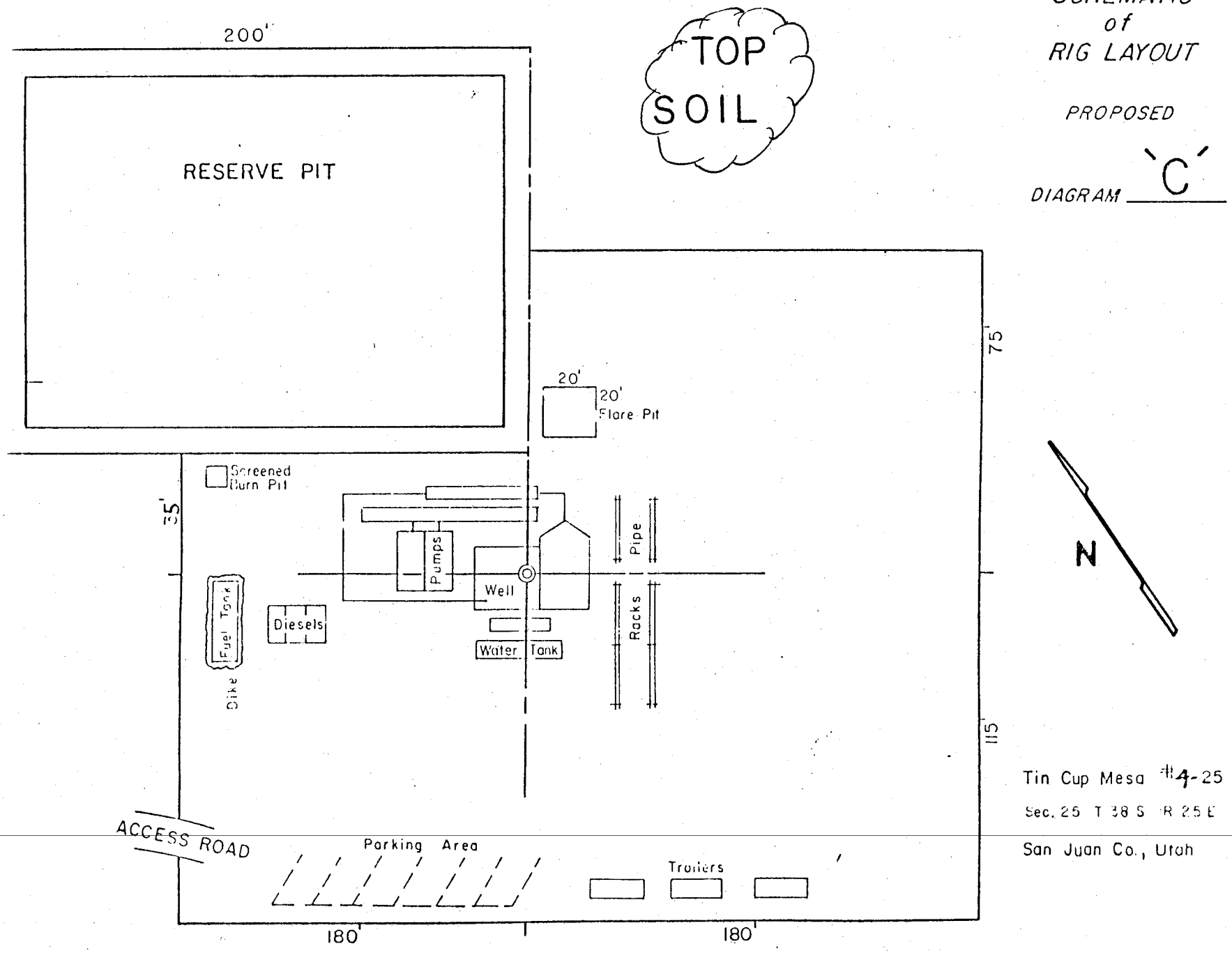



SCHEMATIC
of
RIG LAYOUT
PROPOSED
DIAGRAM 'C'
200'
RESERVE PIT
TOP SOIL
20'
20'
Flare Pit
Screened Burn Pit
35'
75'
115'
Pumps
Pipe
Well
Racks
Fuel Tank
Diesels
Water Tank
Dike
N
ACCESS ROAD
Parking Area
Trailers
180'
180'
Tin Cup Mesa #4-25
Sec. 25 T 38 S R 25 E
San Juan Co., Utah

MARATHON OIL COMPANY
Tin Cup Mesa Water Injection Well #4-25
Drilling Operations Plan
50' FSL, 2,490' FWL, Section 25, T38S, R25E
San Juan County, Utah
Elevation: 5,058' K.B. (Est.)
5,046' G.L. (Est.)

1. Geologic name of surface:

Jurassic Morrison Formation

2. Estimated tops of important geologic markers:

Formation	Depth (K.B.)	Datum	Formation	Depth (K.B.)	(Datum)
Carmel	669'	+4,389'	Paradox	5,187'	- 129'
Navajo	694'	+4,364'	Upper Ismay	5,342'	- 284'
Kayenta	914'	+4,144'	Hovenweep	5,482'	- 424'
Wingate	1,077'	+3,981'	Lower Ismay	5,512'	- 454'
Chinle	1,462'	+3,596'	Gothic Shale	5,567'	- 509'
Shinarump	2,262'	+2,796'	Desert Creek	5,572'	- 514'
Moenkopi	2,312'	+2,746'	Chimney Rock	5,667'	- 609'
Cutler	2,392'	+2,666'	Akah	5,689'	- 631'
Honaker Trail	4,247'	+ 811'	T.D.	5,700'	- 642'

3. Estimated depths of anticipated water, oil, gas or other mineral bearing formations:

Formation/Member	Depth (G.L.)	Possible Content
Carmel	669'	Water
Navajo	694'	Water
Wingate	1,077'	Water
DeChelly**	2,392'	Brine
Honaker Trail	4,247'	Oil
Paradox	5,187'	Brine
Upper Ismay	5,342'	Oil***
Lower Ismay	5,512'	Oil
Desert Creek	5,572'	Oil

** The Cutler Formation may contain the DeChelly Member.
***Primary Objective.

4a. The casing program including the size, grade, weight, whether new or used, and a setting depth of each string:

Min. Hole Size	Casing O.D.	Grade	Weight	Setting Depth	New or Used	Cplg
20"	14"	Thinwall Steel Pipe		60'	New	N/A
12 1/4"	8 5/8"	K-55	24#	1,500'	New	ST&C
7 7/8"	5 1/2"	K-55	15.5#	4,700'	New	ST&C
	5 1/2"	K-55	17#	5,700'	New	ST&C

4b. The cementing program including type, amounts, and additives:

8 5/8" Casing

Cement Volume: 1,500' x .4127 ft^3/ft x 2.0 excess = 1,238 ft^3

Lead Slurry: 1,000' plug 100% excess - 503 sacks of high yield cement (35% fly ash, 65% cement, 6% bentonite) containing 1/4#/sack cellophane flakes and 2% $CaCl_2$.

Weight: 12.7 ppg
Yeild: 1.64 ft^3/sack
Water Requirement: 8.34 gal/sack

Tail Slurry: 500' plus 100% excess - 350 sacks of Class "B" cement containing 1/4#/sack cellophane flakes and 2% $CaCl^2$.

Weight: 15.6 ppg
Yeild: 1.18 ft^3/sack
Water Requirement: 5.2 gal/sack

Casing Equipment will include a float shoe, float collar, and three centralizers. WOC time will be minimum of 6 hours. If float equipment holds, closed-in pressure after cementing is not recommended.

5 1/2" Casing

Cement Volume: 4,250' x .1733 ft^3/ft x 1.25 excess = 921 ft^3. Actual cement volumes will be based on caliper log plus 25% excess.

Slurry Preflush: 20 barrels

Lead Slurry: (3,200' column height) 422 sacks "Lite" cement with 2% $CaCl_2$.

Weight: 12.7 ppg
Yeild: 1.64 ft^3/sack
Water Requirement: 8.34 gal/sack

Tail Slurry: (1,050' column height) 200 sacks Class "B" with 1% fluid loss additive.

Weight: 15.6 ppg
Yeild: 1.18 ft^3/sack
Water Requirement: 5.2 gal/sack

Casing Equipment will include a float shoe, float collar, and six centralizers.

5. B.O.P. specification and testing: (see the attached schematic diagram for size and pressure ratings):

BOP equipment will include a dual ram type preventer with pipe and blind rams and an annular preventer (API arrangement SRRA). All equipment will have a 3,000 psi or greater working pressure. Rams, valves, lines, choke manifold, and casing will be tested to 200 psi for 5 minutes and 1,500 psi for 5 minutes prior to drilling out from under 8 5/8" surface casing. After drilling casing shoe and 5' of additional hole, a shoe test will be performed to 13.5 ppg equivalent mud weight or leak off, whichever occurs first.

A visual check of BOP equipment will be made hourly. Functon pipe rams daily and blind rams on trips.

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

6. Mud program and anticipated pressures:

From	To	Type Mud	Weight	% Oil	Water Loss
0'	1,500'	Spud	8.5-9.0	0	No Control
1,500'	2,392' Cutler	Gel/Water	8.5-9.0	0	No Control
2,392' Cutler	5,342' U. Ismay	Gel/Chemical	9.4-10.3	0	10.0-12.0 cc's
5,342' U. Ismay	T.D.	Gel/Chemical	As Required	0	8.0-9.0 cc's

Mud weights will be kept at a minimum to maximum ROP and minimize lost circulation. However, the existence of water flows may necessitate an increase in mud weight while drilling. Sufficient barite should be kept on location prior to spud in order to increase the mud weight to 11.7 ppg if required.

7a. Type of drilling tools and auxiliary equipment:

A drilling rate recorder, calibrated to record drilling time for each one foot drilled will be used.

A kelly cock will be used and a full opening safety valve will be available on the rig floor.

The mud system will include a desander/desilter, gas buster or degasser.

A manual adjustable choke.

A single shot drift indicator will be used.

7b. Deviation Control:

From	To	Maximum Distance Between Surveys	Maximum Deviation From Vertical	Maximum Change Per 100' of Depth
0'	1,500'	250'	1^{o}	1^{o}
1,500'	T.D.	500'	5^{o}	1^{o}

8. Sample, logging, testing, and coring program:

Samples: 10' intervals from 1,500' to T.D. with a two-man mud logging unit, or as specified by a Marathon representative.

Logging: A DIL/GR/CAL will be run on the 12 1/4" surface hole prior to running casing.

1. DLL/MSFL/GR from T. D. to the surface casing with the GR to surface.
2. BHC Sonic/VDL/GR from T.D. to surface casing.
3. FDC/CNL/Spectral GR from T.D. to surface casing.

The Coriband (Cyberlook) service will be used from the top of the Honaker Trail to T.D.

Testing: Two DST's are anticipated in the top of the Upper Ismay and in the Desert Creek.

Coring: Two 60' cores are anticipated in the Upper Ismay.
One 60' core is anticipated in the Desert Creek.

9. Anticipated abnormal pressures or temperatures:

The DeChelly Member of the Cutler Formation, if penetrated, may contain overpressured salt water requiring 10.5 to 11.5 ppg mud weight to control.

Maximum anticipated bottom hole temperature is approximately 145° F.

Maximum anticipated bottom hole pressure is approximately 3,350 psi.

10. The anticipated starting date and duration of operation:

Starting Date: 1st Quarter, 1985

Duration: 22 days

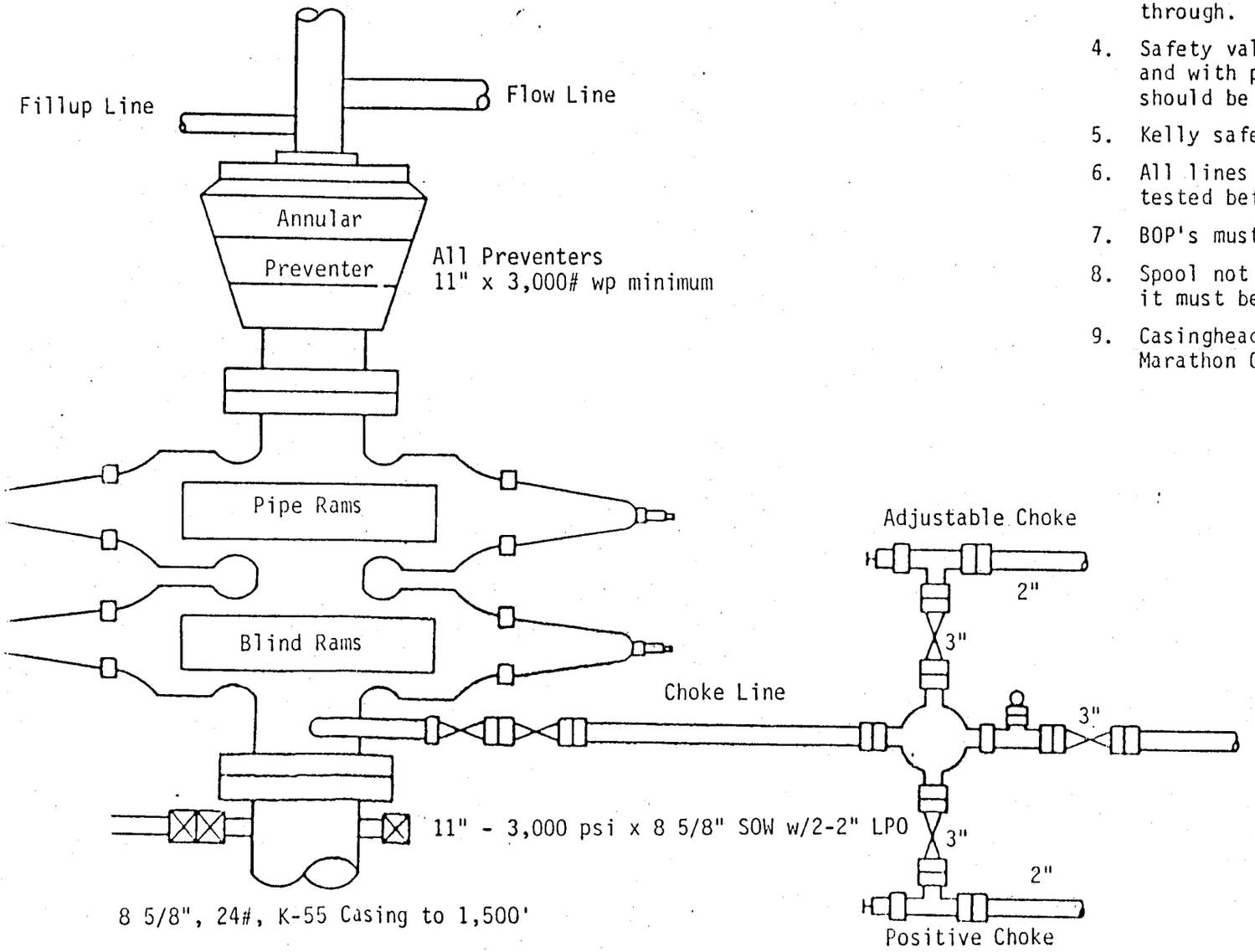
DISTRICT APPROVALS		DIVISION APPROVALS	
Approved	Date	Approved	Date

CASING DESIGN

IGN FACTORS:
= 1.125 Pipe evacuated w/normal MW + .5 ppg. Consider collapse reduction due to tension.
= 1.250 The greater of : 1. Normal MW in annulus. Bottom hole pressure - .10 ppf gas gradient in gas filled pipe.
2. Normal MW in annulus. Maximum surface treating pressure + Hydrostatic of treating fluid.
= 1.50 No buoyancy.

CASING	API/NON-API DRIFT	SETTING DEPTH	SECTION LENGTH	TENSION - 1,000 lb.			COLLAPSE				BURST		
				STRENGTH	FORCE	S.F.	STRENGTH	FORCE	REDUCED STRENGTH	S.F.	STRENGTH	FORCE	S.F.
/8", 24#, K-55, ST&C	7.972"	1,500'	1,500'	263	36	7.31	1,370	741	1,370	1.85	2,950	1,503	2.80
1/2", 15.5#, K-55, ST&C	4.825"	4,700'	4,700'	222	90	2.47	4,040	3,055	3,959	1.30	4,810	2,780	1.73
1/2", 17#, K-55, ST&C	4.767"	5,700'	1,000'	252	17	14.80	4,910	3,705	4,910	1.32	5,320	1,620	3.28

Tin Cup Mesa Water Injection Well #4-25
Section 25, T38S, R25E
San Juan County, Utah



1. Blowout preventers, master valve, plug valve and all fittings must be in good condition. Use new API Seal Rings.
2. All fittings (gates, valves, etc.) to be of equivalent pressure rating as preventers. Valves to be flanged and at least 2" unless otherwise specified. Valves next to BOP to be plug type and nominal 3".
3. Equipment through which bit must pass shall be as large as the inside diameter of the casing that is being drilled through.
4. Safety valve must be available on rig floor at all times and with proper connections. The I.D. of safety valves should be as great as I.D. of tool joints on drill pipe.
5. Kelly safety valve installed, same working pressure as BOP's.
6. All lines and controls to preventers must be connected and tested before drilling out of surface pipe.
7. BOP's must be fluid operated, complete with accumulator.
8. Spool not required, but when side outlet on BOP's is used, it must be below bottom ram.
9. Casinghead and casinghead fittings to be furnished by Marathon Oil Company.

EXHIBIT "B"

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

RECEIVED FEB 11 1985
Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [ ] OTHER Water Injection SINGLE ZONE [ ] MULTIPLE ZONE [ ]

7. UNIT AGREEMENT NAME: Tin Cup Mesa

8. FARM OR LEASE NAME: Tin Cup Mesa

2. NAME OF OPERATOR: Marathon Oil Company

9. WELL NO.: 4-25

3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, Wyoming 82602

10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: SE SE SW 50' FSL & 2490' FWL

At proposed prod. zone:

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 25, T38S, R25E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 8-1/2 miles northwest of Hatch Trading Post, Utah

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
50'	N/A	N/A
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
979'	5700' KB	0'-5700'

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5037' Ungraded Ground

22. APPROX. DATE WORK WILL START*: First Quarter 1985

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
Please See Items #4A, #4B, and #6 of Drilling Operations Plan				

Please See the following attachments:

1. Surveyor's Plat
2. Drilling Operations Program and 13-Point Surface Plan
3. Maps and Diagrams

The person responsible for the APD is Frank Krugh, Marathon.
OFFICE: (307) 577-1555
HOME: (307) 235-4506

RECEIVED
FEB 22 1985
CASPER DISTRICT
OPERATIONS
GOVERNMENT COMPLIANCE

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 Doyle L. Rose TITLE District Operations Manager DATE February 1, 1985

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

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

CONDITIONS OF APPROVAL ATTACHED

STIPULATIONS

EA No: UT-069-85-42X Project: Tin Cup Mesa 4-25 well

Applicant: Marathon

Description of Action Considered: TO DRILL A WATER INJECTION WELL.

The following stipulations have been developed through the above referenced Environmental Assessment to mitigate the environmental impacts of this action. The action referenced is the alternative indicated on the Decision Record and mentioned above, and is described fully in the Environmental Assessment.

1. The berm discussed in item 12 of your surface use plan must be constructed to prevent spills from leaving the immediate area of the well bore in any direction.

MCO RESOURCES, INC.

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

Dist. Mgr. _____
Dist. Engr. _____
Acctg. Supv. _____
Drlg. Supt. _____
Oper. Supt. _____
Res. Engr. _____
Oper. _____
Geolog _____
Husky _____
Empl _____
Envir _____
Safety _____
Other _____
File _____

February 26, 1985

Mr. Doyle L. Jones
District Manager
Marathon Oil Company
P.O. Box 2659
Casper, Wyoming 82602

Re: Tin Cup Mesa No. 4-25 Well

Dear Mr. Jones:

MCOR Oil and Gas Corporation is in receipt of your letter of February 7, 1985 and the accompanying AFE No. 5645-5 for drilling and completion of the Tin Cup Mesa No. 4-25 Well. MCOR has considered the AFE and hereby approves AFE No. 5645-5 for the drilling of the Tin Cup Mesa No. 4-25 Well, specifically subject to the following:

1. The AFE specifies that the well is an "injection well." MCOR and Marathon have not reached agreement that the well be an injection well. The stipulation reached by the parties indicates that Marathon intends the well to be drilled as an injection well and that the parties intend to drill a S.E. location injection well. The purpose of the coring, drill stem testing and regular work-up of the well and the provision requiring notice to MCOR before completion of the well is to allow each interested party the opportunity to evaluate the well as a potential producer. In addition, it should be clear to those who attended the January 24, 1985 hearing in Salt Lake City that both the State of Utah Board of Oil, Gas and Mining and the Federal Bureau of Land Management will be interested to determine whether the well is producible before it is completed as an injector.

   It may be that MCOR will agree that the well be used as an injector after review of the drilling and testing results, but its approval of the AFE at this time does not constitute approval that the well be used other than as a producing well in the event it is producible.

RECEIVED
MAR 4 1985
CASPER DISTRICT
OPERATIONS

MCOR believes that it is understood but wishes to reiterate here that its payment of the working interest as specified in your February 7, 1985 letter is a provisional agreement since Marathon and MCOR continue to

copies: O.A. Howard
M.A. Gray
G.R. Kearns
R.F. Unger copied

disagree on MCOR's participation in the pressure maintenance participating area. MCOR believes that (i) the operating agreement executed by the parties does not and was never intended to apply to secondary recovery operations and that (ii) even if that agreement did apply, Marathon has not appropriately determined the acreage basis participation as called for in the agreement by its utilization of a "circle-tangent" method of acreage allocation. Accordingly, MCOR Oil and Gas Corporation will pay the working interest amount shown in your February 7, 1985 letter with regard to the drilling costs for this well, but by approving this AFE does not in any way signify its agreement with the percentage allocation made by Marathon.

3. Approval of the AFE is made subject to all the terms and conditions of the stipulation and order attached thereto and MCOR respectfully draws your attention to paragraph 3 of the stipulation whereby Marathon agrees to furnish data concerning the well to the regulatory agencies and to all the other working interest owners, at least five working days prior to commencement of completion operations.

Subject to the foregoing, MCOR has executed and returns herewith a copy of the AFE. Your efforts with regard to the Tin Cup Mesa Unit and this well in particular are appreciated. MCOR certainly wants to be co-operative and agreeable with Marathon with respect to this unit, and trusts you understand that MCOR firmly believes that it must protect its fair and just rights where they have been disregarded by others.

Yours very truly,

MCOR OIL AND GAS CORPORATION

J.E. Walton
Manager
Western Region Operations

JEW/pwf

cc: Dale Menge, Esq.
John Kirkham, Esq.
L.M. Smith
F.H. Roth
B.L. Wade, Esq.
K. Abshier, Esq.
T. Deacon

Marathon Oil Company
EXPLORATION & PRODUCTION
AUTHORITY FOR EXPENDITURE

AFE NO. 5645-5

[ ] WILDCAT [X] DEVELOPMENT [ ] DEVELOPMENT EXPL [ ] RECOMPLETION
[ ] WORKOVER [ ] FACILITY [ ] OTHER

Sheet ____ of ____ Sheets Division Casper District Casper Date 2-8-85

Lease or Facility Tin Cup Mesa Unit
Field or Prospect Tin Cup Mesa #4-25 Location 50' FSL, 2,490' FWL, Section 25, T38S, R25E
State Utah County XXXX San Juan
Operator Marathon Oil Company Starting Date 3/1/85 Estimated Completion Date 4/1/85
Marathon Net Interest in Expenditures 75.16927 % Marathon Net Interest in Revenue 61.74928
Is Joint Interest Owners Approval Required? Yes

Estimated Gross Cost This AFE ..... $ 738,000 Marathon Share This AFE ..... $ 555,000

Description of Project & Reason for Expenditure:

It is proposed that the Tin Cup Mesa #4-25 injection well be drilled, offsetting Tin Cup Mesa #3-25. The primary objective for this well is the Upper Ismay Carbonate.

Tin Cup Mesa #4-25 is 979' southeast of Tin Cup Mesa #3-25 (Figure 1). This well encountered the Upper Ismay Carbonate at 5,441' KB with 32' of net pay. Based on this information, Tin Cup Mesa #4-25 should encounter the Ismay Carbonate at 5,458' KB and have 15-20' of net pay (Figure 2). This suggests the well will be near the southeasterly edge of the field and should be a good location for a peripheral injection well.

Computer model studies demonstrate that the incremental recovery of a three-well injection case over a two-well case (#3-23 and #1-25) is 183,000 gross BO. Futhermore, this third injector offers more rapid fillup time and a safety-margin to ensure adequate pressure maintenance in light of any unknowns concerning the field's performance.

PARTICIPANTS' ESTIMATED PRORATED COST OF PROJECT

	W.I. (%)	Amount
Marathon Oil Company	75.16927	554,800
MCOR Oil & Gas Company	17.18750	126,800
Mobil Oil Corporation	4.94792	36,500
Celsius Energy Company	2.69531	19,900
TOTAL	100.00000	738,000

PARTICIPANT'S APPROVAL

Name of Company MCOR Oil and Gas Corporation
Representative's Signature J.C. Walton Date 2-26-85
Title Manager-Operations Western Region

Form 2779 Rev. 5-84

EDWARD W. CLYDE, P.C.
ELLIOTT LEE PRATT
WILLIAM G. GIBBS
RICHARD C. CAHOON, P.C.
RODNEY G. SNOW, P.C.
STEVEN E. CLYDE, P.C.
THEODORE BOYER, JR.
EDWIN C. BARNES
GARY L. PAXTON
L. MARK FERRE
NEIL A. KAPLAN*
D. BRENT ROSE
JOHN W. ANDERSON
DENNIS C. STICKLEY**
JAMES L. WARLAUMONT
H. MIFFLIN WILLIAMS III
JEFFREY W. APPEL
JENNIFER M. HANSEN

*ADMITTED IN WASHINGTON, D.C.
**ADMITTED IN ARIZONA AND WYOMING

CLYDE, PRATT, GIBBS & CAHOON

ATTORNEYS AT LAW
200 AMERICAN SAVINGS PLAZA
77 WEST SECOND SOUTH
SALT LAKE CITY, UTAH 84101

PHONE 322-2516
AREA CODE 801

TELECOPIER:
(801) 322-2516

OF COUNSEL
FRANK J. ALLEN
ROLAND R. WRIGHT

February 26, 1985

FILE NO.

Mr. Cleon Feight, Director
UIC Program
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

HAND DELIVERED

RE: Marathon Oil Company/Tin Cup Mesa Unit #4-25

Dear Cleon:

The following list supplements that furnished to you by John Anderson by his letter of February 14, 1985 regarding individuals or entities owning leasehold interests within one-half mile of the proposed well, that will be receiving actual written notice of the proposed well. It is my understanding that you will provide the notice to these individuals and that Marathon is not required to do so. If my understanding is incorrect, of course, please let me know.

The list is as follows:

OIL AND GAS INTERESTS

Antelope Production
P. O. Box 57
Kimball, Nebraska 69145

Celsius Energy Corporation
P. O. Box 11070
Salt Lake City, Utah 84147

Chorney Oil Company
555 17th Street, Suite 1000
Denver, Colorado 80202-3910

Marathon Oil Company
P. O. Box 2659
Casper, Wyoming 82602

MCOR Oil & Gas Corporation
10880 Wilshire Boulevard
Los Angeles, CA. 90024

Mobil Oil Corporation
P. O. Box 5444
Denver, Colorado 80217

Ladd Petroleum Corporation
830 Denver Club Building
Denver, Colorado 80202

Transco Exploration Co.
1700 Lincoln St.
Suite 2100
1 United Bank Center
Denver, Colorado 80203

GRAZING LEASEE

Mr. Marvin Redburn
Flying R Ranch
25292 Highway 145
Dolores, Colorado 81323

Thanks again for all of your help and personal attention on this. Best personal regards.

Very truly yours,

CLYDE, PRATT, GIBBS & CAHOON

STEVEN E. CLYDE

SECmlm
CC: Del Menge
Bill Willoughby
John Anderson

EDWARD W. CLYDE, P.C.
ELLIOTT LEE PRATT
WILLIAM G. GIBBS
RICHARD C. CAHOON, P.C.
RODNEY G. SNOW, P.C.
STEVEN E. CLYDE, P.C.
THEODORE BOYER, JR.
EDWIN C. BARNES
GARY L. PAXTON
L. MARK FERRE
NEIL A. KAPLAN*
D. BRENT ROSE
JOHN W. ANDERSON
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JAMES L. WARLAUMONT
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JEFFREY W. APPEL
JENNIFER M. HANSEN

*ADMITTED IN WASHINGTON, D.C.
**ADMITTED IN ARIZONA AND WYOMING

CLYDE, PRATT, GIBBS & CAHOON

ATTORNEYS AT LAW
200 AMERICAN SAVINGS PLAZA
77 WEST SECOND SOUTH
SALT LAKE CITY, UTAH 84101

PHONE 322-2516
AREA CODE 801

TELECOPIER:
(801) 322-2516

OF COUNSEL
FRANK J. ALLEN
ROLAND R. WRIGHT

February 14, 1985

FILE NO.

Mr. Cleon Feight, Director
UIC Program
Utah Board of Oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84101

Re: Tin Cup Mesa Unit #4-25

Dear Jack:

I have enclosed an application for a permit to drill Tin Cup Mesa Unit #4-25 for your review. As we discussed, Marathon Oil Company intends to drill this well as a water injection well and would like your approval to inject that well as early as possible. To that end, you indicated that notice could be given in advance of filing Form Numbers DOGM-UIC-1 and DOGM-UIC-2, if we provided the above-referenced application and a listing of all operators and surface owners within one-half mile of the proposed well.

The only operator of a producing leasehold within one-half mile of the Tin Cup Mesa Unit #4-25 is Marathon Oil Company, P.O. Box 2659, Casper, Wyoming, 82602. As for surface owners within one-half mile of Unit #4-25, the BLM is the surface owner of Section 25, 26, 35 and the State of Utah is a surface owner of Section 36. The grazing rights for Section 25, 26, 35 and 36 are held by Mr. Charles Hardy Redd, Box 247, La Sal, Utah, 84530.

Please send notice of Marathon's application to the appropriate parties and initiate publication of notice at your

earliest convenience. If you need additional information, please call either myself or Steven E. Clyde of this office.

Best regards.

Very truly yours,

CLYDE, PRATT, GIBBS & CAHOON

John W. Anderson

JWA/dp

Enclosures

cc: R.F. Unger
W.A. Willoughby

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [ ] OTHER Water Injection SINGLE ZONE [ ] MULTIPLE ZONE [ ]

7. UNIT AGREEMENT NAME: Tin Cup Mesa

8. FARM OR LEASE NAME: Tin Cup Mesa

2. NAME OF OPERATOR: Marathon Oil Company

9. WELL NO.: 4-25

3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, Wyoming 82602

10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: SE SE SW 50' FSL & 2490' FWL

At proposed prod. zone

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 25, T38S, R25E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 8-1/2 miles northwest of Hatch Trading Post, Utah

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
50'	N/A	N/A
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
979'	5700' KB	0'-5700'

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5037' Ungraded Ground

22. APPROX. DATE WORK WILL START*: First Quarter 1985

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
Please See Items #4A, #4B, and #6 of Drilling Operations Plan				

Please See the following attachments:

1. Surveyor's Plat
2. Drilling Operations Program and 13-Point Surface Plan
3. Maps and Diagrams

The person responsible for the APD is Frank Krugh, Marathon.
OFFICE: (307) 577-1555
HOME: (307) 235-4506

RECEIVED
FEB 27 1985
DIVISION OF OIL GAS & MINING

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

24.

SIGNED Douglas L. Imes TITLE District Operations Manager DATE February 1, 1985

(This space for Federal or State office use)

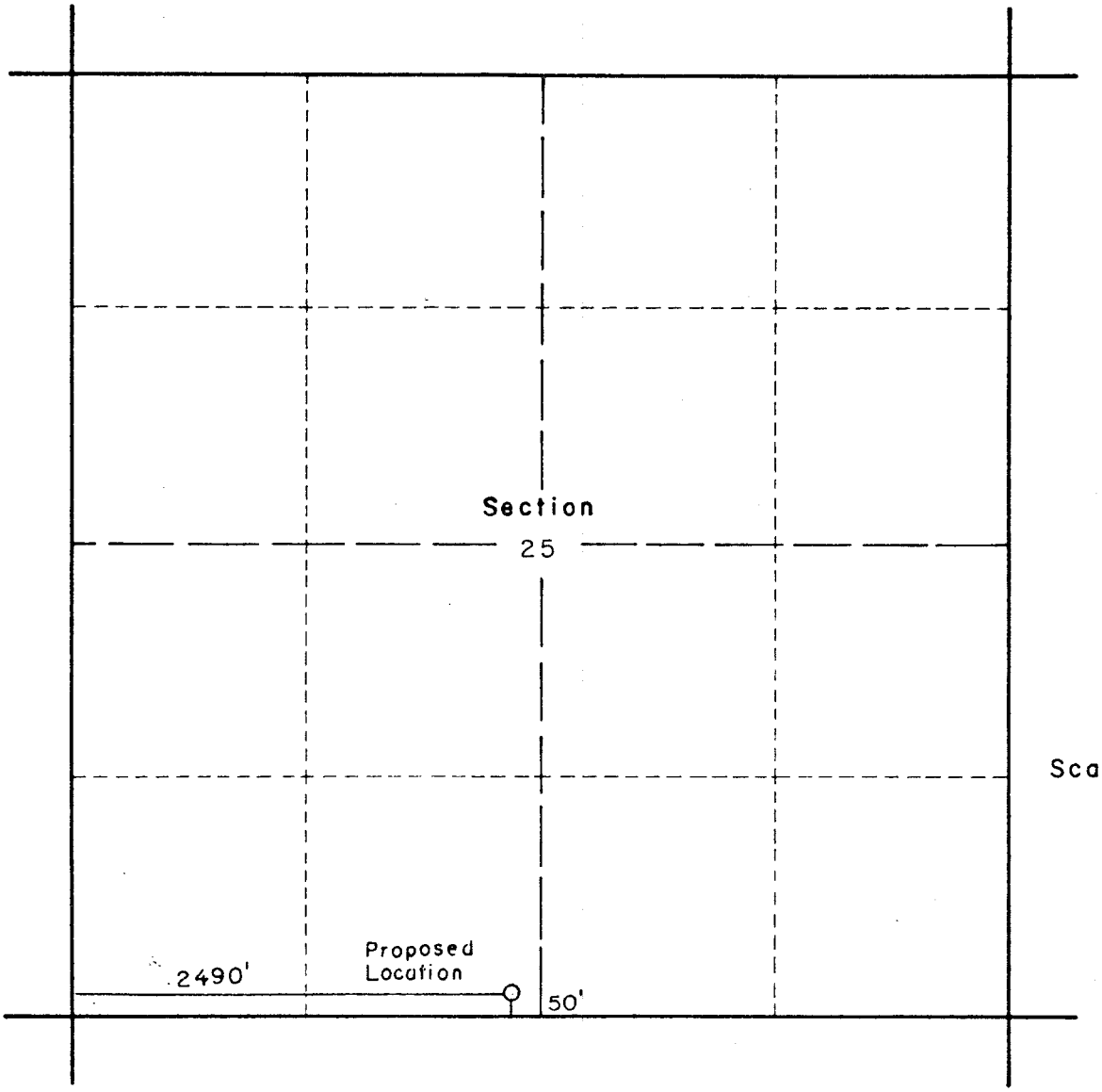
PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

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



Scale: 1" = 1000'

LOCATION: MARATHON OIL CO. - TIN CUP MESA 4-25

Located 50 feet North of the South line and 2490 feet East of the West line of Section 25
Township 38 South Range 25 East Salt Lake Base & Meridian
San Juan County, Utah
Existing ground elevation determined at 5037 feet based on adjoining locations.

I hereby certify the above plat represents a survey made under my supervision and that it is accurate to the best of my knowledge and belief.

Frederick H. Reed

FREDERICK H. REED
Registered Land Surveyor

MARATHON OIL COMPANY
Casper, Wyoming

TIN CUP MESA 4-25
SEC. 25, T 38 S, R 25 E
San Juan County, Utah

CLARK-REED & ASSOC.
Durango, Colorado

DATE: JAN. 22, 1985
FILE NO: 85005

MOAB DISTRICT

CONDITIONS OF APPROVAL FOR PERMIT TO DRILL

Company Marathon Oil Company Well Name Tin Cup Mesa #4-25

Location Sec. 25 , T. 38 S., R. 25 E. Lease No. U- 13655

SE SW 50' F S L, 2490' F WL

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Order No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

A. DRILLING PROGRAM.

1. Surface Formation and Estimated Formation Tops: Refer to Item #2 in attachment "Drilling Operations Plan"

2. Estimated Depth at Which Oil, Gas, Water, or Other Mineral Bearing Zones Are Expected to be Encountered:

	Formation	Zone
Expected oil zones:	Refer to Item #3 in attachment "Drilling Operations Plan"	
Expected gas zones:		
Expected water zones:		
Expected mineral zones:		

All fresh water and prospectively valuable minerals (as described by BLM at onsite) encountered during drilling, will be recorded by depth, cased, and cemented. All oil and gas shows will be tested to determine commercial potential.

3. Pressure Control Equipment: Refer to Item #5 in attachment "Drilling Operations Plan"

BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventor controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.

4. Casing Program and Auxiliary Equipment: Refer to Items #4A, #4B, #7A, and #7B in attachment "Drilling Operations Plan"

Anticipated cements tops will be reported as to depth, not the expected number of sacks.

5. Mud Program and Circulating Medium: Refer to Item #6 in attachment "Drilling Operations Plan"

6. Coring, Logging and Testing Program: Refer to Item #8 in attachment "Drilling Operations Plan"

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analysis, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. If requested, samples (cuttings, fluids, and/or gases) will be submitted to the District Manager.

7. Abnormal Conditions, Bottom Hole Pressures and Potential Hazards: Refer to Item #9 in attachment "Drilling Operations Plan"

8. Anticipated Starting Dates and Notifications of Operations

The operator will contact the San Juan Resource Area at 801-587-2201, 48 hours before beginning any dirt work.

No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the District Manager. If operations are to be suspended, prior approval of the District Manager will be obtained and notification given before resumption of operations.

The spud date will be reported orally to the San Juan Area Manager, a minimum of 24 hours before spudding. A Sundry Notice (Form 3160-5) will be sent w/in 24 hours after spudding, reporting the spud date and time. The Sundry will be sent to the District Manager. If the spudding is on a weekend or holiday, the Sundry will be submitted on the following regular work day.

In accordance with Onshore Oil and Gas Order No. 1, this well will be reported on Form 9-329 "Monthly Report of Operations," starting with the month in which operations begin and continue each month until the well is physically plugged and abandoned. This report will be sent to the BLM District Office, P.O. Box 970, Moab, Utah 84532.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported to the Resource Area in accordance with requirements of NTL-3A.

If a replacement rig is planned for completion operations, a Sundry Notice (Form 3160-5) to that effect will be filed, for prior approval of the District Manager. All conditions of this approved plan are applicable during all operations conducted with the replacement rig. In emergencies, verbal approval can be given by the District Petroleum Engineer.

If the well is successfully completed for production, then the District Manager will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, not later than 5 business days following the date on which the well is placed on production.

No well abandonment operations will begin without the prior approval of the District Manager. In the case of newly drilled dry holes or failures, and in emergencies, oral approval will be obtained from the District Petroleum Engineer. A "Subsequent Report of Abandonment" (Form 3160-5), will be filed with the District Manager, within 30 days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration.

Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the San Juan Area Manager, or the appropriate surface manager.

Approval to vent/flare gas during initial well evaluation will be obtained from the District Office. This preliminary approval will not exceed 30 days or 50 MMCF gas. Approval to vent/flare beyond this initial test period will require District Office approval pursuant to guidelines in NTL-4A.

Upon completion of approved plugging, a regulation marker will be erected in accordance with 43 CFR 3162.6. The following information will be permanently beaded-on with a welding torch: Fed, Well number, location by ¼¼ section, township and range, Lease number.

A first production conference will be scheduled within 15 days after receipt of the first production notice. The San Juan Area Manager will schedule the conference.

Other: _____

B. THIRTEEN POINT SURFACE USE PLAN

1. Existing Roads:

a. Location of proposed well in relation to town or other reference point: See Diagram "A", color coded red.

b. Proposed route to location: See Diagram "A", color coded red. See copy of Surveyor's Plat of Proposed Access Road, ~~Diagrams "B" and "B-1"~~

c. Plans for improvement and/or maintenance of existing roads: Existing roads will be maintained as needed.

The maximum total disturbed width will be 20 feet.

d. An encroachment permit will be obtained from the San Juan County Road Dept., (801) 587-2231, ext. 43.

e. Other: _____

2. Planned Access Roads:

a. The maximum total disturbed width will be 30 feet.

b. Maximum grade: N/A

c. Turnouts: N/A

d. Location (centerline): Has been flagged and staked

e. Drainage: Normal Water Drainage

f. Surface Materials: Gravel will be hauled if needed

g. Other: The road will be ditched and crowned where possible.

Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance by the San Juan Area Manager.

The access road will be water barred or brought to Class III Road Standards within 60 days of dismantling of the drill rig. If this time frame cannot be met, the San Juan Area Manager will be notified so that temporary drainage control can be installed along the access road.

The Class III Road Standards which ensure drainage control over the entire road through the use of natural, rolling topography; ditch turnouts; drainage dips; outsloping; crowning; low water crossings; and culverts will be determined at the appropriate field inspection.

3. Location of Existing Wells: See Diagram "A"

4. Location of Tank Batteries and Production Facilities:

All permanent (on site for 6 months or longer) above ground facilities (including pump jacks) will be painted a flat, nonreflective, earthtone color to match the standard environmental colors, as determined by the Rocky Mountain 5-State Interagency Committee. All facilities will be painted within 6 months of

installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The color will be Sandstone.

All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.

5. Location and Type of Water Supply:

All water needed for drilling purposes will be obtained from:

Primary-Cross Creek, or Secondary Sources-Application for Permit has been filed

Use of water for this operation will be approved by obtaining a temporary use permit from the Utah State Engineer, (801) 637-1303 and by receiving permission from the land owner or surface management agency to use the land containing the water source.

6. Source of Construction Material:

Pad Construction material will be obtained from: N/A

The use of materials under BLM jurisdiction will conform to 43 CFR 3610.2-3. Construction material (will/will not) be located on lease.

7. Methods of Handling Waste Disposal:

The reserve pit (will/~~will not~~) be lined with commercial bentonite sufficient to prevent seepage. At least half of the capacity will be in cut.

Three sides of the reserve pit will be fenced with four strands of barbed wire before drilling starts. The fourth side will be fenced as soon as the drilling is completed. The fence will be kept in good repair while the pit is drying.

A trash basket will be placed on location and emptied in a proper way as needed.

The road and pad will be kept litter free.

A burning permit is required for burning trash between May 1 and October 31. This can be acquired by contacting the local Fire Warden, John Baker, at (801) 587-2705.

Produced waste water will be confined to a (lined/~~unlined~~) pit for a period not to exceed 90 days after initial production. During the 90 day period an application for approval of a permanent disposal method and location, along with the required water analysis, will be submitted for the District Manager's approval pursuant to Onshore Oil and Gas Order No. 3 (NTL-2B).

8. Ancillary Facilities:

Camp facilities (~~will~~/will not) be required. They will be located:

9. Well Site Layout:

The reserve pit will be located: Northern Side-See Diagram "C"

The top 6 inches of soil material will be removed from the location and stockpiled separate from the trees on the North Topsoil along the access will be reserved in place. See Diagram "C"

Access to the well pad will be from: West - See Diagram "B"

10. Reclamation:

a. Immediately on completion of drilling, all trash and debris will be collected from the location and surrounding area. All trash and debris will be disposed of in the trash pit and will then be compacted and buried under a minimum of two feet of compacted soil.

b. The operator /holder or his contractor will contact the San Juan Resource Area office in Monticello, Utah, (801) 587-2201, 48 hours before starting reclamation work that involves earthmoving equipment and upon completion of restoration measures.

c. Before any dirt work to restore the location takes place, the reserve pit must be completely dry.

d. All disturbed areas will be recontoured to blend as nearly as possible with the natural topography. This includes removing all berms and refilling all cuts.

e. The stockpiled topsoil will be spread evenly over the disturbed area. All disturbed areas will be ripped 12 inches deep with the contour.

f. Water bars will be built as follows to control erosion.

Grade	Spacing
→ 2%	Every 200 feet
2-4%	Every 100 feet
4-5%	Every 75 feet
5+%	Every 50 feet

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

___ lbs/acre	Indian ricegrass (Oryzopsis hymenoides)
4 lbs/acre	Galleta (Hilaria jamesii)
___ lbs/acre	crested wheatgrass (Agropyron desertorum)
___ lbs/acre	Western wheatgrass (Agropyron smithii)
___ lbs/acre	Alkali sacaton (Sporobolus airoides)
___ lbs/acre	Sand dropseed (Sporobolus cryptandrus)
2 lbs/acre	Fourwing saltbush (Atriplex canescens)
___ lbs/acre	Shadscale (Atriplex confertifolia)
___ lbs/acre	Green ephedra (Ephedra viridis)
___ lbs/acre	Cliffrose (Cowania mexicana)
___ lbs/acre	Desert bitterbrush (Purshia glandulosa)
___ lbs/acre	Winterfat (Eurotia lanata)
___ lbs/acre	Globemallow (Sphaeralcea coccinea)
___ lbs/acre	Wild sunflower (Helianthus annuus)
1/4 lbs/acre	Yellow Sweet Clover

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

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

* 11. Surface Ownership: Federal Section 25

Mineral Ownership: Federal

12. Other Information: A berm will be built around the southern side of the location to prevent any spills from running over the cliff. The injection line will parallel the access road leading from TCM #3-25 to TCM #4-25 and will be kept within the 30 foot road limits. These items were discussed between Mr. Rich McClure, BLM, Monticello, and Mr. Frank Krugh, Marathon Oil Company, Casper, on January 29, 1985.

There will be no change from the proposed drilling and/or workover program without prior approval from the District Manager. Safe drilling and operating practices must be used. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.2.

"Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3164.

The dirt contractor will be provided with an approved copy of the surface use plan.

If subsurface cultural materials are encountered during construction, work in that spot will stop immediately and the San Juan Resource Area Office will be contacted. All people working in the area will be informed by the superintendent that they are subject to prosecution for disturbing archaeological sites or picking up artifacts. Salvage or excavation of identified archaeological sites will be done by a BLM approved archaeologist only if damage occurs.

This permit will be valid for a period of one year from the date of approval. After permit expiration a new application will be filed for approval for any future operations.

* Approximately 20,000 sq. ft. of the drill pad will lie in State owned land, Section 36. This area will not be used after the well has been drilled. It will be reclaimed and reseeded as soon as possible after the well has been drilled. The State of Utah is aware of this situation and they forsee no problems.

Your contact with the District Office is: Bob Graff
Office Phone: 801-259-6111 Address: P.O. Box 970, Moab UT 84532

Resource Area Manager's address and contacts:
Address: P.O. Box 7, Monticello, UT 84535

Your contact is: Rich McClure
Office Phone: 801-587-2201

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

Representative

Name: Guy Whitlock
Address: P.O. Box 2659, Casper, Wyoming 82602
Phone No.: 307-577-1555

Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by

Marathon Oil Company
Operator's Name

and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Guy R Whitlock

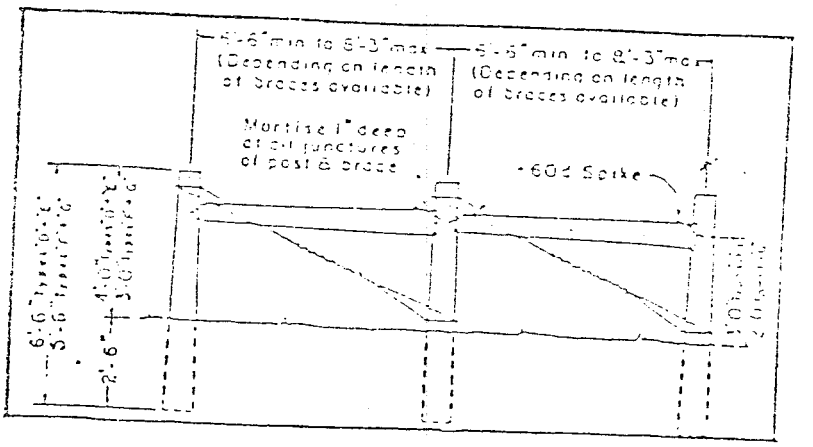
February 1, 1985 — Drilling Engineer
Date — Name and Title

ON-SITE

DATE: January 29, 1985

PARTICIPANTS:	REPRESENTING:
Rich McClure	BLM-Monticello
Patrick Harden	La Plata Archeology
Howard Hughes	Howard Hughes Construction
Jim Perkins, Lou Jobe	Surveyors-Clark Reed & Associates
Jim VanGilder, Carl Bassett, Jim MaGee, Frank Krugh	Marathon Oil Company

PANEL AT GATES & CATTLEGUARDS



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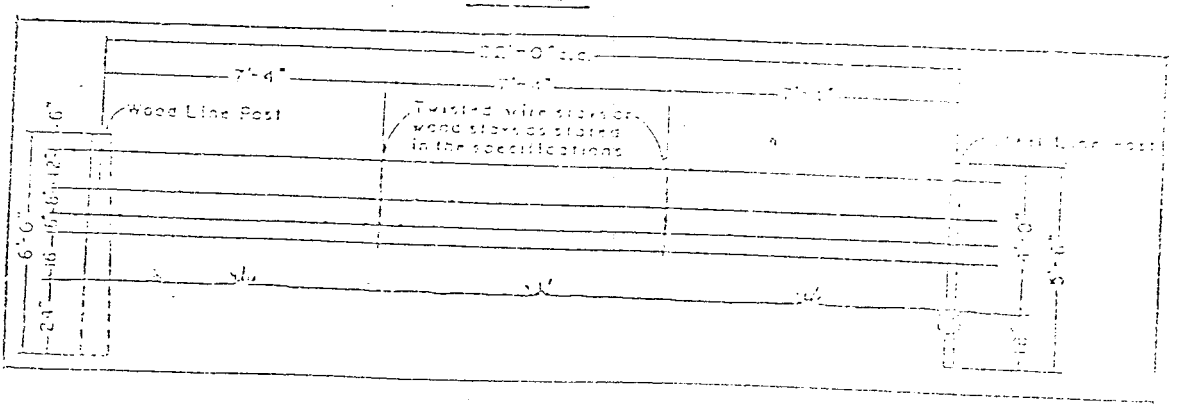


MARATHON OIL COMPANY
Tin Cup Mesa Water Injection Well #4-25
Drilling Operations Plan
50' FSL, 2,490' FWL, Section 25, T38S, R25E
San Juan County, Utah
Elevation: 5,058' K.B. (Est.)
5,046' G.L. (Est.)

1. Geologic name of surface:

Jurassic Morrison Formation

2. Estimated tops of important geologic markers:

Formation	Depth (K.B.)	Datum	Formation	Depth (K.B.)	(Datum)
Carmel	669'	+4,389'	Paradox	5,187'	- 129'
Navajo	694'	+4,364'	Upper Ismay	5,342'	- 284'
Kayenta	914'	+4,144'	Hovenweep	5,482'	- 424'
Wingate	1,077'	+3,981'	Lower Ismay	5,512'	- 454'
Chinle	1,462'	+3,596'	Gothic Shale	5,567'	- 509'
Shinarump	2,262'	+2,796'	Desert Creek	5,572'	- 514'
Moenkopi	2,312'	+2,746'	Chimney Rock	5,667'	- 609'
Cutler	2,392'	+2,666'	Akah	5,689'	- 631'
Honaker Trail	4,247'	+ 811'	T.D.	5,700'	- 642'

3. Estimated depths of anticipated water, oil, gas or other mineral bearing formations:

Formation/Member	Depth (G.L.)	Possible Content
Carmel	669'	Water
Navajo	694'	Water
Wingate	1,077'	Water
DeChelly**	2,392'	Brine
Honaker Trail	4,247'	Oil
Paradox	5,187'	Brine
Upper Ismay	5,342'	Oil***
Lower Ismay	5,512'	Oil
Desert Creek	5,572'	Oil

** The Cutler Formation may contain the DeChelly Member.
***Primary Objective.

4a. The casing program including the size, grade, weight, whether new or used, and a setting depth of each string:

Min. Hole Size	Casing O.D.	Grade	Weight	Setting Depth	New or Used	Cplg
20"	14"	Thinwall Steel Pipe		60'	New	N/A
12 1/4"	8 5/8"	K-55	24#	1,500'	New	ST&C
7 7/8"	5 1/2"	K-55	15.5#	4,700'	New	ST&C
	5 1/2"	K-55	17#	5,700'	New	ST&C

4b. The cementing program including type, amounts, and additives:

8 5/8" Casing

Cement Volume: 1,500' x .4127 ft^3/ft x 2.0 excess = 1,238 ft^3

Lead Slurry: 1,000' plug 100% excess - 503 sacks of high yield cement (35% fly ash, 65% cement, 6% bentonite) containing 1/4#/sack cellophane flakes and 2% $CaCl_2$.

Weight: 12.7 ppg
Yeild: 1.64 ft^3/sack
Water Requirement: 8.34 gal/sack

Tail Slurry: 500' plus 100% excess - 350 sacks of Class "B" cement containing 1/4#/sack cellophane flakes and 2% $CaCl^2$.

Weight: 15.6 ppg
Yeild: 1.18 ft^3/sack
Water Requirement: 5.2 gal/sack

Casing Equipment will include a float shoe, float collar, and three centralizers. WOC time will be minimum of 6 hours. If float equipment holds, closed-in pressure after cementing is not recommended.

5 1/2" Casing

Cement Volume: 4,250' x .1733 ft^3/ft x 1.25 excess = 921 ft^3. Actual cement volumes will be based on caliper log plus 25% excess.

Slurry Preflush: 20 barrels

Lead Slurry: (3,200' column height) 422 sacks "Lite" cement with 2% $CaCl_2$.

Weight: 12.7 ppg
Yeild: 1.64 ft^3/sack
Water Requirement: 8.34 gal/sack

Tail Slurry: (1,050' column height) 200 sacks Class "B" with 1% fluid loss additive.

Weight: 15.6 ppg
Yeild: 1.18 ft^3/sack
Water Requirement: 5.2 gal/sack

Casing Equipment will include a float shoe, float collar, and six centralizers.

5. B.O.P. specification and testing: (see the attached schematic diagram for size and pressure ratings):

BOP equipment will include a dual ram type preventer with pipe and blind rams and an annular preventer (API arrangement SRRA). All equipment will have a 3,000 psi or greater working pressure. Rams, valves, lines, choke manifold, and casing will be tested to 200 psi for 5 minutes and 1,500 psi for 5 minutes prior to drilling out from under 8 5/8" surface casing. After drilling casing shoe and 5' of additional hole, a shoe test will be performed to 13.5 ppg equivalent mud weight or leak off, whichever occurs first.

A visual check of BOP equipment will be made hourly. Functon pipe rams daily and blind rams on trips.

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

6. Mud program and anticipated pressures:

From	To	Type Mud	Weight	% Oil	Water Loss
0'	1,500'	Spud	8.5-9.0	0	No Control
1,500'	2,392' Cutler	Gel/Water	8.5-9.0	0	No Control
2,392' Cutler	5,342' U. Ismay	Gel/Chemical	9.4-10.3	0	10.0-12.0 cc's
5,342' U. Ismay	T.D.	Gel/Chemical	As Required	0	8.0-9.0 cc's

Mud weights will be kept at a minimum to maximum ROP and minimize lost circulation. However, the existence of water flows may necessitate an increase in mud weight while drilling. Sufficient barite should be kept on location prior to spud in order to increase the mud weight to 11.7 ppg if required.

7a. Type of drilling tools and auxiliary equipment:

A drilling rate recorder, calibrated to record drilling time for each one foot drilled will be used.

A kelly cock will be used and a full opening safety valve will be available on the rig floor.

The mud system will include a desander/desilter, gas buster or degasser.

A manual adjustable choke.

A single shot drift indicator will be used.

7b. Deviation Control:

From	To	Maximum Distance Between Surveys	Maximum Deviation From Vertical	Maximum Change Per 100' of Depth
0'	1,500'	250'	1^{o}	1^{o}
1,500'	T.D.	500'	5^{o}	1^{o}

8. Sample, logging, testing, and coring program:

Samples: 10' intervals from 1,500' to T.D. with a two-man mud logging unit, or as specified by a Marathon representative.

Logging: A DIL/GR/CAL will be run on the 12 1/4" surface hole prior to running casing.

1. DLL/MSFL/GR from T. D. to the surface casing with the GR to surface.
2. BHC Sonic/VDL/GR from T.D. to surface casing.
3. FDC/CNL/Spectral GR from T.D. to surface casing.

The Coriband (Cyberlook) service will be used from the top of the Honaker Trail to T.D.

Testing: Two DST's are anticipated in the top of the Upper Ismay and in the Desert Creek.

Coring: Two 60' cores are anticipated in the Upper Ismay.
One 60' core is anticipated in the Desert Creek.

9. Anticipated abnormal pressures or temperatures:

The DeChelly Member of the Cutler Formation, if penetrated, may contain overpressured salt water requiring 10.5 to 11.5 ppg mud weight to control.

Maximum anticipated bottom hole temperature is approximately 145° F.

Maximum anticipated bottom hole pressure is approximately 3,350 psi.

10. The anticipated starting date and duration of operation:

Starting Date: 1st Quarter, 1985

Duration: 22 days

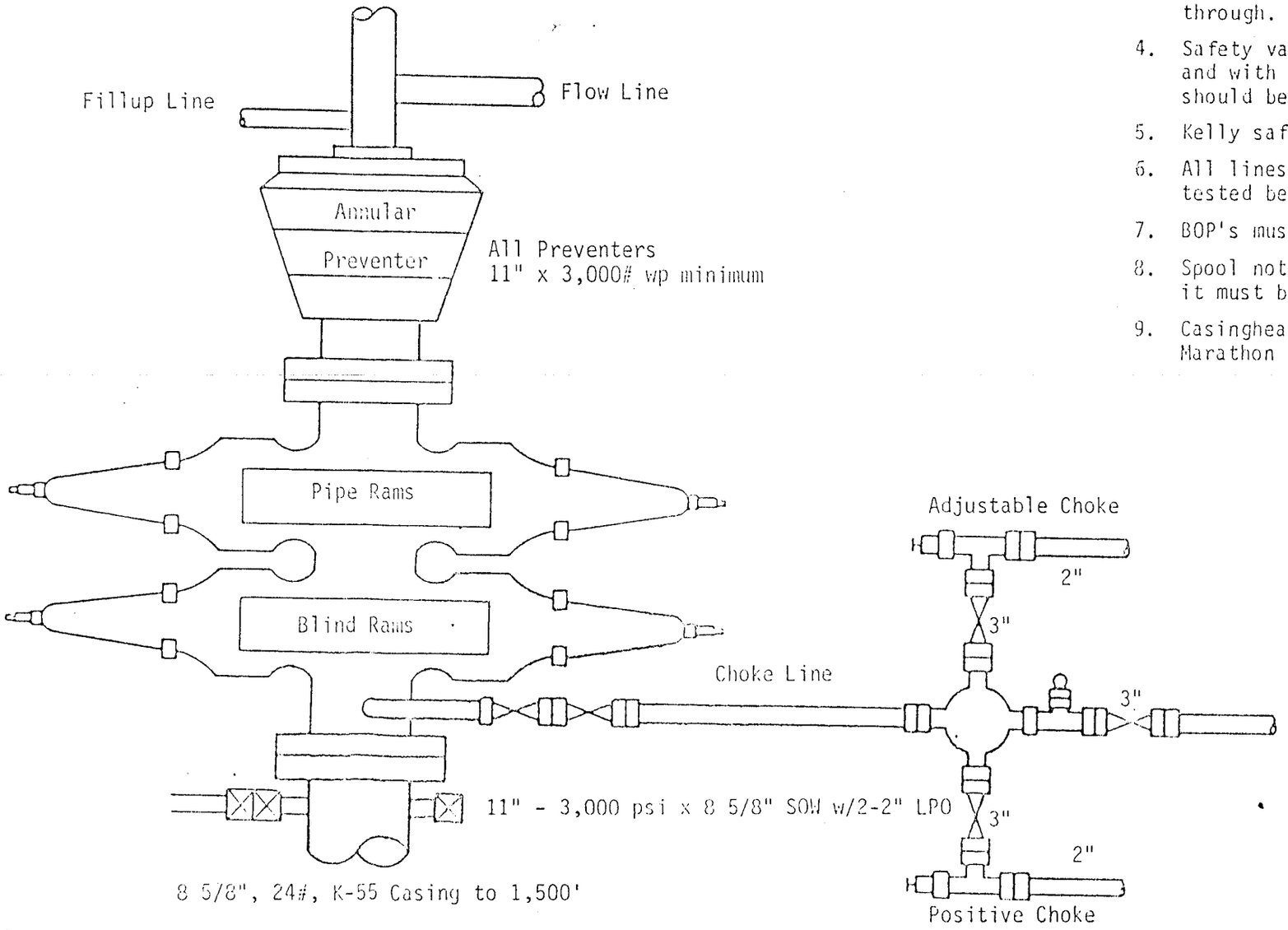
DISTRICT APPROVALS		DIVISION APPROVALS	
Approved	Date	Approved	Date

CASING DESIGN

DESIGN FACTORS:
SF_c = 1.125 Pipe evacuated w/normal MW + .5 ppg. Consider collapse reduction due to tension.
SF_b = 1.250 The greater of : 1. Normal MW in annulus. Bottom hole pressure - .10 ppf gas gradient in gas filled pipe.
2. Normal MW in annulus. Maximum surface treating pressure + Hydrostatic of treating fluid.
SF_t = 1.50 No buoyancy.

CASING	API/NON-API DRIFT	SETTING DEPTH	SECTION LENGTH	TENSION - 1,000 lb.			COLLAPSE				BURST		
				STRENGTH	FORCE	S.F.	STRENGTH	FORCE	REDUCED STRENGTH	S.F.	STRENGTH	FORCE	S.F.
8 5/8", 24#, K-55, ST&C	7.972"	1,500'	1,500'	263	36	7.31	1,370	741	1,370	1.85	2,950	1,503	2.80
5 1/2", 15.5#, K-55, ST&C	4.825"	4,700'	4,700'	222	90	2.47	4,040	3,055	3,959	1.30	4,810	2,780	1.73
5 1/2", 17#, K-55, ST&C	4.767"	5,700'	1,000'	252	17	14.80	4,910	3,705	4,910	1.32	5,320	1,620	3.28

Tin Cup Mesa Water Injection Well #4-25
Section 25, T38S, R25E
San Juan County, Utah



1. Blowout preventers, master valve, plug valve and all fittings must be in good condition. Use new API Seal Rings.
2. All fittings (gates, valves, etc.) to be of equivalent pressure rating as preventers. Valves to be flanged and at least 2" unless otherwise specified. Valves next to BOP to be plug type and nominal 3".
3. Equipment through which bit must pass shall be as large as the inside diameter of the casing that is being drilled through.
4. Safety valve must be available on rig floor at all times and with proper connections. The I.D. of safety valves should be as great as I.D. of tool joints on drill pipe.
5. Kelly safety valve installed, same working pressure as BOP's.
6. All lines and controls to preventers must be connected and tested before drilling out of surface pipe.
7. BOP's must be fluid operated, complete with accumulator.
8. Spool not required, but when side outlet on BOP's is used, it must be below bottom ram.
9. Casinghead and casinghead fittings to be furnished by Marathon Oil Company.

La Plata Archeological Consultants, Inc.
P.O. Box 783
Dolores, Colorado 81323
303-882-4933

February 6, 1985

Mr. Chas Cartwright
Area Archeologist
Bureau of Land Management
P.O. Box 7
Monticello, Utah 84535

Mr. Cartwright:

Please find enclosed the archeological report pertaining to Marathon Oil Company's Tin Cup Mesa #4-25 well pad and access road. Archeological clearance for the project has been recommended.

Sincerely,

Patrick L. Harden
President

Distribution:
BLM - Salt Lake City
Division of State History
Marathon Oil Company

PLH/cs

ARCHEOLOGICAL INVESTIGATIONS FOR MARATHON OIL COMPANY'S TIN CUP MESA #4-25 WELL, SAN JUAN COUNTY, UTAH

LAC REPORT 8509

by
Patrick L. Harden

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

FEBRUARY 6, 1985

Fdederal Antiquities Permit
84-UT-54625

Prepared For:
Marathon Oil Company
P.O. Box 2659
Casper, Wyoming 82602

ABSTRACT

Archeological investigations for Marathon Oil Company's Tin Cup Mesa #4-25 well pad and access road were conducted by personnel of La Plata Archeolgoical Consultants, Inc. on January 29 and 31, 1985. The well pad is located in the extreme SE¼, SW¼ of section 25, and a small portion of the NE¼, NW¼ of section 36; T38S, R25E, San Juan County, Utah. The Bureau of Land Management - San Juan Resource Area administers the land in section 25, while section 36 is Utah State land. All of the SW¼ of section 25 had been previously inventoried for cultural resources by personnel of LAC, while the project area in section 36 was surveyed on the 31st. Approximately 600 feet of new access road will be required, beginning on the south side of Marathon's #3-25 well and running southeast to the new location. The access route was flagged during the on-site inspection held on the 29th, and effectively avoids archeological site 42SA11604/14587 located to the east of the #3-25 location. No cultural resources are in the project area. If the access route flagged is strictly adhered to during construction and well operation archeological clearance for the project is recommended.

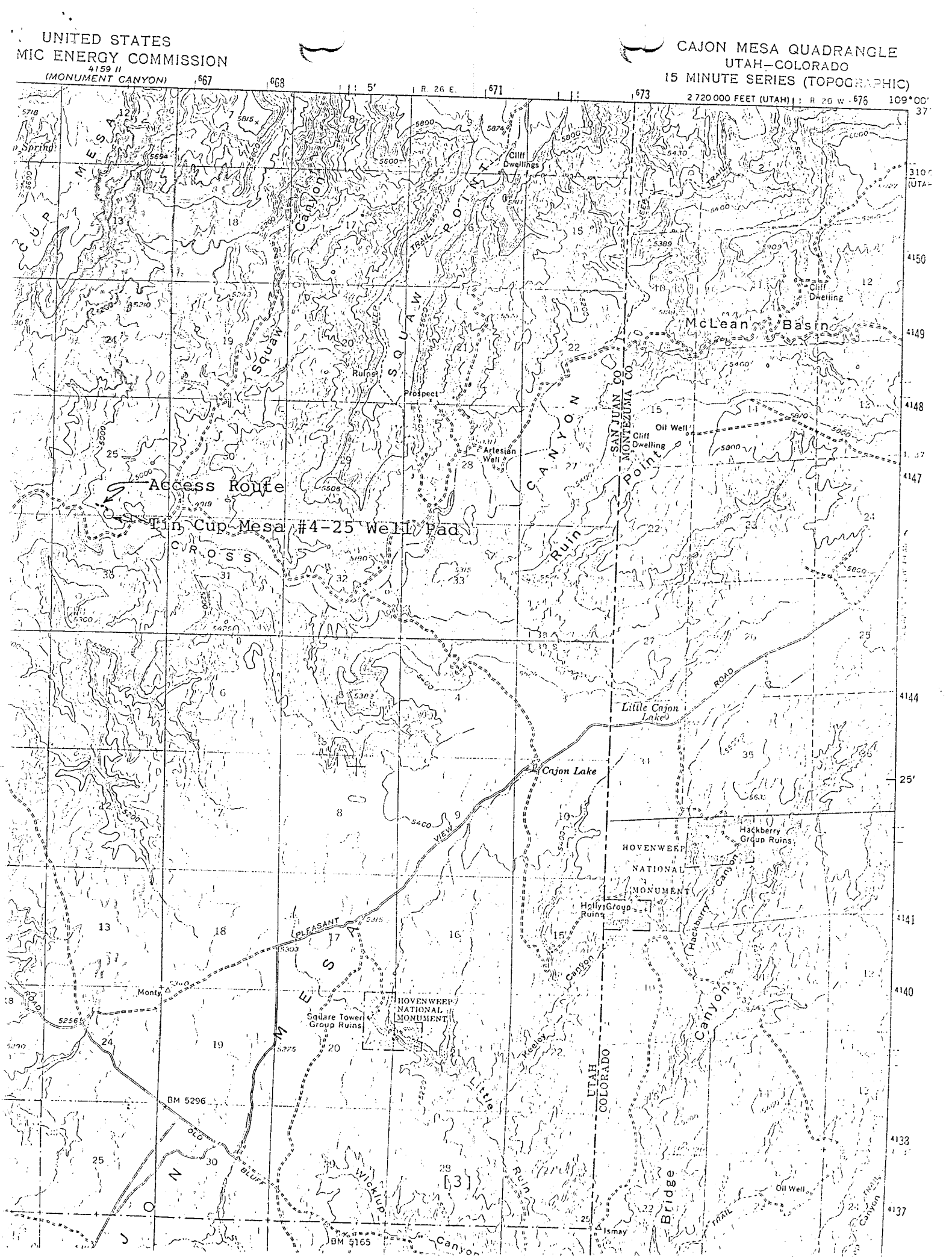
INTRODUCTION

The archeological investigations for Marathon Oil Company's Tin Cup Mesa #4-25 well pad and access road were conducted by

Patrick Harden of La Plata Archeological Consultants, Inc. of Dolores, Colorado on January 29 and 31, 1985. The investigations were requested by Mr. Frank Krugh of Marathon. Although the entire ¼ section in which most of the project is located had been previously inventoried for cultural resources Mr. Krugh requested that an archeologist be present during the pre-drill on-site inspection held on January 29th. Persons attending the predrill included Mr. Krugh (Marathon), Rich McClure (BLM), Howard Hughes (Hughes Construction), Jim Perkins (Reed Surveying), and Harden (LAC).

The project is located in the SE¼, SW¼ of section 25, and the NE¼, NW¼ of section 36; T38S, R25E, San Juan County, Utah. All but ca. 20,000 square feet of the entire project is located in section 25. All of the access is also located in section 25. The Bureau of Land Management - San Juan Resource Area administers the land in section 25, while State owned land is in section 36. The project consists of the construction of a single well pad ca. 325 X 250' in size. Ca. 600' of access road will also be constructed. The access road originates at Marathon's #3-25 well, and the access to that well provides the great majority of access to the #4-25 well.

The entire SW¼ of section 25 had been previously inventoried for cultural resources (Harden 1984a), and the #3-25 location and access road were also investigated (Harden 1984b).


UNITED STATES
MIC ENERGY COMMISSION
4159 II
(MONUMENT CANYON)
CAJON MESA QUADRANGLE
UTAH—COLORADO
15 MINUTE SERIES (TOPOGRAPHIC)
2 720 000 FEET (UTAH)
R. 26 E.
R. 20 W.
Access Route
Tin Cup Mesa #4-25 Well Pad
CUP MESA
Squaw Canyon
SQUAW TRAIL
POINT
Cliff Dwellings
Ruins
Prospect
Artesian Well
CANYON
SAN JUAN CO
MONTEZUMA CO
Ruin Point
Cliff Dwelling
Oil Well
McLean Basin
CROSS
Little Cajon Lake
Cajon Lake
ROAD
VIEW
HOVENWEEP NATIONAL MONUMENT
Hackberry Group Ruins
Hackberry Canyon
Holly Group Ruins
PLEASANT
MESA
Monty
Square Tower Group Ruins
HOVENWEEP NATIONAL MONUMENT
Keeley
Little Ruin Canyon
UTAH
COLORADO
BM 5296
OLD
BLUFF
Wicklup
BM 5165
Canyon
Ismay
Bridge
Oil Well
TRAIL
Canyon
[3]

The reader should refer to the previous survey report for a description of the environment and results of the survey. The ca. 20,000 square feet of the project (and small buffer zone) located in section 36 was surveyed on January 31st. This area could not be investigated on the 29th during the pre-drill because of excessive snow cover.

RESULTS OF INVESTIGATIONS

It was known that an archeological site was located in the general vicinity of the proposed well pad, and just to the east of the #3-25 location. The west and north borders of the site had been fenced to protect it during construction of the #3-25 well. No other archeological sites had been previously found in the project area. The #4-25 well location is well to the southeast of archeological site 42SA11604/14587 (one site, but recorded by earlier surveys as two sites), although the access road to the well passes just to the south of the site (within ca. 75-100'). The access route was flagged during the pre-drill inspection by the dirt contractor (Hughes) and the archeologist, and will avoid disturbing any protion of the site.

An area ca. 200 X 200 feet in section 36 which includes the south portion of the well pad was archeologically surveyed on January 31st by walking a series of transects spaced 15m apart across the area. No cultural resources were found in

the area.

Provided that the access route flagged is strictly adhered to archeological clearance for the project is recommended. Also, the reader should refer to the archeological report for Marathon's #3-25 well (Harden 1984b) regarding strict avoidance of site 42SA11604/14587: i.e., if vandalism to the site occurs as a result of the proximity of the wells it should be fully excavated.

REFERENCES CITED

Harden, Patrick L.

1984a An Archeological Survey in the Cross Canyon Vicinity of Southeastern San Juan County, Utah for Marathon Oil Company. LAC Report 8401. Manuscript on file with the BLM, Monticello.

1984b Archeological Investigations for Marathon Oil Company's Tin Cup Mesa #3-25 Well Pad, San Juan County, Utah. LAC Report 8432. Manuscript on file with the BLM, Monticello.

Casper Division
Production United States

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

February 6, 1985

Estate of Charles Redd
c/o Charles Hardy Redd
La Sal, Utah 84530

Re: State Grazing Lease, GP21382

Dear Mr. Redd:

Marathon Oil Company is in the process of permitting an injection well to be drilled in Section 25, T38S, R25E, of San Juan County, Utah. This well will be located 50' FSL and 2490' FWL of Section 25. Due to the proximity of the well to Section 36, T38S, R25E, approximately 20,000 square feet of the drill pad will be located in Section 36, a State owned section.

The State of Utah Natural Resources and State Lands and Forestry Departments have been notified of the above situation. They suggested that you, the grazing lessee, also be notified. This letter is being sent to serve that purpose.

The land in Section 36 that will be disturbed during the drilling phase of the above well will be reclaimed and reseeded as soon as possible after the well has been drilled.

If you have any questions feel free to contact Mr. Frank Krugh at this number (307) 577-1555 extension #219.

Sincerely,

MARATHON OIL COMPANY

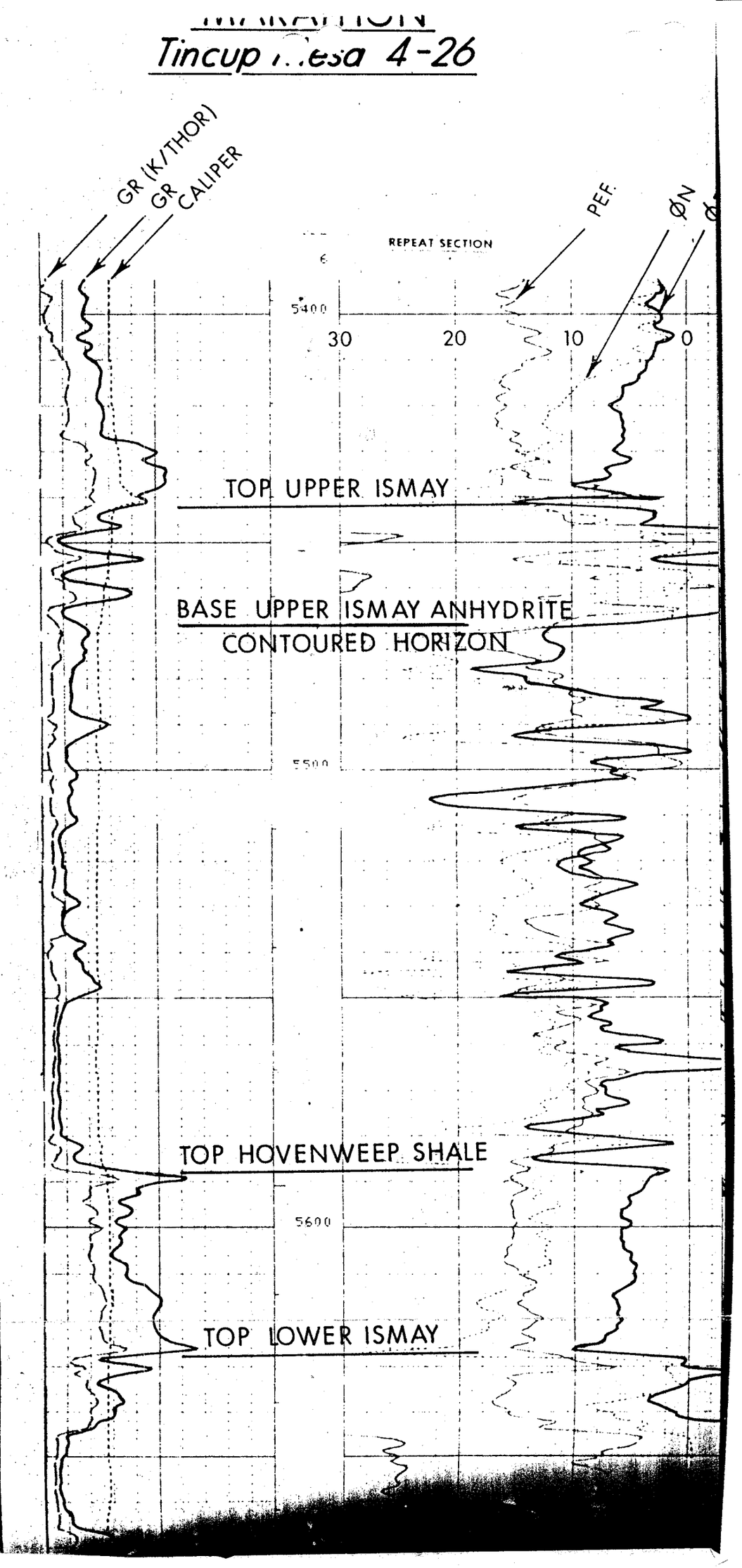
Frank M. Krugh

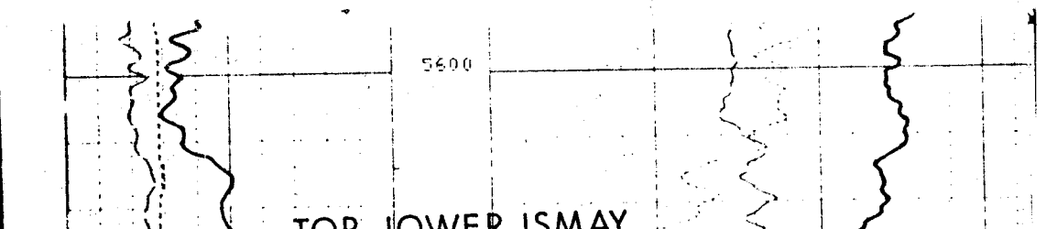
Frank M. Krugh
Regulatory Coordinator

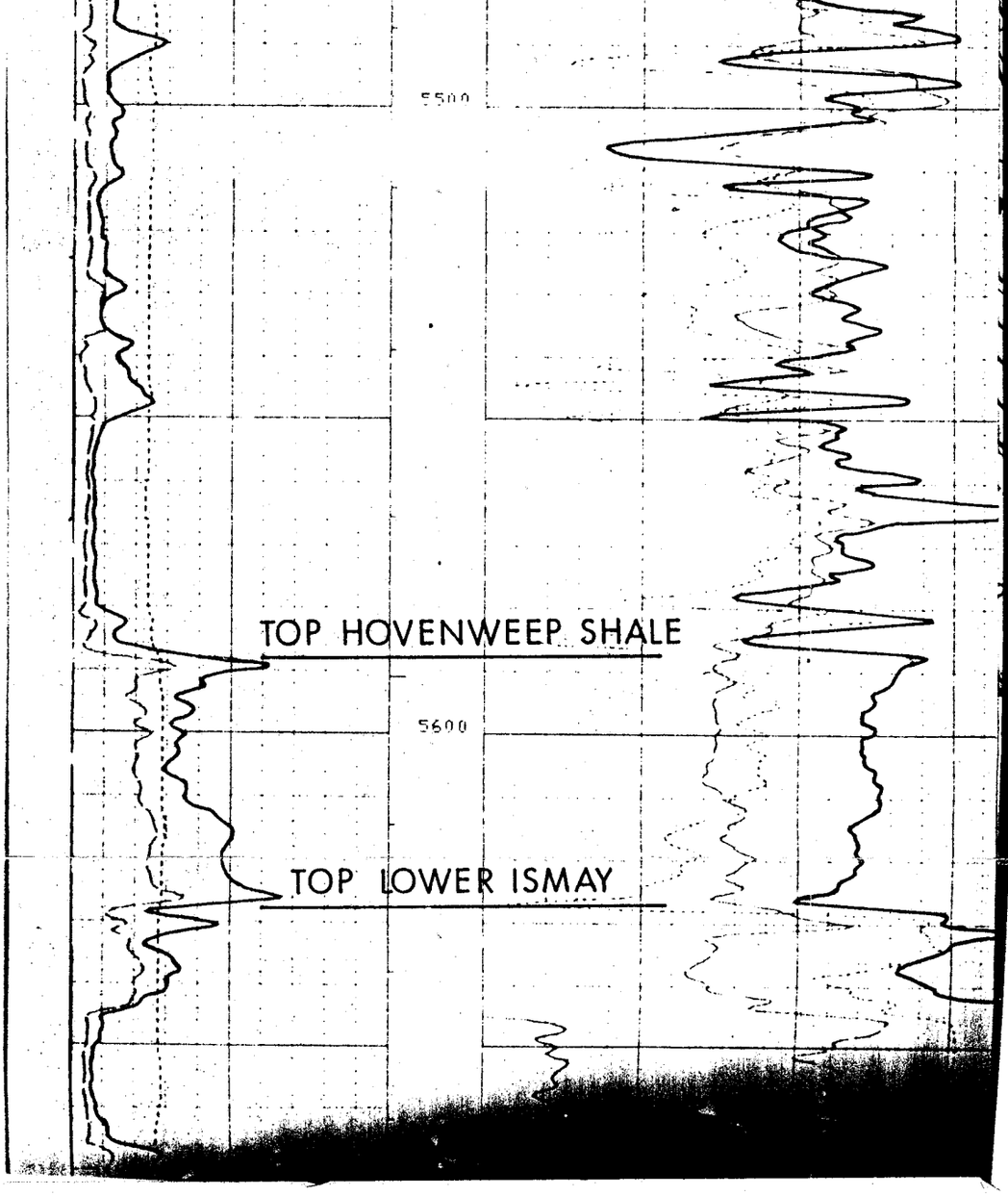
FMK:mrt

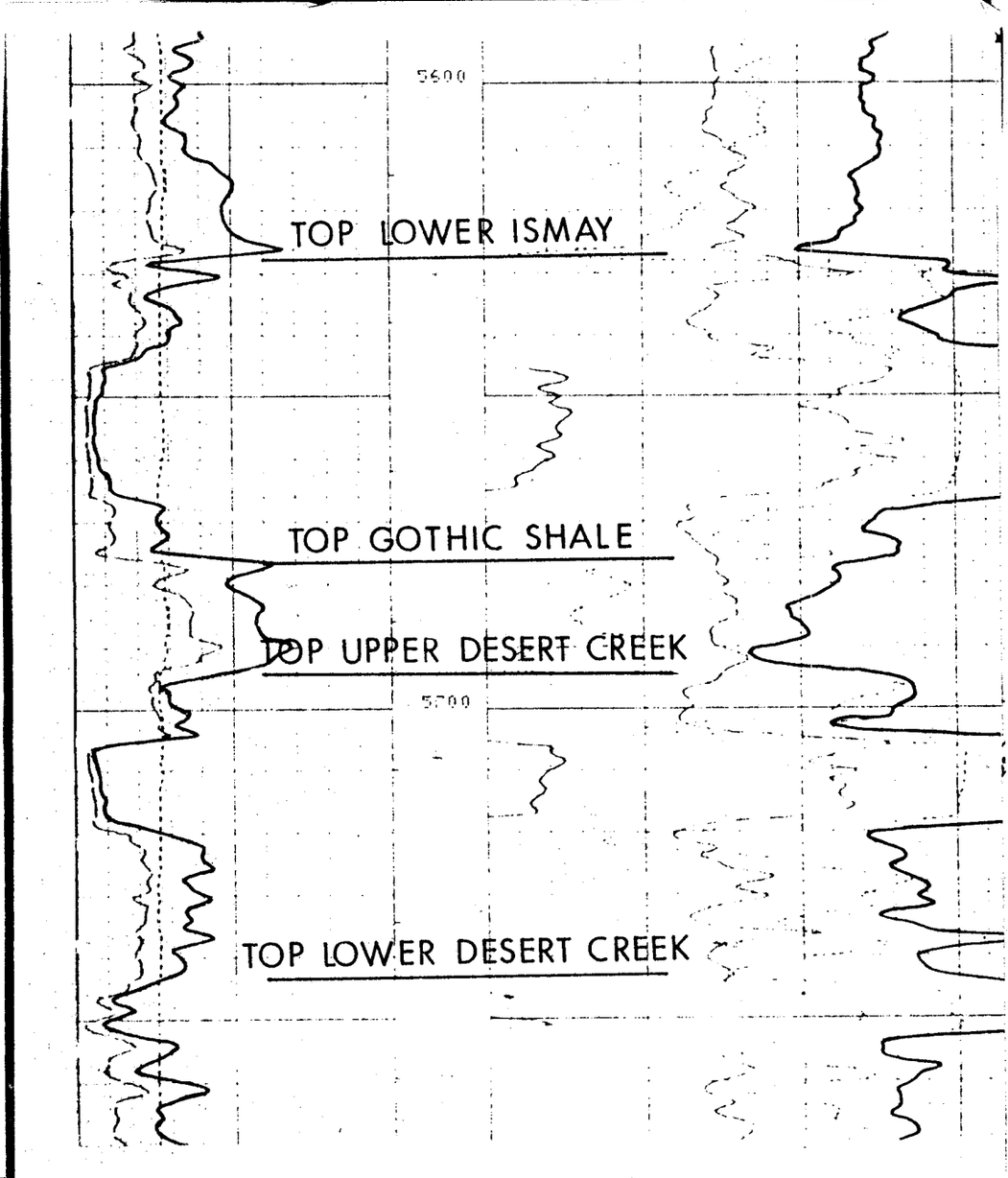
MARATHON

Tincup Mesa 4-26






5500
TOP HOVENWEEP SHALE
5600
TOP LOWER ISMAY


5600
TOP LOWER ISMAY
TOP GOTHIC SHALE
TOP UPPER DESERT CREEK
5700
TOP LOWER DESERT CREEK

R 24 E | R 25 E | R 26 E

T 38 S

T 39 S

EVAPORATION POND

#1-23 P&A

#3-23

#2-23

#3-26

#1

#4-26

#3

#2-25

#1-25

#3-25

DRY HOLES

TIN CUP MESA UNIT TANK BATTERY & GAS FACILITY

SECONDARY WATER SUPPLY

PROPOSED LOCATION #4-25

PRIMARY WATER SUPPLY

SECONDARY WATER SUPPLY

EXISTING ROAD

EXISTING ROAD

Cave Canyon | Perkins Ranch | Bug Park | Cliff Dwelling | Tin Cup Spring | Little Nancy Canyon | Patterson Canyon | TIN CUP MESA | SQUAW CANYON | SQUAW TRAIL POINT | Cliff Dwellings | Prospect | Oil Well | Artesian Well | Artesian Wells | MONTEZUMA CANYON | Ruin | CROSS | Cliff Dwelling | Point | Creek | Ruins | Tunnel | Black Steer Canyon | PLEASANT VIEW | BM 4892 Prospects | BM 4757 | Hatch Trading Post | BM 4680 | Hatch Trailer Sch | Alkali Creek | BM 5018 | BM 5296 | Monts | Square Tower Group Ruins | HOVENWEEP NATIONAL MONUMENT | Cajon Lake | Holly Ruin | Keeley | Little Ruin Canyon | UTAH COLORADO | MESA VERDE | NAVAJO | WILD BLUFF

MARATHON OIL COMPANY

TIN CUP MESA

SAN JUAN CO., UTAH

WELL #4-25

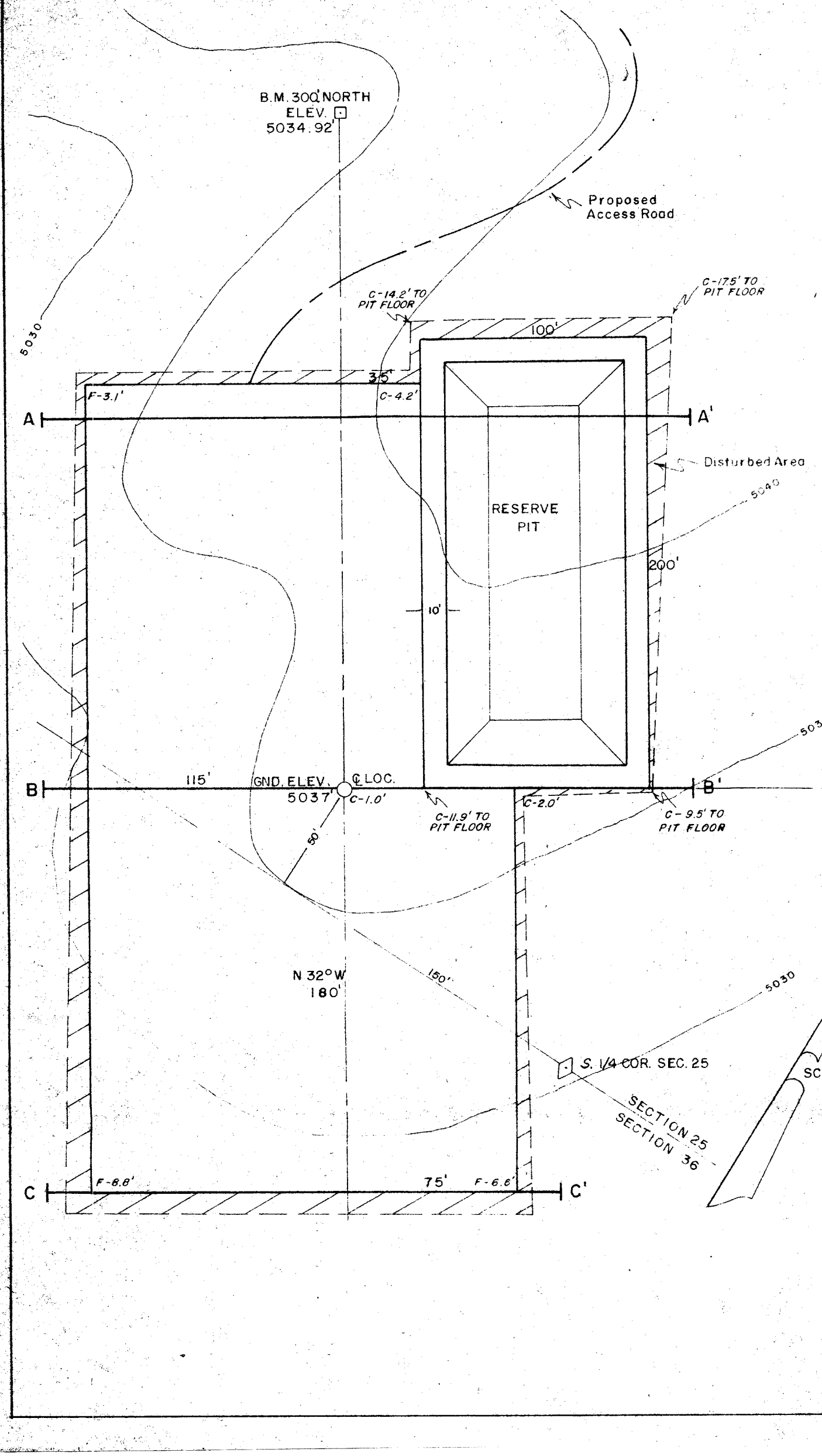
Scale 1"= 1 MILE

2/7/85

Diagram A

MARATHON OIL CO. - T

SE/4, SW/4, SEC.25, T.38 S., R.25



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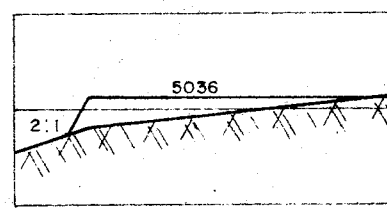
A



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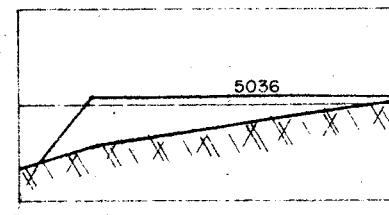

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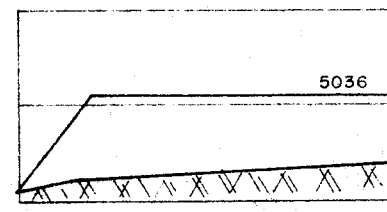


CUT = 7

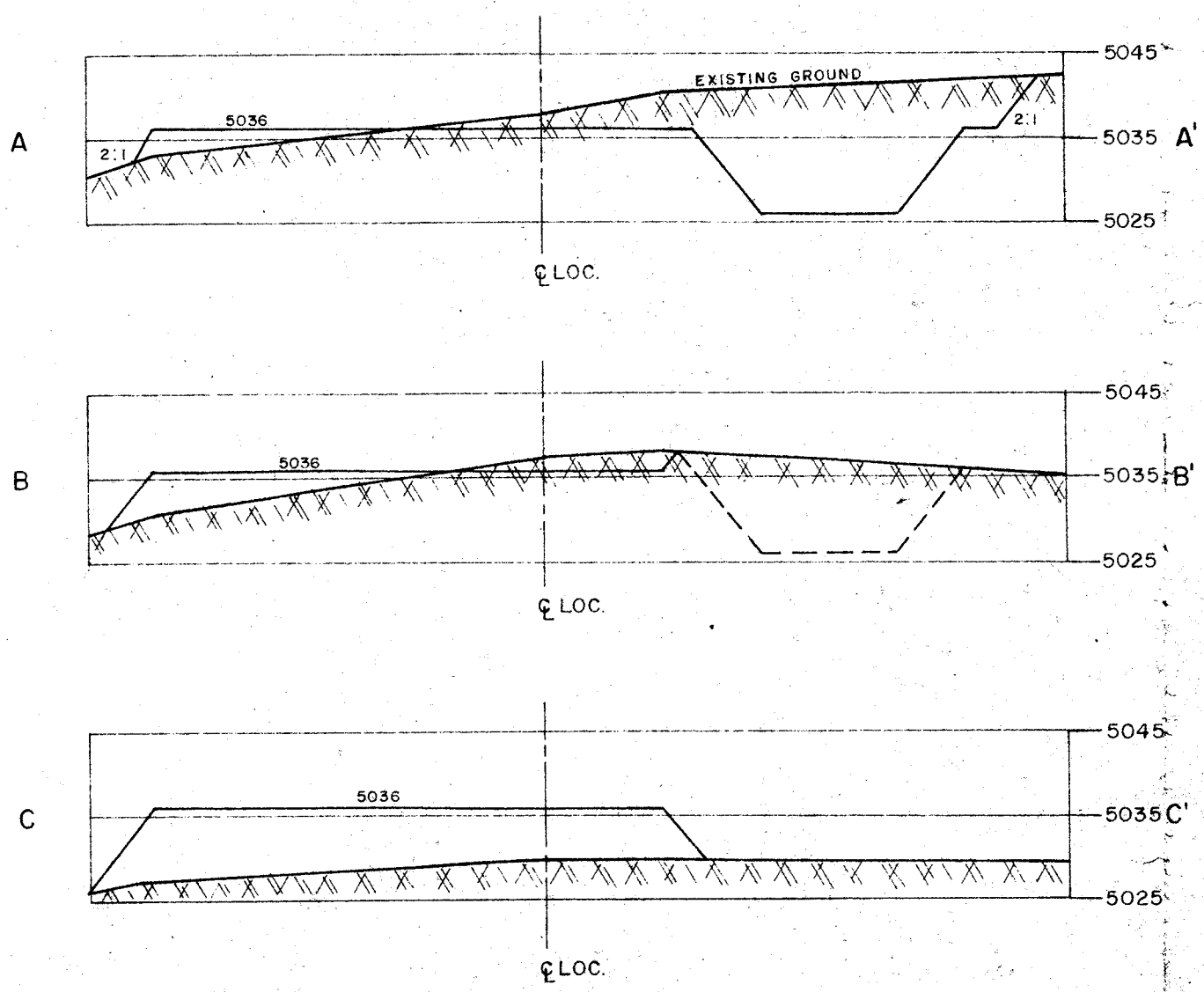
TOP SO

MARATHON OIL CO. - TIN CUP MESA # 4-25

SE/4, SW/4, SEC. 25, T. 38 S., R. 25 E., S.L.M., SAN JUAN COUNTY, UTAH

CROSS SECTION

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 20'
DESIGN ELEV. - 5036'



VOLUMES

CUT = 7593 CU. YDS. FILL = 5466 CU. YDS.
TOP SOIL = 588 CU. YDS. WASTE = 1538 CU. YDS.
RESERVE PIT CAPACITY = 17100 BARREL

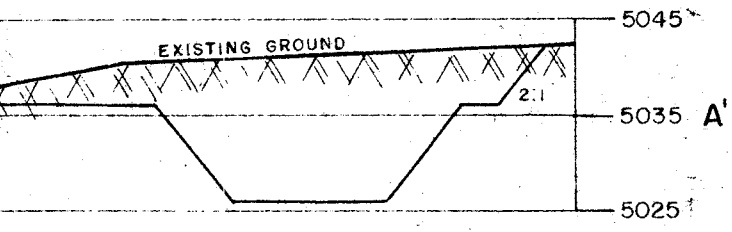
DIAGRAMS B & B-1

P MESA # 4-25

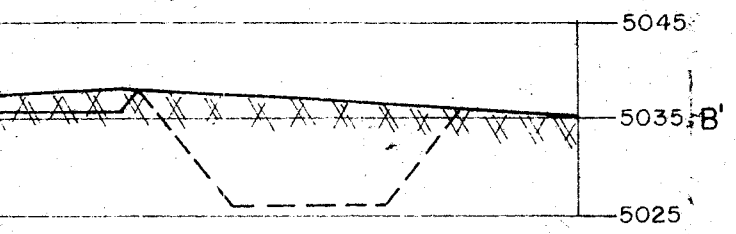
M., SAN JUAN COUNTY, UTAH

TION

ALE: 1" = 50'
E: 1" = 20'
LEV.-5036'



LOC.



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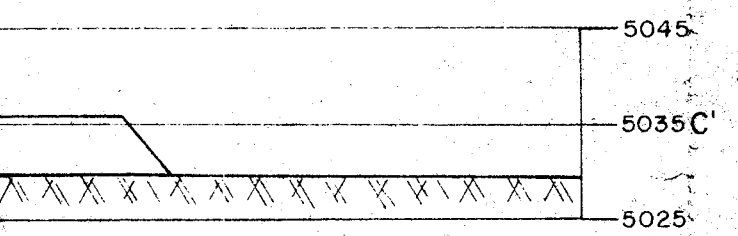
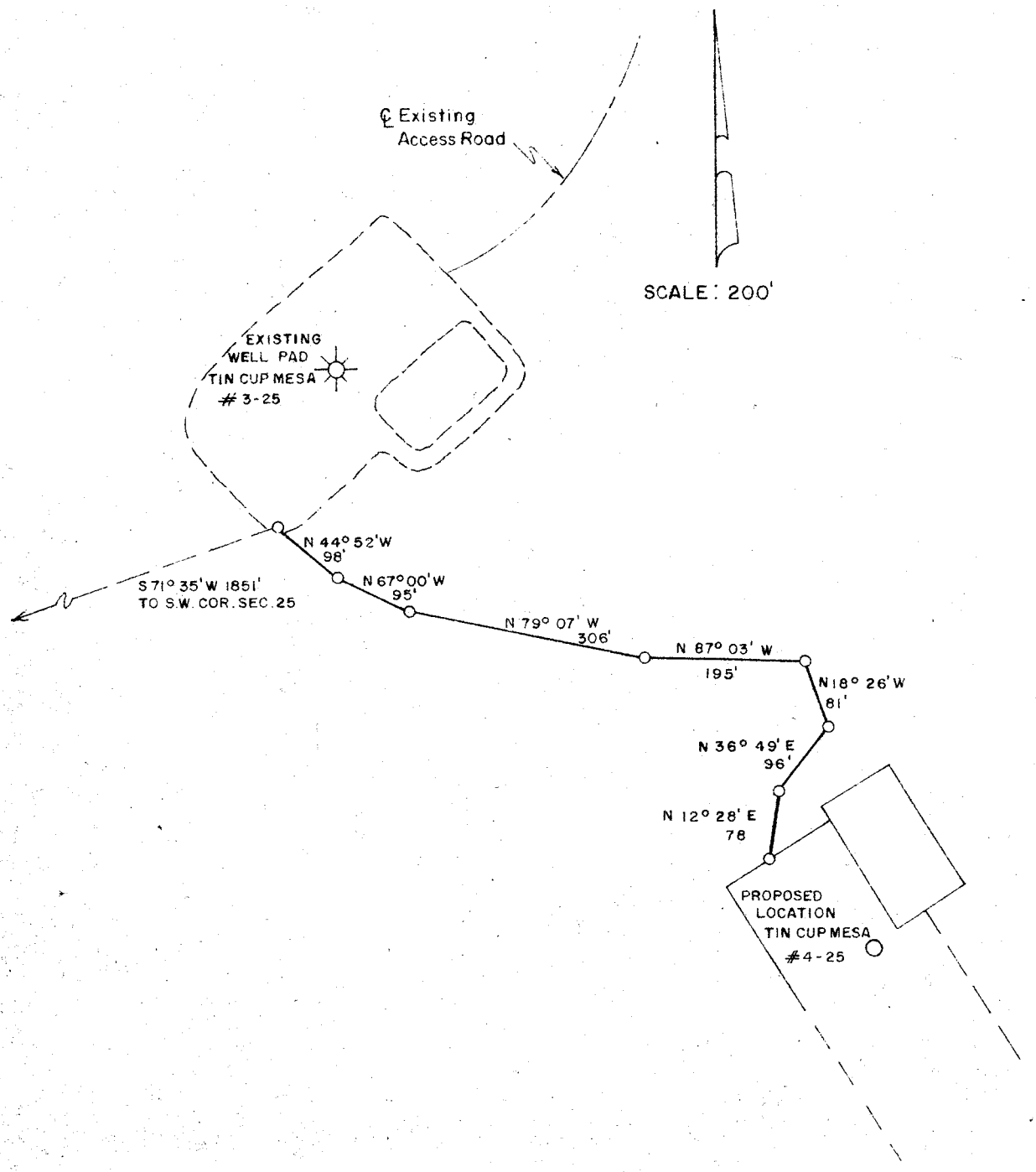


LOC.

OLUMES

S. FILL = 5466 CU. YDS.
. YDS. WASTE = 1538 CU. YDS.
E PIT CAPACITY = 17100 BARREL

PROPOSED ACCESS ROAD



DIAGRAMS B & B-1

RECEIVED
FEB 11 1985
DIVISION OF OIL GAS & MINING

MARATHON OIL COMPANY
Casper, Wyoming

WELL SITE PLAN
Tin Cup Mesa # 4-25
Sec. 26, T. 38 S., R. 25 E.
San Juan County, Utah

CLARK-REED & ASSOC., INC
Durango, Colorado

DATE. JAN. 29, 1985
FILE NO.: 85005

EXHIBIT "A"

CELSIUS ENERGY COMPANY

79 SOUTH STATE STREET • P.O. BOX 11070 • SALT LAKE CITY, UTAH 84147 • PHONE (801) 530-2800

Dist. Mgr. ✓
Dist. Engr.
Acctg. S...
Drlg. Su...
Oper...
Oc...
Geo...
Hus...
Emp...
Envir.
Safety
Other
File Tutsi

March 4, 1985

Marathon Oil Company
P. O. Box 2659
Casper, Wyoming 82602

ATTN: Mr. Doyle L. Jones

Gentlemen:

Re: Proposal to Drill
Tin Cup Mesa Unit Well No. 4-25
SE¼ SW¼ Sec. 25, T.38S., R.25E.
San Juan County, Utah

Enclosed is an approved copy of your AFE No. 5645-5 covering costs to drill the above proposed injection well. We have previously elected to participate in the costs to drill this well.

We will expect to receive well data and reports as on previous unit wells.

Very truly yours,

E. A. Farmer, Jr., Director
Units and Joint Operations

EAFjr:cm

Encl.

RECEIVED
MAR 7 1985
CASPER DISTRICT
OPERATIONS

Marathon Oil Company
XPLORATION & PRODUCTION
UTHORITY FOR EXPENDITURE

AFE NO. 5645-5

[ ] WILDCAT
[X] DEVELOPMENT
[ ] DEVELOPMENT EXPL
[ ] RECOMPLETION

[ ] WORKOVER
[ ] FACILITY
[ ] OTHER

heet ____ of ____ Sheets Division Casper District Casper Date 2-8-85

ase or Facility Tin Cup Mesa Unit

ield or Prospect Tin Cup Mesa #4-25 Location 50' FSL, 2,490' FWL, Section 25, T38S, R25E

tate Utah County XXXX San Juan

perator Marathon Oil Company Starting Date 3/1/85 Estimated Completion Date 4/1/85

arathon Net Interest in Expenditures 75.16927 Marathon Net Interest in Revenue 61.74928

Joint Interest Owners Approval Required? Yes

stimated Gross Cost This AFE . . . . . $ 738,000 Marathon Share This AFE . . . . . $ 555,000

escription of Project & Reason for Expenditure

It is proposed that the Tin Cup Mesa #4-25 injection well be drilled, offsetting Tin Cup Mesa #3-25. The primary objective for this well is the Upper Ismay Carbonate.

Tin Cup Mesa #4-25 is 979' southeast of Tin Cup Mesa #3-25 (Figure 1). This well encountered the Upper Ismay Carbonate at 5,441' KB with 32' of net pay. Based on this information, Tin Cup Mesa #4-25 should encounter the Ismay Carbonate at 5,458' KB and have 15-20' of net pay (Figure 2). This suggests the well will be near the southeasterly edge of the field and should be a good location for a peripheral injection well.

Computer model studies demonstrate that the incremental recovery of a three-well injection case over a two-well case (#3-23 and #1-25) is 183,000 gross BO. Futhermore, this third injector offers more rapid fillup time and a safety-margin to ensure adequate pressure maintenance in light of any unknowns concerning the field's performance.

RECEIVED
MAR 7 1985
CASPER DISTRICT
OPERATIONS

PARTICIPANTS' ESTIMATED PRORATED COST OF PROJECT

	W.I. (%)	Amount
Marathon Oil Company	75.16927	554,800
MCOR Oil & Gas Company	17.18750	126,800
Mobil Oil Corporation	4.94792	36,500
Celsius Energy Company	2.69531	19,900
TOTAL	100.00000	738,000

PARTICIPANT'S APPROVAL

ame of ompany Celsius Energy Company

epresentative's ignature RM Kirsch Date 2-22-85

itle R. M. Kirsch, President

orm 2779 Rev. 5-84

Marathon Oil Company
EXPLORATION & PRODUCTION
AUTHORITY FOR EXPENDITURE

AFE NO. 5645-5

- [ ] WILDCAT
- [X] DEVELOPMENT
- [ ] DEVELOPMENT EXPL
- [ ] RECOMPLETION
- [ ] WORKOVER
- [ ] FACILITY
- [ ] OTHER

Sheet ____ of ____ Sheets Division Casper District Casper Date 2-8-85

Lease or Facility Tin Cup Mesa Unit
Field or Prospect Tin Cup Mesa #4-25 Location 50' FSL, 2,490' FWL, Section 25, T38S, R25E
State Utah County XXXX San Juan
Operator Marathon Oil Company Starting Date 3/1/85 Estimated Completion Date 4/1/85
Marathon Net Interest in Expenditures 75.16927 Marathon Net Interest in Revenue 61.74928
Is Joint Interest Owners Approval Required? Yes

Estimated Gross Cost This AFE ..... $ 738,000 Marathon Share This AFE ..... $ 555,000

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Mobil Oil Corporation	4.94792	36,500
Celsius Energy Company	2.69531	19,900
TOTAL	100.00000	738,000

PARTICIPANT'S APPROVAL

Name of Company MOBIL OIL CORPORATION

Representative's Signature Jim Lee Wolfe Date 3/14/85

Title Joint Interest Advisor

Form 2779 Rev. 5-84

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

March 6, 1985

Newspaper Agency
Legal Advertizing
Mezzanine Floor
143 South Main
Salt Lake City, Utah 84111

Gentlemen:

RE: Cause No. UIC-057

Attached hereto is a Notice of Application of Administrative Approval, before the Division of Oil, Gas and Mining, Department of Natural Resources, State of Utah.

It is requested that this notice be published ONCE ONLY, as soon as possible but no later than the 13th day of March. In the event that said notice cannot be published by this date, please notify this office immediately by calling 538-5340 Ex. 5296.

Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

Very truly yours,
DIVISION OF OIL, GAS AND MINING

MARJORIE L. ANDERSON
Administrative Assistant

mfp
0045A

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

---ooOoo---

IN THE MATTER OF THE APPLICATION OF MARATHON OIL COMPANY FOR ADMINISTRATIVE APPROVAL OF THE TIN CUP MESA 4-25 WELL, LOCATED IN SECTION 25, TOWNSHIP 38 SOUTH, RANGE 25 EAST, SAN JUAN COUNTY, UTAH, AS A CLASS II ENHANCED RECOVERY INJECTION WELL.

CAUSE NO. UIC-057-1

---ooOoo---

THE STATE OF UTAH TO ALL INTERESTED PARTIES IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that Marathon Oil Company, P.O. Box 120, Casper, Wyoming 82602 has requested administrative approval of the Tin Cup Mesa 4-25 well, located 50' FSL and 2490'FWL (SESW) of Section 25, Township 38 South, Range 25 East, San Juan County, Utah as a class II enhanced recovery injection well.

The proposed operating data for the well is as follows:

Injection Interval: Ismay Zone-Paradox Formation
Depth 5430'-5530'
Maximum Estimated Surface Pressure: 3600 psig
Maximum Estimated Water Injection Rate: 3400 BWPD

Administrative approval of this application will be granted unless objections are filed with the Division of Oil, Gas and Mining within fifteen days after publication of this Notice. Objections, if any, should be mailed to: The Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

DATED this 22nd day of May, 1985.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

Marjorie L. Anderson
MARJORIE L. ANDERSON
Administrative Assistant

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

---ooOoo---

IN THE MATTER OF THE APPLICATION OF MARATHON OIL COMPANY FOR ADMINISTRATIVE APPROVAL OF THE TIN CUP MESA 4-25 WELL, LOCATED IN SECTION 25, TOWNSHIP 38 SOUTH, RANGE 25 EAST, SAN JUAN COUNTY, UTAH, AS A CLASS II ENHANCED RECOVERY INJECTION WELL.	:	CAUSE NO. UIC-057

---ooOoo---

THE STATE OF UTAH TO ALL INTERESTED PARTIES IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that Marathon Oil Company, P.O. Box 120, Casper, Wyoming 82602 has requested administrative approval of Tin Cup Mesa 4-25 well, located 50' FSL and 2490'FWL (SESW) of Section 25, Township 38 South, Range 25 East, San Juan County, Utah as a Class II enhanced recovery injection well.

The proposed operating data for the well is as follows:

Injection Interval: Ismay Zone-Paradox Formation
Maximum Estimated Surface Pressure: 3600 psig
Maximum Estimated Water Injection Rate: 4000 BWPD

Administrative approval of this application will be granted unless objections are filed with the Division of Oil, Gas and Mining within fifteen days after publication of this Notice. Objections, if any, should be mailed to: The Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

DATED this 6th day of March, 1985.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

Marjorie L. Anderson

MARJORIE L. ANDERSON
Administrative Assistant

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

March 6, 1985

San Juan Record
Legal Advertizing
Monticello, Utah 84535

Gentlemen:

RE: Cause No. UIC-057

Attached hereto is a Notice of Application of Administrative Approval, before the Division of Oil, Gas and Mining, Department of Natural Resources, State of Utah.

It is requested that this notice be published ONCE ONLY, as soon as possible but no later than the 13th day of March. In the event that said notice cannot be published by this date, please notify this office immediately by calling 538-5340 Ex. 5296.

Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

Very truly yours,
DIVISION OF OIL, GAS AND MINING

MARJORIE L. ANDERSON
Administrative Assistant

mfp
0045A

United States Department of the Interior

U-13655
(U-069)

BUREAU OF LAND MANAGEMENT
Moab District
San Juan Resource Area
P. O. Box 7
Monticello, Utah 84535

MAR 13 1985

Mr. Frank M. Krugh
c/o Marathon Oil Company
P. O. Box 2659
Casper, Wyoming 82602

Re: Tincup Mesa 4-25 Well
Lease U-13655
T. 38 S., R. 25 E., Section 25
San Juan County, Utah

Dear Mr. Krugh:

At the request of Howard Hughes, Howard Hughes Construction, we checked the subsurface material during construction of the reserve pit for this location.

Mr. Hughes is satisfied that this material has sufficient depth and sufficeint clay content to prevent pit seepage, we concur with his assessment and waiver the APD requirement of lining the reserve pit.

Sincerely yours,

Robert Turri

Acting Area Manager

cc.
Mr. Howard Hughes
Howard Hughes Construction
15557 US Hwy 666
Dolores, CO 81323

MDO

RECEIVED

MAR 14 1985

CASPER DISTRICT
OPERATIONS
GOVERNMENT COMPLIANCE

STATE OF UTAH
NATURAL RESOURCES & ENERGY
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

March 15, 1985

Marathon Oil Company
P.O. Box 2659
Casper, WY 82602

Dear Applicant:

RE: TEMPORARY APPLICATION
NUMBER 09-1412 (T60662)

Enclosed is a copy of approved Temporary Application Number 09-1412 (T60662). 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 March 1, 1986, and it is expected that no diversion or use of the water will be done after that date unless another proposal has been made and approved.

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

Yours truly,

Robert L. Morgan

Robert L. Morgan, P.E.
State Engineer

DCH:slm

Encl.: Copy of approved Temporary Application

Form 97 2M 10-70

TEMPORARY

Application No. T 72663

APPLICATION TO APPROPRIATE WATER
STATE OF UTAH

09-1412

RECEIVED
FEB 11 19
WATER RIGHTS
PRICE

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 Marathon Oil Company

3. The Post Office address of the applicant is P.O. Box 2659, Casper, Wyoming 82602

4. The quantity of water to be appropriated _____ second-feet and/or 0.50 acre-feet

5. The water is to be used for Oil Well Drilling (Major Purpose) from March 1, 1985 (Month) (Day) to March 1, 1986 (Month) (Day)

other use period _____ (Minor Purpose) from _____ (Month) (Day) to _____ (Month) (Day)

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

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

7. The direct source of supply is* Cross Creek - Primary (See Reverse Side for Secondary) (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*
SW 1/4 SW 1/4 of Section 25, T38S, R25E, SLM
Primary: E. 950 ft. & N. 325 ft. from the SW Cor. Sec. 25, T38S, R25E, SLB&M.
(See Reverse side for Secondary Source) (5½ mi. NE 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 A hole in the stream bed where water will be sucked out. The stream itself will not be diverted. (See Reverse)

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.

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 Oil Well Drilling

20. Give place of use by legal subdivision of the United States Land Survey for all uses described in paragraphs 14 to 19, incl. SE SW of Section 25, T38S, R25E SLM (Well #4-25)
Tin Cup Mesa #4-25: N. 50 ft. & E. 2490 ft. from SW Cor. Sec. 25, T38S, R25E, SLB&M.

21. The use of water as set forth in this application will consume 0.50 A.F. 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:

12. Surface and Mineral Rights owned by U.S. Government

Secondary Source Information:

Paragraph #7: Underground Water (Artesian Wells)

Paragraph #8: San Juan County, SE NW of Section 35, T38S, R25E. NE SE of Section 28, T38S, R26E

#1) S. 1975 FT. 7 W. 565 FT. from N 1/4 Cor. Sec. 35, T38S, R25E, SLM

#2) S. 1980 FT. & W. 1854 FT. from NE Cor. Sec. 28, T38S, R26E, SLM

Paragraph #9: (2) Existing Artesian Wells

#1) 9" x 13" casing, 1465 ft. deep

#2) 4", 8", 10" casing, 930 ft. deep

(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*

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

DECLARATION OF CITIZENSHIP

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

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

My commission expires:

(SEAL)

Notary Public

FEES FOR APPLICATIONS TO APPROPRIATE WATER IN UTAH

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

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

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

STATE ENGINEER'S ENDORSEMENTS

1. FEB 11,1985 Application received (by mail / over counter) in State Engineer's office by AP
2. ..... Priority of Application brought down to, on account of .....
3. 2-20-85 Application fee, $ 15.00, received by Cas Rec. No. 17425
4. ..... Application microfilmed by ..... Roll No. .....
5. ..... Indexed by ..... Platted by .....
6. 2-11-85 Application examined by AP
7. ..... Application returned, ... or corrected by office .....
8. ..... Corrected Application resubmitted (by mail / over counter) to State Engineer's office.
9. ..... Application approved for advertisement by .....
10. ..... Notice to water users prepared by .....
11. ..... Publication began; was completed .....
    Notice published in .....
12. ..... Proof slips checked by .....
13. ..... Application protested by .....
14. ..... Publisher paid by M.E.V. No. .....
15. ..... Hearing held by .....
16. ..... Field examination by .....
17. 2-11-85 Application designated for (approval / rejection) AP SG
18. 3/15/85 Application copied or photostated by slm proofread by .....
19. 3/15/85 Application (approved / ~~rejected~~)
20. Conditions:

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

    a. Actual construction work shall be diligently prosecuted to completion.

    b. Proof of Appropriation shall be submitted to the State Engineer's office by NPR

    c. TEMPORARY APPROVAL -- EXPIRES March 1, 1986.

Robert L. Morgan

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

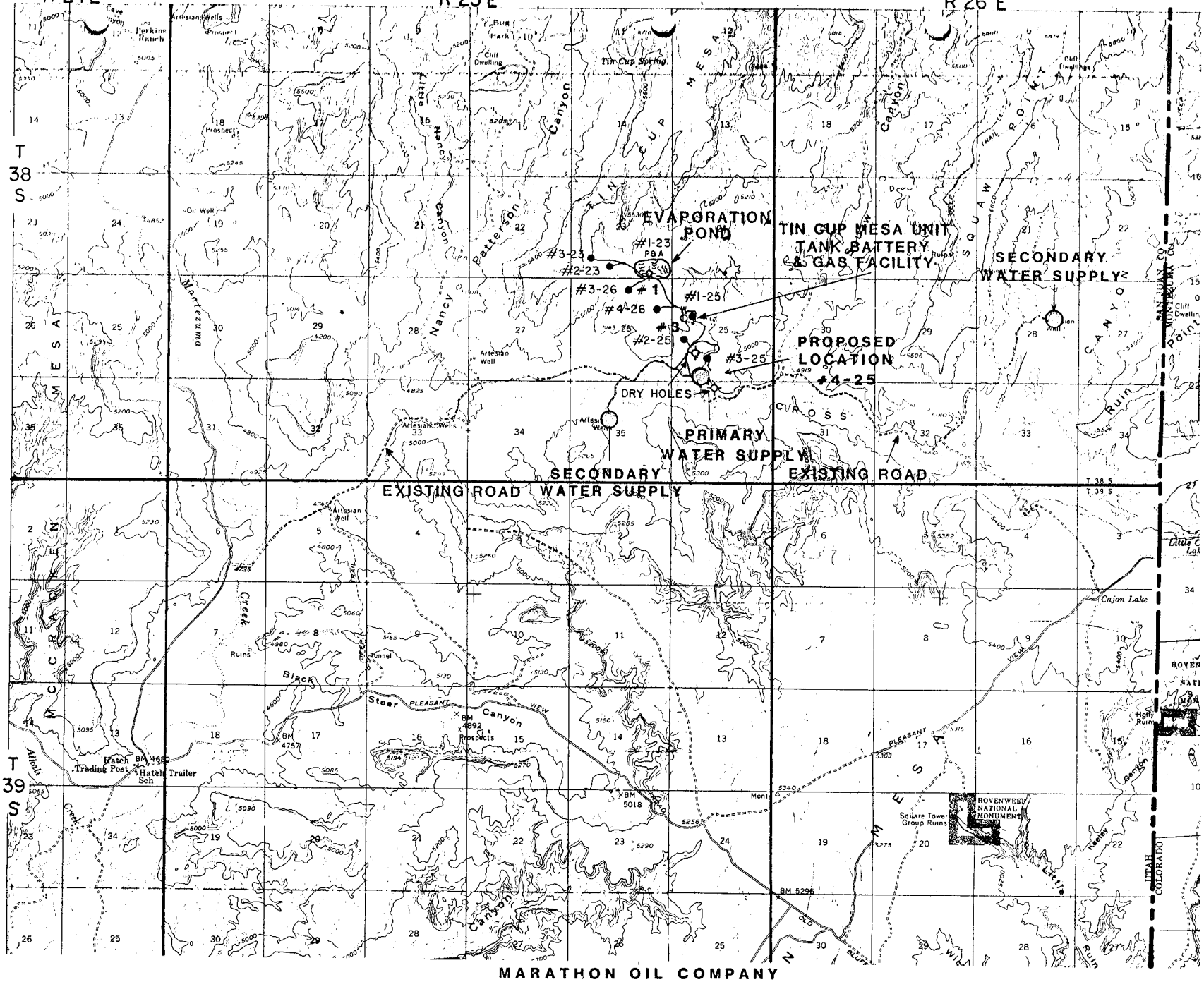
21. ..... Time for making Proof of Appropriation extended to .....
22. ..... Proof of Appropriation submitted.
23. ..... Certificate of Appropriation, No. ....., issued

TEMPORARY

Application No. T 66662

09-1412

WATER RIGHTS DATA BASE
ENTERED - DATE 3/14/85 BY MLK
VERIFIED - DATE 3/14/85 BY



MARATHON OIL COMPANY

TIN CUP MESA

SAN JUAN CO., UTAH

WELL #4-25

Scale 1"= 1 MILE

2/7/85

Diagram A

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

March 21, 1985

TO: Jack Feight, UIC Program Manager

FROM: R. J. Firth, Associate Director, Oil and Gas RJF

SUBJECT: Marathon Oil Company Pressure Maintenance Operations
Tin Cup Mesa Unit #4-25, Proposed Water Injection Well

Attached is a copy of the Board Order and the Stipulation of the parties with respect to the January 24, 1985, hearing and a copy of the initial report requirements of the Order. Even in view of the Stipulation, there still appears to be some major differences between the parties regarding the proposed #4-25 water injection well. I certainly feel that administrative approval by the Division of the #4-25 well as a water injection well, particularly in light of the lack of the required UIC application, would be inappropriate at this time and would probably only enhance the possibility of the Division's involvement in this continuing controversy.

jbl

Attachment

cc: Dianne R. Nielson

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

IN THE MATTER OF THE PETITION OF MARATHON OIL COMPANY FOR APPROVAL OF A PLAN OF OPERATION FOR PRESSURE MAINTENANCE IN THE ISMAY ZONE PARADOX FORMATION PARTICIPATING AREA OF THE TIN CUP MESA UNIT SAN JUAN COUNTY, UTAH	:	ORDER Docket No. 84-076 Cause No. 211-1

It is, therefore, adjudged and ordered that:

A. Marathon, as operator of the Tin Cup Mesa Unit, San Juan County, Utah, is authorized to immediately commence production of the Unit beginning as of 10:00 a.m., January 24, 1985.

B. The Unit Operator is directed to commence injection operations with respect to Wells No. 3-23 and No. 1-25, with the Board reserving jurisdiction over this matter for further evaluation and report upon motion of the Division or any interested party, as specified in the Stipulation.

C. The terms and conditions of the foregoing Stipulation, with respect to the other matters addressed therein, are approved by the Board.

D. The Board retains continuing jurisdiction over this cause.

Dated this 24th day of January, 1985.

STATE OF UTAH
BOARD OF OIL, GAS & MINING.

By _____
Gregory P. Williams, Chairman

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

IN THE MATTER OF THE PETITION OF MARATHON OIL COMPANY FOR APPROVAL OF A PLAN OF OPERATION FOR PRESSURE MAINTENANCE IN THE ISMAY ZONE PARADOX FORMATION PARTICIPATING AREA OF THE TIN CUP MESA UNIT SAN JUAN COUNTY, UTAH	:	STIPULATION Docket No. 84-076 Cause No. 211-1

Come now Marathon Oil Company (Marathon) and MCOR Oil and Gas Corporation (MCOR), by their respective attorneys of record, and stipulate as follows:

1. That Marathon, as the operator of the Tin Cup Mesa Unit (hereinafter "said Unit") in San Juan County, Utah, may, subject to Board approval, pursuant to § 40-6-5(2)(c), Utah Code Annotated 1953, as amended, immediately implement the two-well water injection-pressure maintenance program in said Unit, as proposed by Marathon, and reflected by the record in this matter, as supplemented by the drilling of a third injection well, as provided for in paragraph 3 hereof (hereinafter "said program"). One of the injection wells, which the parties have heretofore approved, is on the north end of said Unit and is known as Well No. 3-23. The other is near the center of the field and is known as Well No. 1-25. With the implementation of said program, the parties hereto urge the Board to rescind its shut-in order and to permit the field to go back into production.

2. The cost of said program will be a Unit cost, and, under the present Unit allocation of costs, MCOR will be charged with

approximately seventeen and one-half percent (17½%) of the cost of said program, including, but not limited to, the drilling and equipping of the injection and water wells.

3. Marathon agrees, as provided for herein, to drill a well within said Unit, as an intended injection well to be located 2,490 feet east of the west line and 50 feet north of the south line of Section 25, Township 38 South, Range 25 East, with the objective of the Ismay Zone Paradox Formation (hereinafter "said well"). MCOR agrees that it will not object to the location and/or the permitting of said well. Marathon intends to utilize said well as an injection well if it encounters the objective carbonate formation with the permeability and other characteristics necessary or desirable for use of it as an injection well for said program. The drilling will be done by Marathon, as the Unit operator and paid for as a unit cost. If the Unit working interest owners in the participating area determine that said well is not suitable for an injection well, its other utility, if any, will be determined by the Unit working owners voting in accordance with the Unit Operating Agreement, with voting percentages established with the current B.L.M. approved pressure maintence participating area. Once authority to drill said well has been granted, it will be expeditiously drilled and diligently prosecuted to completion. Consistent with prior practices by Marathon in its operations of the Tin Cup Mesa Field, Marathon will gather relevant data, including core samples and test the well for its hydro-carbon production capacity. The said data will be furnished to the said Unit working interest

owners, the Utah Division of Oil, Gas and Mining, and the B.L.M., at least five (5) working days prior to commencement of completion operations.

4. Marathon will monitor the operations of said program and will file reports containing all material data (except proprietary information) with the Utah Division of Oil, Gas and Mining and with B.L.M. at periodic intervals of not longer than thirty (30) days, until commencement of water injection into the said third well. Copies of the same will be furnished promptly to MCOR and the other parties to said program. Thereafter data acquisition and reporting will be in acordance with B.L.M. and State of Utah requirements.

5. The parties also agree that with the initiation and monitoring of said program, additional material data may develop which will be useful in further developing the field. It is also anticipated that through such monitoring of said program, appropriate injection allocations and other related adjustments in such things as the rate of injection can be made.

6. This stipulation shall not be utilized by either party as an admission or concession in regard to any reserved or continued issues. The stipulation is made so that the field can go back into production, as provided in numbered paragraphs 1 through 5 herein. Both parties agree, based on present information, that said program will protect the field against waste.

7. It is stipulated that all of the other issues raised by any of the parties in these proceedings may be continued without

date, but to be noticed for further hearing by any party, upon reasonable notice, or may be called on for hearing by the Board on its own motion. Notwithstanding the provisions of numbered paragraph 6 hereof, failure to further pursue such issues in this proceeding by any party shall not estop nor bar such party from pursuing the same in civil litigation filed in a court of competent jurisdiction.

8. MCOR will, and does hereby withdraw its pending application for an exception well in Section 25.

The foregoing stipulation is accepted and agreed to this 24th day of January, 1985.

MARATHON OIL COMPANY

By _____
Edward W. Clyde, Esq.

By _____
Delvin Menge, Esq.

MCOR OIL AND GAS CORPORATION

By _____
John S. Kirkham, Esq.

Concurs:

DIVISION OF OIL, GAS & MINING

By _____
Barbara Roberts, Esq.

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
IN AND FOR THE STATE OF UTAH

---ooOoo---

IN THE MATTER OF THE APPLICATION OF MARATHON OIL COMPANY FOR ADMINISTRATIVE APPROVAL OF THE TIN CUP MESA 4-25 WELL, LOCATED IN SECTION 25, TOWNSHIP 38 SOUTH, RANGE 25 EAST, SAN JUAN COUNTY, UTAH, AS A CLASS II ENHANCED RECOVERY INJECTION WELL	:	NOTICE OF HEARING DOCKET NO. 85-037 CAUSE NO. UIC-057-1

---ooOoo---

THE STATE OF UTAH TO ALL OPERATORS, TAKERS OF PRODUCTION, MINERAL AND ROYALTY OWNERS, AND PARTICULARLY ALL PERSONS INTERESTED IN SECTIONS 23, 25, AND 26, TOWNSHIP 38 SOUTH, RANGE 25 EAST, SAN JUAN COUNTY, UTAH.

Notice is hereby given that the Board of Oil, Gas and Mining will conduct a hearing on the above-captioned matter at 10:00 a.m., on Tuesday, July 9, 1985 in the Board Room of the Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 301, Salt Lake City, Utah.

The purpose of this proceeding will be for the Board to receive information regarding the objections to the requested administrative approval of the Tin Cup Mesa 4-25 Well as a water injection well.

This matter was noticed on March 6, 1985 and published on March 31, 1985. Pursuant to Rule I-5(g)(iii) of the Rules and Regulations of the Board of Oil, Gas and Mining, objections were received from BHP Petroleum, TXP Operating Company and MCOR Oil and Gas Corporation.

This matter will be considered by the Board in conjunction with the scheduled hearing for Docket No. 84-076, Cause No. 211-1, which is a petition for approval of a plan of operation for pressure maintenance in the Ismay Zone Paradox Formation participating area of the Tin Cup Mesa Unit, San Juan County, Utah.

Persons interested in this matter may participate pursuant to the Procedural Rules of the Board. The application and any subsequent pleadings may be inspected in the office of the undersigned, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah.

DATED this 24th day of June, 1985.

STATE OF UTAH
BOARD OF OIL, GAS AND MINING

Marjorie L. Anderson
Secretary of the Board

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

March 22, 1985

TO: Ron Firth

FROM: Cleon Feight

SUBJECT: Marathon Oil Company Pressure Maintenance Operations Tin Cup Mesa Unit #4-25, Proposed Water Injection Well

Provided that no objections are received, John Anderson, attorney for Marathon, has been told that the above mentioned well cannot be granted administrative approval as a Class II injection well until it has been drilled, completed and the necessary UIC application forms submitted to this Division.

mfp
0135A

cc: John Anderson

Casper Division
Production United States

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

March 21, 1985

State of Utah
Division of Oil, Gas, & Mining
Attn: Mr. John Baza
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Mr. Baza:

Enclosed please find a copy of the approved Temporary Application to obtain water for the drilling of Tin Cup Mesa #4-25.

As you can see this permit is valid to March 1, 1986.

Thank you for your cooperation in dealing with the permitting of Tin Cup Mesa #4-25.

Sincerely,

MARATHON OIL COMPANY

Frank M. Krugh

Frank M. Krugh
Regulatory Coordinator

FMK:mrt
Enclosure

Affidavit of Publication

ADM-35B

STATE OF UTAH,

ss.

County of Salt Lake

BEFORE THE DIVISION OF OIL, GAS AND MINING DEPARTMENT OF NATURAL RESOURCES STATE OF UTAH CAUSE NO. UIC-057

IN THE MATTER OF THE APPLICATION OF MARATHON OIL COMPANY FOR ADMINISTRATIVE APPROVAL OF THE TIN CUP MESA 4-25 WELL, LOCATED IN SECTION 25, TOWNSHIP 38 SOUTH, RANGE 25 EAST, SAN JUAN COUNTY, UTAH, AS A CLASS II ENHANCED RECOVERY INJECTION WELL.

THE STATE OF UTAH TO ALL INTERESTED PARTIES IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that Marathon Oil Company, P.O. Box 120, Casper, Wyoming 82602 has requested administrative approval of Tin Cup Mesa 4-25 well, located 50' FSL and 2490'FWL (SESW) of Section 25, Township 38 South, Range 25 East, San Juan County, Utah as a Class II enhanced recovery injection well.

The proposed operating data for the well is as follows:

Injection Interval: Ismay Zone-Paradox Formation
Maximum Estimated Surface Pressure: 3600 psig
Maximum Estimated Water Injection Rate: 4000 BWPD

Administrative approval of this application will be granted unless objections are filed with the Division of Oil, Gas and Mining within fifteen days after publication of this Notice. Objections, if any, should be mailed to: The Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

DATED this 6th day of March, 1985.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
MARJORIE L. ANDERSON
Administrative Assistant

C-17

Cheryl Gierloff

Being first duly sworn, deposes and says that he/she is legal advertising clerk of THE SALT LAKE TRIBUNE, a daily newspaper printed in the English language with general circulation in Utah, and published in Salt Lake City, Salt Lake County, in the State of Utah, and of the DESERET NEWS, a daily newspaper printed in the English language with general circulation in Utah, and published in Salt Lake City, Salt Lake County, in the State of Utah.

That the legal notice of which a copy is attached hereto

Cause No. UIC-057 Application of Marathon Oil, Company

was published in said newspaper on

March 14, 1985

Cheryl Gierloff
Legal Advertising Clerk

Subscribed and sworn to before me this 25th day of March A.D. 19 85

B. J. Moore
Notary Public

My Commission Expires

March 1, 1988

Affidavit of Publication

ADM-35B

STATE OF UTAH,

ss.

County of Salt Lake

BEFORE THE DIVISION OF OIL, GAS AND MINING DEPARTMENT OF NATURAL RESOURCES STATE OF UTAH CAUSE NO. UIC-057

IN THE MATTER OF THE APPLICATION OF MARATHON OIL COMPANY FOR ADMINISTRATIVE APPROVAL OF THE TIN CUP MESA 4-25 WELL, LOCATED IN SECTION 25, TOWNSHIP 38 SOUTH, RANGE 25 EAST, SAN JUAN COUNTY, UTAH, AS A CLASS II ENHANCED RECOVERY INJECTION WELL.

THE STATE OF UTAH TO ALL INTERESTED PARTIES IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that Marathon Oil Company, P.O. Box 120, Casper, Wyoming 82602 has requested administrative approval of Tin Cup Mesa 4-25 well, located 50' FSL and 2490'FWL (SESW) of Section 25, Township 38 South, Range 25 East, San Juan County, Utah as a Class II enhanced recovery injection well.

The proposed operating data for the well is as follows:

Injection Interval: Ismay Zone-Paradox Formation
Maximum Estimated Surface Pressure: 3600 psig
Maximum Estimated Water Injection Rate: 4000 BWPD

Administrative approval of this application will be granted unless objections are filed with the Division of Oil, Gas and Mining within fifteen days after publication of this Notice. Objections, if any, should be mailed to: The Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

DATED this 6th day of March, 1985.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
MARJORIE L. ANDERSON
Administrative Assistant

C-17

Cheryl Gierloff

Being first duly sworn, deposes and says that he/she is legal advertising clerk of THE SALT LAKE TRIBUNE, a daily newspaper printed in the English language with general circulation in Utah, and published in Salt Lake City, Salt Lake County, in the State of Utah, and of the DESERET NEWS, a daily newspaper printed in the English language with general circulation in Utah, and published in Salt Lake City, Salt Lake County, in the State of Utah.

That the legal notice of which a copy is attached hereto

Cause No. UIC-057 Application of Marathon Oil Company

was published in said newspaper on

March 14, 1985

Cheryl Gierloff
Legal Advertising Clerk

Subscribed and sworn to before me this 25th day of March A.D. 19 85

B. J. Marie
Notary Public

My Commission Expires

March 1, 1988

RECEIVED
MAR 27 1985
DIVISION OF OIL
GAS & MINING

STATE OF UTAH

w/ok

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

API #43-037-31145

NAME OF COMPANY: MARATHON OIL

WELL NAME: TIN CUP MESA #4-25

SECTION SE SW 25 TOWNSHIP 38S RANGE 25E COUNTY San Juan

DRILLING CONTRACTOR Energy Serch

RIG # 2

SPUDDED: DATE 4-3-85

TIME 10:45 PM

HOW Rotary

DRILLING WILL COMMENCE _____

REPORTED BY Frank Krugh

TELEPHONE # 307-577-1555

DATE 4-8-85 SIGNED AS

Form OGC-1b

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

SUBMIT IN TRIPLICATE* (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.)

RECEIVED
APR 08 1985
DIVISION OF OIL GAS & MINING

1. OIL WELL ☐ GAS WELL ☒ OTHER Spud-Injection Well

2. NAME OF OPERATOR: Marathon Oil Company

3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, Wyoming 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: SE SE SW 50' FSL & 2490' FWL

5. LEASE DESIGNATION AND SERIAL NO.: U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME: Tin Cup Mesa

8. FARM OR LEASE NAME: Tin Cup Mesa

9. WELL NO.: 4-25

10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 25, T38S, R25E

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

14. PERMIT NO. 2-14-85 / 43-037-31145

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5036' GL 5049' KB

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

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

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

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

The above well was Spudded on April 3, 1984, at 10:45 PM by Energy Search Rig #2.

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

SIGNED Dayle Jones TITLE District Operations Manager DATE April 4, 1985

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

TINCUP MESA #4-25 WELL HISTORY

4-18-85	5,482'	MADE 130' IN U. ISMAY FORMATION. CUT CORE #1 5,432' TO 5,482'.
4-19-85	5,552'	MADE 70' IN U. ISMAY FORMATION. MW 11.2+. CUT CORE #2 FROM 5,492'-5,552'.
4-20-85	5,720'	MADE 168' IN GOTHIC SHALE FORMATION. MW 11.3.
4-21-85	5,778'	MADE 58' IN AKAH FORMATION. MW 11.2. CUT CORE #3 5,716-5,758'.
4-22-85	5,778'	MADE 0' IN AKAH FORMATION. MW 11.2+. R/U SOS. LOGS #1 DLL, MSFL, GR, #2 CNL, FDC, SPECTRAGAMMA, #3 BHC, VDL, GR. DRILLERS T.D. 5,778.5', LOGGERS T.D. 5,778'.
4-23-85	5,778'	MADE 0' IN AKAH FORMATION. MW 11.2+. DST #1, FORMATION U. ISMAY, INTERVAL TESTED FROM 5,429' TO 5,510' BY LYNES.
4-24-85	5,778'	MADE 0' IN AKAH FORMATION. MW 11.2. WORK STUCK PIPE.
4-25-85	5,778'	MADE 0' IN AKAH FORMATION. MW 11.0. REAM & WASH TO 5,778'.
4-26-85	5,778'	MADE 0' IN AKAH FORMATION. FIN RIH W/5-1/2" CSG. CIRC. MIX & PUMP 5 BW, 10 BBL SPACER 1,000, 10 BBL CW 100, 900 SX LIGHT WT III W/2% CACL2, 1/4#/SK D29 TAILED IN W/300 SX HI EARLY W/1% D60 DISPLACED W/H_2O, R/D CMTERS. N/D BOP'S SET SLIPS W/86,000# ON SLIPS. N/U TBG HEAD TESTED TO 1,000 PSI 5 MIN O.K. BUMPED PLUG TO 2,000 PSI, FLOATS O.K. RECIPROCATED THRU JOB. RAN 142 JTS OF 5-1/2", K-55, 17# & 15.5 LTC CASING. RELEASED RIG @ 8:00 PM 4-25-85. CASING SET AT 5777'KB.

TINCUP MESA #4-25 WELL HISTORY

4-4-85	400'	MADE 327' IN MORRISON FORMATION. MW 8.5. MI & RU ROTARY TOOLS. SPUD @ 10:45 P.M. 4-3-85. DRILL AHEAD W/H_2O & BENEX.
4-5-85	1,500'	MADE 1,100' IN CHINLE FORMATION. MW 9.0. RUN DIL/GR LOGGERS T.D. 1,501. R/U CSG CREW.
4-6-85	1,500'	MADE 0' IN CHINLE FORMATION. MW 8.3. RUN 38 JTS 8-5/8", K-55, 24#, STC CSG. LAND CSG @ 1,497'. CEMENT W/503 SXS 1+ WT 3 W/2% CACL2 AND 1/4#/SK CELLOPHANE FLAKE. TAILED IN W/350 SX HIGH EARLY W/2% CACL2 & 1/4#/SK CELLOPHANE FLAKE. CIRC CMT TO SURFACE CEMENT DROPPED 25' IN 1 HR. 1" W/20 SX HIGH EARLY CEMENT WOC 6 HRS. CUT-OFF WELD ON 11" 3,000 8-5/8" SOW BRADEN HEAD. TEST HEAD TO 1,000 PSI O.K. N/U TEST BOP'S 500 PSI 5 MIN. 1,500 PSI 5 MINUTES. TEST O.K. ON RAMS. NO TEST ON HYDRILL.
4-7-85	2,630'	MADE 1,130' IN CUTLER FORMATION. MW 8.9. TESTED TO 500 PSI 5 MIN 1,500 5 MIN O.K. TEST CASING TO 1,500 O.K. TAGGED CMT STINGERS AT 1,414'. DRILL CEMENT TO 1,500 DRILL 15' NEW HOLE. RUN LEAK OFF TEST TO 410 PSI. DRILLED & SURVEYED 1,510' TO 2,630', NO PROBLEMS.
4-8-85	3,107'	MADE 477' IN CUTLER FORMATION. MW 11.2.
4-9-85	3,402'	MADE 295' IN CUTLER FORMATION. MW 11.2.
4-10-85	3,643'	MADE 241' IN CUTLER FORMATION. MW 11.2.
4-11-85	3,945'	MADE 302' IN CUTLER FORMATION. MW 11.2.
4-12-85	4,169'	MADE 224' IN CUTLER FORMATION. MW 7.2. CIRCULATED & POOH 1/2 OF #1 CONE GONE. P/U NEW BIT RIH. REAM 90' TO BOTTOM WORKED ON JUNK.
4-13-85	4,449'	MADE 280' IN HONAKER TRAIL FORMATION. MW 11.2. DRILL 4,169'-4,449', NO PROBLEMS.
4-14-85	4,697'	MADE 248' HONAKER TRAIL FORMATION. MW 11.3. DRILL 4,449-4,697 NO PROBLEMS.
4-15-85	4,937'	MADE 240' IN HONAKER TRAIL FORMATION. MW 11.3. DRILL 4,697'-4,937', NO PROBLEMS.
4-16-85	5,116'	MADE 179' IN HONAKER TRAIL FORMATION. MW 11.3. RECOVERED BUTTONS & 1/4 OF CONE NOSE IN JUNK BASKET.
4-17-85	5,352'	MADE 236' IN PARADOX FORMATION. MW 11.3. DRILL 5,116'-5,352' W/NO PROBLEMS.
4-18-85	5,482'	MADE 130' IN U. ISMAY FORMATION. MW 11.3.

Form OGC-1b

SUBMIT TRIPLICATE*
(Other instructions on reverse side)

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

RECEIVED
APR 23 1985
DIVISION OF OIL GAS & MINING

1. OIL WELL ☐ GAS WELL ☒ OTHER Injection Well

2. NAME OF OPERATOR
Marathon Oil Company

3. ADDRESS OF OPERATOR
P.O. Box 2659, Casper, Wyoming 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
SE SE SW 50' FSL & 2490' FWL

5. LEASE DESIGNATION AND SERIAL NO.
U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME
Tin Cup Mesa

8. FARM OR LEASE NAME
Tin Cup Mesa

9. WELL NO.
4-25

10. FIELD AND POOL, OR WILDCAT
Tin Cup Mesa

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 25, T38S, R25E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

14. PERMIT NO. 2-14-85
43-037-31145

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
5036' GL, 5049' KB

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐				
(Other) Please See Below			☒	(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.) *

PROGRESS REPORT

Please See Attachment

4-4-85 To 4-18-85

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

SIGNED Doyle L. Jones TITLE District Operations Manager DATE April 18, 1985

(This space for Federal or State office use)

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

*See Instructions on Reverse Side

MARATHON OIL COMPANY
TIN CUP MESA #4-25
ISMAY INJECTOR COMPLETION PROCEDURE
SECTION 25, T38S, R25E
SAN JUAN COUNTY, UTAH
AFE #5645-5

RECEIVED
MAY 06 1985
DIVISION OF OIL
GAS & MINING

WELL DATA:

Elevation: 5,036' G.L., 5,049' K.B.

Total Depth: 5,778' T.D., 5,701' P.B.T.D.

Casing Record:

Conductor:	14" Thinwall Steel Pipe from Surface to 80' K.B.
Surface:	8 5/8", K-55, 24# casing from surface to 1,497' K.B.
Production:	5 1/2", K-55, 17# & 15#, LT&C from surface to 5,777' K.B.

Casing Tools:

Float Collar:	5,701' K.B.
Float Shoe:	5,777' K.B.

Tubing Record (to be installed):

2 7/8", J-55, 6.5# EUE internally epoxy coated landed with 12,000# tension
Size 45A4 Baker Model "AL-2" Lok-Set Packer internally epoxy coated with 2.38" I.D. at 5,380' K.B.

Proposed Perforations:

5,430'-5,436' K.B.
5,443'-5,463' K.B.
5,470'-5,504' K.B.
5,514'-5,530' K.B.

PROCEDURE SUMMARY

This procedure proposes to perforate all injection perforations over balanced, in acid with wireline conveyed casing guns. After perforating and over displacement of the acid into the perforations, a retrievable bridge plug and packer assembly will be run to selectively isolate and treat each perforation interval.

PROPOSED PROCEDURE

1. Rig up and move in completion rig.

2. Nipple up and test BOP's to 3,000 psi.

3. Run in hole with casing scraper to P.B.T.D. (5,701' K.B.) and reverse circulate bottoms up with fresh water. Pull out of hole with casing scraper. Pressure test casing to 3,000 psi.

4. Spot 200 gallons of 15% HCl at 5,530' K.B. with non-emulsifier, corrosion inhibitor and iron sequestering agent to 5,325' K.B. Pull out of hole with coiled tubing.

5. Rig up wireline perforators lubricator. Run in hole with 4" diameter hollow steel carrier casing guns loaded with 4 JSPF (22 gram, .43" hole), 90° phasing and correlate on depth to perforate. Perforate 5,530'-5,514' K.B., 5,504'-5,470' K.B., 5,463'-5,443' K.B., and 5,436'-5,430' K.B. using multiple perforations runs. Perforate from top to bottom.

6. Over displace acid into perforations with 8 barrels of Ismay formation water (maximum injection pressure at surface 3,000#).

7. Run in hole with Baker model "G" retrievable bridge plug, Baker retrievamatic packer, and tubing to straddle lowest perforation zone, set retrievable bridge plug at 5,533' K.B. (top seal). Pull up hole and set packer seals at 5,509' K.B., pack off and acidize 5,530'-5,514' K.B. perforations with 800 gallons of 15% HCl with additives (50 gallons per foot). Over displace into formation with 5 barrels Ismay formation water.

8. Pull up on tubing to equalize pressure on packer, unset packer, run in hole and latch onto retrievable bridge plug, unset retrievable bridge plug, pull out of hole to 5,509' K.B. (top seal of retrievable bridge plug) and set retrievable bridge plug.

9. Pull up hole to 5,466' K.B. with packer and set packer at 5,466' K.B. (seals). Acidize 5,504'-5,470' K.B. perforations with 1,700 gallons of 15% HCl with additives and over displace acid into perforations with 10 barrels of Ismay formation water.

10. Pull up on tubing to equalize, unset packer, run in hole and latch onto retrievable bridge plug, unset retrievable bridge plug, pull out of hole to 5,466' K.B. (top seal of retrievable bridge plug) and set retrievable bridge plug.

11. Pull up hole with packer to 5,439' K.B. and set packer at 5,439' K.B. (seals). Acidize 5,463'-5,443' K.B. perforations with 1,000 gallons of 15% HCl with additives and over displace acid into perforations with 10 barrels of Ismay formation water.

12. Pull up on tubing to equalize pressure on packer, unset packer, run in hole and latch onto retrievable bridge plug, unset retrievable bridge plug, pull out of hole to 5,439' K.B. (top seal of retrievable bridge plug) and set retrievable bridge plug.

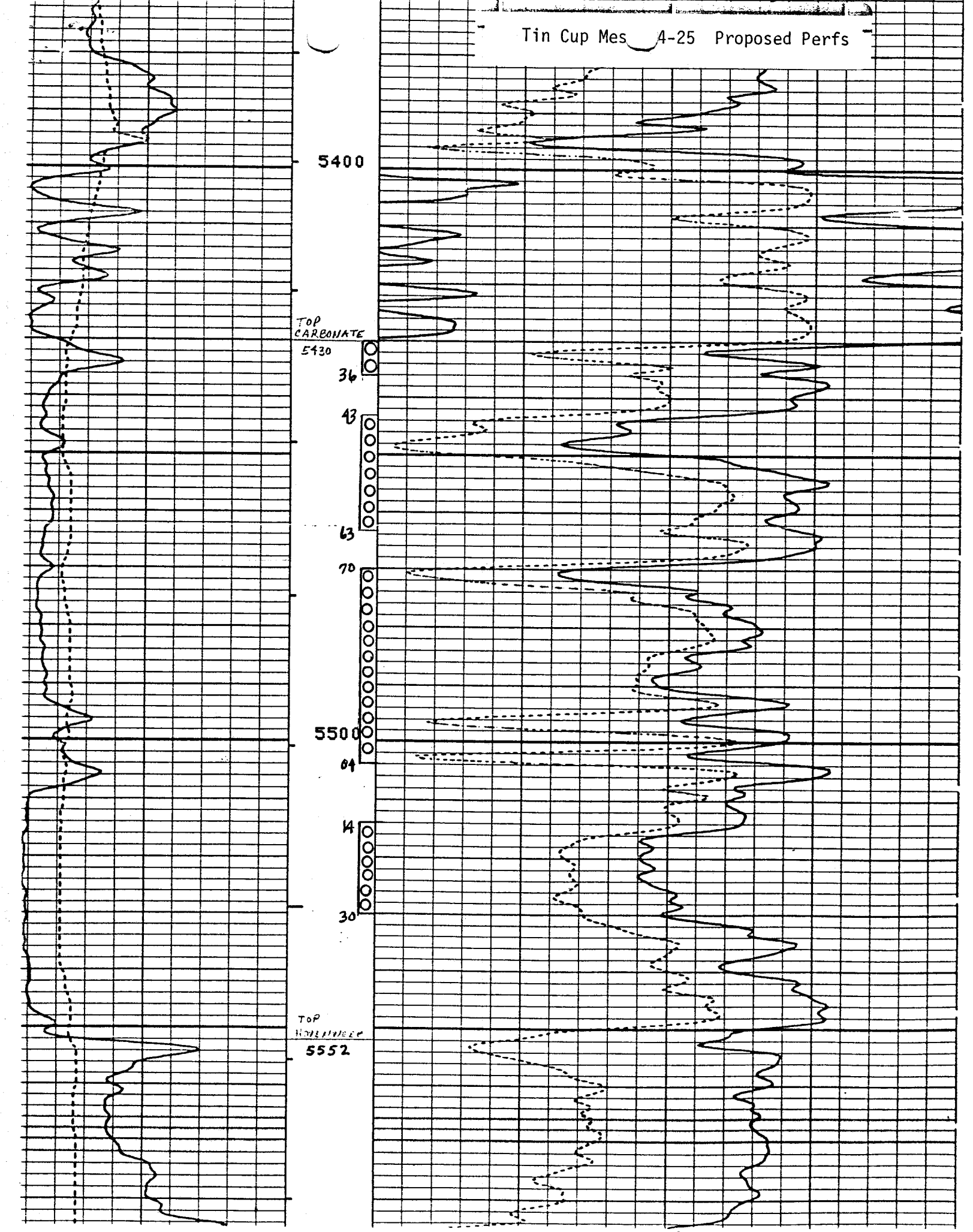
13. Pull up hole with packer to 5,425' K.B. and set packer at 5,425' K.B. (seals). Acidize 5,435'-5,430' K.B. perforations with 300 gallons of 15% HCl with additives and over displace acid into perforations with 5 barrels of Ismay formation water.

14. Pull up on tubing to equalize, unset packer, run in hole and latch onto retrievable bridge plug, unset retrievable bridge plug, pull out of hole with retrievable bridge plug, packer and tubing.

15. Run in hole with internally epoxy coated tubing and Baker Lok-Set packer to 5,380' K.B., circulate one drum (55 gallons) of NL Coat B1400 corrosion inhibitor down backside. Set packer at 5,380' K.B. (bottom of packer) in 12,000# tension.

16. Rig up injection tree and flowline, release completion rig.

ROC/kt

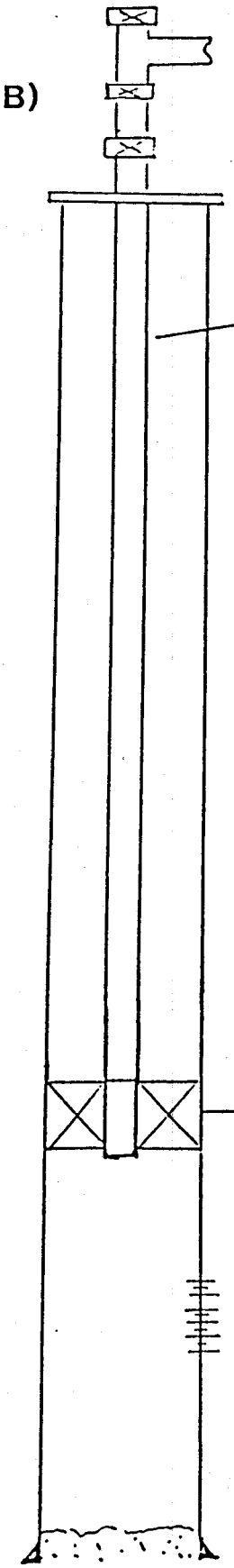

Tin Cup Mes 4-25 Proposed Perfs
5400
TOP CARBONATE
5430
36
43
63
70
5500
04
14
30
TOP
5552

TIN CUP MESA #4-25

SMAY COMPLETION

Elevation 5036' GL (13'KB)

5049' KB



3600 # Tree

2 7/8",J-55,6.5# EUE Tbg
Internally Coated

Baker "AL-2" Large Bore Lok-Set Pkr
2.38"ID Set at 5380 'K

Proposed Ismay Perfs

5430-5436'KB
5443-5463'KB
5470-5504'KB
5514-5530'KB

5 1/2",K-55,17# STC Csg

PBTD 5701 'KB

TD 5778 ' KB

CHECKLIST FOR INJECTION WELL APPLICATION AND FILE REVIEW

* * * * * * * * *

Operator: Marathon Oil Co. Well No. 4-25

County: San Juan T 38S R 25E Sec. 25 API# _____

New Well ___ Conversion ___ Disposal Well ___ Enhanced Recovery Well ___

	YES	NO
UIC Forms Completed	✓	
Plat including Surface Owners, Leaseholders, and wells of available record	✓	
Schematic Diagram	✓	
Fracture Information	✓	
Pressure and Rate Control	✓	
Adequate Geologic Information	✓	

Fluid Source: Produced & Makeup Water

Analysis of Injection Fluid: Yes ✓ No ___ TDS 75,562 +

Analysis of Water in Formation to be injected into: Yes ✓ No ___ TDS 256,894

Known USDW in area: ? Depth _____

Number of wells in area of review: 4 Prod. 2 P&A 2 Water ___ Inj. ___

Aquifer Exemption: Yes ___ NA ✓

Mechanical Integrity Test: Yes ✓ No ___ Date Future Type _____

Comments: Should be no danger to fresh water sources.

Reviewed by: [illegible] 5/6/85

Casper Division
Production United States

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

May 3, 1985

Mr. Cleon Feight, Manager
UIC Program
Utah Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center
Salt Lake City, Utah 84180-1203

Re: Tin Cup Mesa Unit Well #4-25
San Juan County, Utah

Dear Mr. Feight:

In furtherance of Marathon Oil Company's earlier request for a Class II water injection permit for Well #4-25, we have enclosed the following:

1. An original and six (6) copies of form DOGM-UIC-1.

2. Three (3) complete sets of attachments to form DOGM-UIC-1.

3. Completion procedure for Well #4-25.

Marathon will complete Well #4-25 as a water injection well, as advertised in Cause No. UIC-057, and as contemplated by the Stipulation between MCOR and Marathon, with the concurrence of the Division of Oil, Gas and Mining, in Cause No. 211-1, Docket No. 84-076, before the Utah Board of Oil, Gas and Mining on January 24, 1985, and the subsequent Application for Permit to Drill for this well.

Based on an analysis of the data from Well #4-25, which has previously been submitted to you or is enclosed herewith, the Working Interest Owners in the Unit Participating Area have, in accordance with the voting provisions of the Unit Operating Agreement, determined that this well should be completed as an injection well for the following reasons:

1. Water injection at Well #4-25 is necessary to prevent further decline in reservoir pressure, thus preventing a loss in ultimate oil recovery.

2. Well #3-25 is draining the reserves from the Well #4-25 location, which is evidenced by approximately 170 psi decrease from initial reservoir pressure at Well #4-25.

3. The above Stipulation states, in part, that it is intended to utilize Well #4-25 as an injection well "...if it encounters the objective carbonate formation with the permeability and other characteristics necessary or desirable for..." such use, which is supported by the data from Well #4-25.

The two (2) existing water injection wells, Wells #3-23 and #1-25, are injecting a total of 1,075 BWPD. The equivalent voidage rate from the reservoir is approximately 1,600 BPD. If additional water is not injected into the reservoir, the pressure will continue to decline, causing a loss of ultimate oil recovery. It is estimated that the injection rate into Well #4-25 will be approximately 1,700 BWPD, which will adequately balance the equivalent voidage rate, prevent further decline in reservoir pressure and reverse the pressure decline.

Based on initial shut-in pressure reported on the DST in Well #4-25, Well #3-25 is draining oil from the Well #4-25 location. The initial shut-in pressure of Well #4-25 was recorded at 1,933 psi, well below the initial reservoir pressure of 2,104 psi.

Based on the above, to avoid continued pressure decline of the reservoir, minimize further reservoir voidage imbalance and resulting loss in ultimate recovery of oil reserves, Marathon respectfully requests approval to complete Well #4-25 as the third injector for the Pressure Maintenance Program in the Tin Cup Mesa Unit previously approved by the Board's Order in the above cited Cause and Docket.

Yours very truly,

MARATHON OIL COMPANY

Robert H. Unger. FOR D.L.J.

Doyle L. Jones
District Production Manager

DLJ/cp/75
Enclosure

EXHIBIT A

STATE OF UTAH
DIVISION OF OIL, GAS, AND MINING
ROOM 4241 STATE OFFICE BUILDING
SALT LAKE CITY, UTAH 84114
(801) 533-5771
(RULE I-5 & RULE I-4)

FORM NO. DOGM-UIC-1
(Revised 1982)

IN THE MATTER OF THE APPLICATION OF
Marathon Oil Company
ADDRESS P.O. Box 2659
Casper, WY ZIP 82602
INDIVIDUAL___ PARTNERSHIP___ CORPORATION X
FOR ADMINISTRATIVE APPROVAL TO DISPOSE OR
INJECT FLUID INTO THE 4-25 Tin Cup Mesa WELL
SEC. 25 TWP. 38S RANGE 25E
San Juan COUNTY, UTAH

CAUSE NO. _____

ENHANCED RECOVERY INJ. WELL	☒
DISPOSAL WELL	☐
LP GAS STORAGE	☐
EXISTING WELL (RULE I-4)	☐

RECEIVED
MAY 06 1985
DIVISION OF OIL
GAS & MINING

APPLICATION

Comes now the applicant and shows the Corporation Commission the following:
1. That Rule I-5 (g) (iv) authorizes administrative approval of enhanced recovery injection or disposal or LP Gas storage operations.
2. That the applicant submits the following information.

Lease Name: Tin Cup Mesa	Well No.: 4-25	Field: Tin Cup Mesa	County: San Juan
Location of Enhanced Recovery Injection or Disposal Well: 2490' FWL 50'FSL Sec. 25		Twp. 38S	Rge. 25E
New Well To Be Drilled: Yes ☒ No ☐	Old Well To Be Converted: Yes ☐ No ☒	Casing Test: Yes ☐ No ☐ Date (Will Notify)	
Depth-Base Lowest Known Fresh Water Within ½ Mile: None	Does Injection Zone Contain Oil-Gas-Fresh Water Within ½ Mile: YES ☒ NO ☐	State What: OIL & GAS	
Location of Injection Source(s): N26° 1' W 1,881' to NW Corner of Sec. 25	Geologic Name(s) and Depth of Source(s): Cutler 2,900' KB and Upper Ismay Produced Water		
Geologic Name of Injection Zone: Ismay	Depth of Injection Interval: 5430 to 5530 Gross (Proposed)		
a. Top of the Perforated Interval: (Proposed) 5430'	b. Base of Fresh Water: 0	c. Intervening Thickness (a minus b): 5430'	
Is the intervening thickness sufficient to show fresh water will be protected without additional data?	(YES) NO		
Lithology of Intervening Zones: Sandstones, Siltstones, Shales, Limestones, & Anhydrite			
Injection Rates and Pressures: Maximum 3400 B/D; 3600 PSI			

The Names and Addresses of Those to Whom Notice of Application ~~Should be~~ Sent.

These Notices were sent by the Division based on letters from John Anderson and Steven Clyde, dated February 14 and 26, 1985, respectively. Also, your file should contain proof of publication. See Cause No. UIC-057.

State of Wyoming)
County of Natrona)

Robert F. Unger
Applicant

Before me, the undersigned authority, on this day personally appeared Robert F. Unger known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states, that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Suscribed and sworn to before me this 3rd day of May, 19 85

SEAL PATRICK T. GEILE - Notary Public County of Natrona State of Wyoming My Commission Expires Mar. 10, 1989

My commission expires March 10 1989

Notary Public in and for Natrona

(OVER)

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

May 6, 1985

TO: Jack Feight, Manager
UIC Program

FROM: Dianne R. Nielson, Director

RE: Application for Injection Permit for Well #4-25, Tin Cup Mesa Unit, San Juan County, Utah

You have received a May 3, 1985 notification of Marathon's intent to complete the above-referenced well as a Class II water injection well. This well is the subject of a recent Board hearing. The resulting Board Order and Stipulation are attached.

Due to the past involvement of the Board in this matter and the continued controversy regarding the resource potential of this well, the Division will take no action in approval or support of any completion on Well #4-25 without first contacting the Chairman of the Board of Oil, Gas and Mining.

Any completion, injection, production, or related request on the above-referenced well can only be approved, in writing, by the Director. No verbal approvals will be issued. Please keep Ron Firth informed of communiations between your section and any of the interested parties. You and your staff should continue to review the completion program and brief Ron Firth of any concerns.

Thank you for your assistance in this matter.

mla
cc: R. J. Firth
0273V

Form OGC-1b

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

2

14

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 Injection Well

2. NAME OF OPERATOR
Marathon Oil Company

3. ADDRESS OF OPERATOR
P.O. Box 2659, Casper, Wyoming 82602

RECEIVED
MAY 06 1985
DIVISION OF OIL GAS & MINING

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
SE SE SW 50' FSL & 2490' FWL

5. LEASE DESIGNATION AND SERIAL NO.
U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME
Tin Cup Mesa

8. FARM OR LEASE NAME
Tin Cup Mesa

9. WELL NO.
4-25

10. FIELD AND POOL, OR WILDCAT
Tin Cup Mesa

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 25, T38S, R25E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

14. PERMIT NO.
2-14-85
43-037-31145

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
5036' GL, 5049' KB

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐				
(Other) Please See Below			☒	(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.)*

PROGRESS REPORT

Please See Attachment

4-18-85 to 4-26-85

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

SIGNED Daylet Jones TITLE District Operations Manager DATE April 30, 1985

(This space for Federal or State office use)

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

*See Instructions on Reverse Side

LAW OFFICES OF
VAN COTT, BAGLEY, CORNWALL & McCARTHY
A PROFESSIONAL CORPORATION
SUITE 1600
50 SOUTH MAIN STREET
SALT LAKE CITY, UTAH 84144
TELEPHONE (801) 532-3333
TELEX 453149

ADDRESS ALL CORRESPONDENCE TO
POST OFFICE BOX 45340
84145

May 7, 1985

HAND DELIVERED

Mr. Cleon Feight
UIC Program
Utah Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center
Salt Lake City, Utah 84180-1203

RECEIVED
MAY 07 1985
2:50 p.m.
DIVISION OF OIL
GAS & MINING

Re: Tin Cup Mesa Unit Well #4-25
San Juan County, Utah

Dear Mr. Feight:

Pursuant to Rule I-5(a)(iii) of The Oil and Gas Conservation General Rules and Regulations (1982), MCOR Oil and Gas Corporation files its objection to the request of Marathon Oil Company to complete Well #4-25 as a water injection well and requests that a hearing be held in conjunction with this and other matters pending before the Board. MCOR's objections are more fully stated in matters currently pending before the Board and will be described at the hearing. MCOR also objects to the Division taking any action as it relates to the use of Well #4-25 as a water injection well based upon previous filings with the UIC Program.

VAN COTT, BAGLEY, CORNWALL & McCARTHY

By John S. Kirkham
John S. Kirkham
Attorney for MCOR Oil and Gas Company

JSK:SDC:cf
cc: Diane Nielsen
Greg Williams
Tom Deacon
John Anderson, Esq.

Copy given to Ron Firth 5/10/85 BS

jack

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

May 8, 1985

Mr. Doyle L. Jones
District Production Manager
Marathon Oil Company
P. O. Box 2659
Casper, WY 82602

Dear Mr. Jones:

RE: Tin Cup Mesa Unit #4-25, San Juan County, Utah

We acknowledge receipt on May 3, 1985, of a complete application, Form DOGM-UIC-1 with attachments, and the completion procedure for the referenced well. In accordance with Oil and Gas Conservation General Rules and Regulations, Rule I-5(g), Application for Approval of Class II Injection Wells, the processing procedures for such an application is as follows:

1. Technical review for completeness and compliance.

2. Public notice pursuant to the Procedural Rules of the Board.

3. Fifteen day comment period following publication of the notice and setting of a Board hearing if necessary.

4. Administrative approval recommendation of the Division Director if no objections are received and a Board hearing is not required.

Therefore, the processing of the application for administrative approval of the referenced well as an enhanced recovery injection well will proceed in accordance with these provisions of the General Rules and Regulations.

It is our opinion that the noticing of this matter, published during March 1985 as Cause No. UIC-057, was predicated upon an Application for Permit to Drill, which is insufficient information for such an action. We regret that you were misinformed concerning this advance noticing and the proper procedures to pursue, and that this deficient noticing occurred.

It is the Division's understanding that the disposition of this proposed injection well will be the subject of a Board hearing.

Therefore, the Division will not proceed with public notice until or unless we receive a specific request from Marathon and provided that said notice is not contrary to orders or stipulation by or before the Board.

Best regards,

Dianne R. Nielson

Dianne R. Nielson
Director

jbl

cc: Gregory Williams, Chairman, Board of Oil, Gas and Mining
Jack Feight, Manager, UIC Program

0097T

WATER INJECTION

Casper Division
Production United States

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

May 20, 1985

CERTIFIED MAIL RECEIPT REQUEST

Division of Oil, Gas, and Mining
355 West North Temple
#3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Re: Cement Bond Log
Final Print
Tin Cup Mesa #4-25
San Juan County, Utah

Dear Sir:

Attached for your records is the Cement Bond Log (Final Print) for the Tin Cup Mesa #4-25, San Juan County, Utah.

Very truly yours,

MARATHON OIL COMPANY

W. A. Willoughby

W. A. Willoughby
Government Compliance Technician

WAW:mrt
Attachments

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

May 22, 1985

San Juan Record
Legal Advertizing
Monticello, Utah 84534

Gentlemen:

RE: UIC-057-1

Attached hereto is a Notice of Application of Administrative Approval, before the Division of Oil, Gas and Mining, Department of Natural Resources, State of Utah.

It is requested that this notice be published ONCE ONLY, as soon as possible but no later than the 31st day of May. In the event that said notice cannot be published by this date, please notify this office immediately by calling 538-5340 Ex. 5296.

Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

Very truly yours,
DIVISION OF OIL, GAS AND MINING

for Marlayne Poulsen

MARJORIE L. ANDERSON
Administrative Assistant

mfp
0045A

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

---ooOoo---

IN THE MATTER OF THE APPLICATION OF GULF OIL CORPORATION FOR ADMINISTRATIVE APPROVAL OF THE ~~WONSITS VALLEY UNIT #44~~ WELL, LOCATED IN SECTION ~~14~~, TOWNSHIP ~~8~~ SOUTH, RANGE ~~21~~ EAST, ~~UINTAH~~ COUNTY, UTAH, AS A CLASS II ENHANCED RECOVERY ~~INJECTION~~ WELL. : CAUSE NO. UIC-050

---ooOoo---

THE STATE OF UTAH TO ALL INTERESTED PARTIES IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that ~~Gulf Oil Corporation, P.O. Box 2619,~~ Casper, Wyoming 82602 has requested administrative approval from the Division of ~~Wonsits Valley Unit #44~~ well, located ~~in the NE1/4 NE1/4~~ of Section ~~14~~, Township ~~8~~ South, Range ~~21~~ East, ~~Uintah~~ County, Utah as a Class II enhanced recovery injection well.

The proposed operating data for the well is as follows:

Injection Interval: ~~Green River~~ Formations ~~5195'~~ to ~~5389'~~

Maximum Estimated Surface Pressure: ~~2000~~ psig

Maximum Estimated Water Injection Rate: ~~3000~~ BWPD

This application will be granted unless objections are filed with the Division of Oil, Gas and Mining within fifteen days after publication of this Notice. Objections, if any, should be mailed to: Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

DATED this ~~7~~th day of February, 1985.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

MARJORIE L. LARSON
Administrative Assistant

UIC-057

NOTICE WAS SENT TO THE FOLLOWING:

NEWSPAPER AGENCY March 7
SAN JUAN RECORD March 7

UTAH STATE DEPARTMENT OF HEALTH March 7

U.S.S ENVIRONMENTAL PROTECTION AGENCY March 7

BUREAU OF LAND MANAGEMENT March 7

MR. CHARLES HARDY REDD
MR. MARVIN REDBURN
TRANSCO EXPLORATION COMPANY
LADD PETROLEUM CORPORATION
MOBIL OIL CORPORAITON
MCOR OIL AND GAS COPORATION
CHORNEY OIL COMPANY
CELSIUS ENERGY CORPORATION
ANTELOPE PRODUCTION
MARATHON OIL COMPANY

Marlayne Poulsen
March 8, 1985

EXHIBIT "D"

United States Department of the Interior

3160
(U-922)

BUREAU OF LAND MANAGEMENT

Moab District
P. O. Box 970
Moab, Utah 84532

MAY 23 1985

Marathon Oil Company
P. O. Box 2659
Casper, Wyoming 82602

Re: Tin Cup Mesa Unit
Injection Well No. 4- 25
Sec. 25, T. 38 S., R. 25 E., SLM
San Juan County, Utah

Gentlemen:

Marathon Oil Company as operator of the referenced unit and well has requested to commence injection into Well No. 4-25 to replenish reservoir pressure, to increase ultimate recovery, and to protect the correlative rights of interests in the unit and surrounding areas. A meeting was held at the Bureau of Land Management, Utah State Office on May 17, 1985, with Marathon Oil Company, MCO Resources Inc., Celsius Energy Company and other various interested parties to discuss Well No. 4-25. Material was presented by various interested parties on development of the Tin Cup Mesa Unit and future status of Well No. 4-25. After analysis of this information by Bureau personnel, we have concluded that Marathon Oil Company's request to initiate injection into Well No. 4-25 is the most expedient method of development and approve your program as filed. Injection may begin at your convenience. Please notify our office prior to commencement of operations.

Sincerely,

Kenneth V Rhea

ACTING District Manager

cc: MCOR
Celsius Energy Co.
Mobil Oil Corporation
State Oil, Gas & Mining Div.
Utah Board of Oil, Gas & Mining
U-922

DELVIN MENGE

MAY 28 1985

CLYDE & PRATT

ATTORNEYS AT LAW
200 AMERICAN SAVINGS PLAZA
77 WEST SECOND SOUTH
SALT LAKE CITY, UTAH 84101

PHONE 322-2516
AREA CODE 801

TELECOPIER:
(801) 322-2516

OF COUNSEL
FRANK J. ALLEN

EDWARD W. CLYDE, P.C.
ELLIOTT LEE PRATT
WILLIAM G. GIBBS
RODNEY G. SNOW
STEVEN E. CLYDE
THEODORE BOYER, JR.
EDWIN C. BARNES
GARY L. PAXTON
L. MARK FERRE
NEIL A. KAPLAN*
D. BRENT ROSE
JOHN W. ANDERSON
JAMES L. WARLAUMONT
H. MIFFLIN WILLIAMS III
JEFFREY W. APPEL
JENNIFER M. HANSEN

*ADMITTED IN WASHINGTON, D.C.

May 24, 1985

FILE NO.

Make sure actual
F published notice

Dianne R. Nielson, Ph.D.
Division Director
Oil, Gas & Mining
355 West North Temple
3 Triad Center Suite 350
Salt Lake City, Utah 84180-1203

RE: Tin Cup Mesa Unit #4-25, San Juan County, Utah

Dear Dr. Nielsen:

On May 8, 1985 you wrote Mr. Doyle L. Jones of Marathon Oil Company regarding a deficiency in the noticing of Well #4-25. If there was a deficiency, Marathon would like it corrected and requests the Division to give new notice of Well #4-25 as a water injection well in accordance with the Oil and Gas Conservation General Rules and Regulations.

If you have any questions regarding this matter, please let me know.

Best regards.

Very truly yours,

CLYDE & PRATT

JOHN W. ANDERSON
Attorney for
MARATHON OIL COMPANY

JWAmlm
CC: Edward W. Clyde, Esq.
Delvin C. Menge, Esq., Marathon Oil Company
Gregory Williams, Chairman, Board of Oil, Gas and Mining
Jack Feight, Manager, UIC Program ✓

United States Department of the Interior

3160
(U-922)

BUREAU OF LAND MANAGEMENT

Moab District
P. O. Box 970
Moab, Utah 84532

RECEIVED
MAY 28 1985
MAY 23 1985
DIVISION OF OIL
GAS & MINING

Marathon Oil Company
P. O. Box 2659
Casper, Wyoming 82602

Re: Tin Cup Mesa Unit
Injection Well No. 4- 25
Sec. 25, T. 38 S., R. 25 E., SLM
San Juan County, Utah

Gentlemen:

Marathon Oil Company as operator of the referenced unit and well has requested to commence injection into Well No. 4-25 to replenish reservoir pressure, to increase ultimate recovery, and to protect the correlative rights of interests in the unit and surrounding areas. A meeting was held at the Bureau of Land Management, Utah State Office on May 17, 1985, with Marathon Oil Company, MCO Resources Inc., Celsius Energy Company and other various interested parties to discuss Well No. 4-25. Material was presented by various interested parties on development of the Tin Cup Mesa Unit and future status of Well No. 4-25. After analysis of this information by Bureau personnel, we have concluded that Marathon Oil Company's request to initiate injection into Well No. 4-25 is the most expedient method of development and approve your program as filed. Injection may begin at your convenience. Please notify our office prior to commencement of operations.

Sincerely,

/s/ Kenneth V. Rhea

District Manager

ACTING

cc: MCOR
Celsius Energy Co.
Mobil Oil Corporation
State Oil, Gas & Mining Div.
Utah Board of Oil, Gas & Mining
U-922

CORE ANALYSIS REPORT

FOR

MARATHON OIL COMPANY

4-25 TIN CUP MESA
TIN CUP MESA
SAN JUAN, UTAH

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

MARATHON OIL COMPANY
4-25 TIN CUP MESA
TIN CUP MESA
SAN JUAN,UTAH

DATE : 22-APRIL-198
FORMATION : PARADOX
DRLG. FLUID: WBM
LOCATION : SE,SW SEC. 25-T38S-R25E

FILE NO : 3803-003382
ANALYSTS : DS;EV
ELEVATION: 5049 KB

FULL DIAMETER ANALYSIS-BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
	ISMAY ZONE CORE # 1 5432-5492							
	5432.0-34.0							ANHYDRITE SL/DOL-LM -- NO ANALYSIS
1	5434.0-35.0	0.08	*	5.7	3.4	26.9	2.89	DOL BRN VFXLN SL/ANHY
2	5435.0-36.0	15.	13.	17.8	8.9	29.1	2.86	DOL BRN FNXLN SL/ANHY
3	5436.0-37.0	2.00	1.96	11.4	8.6	34.5	2.89	DOL BRN FNXLN SL/ANHY
4	5437.0-38.0	4.27	4.10	10.3	0.0	44.3	2.82	DOL BRN FNXLN SL/ANHY SL/CALC
5	5438.0-39.0	0.26	0.03	4.2	0.0	57.4	2.84	DOL BRN FNXLN SL/ANHY SL/CALC
6	5439.0-40.0	3.72	3.41	12.0	8.4	28.3	2.82	DOL BRN FNXLN SL/ANHY SL/CALC
7	5440.0-41.0	0.11	0.07	7.0	2.7	47.7	2.84	DOL BRN FNXLN SL/ANHY SL/CALC
8	5441.0-42.0	0.05	0.04	6.1	2.4	52.9	2.82	DOL BRN FNXLN SL/ANHY SL/CALC
9	5442.0-43.0	0.06	0.05	6.4	6.6	15.1	2.84	DOL BRN FNXLN SL/ANHY SL/CALC
10	5443.0-44.0	0.33	0.32	8.8	12.9	34.5	2.83	DOL BRN FNXLN SL/ANHY SL/CALC
11	5444.0-45.0	0.11	0.09	8.7	8.1	39.5	2.83	DOL BRN FNXLN SL/ANHY SL/CALC
12	5445.0-46.0	0.13	0.12	7.0	7.4	40.3	2.84	DOL BRN FNXLN SL/ANHY SL/CALC
13	5446.0-47.0	0.13	0.10	10.9	8.9	35.5	2.84	DOL BRN FNXLN SL/ANHY SL/CALC
14	5447.0-48.0	9.00	8.00	19.4	10.6	35.4	2.87	DOL BRN FNXLN SL/ANHY
15	5448.0-49.0	7.10	5.50	17.9	13.6	43.9	2.88	DOL BRN FNXLN SL/ANHY
16	5449.0-50.0	27.	24.	21.6	10.6	38.3	2.87	DOL BRN FNXLN SL/ANHY
17	5450.0-51.0	24.	22.	20.7	16.5	41.2	2.88	DOL BRN FNXLN SL/ANHY
18	5451.0-52.0	21.	20.	27.2	14.1	41.6	2.84	DOL BRN FNXLN SL/ANHY
19	5452.0-53.0	20.	19.	25.0	12.2	29.2	2.89	DOL BRN FNXLN SL/ANHY
20	5453.0-54.0	15.	15.	21.2	11.2	32.5	2.89	DOL BRN FNXLN SL/ANHY
21	5454.0-55.0	2.10	1.85	12.3	11.1	29.7	2.83	DOL BRN FNXLN SL/ANHY SL/CALC
22	5455.0-56.0	12.	9.77	18.3	13.1	48.6	2.86	DOL BRN FNXLN SL/ANHY
23	5456.0-57.0	0.29	0.21	8.1	10.4	29.7	2.81	LM GRY VFXLN SL/DOL SL/ANHY
24	5457.0-58.0	0.59	0.47	5.6	10.8	38.8	2.80	LM GRY VFXLN SL/DOL SL/ANHY

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

MARATHON OIL COMPANY
4-25 TIN CUP MESA

DATE : 22-APRIL-198
FORMATION : PARADOX

FILE NO : 3803-003382
ANALYSTS : DS;EV

FULL DIAMETER ANALYSIS-BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
25	5458.0-59.0	2.32	2.12	5.8	2.2	56.3	2.80	LM GRY VFXLN SL/ANHY SL/VUG
26	5459.0-60.0	0.76	0.72	4.6	2.8	39.0	2.79	LM GRY VFXLN SL/ANHY SL/VUG
27	5460.0-61.0	1.10	0.75	5.5	1.8	25.4	2.79	LM GRY VFXLN SL/ANHY SL/VUG
28	5461.0-62.0	4.58	4.10	5.5	0.0	64.4	2.79	LM GRY VFXLN SL/ANHY SL/VUG
29	5462.0-63.0	0.93	0.40	5.1	3.1	49.5	2.79	LM GRY VFXLN SL/ANHY SL/VUG
30	5463.0-64.0	3.90	3.39	7.8	9.8	31.3	2.80	LM GRY VFXLN SL/ANHY SL/VUG
31	5464.0-65.0	4.30	3.11	8.6	13.2	41.6	2.78	LM GRY VFXLN SL/ANHY SL/VUG
32	5465.0-66.0	2.28	1.89	6.9	11.9	34.0	2.76	LM GRY VFXLN SL/ANHY SL/VUG
33	5466.0-67.0	5.44	4.78	12.9	12.1	29.0	2.84	LM GRY VFXLN SL/ANHY SL/VUG SL/DOL
34	5467.0-68.0	0.45	0.41	3.9	0.0	21.9	2.78	LM GRY VFXLN SL/ANHY SL/VUG
35	5468.0-69.0	0.20	0.20	3.6	0.0	38.6	2.79	LM GRY VFXLN SL/ANHY SL/VUG
36	5469.0-70.0	0.39	0.31	4.7	3.7	29.5	2.78	LM GRY VFXLN SL/ANHY SL/VUG
37	5470.0-71.0	0.30	0.30	4.2	3.2	25.3	2.78	LM GRY VFXLN SL/ANHY SL/VUG
38	5471.0-72.0	1.07	0.90	5.3	2.2	26.8	2.78	LM GRY VFXLN SL/ANHY SL/VUG
39	5472.0-73.0	0.60	0.46	6.5	6.9	55.2	2.79	LM GRY VFXLN SL/ANHY SL/VUG
40	5473.0-74.0	2.68	2.48	22.9	0.0	69.4	2.83	DOL LTBRN VFXLN SL/ANHY
41	5474.0-75.0	3.56	3.52	25.4	0.0	69.5	2.83	DOL LTBRN VFXLN
42	5475.0-76.0	3.39	3.39	20.3	6.4	51.4	2.84	DOL LTBRN VFXLN
43	5476.0-77.0	2.95	2.70	21.0	4.0	51.3	2.85	DOL LTBRN VFXLN
44	5477.0-78.0	7.06	6.75	8.0	0.0	44.2	2.78	LM GRY VFXLN SL/ANHY SL/VUG
45	5478.0-79.0	18.	17.	17.1	4.8	27.8	2.77	LM GRY VFXLN SL/DOL SL/VUG
46	5479.0-80.0	15.	13.	9.7	9.5	22.7	2.75	LM GRY VFXLN SL/ANHY SL/DOL SL/VUG
47	5480.0-81.0	13.	9.58	10.7	6.2	22.9	2.74	LM GRY VFXLN SL/ANHY SL/DOL SL/VUG
48	5481.0-82.0	2.06	2.06	9.1	2.1	42.7	2.76	LM GRY VFXLN SL/ANHY SL/DOL SL/VUG
49	5482.0-83.0	16.	*	10.9	0.0	62.0	2.75	LM GRY VFXLN SL/ANHY SL/DOL SL/VUG
50	5483.0-84.0	1.72	1.44	5.7	0.0	59.4	2.76	LM GRY VFXLN SL/ANHY SL/DOL SL/VUG
51	5484.0-85.0	6.61	2.58	8.8	2.4	18.9	2.77	LM GRY VFXLN SL/ANHY SL/DOL SL/VUG
52	5485.0-86.0	9.17	5.18	6.2	0.0	63.8	2.78	LM GRY VFXLN SL/ANHY SL/DOL SL/VUG
53	5486.0-87.0	1.29	0.59	7.3	3.0	42.4	2.78	LM GRY VFXLN SL/ANHY SL/DOL SL/VUG
54	5487.0-88.0	9.02	5.35	6.3	2.6	28.3	2.77	LM GRY VFXLN SL/ANHY SL/DOL SL/VUG **

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

MARATHON OIL COMPANY
4-25 TIN CUP MESA

DATE : 22-APRIL-198
FORMATION : PARADOX

FILE NO : 3803-003382
ANALYSTS : DS;EV

FULL DIAMETER ANALYSIS-BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
55	5488.0-89.0 5489.0-92.0	3.59	*	8.1	2.9	32.4	2.77	LM GRY VFXLN SL/ANHY SL/DOL SL/VUG CORE LOSS
	ISMAY ZONE CORE # 2 5492-5552							
56	5492.0-93.0	10.	2.53	9.5	2.0	48.2	2.73	LM GRY VFXLN SL/VUG
57	5493.0-94.0	1.67	1.30	10.6	1.4	57.5	2.73	LM GRY VFXLN SL/VUG
58	5494.0-95.0	15.	8.68	12.8	6.8	56.8	2.72	LM GRY VFXLN SL/VUG
59	5495.0-96.0	0.98	0.67	10.1	6.9	25.8	2.72	LM GRY VFXLN SL/VUG
60	5496.0-97.0	2.65	0.96	12.6	6.8	35.5	2.73	LM GRY VFXLN SL/VUG
61	5497.0-98.0	5.34	3.92	9.2	0.0	46.4	2.75	LM GRY VFXLN SL/ANHY SL/VUG
62	5498.0-99.0	0.94	0.69	5.5	2.5	29.4	2.74	LM GRY VFXLN SL/ANHY SL/VUG
63	5499.0-00.0	2.03	1.10	5.5	3.4	41.0	2.80	LM GRY VFXLN SL/DOL SL/VUG
64	5500.0-01.0	0.47	0.45	14.9	1.7	39.5	2.83	DOL LTBRN VFXLN SL/ANHY
65	5501.0-02.0	0.32	0.32	14.7	1.6	55.9	2.80	DOL LTBRN VFXLN SL/CALC
66	5502.0-03.0	1.65	1.51	17.4	1.5	44.3	2.83	DOL LTBRN VFXLN
67	5503.0-04.0	0.06	0.05	6.3	1.9	37.6	2.81	DOL LTBRN VFXLN SL/SHY
68	5504.0-05.0	0.01	<0.01	2.3	0.0	43.8	2.73	LM GRY VFXLN
69	5505.0-06.0	0.02	0.01	4.9	0.0	18.3	2.74	LM GRY VFXLN
70	5506.0-07.0	0.02	<0.01	2.7	0.0	31.7	2.74	LM GRY VFXLN
71	5507.0-08.0	5.22	5.02	15.6	1.3	10.0	2.86	DOL LTBRN VFXLN SL/ANHY
72	5508.0-09.0	7.50	7.40	18.7	0.0	13.4	2.85	DOL LTBRN VFXLN SL/ANHY
73	5509.0-10.0	0.31	0.20	7.8	0.0	54.5	2.79	LM GRY VFXLN SL/DOL
74	5510.0-11.0	<0.01	<0.01	1.9	0.0	67.0	2.74	LM GRY VFXLN FOSS
75	5511.0-12.0	<0.01	*	1.6	0.0	66.7	2.73	LM GRY VFXLN FOSS
76	5512.0-13.0	<0.01	<0.01	2.4	0.0	63.2	2.77	LM GRY VFXLN SL/ANHY FOSS
77	5513.0-14.0	1.17	1.16	17.0	0.0	52.5	2.80	DOL LTBRN VFXLN
78	5514.0-15.0	0.09	0.08	3.6	0.0	65.8	2.72	LM GRY VFXLN SL/ANHY SL/VUG
79	5515.0-16.0	1.19	0.67	7.8	2.1	54.9	2.73	LM GRY VFXLN SL/ANHY SL/VUG
80	5516.0-17.0	4.60	1.73	8.5	1.9	37.4	2.73	LM GRY VFXLN SL/ANHY SL/VUG

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

MARATHON OIL COMPANY
4-25 TIN CUP MESA

DATE : 22-APRIL-198
FORMATION : PARADOX

FILE NO : 3803-003382
ANALYSTS : DS;EV

FULL DIAMETER ANALYSIS-BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
81	5517.0-18.0	2.29	2.09	9.7	0.0	55.7	2.74	LM GRY VFXLN SL/ANHY SL/VUG
82	5518.0-19.0	1.71	0.93	8.7	1.2	48.8	2.75	LM GRY VFXLN SL/ANHY SL/VUG
83	5519.0-20.0	0.87	0.82	8.3	0.0	63.0	2.77	LM GRY VFXLN SL/ANHY SL/VUG
84	5520.0-21.0	10.	3.45	10.3	0.0	40.8	2.76	LM GRY VFXLN SL/ANHY SL/VUG
85	5521.0-22.0	5.46	4.97	12.1	1.5	36.6	2.75	LM GRY VFXLN SL/ANHY SL/VUG
86	5522.0-23.0	26.	17.	14.7	1.5	44.9	2.76	LM GRY VFXLN SL/ANHY SL/VUG
87	5523.0-24.0	5.41	4.10	14.3	0.0	94.6	2.74	LM GRY VFXLN SL/DOL SL/VUG
88	5524.0-25.0	15.	14.	16.3	0.0	86.3	2.75	LM GRY VFXLN SL/DOL SL/VUG
89	5525.0-26.0	7.55	6.97	15.3	0.0	77.0	2.75	LM GRY VFXLN SL/DOL SL/VUG
90	5526.0-27.0	13.	12.	15.1	0.0	65.4	2.75	LM GRY VFXLN SL/DOL SL/VUG
91	5527.0-28.0	6.64	4.74	13.8	0.0	63.4	2.76	LM GRY VFXLN SL/DOL SL/VUG
92	5528.0-29.0	9.27	6.47	14.0	0.0	79.5	2.75	LM GRY VFXLN SL/DOL SL/VUG
93	5529.0-30.0	10.	8.36	13.8	0.0	83.0	2.76	LM GRY VFXLN SL/DOL SL/VUG
94	5530.0-31.0	9.40	7.59	14.3	0.0	73.0	2.75	LM GRY VFXLN SL/DOL SL/VUG
95	5531.0-32.0	7.91	6.48	13.6	0.0	82.5	2.75	LM GRY VFXLN SL/DOL SL/VUG
96	5532.0-33.0	7.01	4.27	15.5	0.0	88.1	2.82	LM GRY VFXLN SL/DOL SL/VUG
97	5533.0-34.0	11.	11.	15.9	0.0	75.6	2.77	LM GRY VFXLN SL/DOL SL/VUG
98	5534.0-35.0	6.50	4.38	12.2	0.0	75.5	2.76	LM GRY VFXLN SL/DOL SL/VUG
99	5535.0-36.0	14.	13.	13.9	0.0	77.0	2.75	LM GRY VFXLN SL/DOL SL/VUG
100	5536.0-37.0	7.22	5.33	13.4	0.0	76.3	2.75	LM GRY VFXLN SL/DOL SL/VUG
101	5537.0-38.0	2.78	2.06	10.8	0.0	76.2	2.77	LM GRY VFXLN SL/DOL SL/VUG
102	5538.0-39.0	1.00	0.86	9.0	0.0	53.9	2.77	LM GRY VFXLN SL/DOL SL/ANHY
103	5539.0-40.0	0.92	0.76	9.1	0.0	62.6	2.80	LM GRY VFXLN SL/DOL SL/ANHY
104	5540.0-41.0	0.43	0.35	6.4	0.0	59.8	2.80	LM GRY VFXLN SL/DOL SL/ANHY
105	5541.0-42.0	1.00	0.87	6.4	0.0	39.1	2.78	LM GRY VFXLN SL/DOL SL/ANHY
106	5542.0-43.0	1.12	1.00	8.1	0.0	34.8	2.78	LM GRY VFXLN SL/DOL SL/ANHY
107	5543.0-44.0	1.14	1.06	8.6	0.0	71.2	2.78	LM GRY VFXLN SL/DOL SL/ANHY
108	5544.0-45.0	1.95	1.20	9.4	0.0	79.8	2.78	LM GRY VFXLN SL/DOL SL/ANHY
109	5545.0-46.0	0.75	0.65	8.0	0.9	69.2	2.76	LM GRY VFXLN SL/DOL SL/ANHY
110	5546.0-47.0	1.38	0.71	7.6	1.3	46.1	2.78	LM GRY VFXLN SL/DOL SL/ANHY

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

MARATHON OIL COMPANY
4-25 TIN CUP MESA

DATE : 22-APRIL-198
FORMATION : PARADOX

FILE NO : 3803-003382
ANALYSTS : DS;EV

FULL DIAMETER ANALYSIS-BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
111	5547.0-48.0	0.96	0.82	5.4	0.0	65.4	2.78	LM GRY VFXLN SL/DOL SL/ANHY
112	5548.0-49.0	0.15	0.14	3.9	0.0	25.7	2.79	LM GRY VFXLN SL/DOL SL/ANHY
113	5549.0-50.0	0.07	0.06	4.9	0.0	57.1	2.83	LM GRY VFXLN SL/DOL SL/ANHY
	5550.0-52.0							CORE LOSS
	5552.0-16.0							DRILLED TO DESERT CREEK
	DESERT CREEK ZONE CORE # 3 5716-5758							
	5716.0-33.0							LM SL/SHY -- NO ANALYSIS
	5733.0-58.0							SHALE -- NO ANALYSIS

** DENOTES FRACTURE PERMEABILITY

* SAMPLE NOT SUITABLE FOR FULL DIAMETER ANALYSIS

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

MARATHON OIL COMPANY
4-25 TIN CUP MESA

DATE : 22-APRIL-198
FORMATION : PARADOX

FILE NO. : 3803-003382
ANALYSTS : DS;EV

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

DEPTH INTERVAL: 5434.0 TO 5550.0

FEET OF CORE ANALYZED : 113.0 FEET OF CORE INCLUDED IN AVERAGES: 113.0

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

PERMEABILITY MAXIMUM RANGE (MD.)	:	0.00 TO	100.	(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: 5434.0 TO 5550.0

AVERAGE PERMEABILITY (MILLIDARCIES)		
ARITHMETIC PERMEABILITY	:	5.0
GEOMETRIC PERMEABILITY	:	1.5
HARMONIC PERMEABILITY	:	0.03
GEOMETRIC MAXIMUM & 90 DEG PERM.	:	1.2
AVERAGE POROSITY (PERCENT)	:	10.5
AVERAGE RESIDUAL OIL SATURATION (PERCENT OF PORE SPACE)	:	4.1

PRODUCTIVE CAPACITY (MILLIDARCY-FEET)		
ARITHMETIC CAPACITY	:	559.
GEOMETRIC CAPACITY	:	169.
HARMONIC CAPACITY	:	3.8
GEOMETRIC MAXIMUM & 90 DEG CAPACITY	:	132.
AVERAGE TOTAL WATER SATURATION (PERCENT OF PORE SPACE)	:	49.0
AVERAGE CONNATE WATER SATURATION ** (PERCENT OF PORE SPACE)	:	48.7

** ESTIMATED FROM TOTAL WATER SAUTRATION.

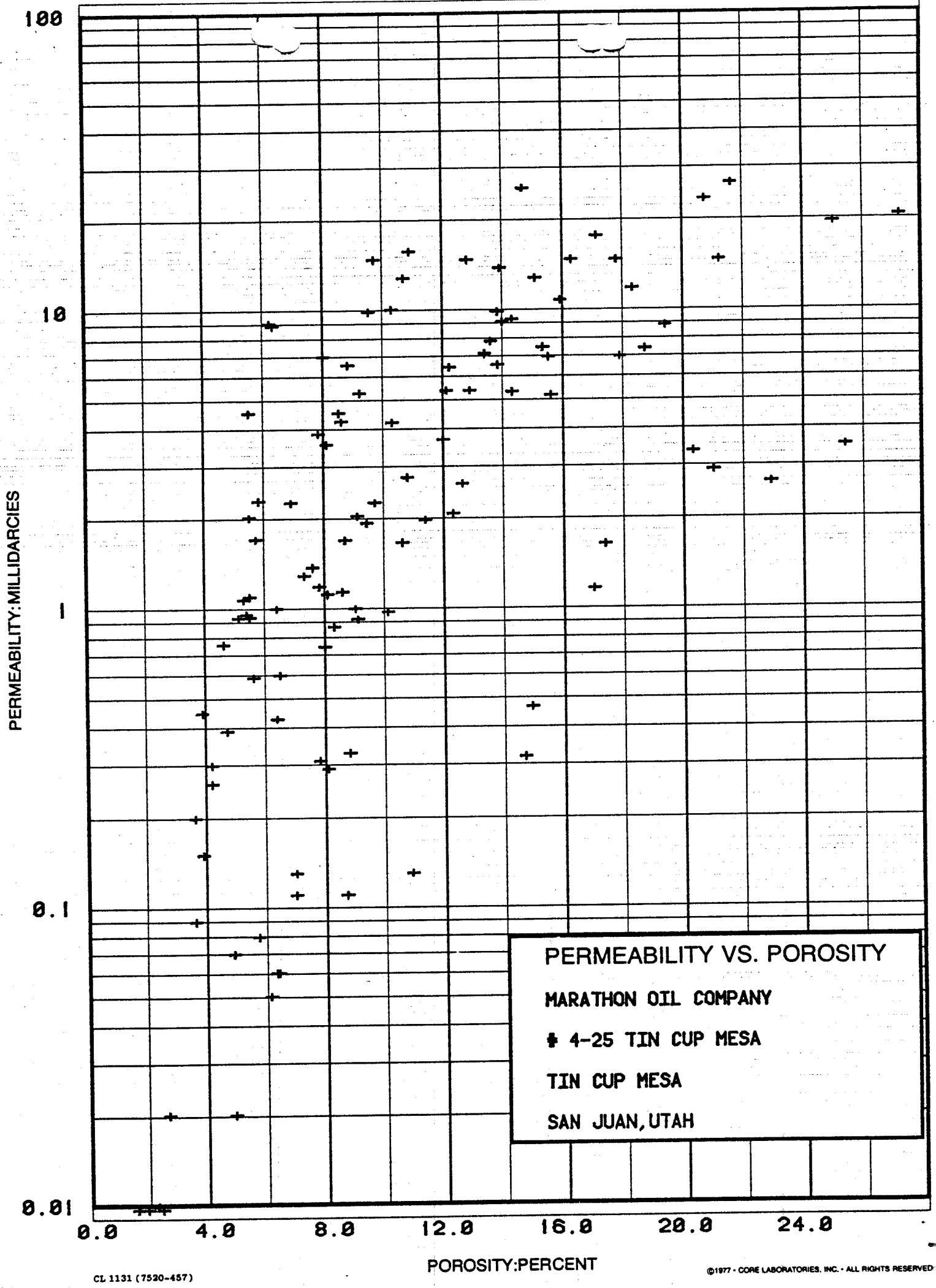
CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

PERMEABILITY VS POROSITY

COMPANY: MARATHON OIL COMPANY
FIELD : TIN CUP MESA
WELL : # 4-25 TIN CUP MESA
COUNTY, STATE: SAN JUAN, UTAH

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

DEPTH INTERVAL	RANGE & SYMBOL	PERMEABILITY MINIMUM	PERMEABILITY MAXIMUM	POROSITY MIN.	POROSITY MAX.	POROSITY AVERAGE	PERMEABILITY AVERAGES ARITHMETIC	HARMONIC	GEOMETRIC
5434.0 - 5550.0	1 (+)	0.000	100.0	0.0	50.0	10.5	5.0	0.03	1.5



CL 1131 (7520-457)

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MARATHON OIL COMPANY
FIELD : TIN CUP MESA
WELL : # 4-25 TIN CUP MESA
COUNTY, STATE: SAN JUAN,UTAH

AIR PERMEABILITY : MD. (HORIZONTAL) RANGE USED 0.000 TO 100.
POROSITY : PERCENT (HELIUM) RANGE USED 0.0 TO 46.0

(PERMEABILITY UNCORRECTED FOR SLIPPAGE)

DEPTH LIMITS : 5434.0 - 5550.0 INTERVAL LENGTH : 116.0
FEET ANALYZED IN ZONE : 113.0 LITHOLOGY EXCLUDED : NONE

DATA SUMMARY

POROSITY	PERMEABILITY AVERAGES		
AVERAGE	ARITHMETIC	HARMONIC	GEOMETRIC
10.5	5.0	0.03	1.5

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MARATHON OIL COMPANY
FIELD : TIN CUP MESA

WELL : # 4-25 TIN CUP MESA
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	1.8	0.005	0.005	1.8	1.8
2.0 - 4.0	7.0	3.2	0.053	0.132	6.2	8.0
4.0 - 6.0	17.0	5.2	0.562	1.1	15.0	23.0
6.0 - 8.0	16.0	6.9	0.605	1.9	14.2	37.2
8.0 - 10.0	21.0	8.8	1.8	3.4	18.6	55.8
10.0 - 12.0	9.0	10.7	2.8	5.7	8.0	63.7
12.0 - 14.0	12.0	12.9	6.2	7.2	10.6	74.3
14.0 - 16.0	11.0	14.9	5.2	8.6	9.7	84.1
16.0 - 18.0	6.0	17.3	6.2	9.7	5.3	89.4
18.0 - 20.0	3.0	18.8	9.3	9.5	2.7	92.0
20.0 - 22.0	5.0	21.0	9.9	14.	4.4	96.5
22.0 - 24.0	1.0	22.9	2.7	2.7	0.9	97.3
24.0 - 26.0	2.0	25.2	8.4	12.	1.8	99.1
26.0 - 28.0	1.0	27.2	21.	21.	0.9	100.0

TOTAL NUMBER OF FEET = 113.0

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MARATHON OIL COMPANY
FIELD : TIN CUP MESA

WELL : # 4-25 TIN CUP MESA
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	3.0	0.005	0.005	2.0	2.7	2.7
0.010 - 0.020	1.0	0.010	0.010	2.3	0.9	3.5
0.020 - 0.039	2.0	0.020	0.020	3.8	1.8	5.3
0.039 - 0.078	4.0	0.060	0.060	5.9	3.5	8.8
0.078 - 0.156	7.0	0.112	0.114	6.7	6.2	15.0
0.156 - 0.312	5.0	0.269	0.272	5.6	4.4	19.5
0.312 - 0.625	8.0	0.437	0.447	8.2	7.1	26.5
0.625 - 1.250	16.0	0.985	0.994	7.7	14.2	40.7
1.250 - 2.500	14.0	1.9	1.9	9.1	12.4	53.1
2.500 - 5.000	13.0	3.5	3.6	13.4	11.5	64.6
5.- 10.	20.0	7.1	7.2	13.1	17.7	82.3
10.- 20.	15.0	13.	13.	14.2	13.3	95.6
20.- 40.	5.0	23.	24.	21.8	4.4	100.0

TOTAL NUMBER OF FEET = 113.0

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MARATHON OIL COMPANY
FIELD : TIN CUP MESA

WELL : # 4-25 TIN CUP MESA
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	113.0	100.0	10.5	9.4
2.0	2.0	0.3	111.0	99.7	10.7	9.5
4.0	9.0	2.2	104.0	97.8	11.2	9.8
6.0	26.0	9.6	87.0	90.4	12.4	11.4
8.0	42.0	18.8	71.0	81.2	13.6	12.9
10.0	63.0	34.3	50.0	65.7	15.6	14.7
12.0	72.0	42.4	41.0	57.6	16.7	15.5
14.0	84.0	55.5	29.0	44.5	18.3	17.2
16.0	95.0	69.3	18.0	30.7	20.3	20.0
18.0	101.0	78.0	12.0	22.0	21.8	21.2
20.0	104.0	82.7	9.0	17.3	22.8	
22.0	109.0	91.5	4.0	8.5	25.1	25.0
24.0	110.0	93.5	3.0	6.5	25.9	
26.0	112.0	97.7	1.0	2.3	27.2	
28.0	113.0	100.0	0.0	0.0		

TOTAL STORAGE CAPACITY IN POROSITY-FEET = 1188.7

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

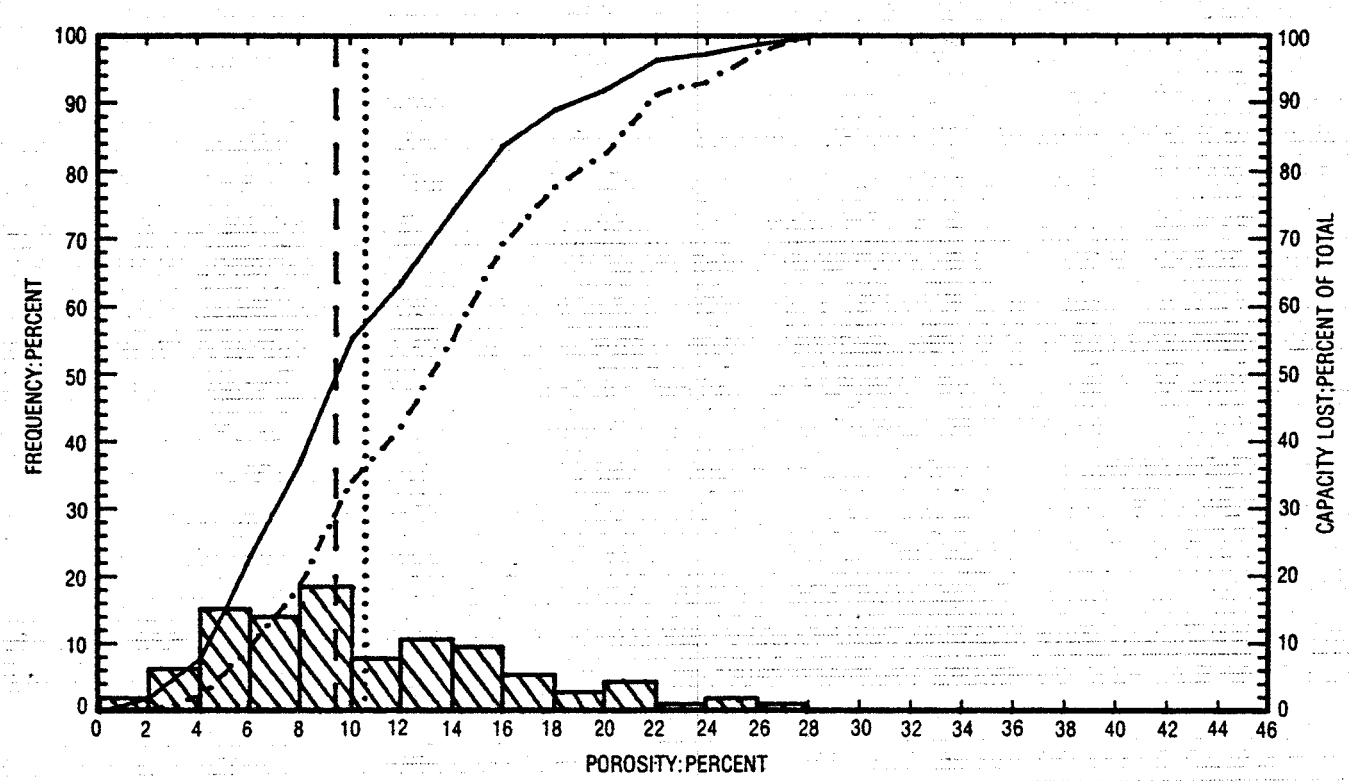
STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

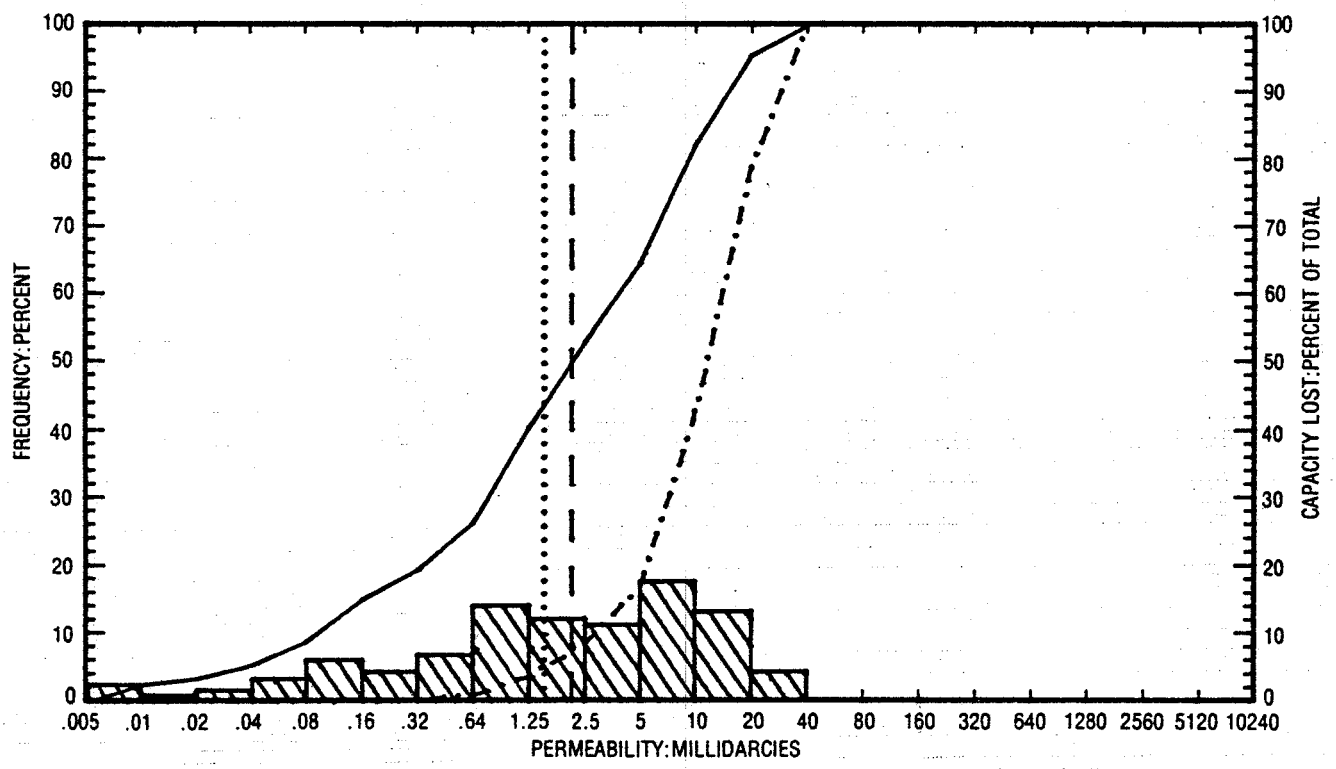
COMPANY: MARATHON OIL COMPANY
FIELD : TIN CUP MESA
WELL : # 4-25 TIN CUP MESA
COUNTY, STATE: SAN JUAN, UTAH

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	113.0	100.0	1.50	2.10
0.010	3.0	0.0	110.0	100.0	1.89	2.26
0.020	4.0	0.0	109.0	100.0	1.92	2.32
0.039	6.0	0.0	107.0	100.0	2.09	2.44
0.078	10.0	0.1	103.0	99.9	2.40	2.71
0.156	17.0	0.2	96.0	99.8	3.00	3.26
0.312	22.0	0.4	91.0	99.6	3.42	3.73
0.625	30.0	1.1	83.0	98.9	4.17	4.62
1.250	46.0	3.9	67.0	96.1	5.89	6.26
2.500	60.0	8.7	53.0	91.3	7.98	7.98
5.	73.0	17.0	40.0	83.0	10.39	10.00
10.	93.0	42.8	20.0	57.2	15.30	
20.	108.0	78.9	5.0	21.1	23.44	
40.	113.0	100.0	0.0	0.0		

TOTAL FLOW CAPACITY IN MILLIDARCY-FEET(ARITHMETIC) = 559.38





PERMEABILITY AND POROSITY HISTOGRAMS

MARATHON OIL COMPANY
4-25 TIN CUP MESA
TIN CUP MESA
SAN JUAN, UTAH

LEGEND

- ARITHMETIC MEAN POROSITY
- GEOMETRIC MEAN PERMEABILITY
- MEDIAN VALUE
- CUMULATIVE FREQUENCY
- CUMULATIVE CAPACITY LOST

Casper Division
Production United States

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

February 15, 1985

State of Utah
Natural Resources & Energy
Attn: Div. of Oil, Gas & Mining
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203

BLM
Attn: Jimmie Raffoul
Consolidated Financial Center
324 South State Street
Salt Lake City, UT 84111-2303

MCOR Oil & Gas Corporation
Attn: J. E. Walton
Manager - Operations
Western Region
10880 Wilshire Blvd.
Los Angeles, CA 90024

Celsius Energy Company
Attn: E. A. Farmer
P.O. Box 11070
Salt Lake City, UT 84147

Mobil Oil Corporation
Attn: R. G. Justice
P.O. Box 5444
Denver, CO 80217

Gentlemen:

RE: Tin Cup Mesa Unit
San Juan County, Utah

In accordance with the Order of the Board of Oil, Gas & Mining, State of Utah, and the Stipulation between Marathon Oil Company and MCOR Oil and Gas Corporation (both dated January 24, 1985), the following report concerning the Tin Cup Mesa Unit operation is submitted.

Production from the Unit commenced January 24 and injection began January 26, 1985. Within a few days, total field oil and water production returned to levels comparable to those prior to field shut-in on November 5, 1984. Gas production resumed at rates lower than those observed earlier, resulting in a producing gas-oil ratio averaging slightly under 1,000 SCF/bbl compared to almost 1,200 SCF/bbl in November.

Water injection rates for both injectors (#3-23 and #1-25) began at rates lower than observed in prior injectivity tests. Following shake-down of surface equipment, both injectors were back-flowed and acidized. Current injection rates are approximately 625 BWPD for each well at 3,300 psi surface injection pressure. Plans are to strive for improved injection.

Attached are various graphs of production and injection as well as injection well diagnostic graphs (Hall plots). During the next report period, we plan to obtain a new measurement of reservoir pressure.

The 1985 Plan of Development for the Tin Cup Mesa Unit was approved by the BLM on January 31, 1985. The Pressure Maintenance Participating Area is effective January 1, 1985. An Application for Permit to Drill the proposed injection well, Tin Cup Mesa #4-25, was submitted to the BLM and the Utah Division of Oil, Gas & Mining on February 8, and an AFE for the well has been submitted to all participating owners. Plans are to commence site preparation and drilling immediately after receipt of the approved APD.

As per the Order and Stipulation dated January 24, these reports will be submitted monthly until commencement of water injection into Tin Cup Mesa #4-25.

Very truly yours,

MARATHON OIL COMPANY

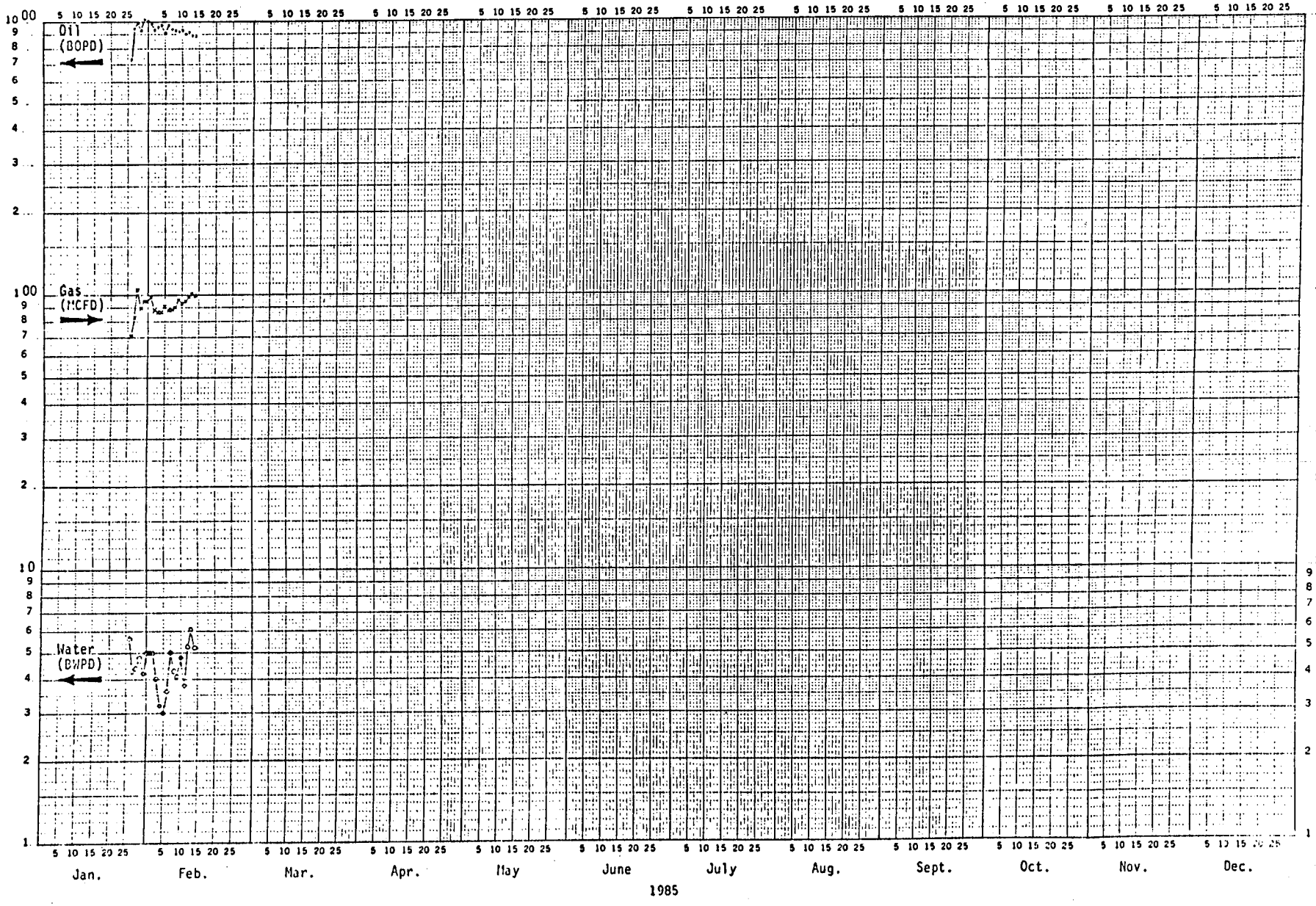
Robert F. Unger
District Engineer

RFU:jmb

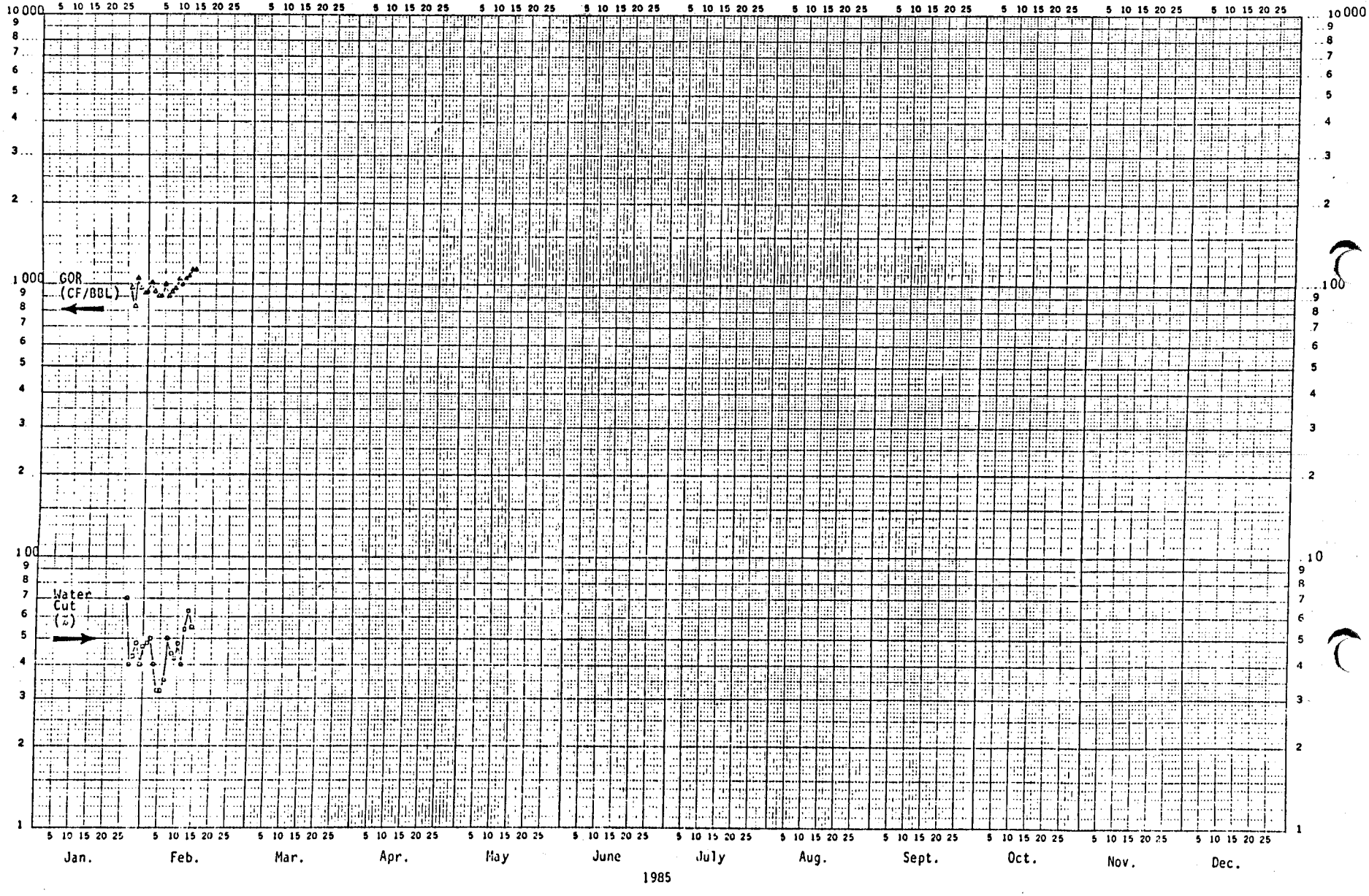
enclosures

cc: E. W. Clyde, Esq.
J. D. Davidson
D. L. Jones
F. E. Kastner
D. C. Menge, Esq.

Tin Cup Mesa - Total Field
Source: Morning Reports

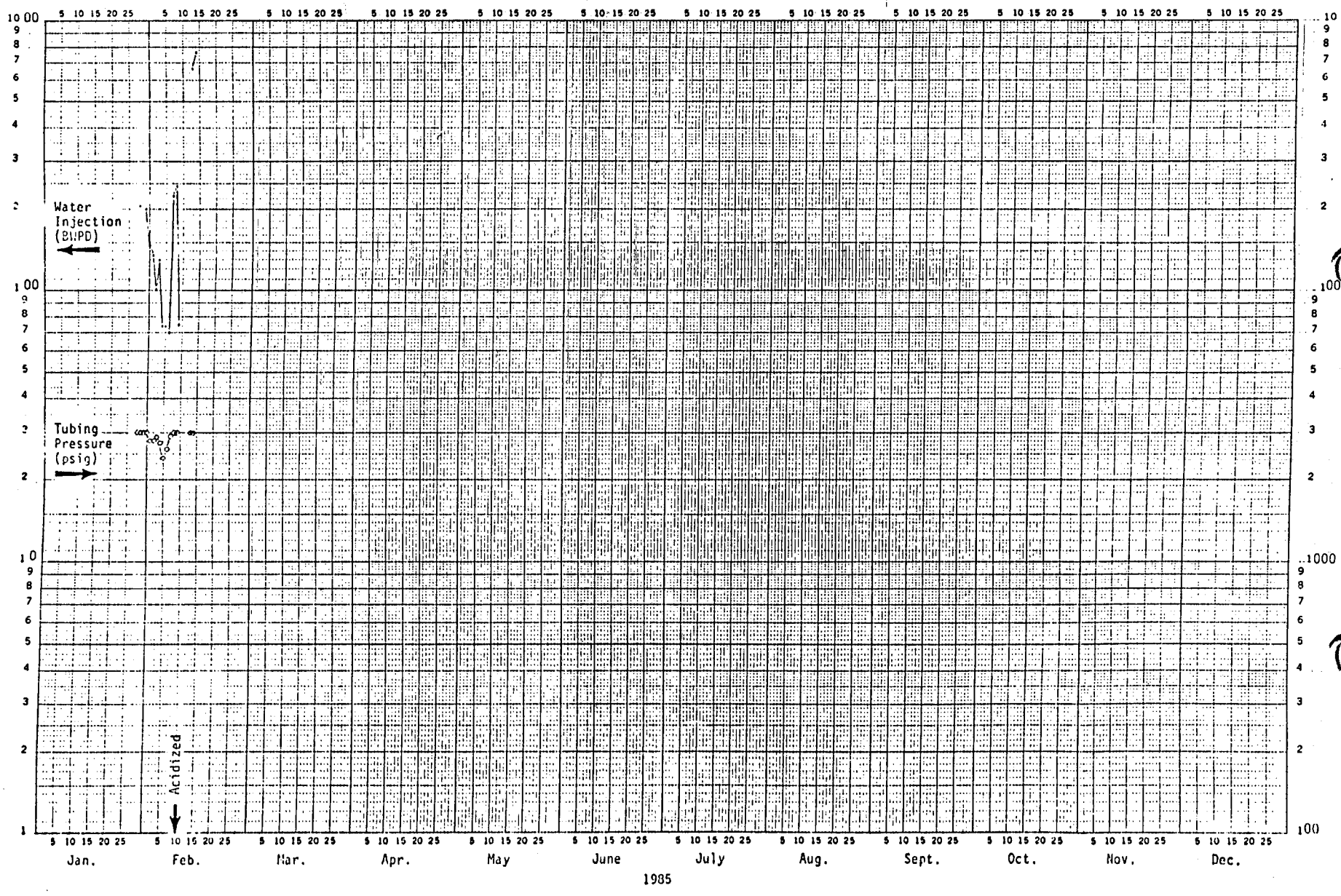


Tin Cup Mesa - Total Field
Source: Morning Reports



47 6540

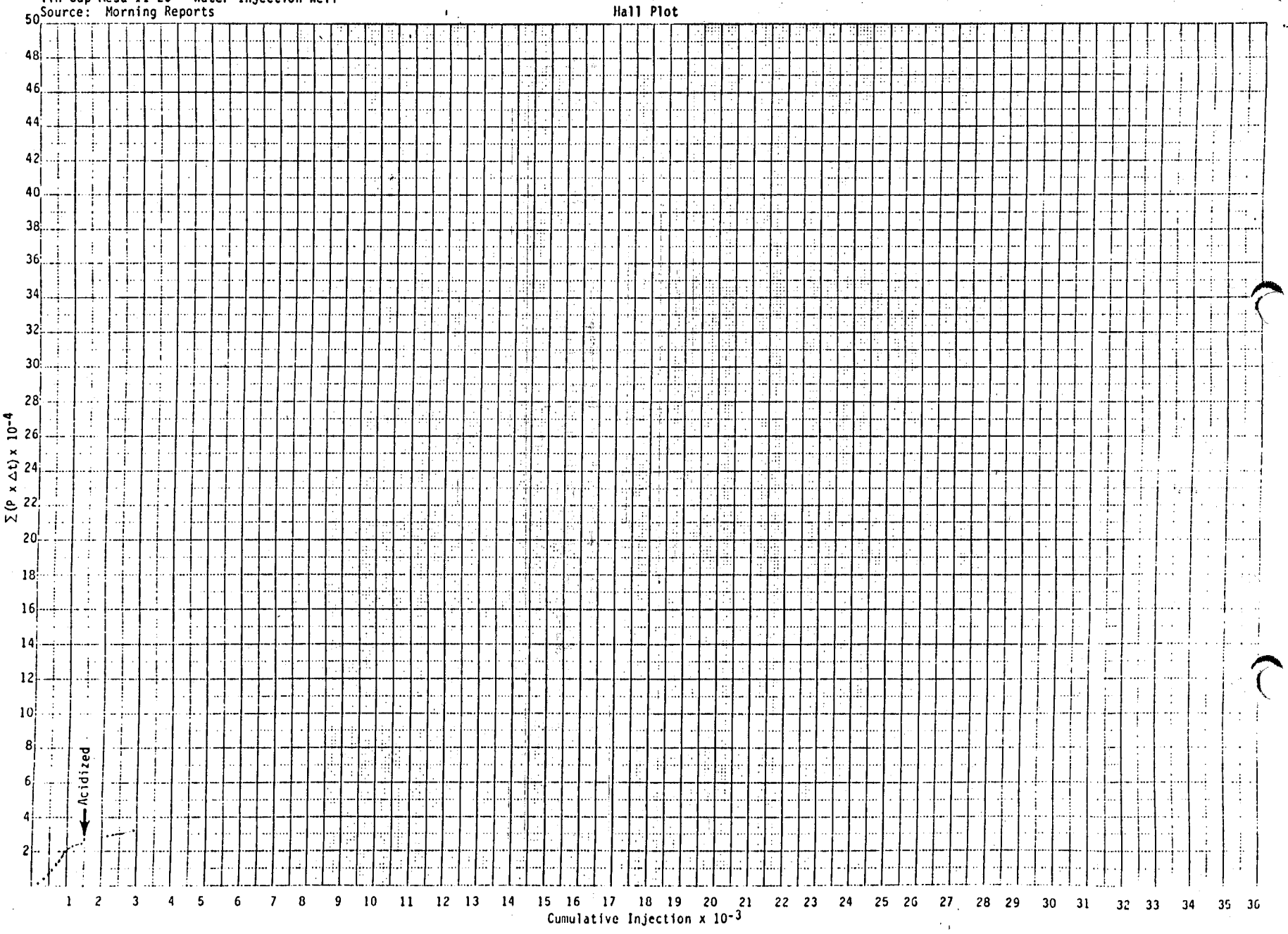
Tin Cup Mesa #1-25 - Water Injection Well
Source: Morning Reports



47 6540

Tin Cup Mesa #1-25 - Water Injection Well
Source: Morning Reports

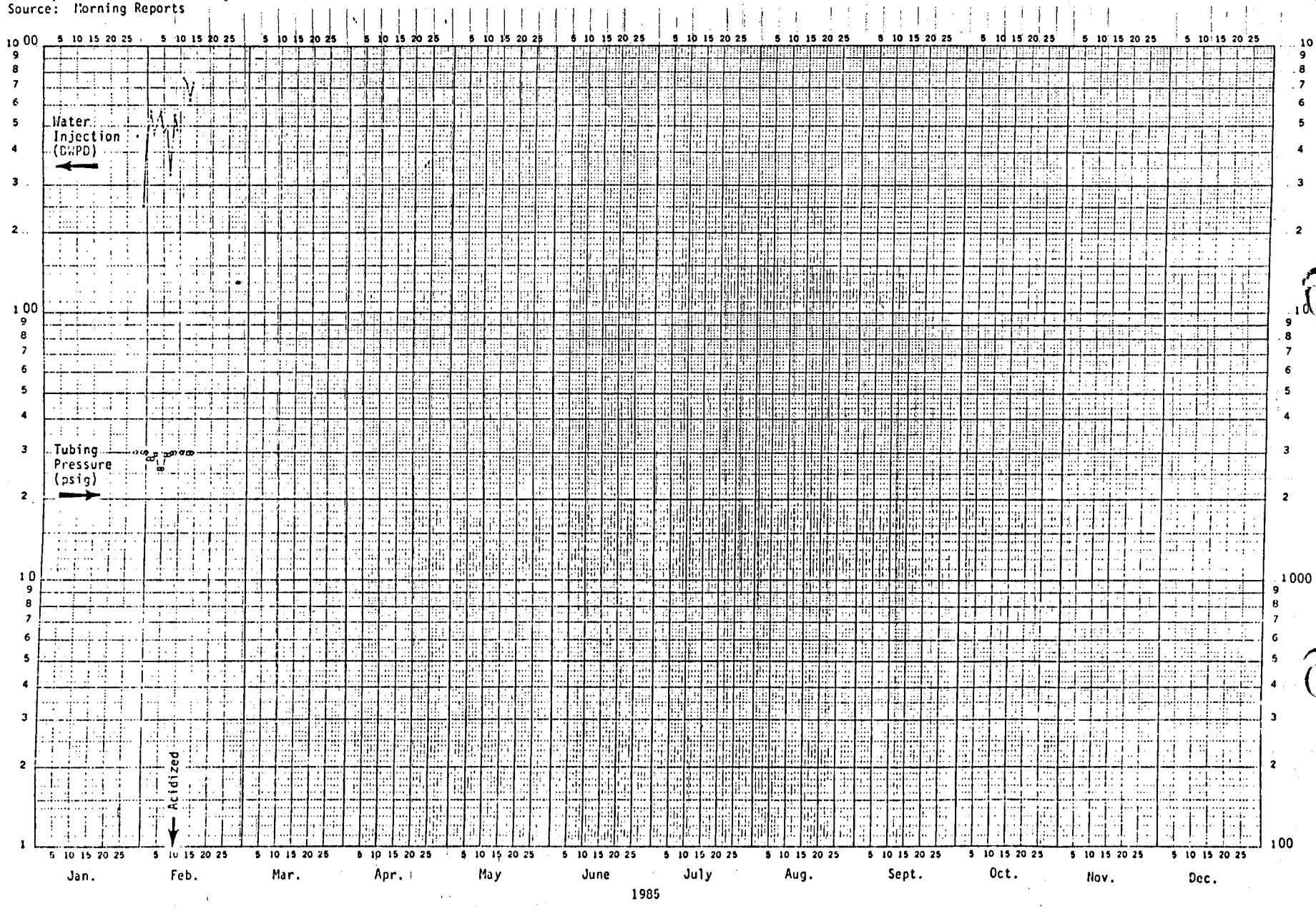
Hall Plot



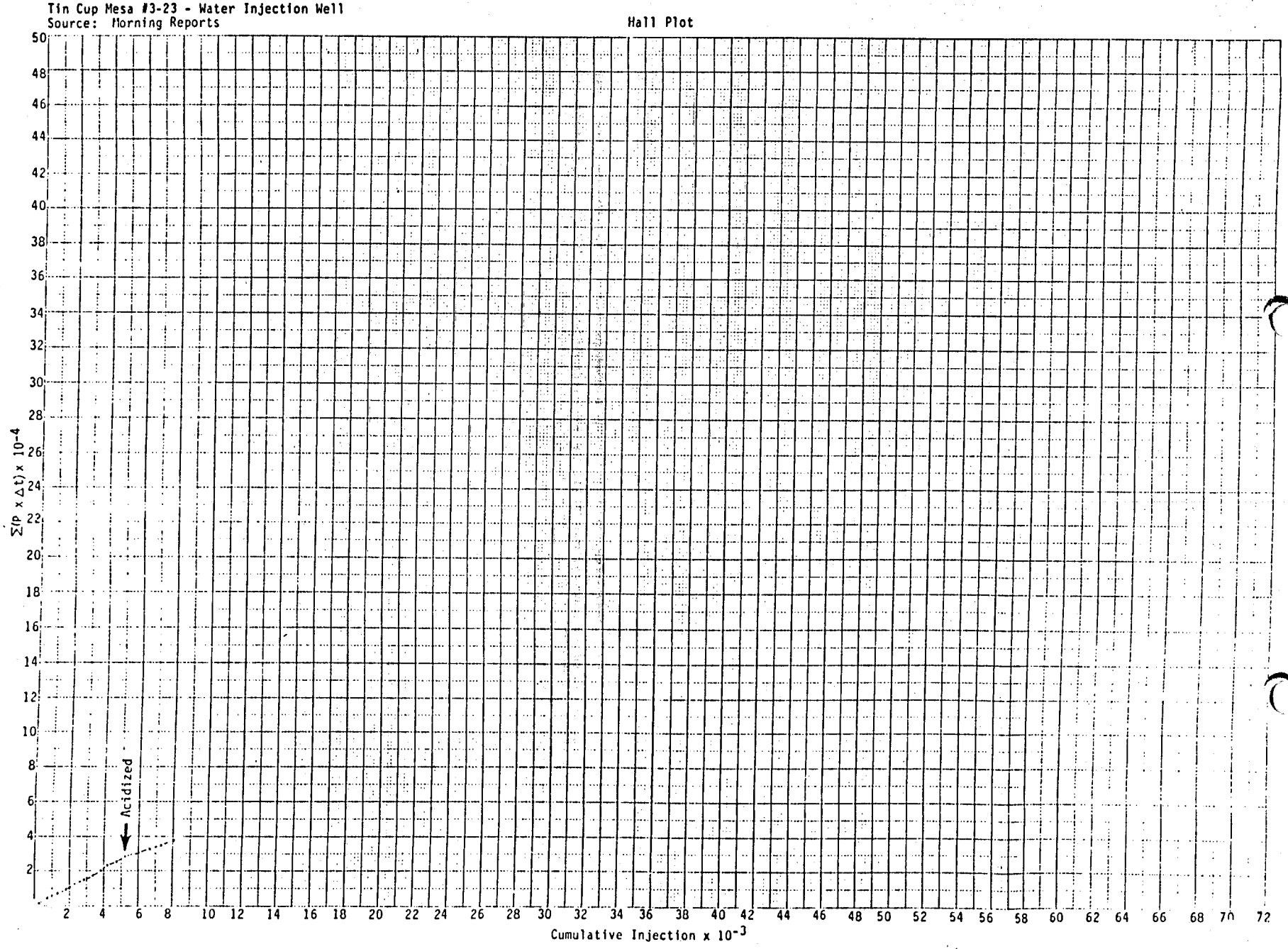
$\Sigma(P \times \Delta t) \times 10^{-4}$

461510

Tin Cup Mesa #3-23 - Water Injection Well
Source: Morning Reports



Tin Cup Mesa #3-23 - Water Injection Well
Source: Morning Reports



461510

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

May 29, 1985

Mr. Kenneth V. Rhea,
Acting District Manager
U. S. Bureau of Land Management
Moab District
P.O. Box 970
Moab, Utah 84532

Dear Mr. Rhea:

RE: Tin Cup Mesa Unit, Well No. 4-25, Section 25, Township 38 South, Range 25 East, SLM, San Juan County, Utah

The purpose of this letter is to clarify the responsibility of the Utah Division of Oil, Gas and Mining regarding approval of injection in the above-captioned well.

Through primacy from the Environmental Protection Agency, the Division has sole authority for approval of all Class II Injection Wells on federal (non-tribal), state, and private lands in the state. This authority for UIC wells does not require approval prior to completion of the well. However, written approval for a Class II Well must be granted by the Division prior to injecting fluid into the well.

Attached is a copy of the letter sent to Marathon. If you have any questions, please contact me or Ron Firth at the above number. We have been discussing coordination between the Division and your District regarding oil and gas matters. If we can provide better coordination, specifically regarding Class II approvals, let me know.

Best regards,

Dianne R. Nielson

Dianne R. Nielson
Director

mjm
Attachment
cc: D. Hileman, BLM, Salt Lake City, Utah
J. Feight
R. Firth
0270V-10

STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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

May 29, 1985

Mr. Doyle Jones
Marathon Oil Company
P.O. Box 2659
Casper, Wyoming 82602

Dear Mr. Jones:

RE: Tin Cup Mesa Unit, Well No. 4-25, Section 25, Township 38 South, Range 25 East, SLM, San Juan County, Utah

As per our conversation today, this letter is to correct any confusion arising from the May 23, 1985, letter from the Moab District of Bureau of Land Management (BLM), regarding injection into the above-referenced well. The Division concurs with the BLM conclusion that Marathon may complete Well No. 4-25 as an injection well. However, as you are aware, you must obtain written permission from the Utah Division of Oil, Gas and Mining, prior to injection of any fluids into this Class II Well. The State has initiated notice, per your request, for use of this well as an injection well.

Please continue to work with Jack Feight, UIC Manager, regarding the application for Class II Well approval. If you have any other questions, contact Ron Firth at the above number.

Best regards,

Dianne R. Nielson

Dianne R. Nielson
Director

mjm
cc: P. Hileman, BLM, Salt Lake City, Utah
K. Rhea, BLM, Moab, Utah
J. Feight
R. Firth
0270V-9

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

IN THE MATTER OF THE PETITION OF MARATHON OIL COMPANY FOR APPROVAL OF A PLAN OF OPERATION FOR PRESSURE MAINTENANCE IN THE ISMAY ZONE PARADOX FORMATION PARTICIPATING AREA OF THE TIN CUP MESA UNIT SAN JUAN COUNTY, UTAH	:	**RESPONSE OF MARATHON OIL COMPANY TO PETITION OF MCOR OIL & GAS CORPORATION AND COUNTER PETITION** Docket No. 84-076 Cause No. 211-1

Marathon Oil Company ("Marathon"), by and through its attorneys Edward W. Clyde and John W. Anderson, hereby responds to MCOR Oil & Gas Corporation's ("MCOR") Petition as follows:

OPENING STATEMENT

On September 25, 1984, Marathon filed a Petition with the Utah Board of Oil, Gas and Mining ("Board") to approve its Plan of Operations for the Tin Cup Mesa Unit. Following a hearing on said Petition the Board specifically found that waste was occurring and would continue to occur absent a Pressure Maintenance Program. The Board further found that a Pressure Maintenance Program was proper and feasible and that the Field should be shut-in until a Pressure Maintenance Program was initiated.

A Stipulation between the parties was filed on January 24, 1985, which received concurrence of the Utah Division of Oil, Gas and Mining ("Division"), and approval by the Board in its Order

of the same date. The Stipulation and Order recognized the need for a third water injection well in the Unit and, among other things, provided that Marathon would "drill a well within said Unit, as an intended injection well. . .". The Stipulation and Order further recognized that "Marathon intends to utilize said well as an injection well if it encounters the objective carbonate formation with the permeability and other characteristics necessary or desirable for use of it as an injection well for said program."

Well #4-25 was located as a water injection well, being off pattern for a production well, and it was not filed nor advertised as a production well. Prior to and during this time, Marathon advised the Division and Board that it would not have been willing to drill at this location except as a water injection well.

Following the Stipulation of the parties and the Board's Order thereon, Marathon sought the necessary approvals to drill Well #4-25 as a water injection well. In obtaining those approvals, Marathon again made it clear that the well was being drilled as a water injection well. That is how the Application for Permit to Drill ("APD") read and how the well was noticed and advertised by the Division. The following exemplifies the steps taken by Marathon.

1. On or about February 7, 1985, Marathon proposed to all Working Interest Owners in the Unit Participating Area (MCOR,

Mobil and Celsius) by an Authority for Expenditure, that a water injection well was to be drilled at the Well #4-25 location. The necessary approvals were obtained and copies thereof are attached hereto as Exhibit "A" and incorporated herein by reference.

2. On or about February 8, 1985, Marathon filed an APD for a water injection well with the U.S. Department of Interior (BLM). The BLM gave its approval to so drill the well on February 20, 1985. A copy of said APD with BLM approval thereon is attached hereto as Exhibit "B" and incorporated herein by reference.

3. On or about February 8, 1985, Marathon filed the same APD as is referenced in number 2 above, for a water injection well with the Division. The Division gave its approval to so drill the well on February 20, 1985. A copy of the approval thereon is attached hereto as Exhibit "C" and incorporated herein by reference.

4. At the request of Marathon, the Division UIC Program Manager on or about March 6 and March 13, 1985 gave actual and published notice that Well #4-25 would be drilled and that it would be a water injection well. Marathon's purpose in seeking such advance notice was to ensure that there would be no objections thereto that might delay the drilling and completion of this water injection well. No objections were made or filed. Marathon, therefore, proceeded to award a contract for the drilling of Well #4-25.

5. Upon the completion of drilling operations, the Working Interest Owners in the Unit Participating Area, in accordance

with the voting provisions of the Unit Operating Agreement ("Voting Working Interest Owners") determined that this well would be completed as a water injection well and Marathon sought administrative confirmation and approval therefor from the Division, doing so in advance of actually completing the well for that purpose. Marathon's purpose in seeking such confirmation and approval was to ensure that it had proper authority to so proceed. If hearings were necessary or desired, Marathon wanted to address those concerns before further expenditures of money were made to complete Well #4-25 as a water injection well.

ANSWER TO PETITION

Marathon responds to the specific allegations of MCOR's Petition as follows:

1. Marathon denies paragraph 1 of the Petition.

2. Marathon admits that MCOR is endeavoring to proceed under the statutes alleged.

3. Marathon denies paragraph 3 of the Petition. Marathon did ask to have representatives of the Division send notice and publish the same in advance of actually drilling the well. The reason for doing so is set forth above. Marathon has made no statement regarding the sufficiency of the notice. Marathon simply asserts that it has acted conservatively and gone beyond what the General Rules and Regulations require. Specifically, Marathon has subjected itself to Division and third party review more times than the Division Rules provide.

4. Marathon responds to paragraph 4 of the Petition as follows:

A. The issue of whether sufficient data exists to establish the possibility that Well #4-25 "could" be completed as a producing well is not an issue that can be resolved by this Board; the issue is whether sufficient data exists to establish whether Well #4-25 encountered the objective carbonate formations with the permeability and other characteristics necessary or desirable for use of it as a water injection well under the approved Pressure Maintenance Program.

B. Marathon affirmatively alleges that Well #4-25 is capable of production but that it would be wasteful to use it as a production well. Reasons therefore include the following:

a. Waste is now occurring. The reservoir is losing pressure and there is a current need for a third water injection well to reverse this pressure decline. If Well #4-25 were put into production it would simply accelerate the declining pressure and increase the waste.

b. Well #4-25 is an ideal water injection well. It is in communication with the reservoir and has encountered an area of sufficient porosity and permeability to pressurize and move the oil to existing producing wells in the Unit.

c. Well #4-25 is close enough to the producing wells in the center of the Unit to be a good water injection well. If

the injection point was moved farther from such producing wells, the benefits of water injection would decrease.

d. A production well at the #4-25 location is neither necessary nor desirable. The existing well spacing pattern of one well to every eighty acres was initially established and data from subsequent operations supports this spacing as proper to develop the Field. Well #4-25 is off pattern as a production well and contrary to good management and reservoir development practices.

e. If Well #4-25 were put into production, waste would continue to occur until a new water injection well was located. There is also a large degree of risk involved in locating a new injection well. Risk that the well will not have the necessary characteristics to be a good injection well and risk that MCOR will again claim the well should be put into production, which will further delay water injection. The Field requires additional pressure maintenance now. Further delay in completing this well as an injection well will allow continued waste.

f. If Well #4-25 is used as an injector it will protect acreage to the southeast from any drainage by Unit production. The injected water will act as a barrier and will push the recoverable Unit oil from the injector to producing Well #3-25. It will also provide a similar benefit to any producing well to the southeast, if and when such producing well is successfully drilled and completed on normal spacing.

C. Marathon admits it has sent certain data on Well #4-25 to the Division, but is without sufficient information or belief as to the "certain data" Petitioner is referring to and on that basis denies the statements and conclusions made by MCOR.

D. Marathon affirmatively states that the results of the drill stem test, together with other data from the well, shows that the well #4-25 would be a good water injection well. Said data also shows that the #4-25 well is capable of production. However, after analysis, and in accordance with the voting provisions of the Unit Operating Agreement, the Voting Working Interest Owners have determined that the well should be completed as a water injection well.

E. Marathon does acknowledge a duty, based on the Stipulation of the parties dated January 24, 1985, to further test the well for its "hydrocarbon production capacity" and is currently proposing that test to the Voting Working Interest Owners. However, Marathon asserts there is little to be gained by such testing as the testing that has been completed to date already shows that the well is capable of production and will serve as a suitable injector.

F. Marathon did reject the method by which MCOR sought to production test the well but did so to protect the integrity of the well as a water injection well.

5. Marathon responds to paragraph 5 of the Petition as follows:

A. Marathon denies it did not test Well #4-25 in accordance with prior practices in the Tin Cup Mesa Field. Marathon did conduct a drill stem test which has been completed and a production capacity test is now being proposed as stated above. Marathon further asserts that there is little, if anything, to be gained by further production tests as Marathon has already acknowedged that Well #4-25 is capable of production and is suitable as an injector.

B. Marathon denies that it should be enjoined from completing Well #4-25 as an injection well.

C. Marathon asserts that sufficient well testing has been done in accordance with the intent for drilling and completing Well #4-25 as a water injection well and that the Voting Working Interest Owners have already agreed that the data gathered is sufficient to allow Marathon to proceed with completion of the well as a water injection well. Marathon asserts that the Board is without jurisdiction to order that the well be put into production.

6. Marathon denies the relevancy of the allegation in paragraph 6 of the Petition in that said lands are committed to the Unit, which effectively reduce Petitioner's interest to a participating interest in the Unit Participating Area therefor, which is less than a controlling interest.

7. Marathon asserts that a drill stem test has been done and that a production capacity test is now being proposed as stated above. Additional tests are not necessary and could result in significant delays and irreparable damage to the wellbore so as to preclude its ultimate use as a water injection well.

8. In answering paragraph 8 of the Petition, Marathon asserts that it is in compliance with the existing Stipulation between the parties by virtue of having conducted a drill stem test and proposing a production capacity test as above stated. Marathon denies that further testing of well #4-25 would be in the public interest and would increase ultimate recovery and prevent waste while protecting the correlative rights of each owner. Marathon acknowledges the representation being made by MCOR to the Board and states that said representations do not require a response.

9. Marathon denies paragraph 9 of the Petition and asserts that the further testing of the well should have no impact whatsoever on the need for additional pleadings or exhibits. Marathon has heretofore acknowledged that well #4-25 is capable of production and the test results will only lend support to Marathon's statement.

10. Marathon affirmatively alleges that should there be significant delay in completing Well #4-25 as a water injection well, the Field should again be shut-in.

PRAYER FOR RELIEF

WHEREFORE, Marathon respectfully requests that the Board of Oil, Gas and Mining of the State of Utah deny the Petition of MCOR and to affirm the completion of Well #4-25 as a water injection well, including approval of the Application for a UIC Class II water injection permit presently pending before the Division.

COUNTER PETITION

By way of Counter-Petition, Marathon Oil Company ("Marathon") alleges:

1. Continuing production from the Tin Cup Mesa Field, without a proper and adequate Pressure Maintenance Program, will result in waste of recoverable hydrocarbon reserves. This Board has heretofore so determined and, upon such determination, issued a Shut-in Order until a Pressure Maintenance Program could be implemented. The Field was then shut-in.

2. MCOR Oil & Gas Corporation, ("MCOR") sought leave to drill an exception oil well, but objections were filed thereto. Also, Marathon objected to drilling an exploratory well at Unit expense at or near the Unit boundaries, to explore adjacent acreage held under lease by MCOR. However, Marathon was willing to drill a water injection well inside the Unit boundary. Since the cost thereof would be paid by the Working Interest Owners in

the Unit Participating Area, under the voting provision in the Unit Operating Agreement ("Voting Working Interest Owners"), in part by MCOR, Marathon agreed to provide Voting Working Interest Owners, including MCOR, with the normal open-hole data developed by said drilling.

3. Upon Stipulation of the parties to the effect that Well #4-25 would be drilled as an injection well, the Board permitted the Field to resume production under a two-well water injection program, which would be supplemented by a third injection well, Well #4-25.

4. The Board required that the injection program be monitored and that periodic reports be filed with the Division. Said monitoring demonstrates that the reservoir voidage from the field exceeds the volume of water being injected into the reservoir under the two-well program, and that a third water injection well (Well #4-25) is needed.

5. After the #4-25 well was drilled and cased, MCOR then recommended the well be production tested through casing perforations, which do not coincide with intervals to be perforated for water injection, and has asserted that it had not agreed that Well #4-25 could be drilled as a water injection well. Also, MCOR asserts that it and Marathon had agreed to obtain data regarding the well, so that at some future date a decision could be made as to whether the well should be completed as a water injection well or as a production well. Marathon and

the Voting Working Interest Owners have taken the position (and still take the position) that the well (per the Stipulation filed with the Board and the record made at the time the Board was asked to approve said Stipulation) would be utilized as a water injection well.

6. Marathon has proceeded to collect all of the normal open-hole data on Well #4-25 and has communicated that data to both the Division and to the Voting Working Interest Owners, including MCOR. However, a breakdown in communications occurred when MCOR met with the Board's staff (without notice or invitation to Marathon) for the purpose of reaching a decision as to (a) further testing the well; (b) completion of Well #4-25 as a production well; and (c) on expansion of the Unit. Marathon, had conducted a drill stem test of Well #4-25, and, prior to the time the Petition was filed by MCOR for an Emergency Order, analyzed the results of the drill stem test and other data from Well #4-25 and had determined that further production testing of said well to complete it as an injector would not be necessary or desirable. However, because Marathon had agreed by Stipulation dated January 24, 1985 to test the well for its "hydrocarbon production capacity" it is proposing a production capacity test of the well. Those results will be made available to the Voting Working Interest Owners, including MCOR, the Division and the BLM immediately upon completion of the test.

7. Marathon still desires and intends to complete said well as a water injection well in accordance with the Stipulation and Order as well as the decision of the Voting Working Interest Owners. Even though the well testing shows that the well could be completed either as a producer or as a water injection well, Marathon asserts that the Voting Working Interest Owners have agreed and determined that said well will be operated as a water injection well and denies that the Board has jurisdiction to order that Well #4-25 be put into production.

8. Well #4-25 should, in any event, be completed as an injection well, because:

(a) Waste is now occurring. The Field is losing pressure and there is a current need for a third injection well.

(b) No petition for authority to drill a producing well at an exception location has been filed and no notice has been given for such a well.

(c) Marathon made it crystal clear in the Stipulation and at the hearing on the Stipulation that it was not willing (at Unit expense) to drill an exploratory production well adjacent to MCOR's unexplored leases which are outside the Unit. A water injection well at this location would not involve any drainage of said adjacent acreage and would not adversely impact correlative rights, nor require that we address the expansion of the Unit under emergency conditions.

(d) The well was in fact noticed and drilled as a water injection well.

(e) Well #4-25 is suitably located as a water injection well. It could be so used without adversely affecting MCOR's correlative rights. The initial reservoir pressure encountered when said well was drill stem tested demonstrated that the north offset production well, #3-25, will drain reserves from the area where Well #4-25 is located and water injection into Well #4-25 will improve recovery of hydrocarbons from this area. If this well is completed and used as a water injection well, it will also benefit adjacent offset acreage to the south from present Unit production.

(f) A water injection well located farther to the southeast would be too remote from the Unit's central wells with high productivity and an injection well located closer thereto could prematurely flood out these producing wells. Also, an injection well located farther to the southeast risks penetration of the Ismay Formation, not having reservoir characteristics adequate for an effective water injection well. For these reasons, Well #4-25 is properly located and should be completed as an injection well.

(g) The well, if completed as a production well would be an excess well drilled and produced contrary to prudent reservoir management practices. All of the acreage in the Unit which would justify commercial drilling has been drilled on permitted spacing.

9. The Field is presently being produced without an adequate Pressure Maintenance Program in place. Should it appear that a significant delay will occur in resolving the well utilization issues; either through prolonged litigation or through the necessity to provide notice, drill and equip a different well, Marathon respectfully suggests that the Field immediately should be shut-in. As heretofore alleged, there is an imbalance in the production on the one hand and the amount of water being injected on the other. Unless this well is promptly completed and equipped as a water injection well, there will be unavoidable and unacceptable delays, with loss in ultimate recovery of reserves. The hydrocarbons which will be thus wasted belong to the Royalty Owners and Voting Working Interest Owners, a substantial portion belonging to Marathon, and Marathon does not desire to continue to produce the Field and waste the hydrocarbons.

10. The BLM has met with Marathon, MCO Resources, Celsius Energy Company, and other interested parties and has determined that injection into Well #4-25 is the most expedient method of development. Accordingly, the BLM has given Marathon approval to begin injection at Marathon's convenience. A copy of the BLM's approval letter dated May 23, 1985 authorizing injection is attached hereto as Exhibit "D" and by this reference incorporated herein.

PRAYER FOR RELIEF

WHEREFORE, Marathon respectfully requests that the Board of Oil, Gas and Mining of the State of Utah deny the Petition of MCOR and to affirm the completion of Well #4-25 as a water injection well, including approval of the Application for a UIC Class II water injection permit presently pending before the Division.

DATED this 28th day of May, 1985.

Respectfully submitted,

CLYDE & PRATT

By _____
Edward W. Clyde
John W. Anderson

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing RESPONSE OF MARATHON OIL COMPANY TO PETITION OF MCOR OIL & GAS CORPORATION AND COUNTER PETITION upon all parties indentified below by mailing a copy thereof, properly addressed, with postage pre-paid to:

Branch of Liquid Fuel Management
Bureau of Land Management
Utah State Office
Consolidated Financial Center
324 South State Street
Salt Lake City, Utah 84111-2303

Antelope Production Company
112 West 2nd Street
Box 57
Kimball, Nebraska 69145

Transco Exploration Company
1700 Lincoln Street, Suite 2100
Denver, Colorado 80203
Attention: Raymond Blunk

Division of State Lands & Forestry
355 West North Temple
3 Triad Center, Suite 400
Salt Lake City, Utah 84180-1204

Celsius Energy Corporation
c/o Connie Holbrook
79 South State Street
Salt Lake City, Utah 84147

Richard L. Peterson
Post Office Box 8
Douglas, Wyoming 82602

Chorney Oil Company
555 17th Street, Suite 1000
Denver, Colorado 80200

Attention: Bruce Martens

and caused to be HAND-DELIVERED a true and correct copy of the same to:

John S. Kirkham
Van Cott, Bagley, et al.
50 South Main Street, Suite 1600
Salt Lake City, Utah 84145

Gregory P. Williams, Chairman
Board of Oil, Gas & Mining
c/o Giauque & Williams
500 Kearns Building
Salt Lake City, Utah 84101

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

June 3, 1985

The Division of Oil, Gas & Minerals
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

RE: Cause No. UIC-057-1
Application of Marathon Oil Co. for
Approval of Tincup Mesa 4-25 Well
as Class II Enhances Recovery
Injection Well.

Gentlemen:

We are enclosing Transco's objections to establishing the Tincup Mesa 4-25 as an injection well when, in our viewpoint, it is a well capable of producing significant quantities of oil.

We respectfully ask that the State of Utah consider this a producer and petition the BLM for an extension of the unit to include the lands in a PA which would be established if the 4-25 is a producer.

Sincerely,

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

By: Raymond S. Blunk
RAYMOND S. BLUNK
Area Land Manager

RSB:cl

PROPOSED TXC POSITION REGARDING MARATHON'S REQUEST TO UTILIZE
4-25 TIN CUP MESA WELL FOR WATER INJECTION

I. The immediate concern for the Tin Cup Mesa Field Upper Ismay reservoir is that loss of recoverable reserves will result without a third water injection well to bring reservoir pressure (1925 psi, May 1984) back above the bubble point of 2070 psi. Loss of recoverable reserves would occur due to oil shrinkage, decrease of relative permeability to oil due to formation of free gas saturation and increase of oil viscosity. The two initial injection wells (3-23 and 1-25) are unable to take injected water at the necessary rate to repressurize and maintain the reservoir above bubble point and in addition a third injection site near the southeast end of the field is needed to geographically maintain pressure equally throughout the entire reservoir.

Transco maintains this can be accomplished by recompleting the MCOR 1-25 Canyon Junction Federal (approx. 35 to 57' Upper Ismay 6%+ porosity, 8 5/8" casing at 1795') and/or the MCOR 1-36 Canyon State (11 to 27' Upper Ismay 6%+ porosity, 8 5/8" casing at 1811') wells as water injectors in the known porous water leg of the reservoir and thereby repressurizing the reservoir from the base upward. Porosity which is vertically discontinuous in the algal mound flank wells feeds into vertically continuous porosity in the mound center and evidence that this vertical pressurization is feasible is the fact that the field has one common (not six) gas-oil contacts and one common (not six) oil-water contacts. The 4-26 well in the algal mound center exhibits nearly continuous vertical porosity (at least 93' out of 122' from 5468-5590 has porosity of 6% or greater). Other evidence is in Marathon's two interference tests between 3-26 and 1-25 and secondly between 2-23 and 3-26 which indicated reservoir continuity from the 2-23 to the 3-26 and on to the 1-25 well without observable reservoir limits. The same perforated interval which was interference tested in these three wells appears to be porous in the MCOR 1-25 well.

Since pressure maintenance can be accomplished on the southeast end of the field without using a potentially productive well (4-25) and since the field limits of the southeast have not been determined it would seem to be premature to use a producer (4-25) for pressure maintenance when a porous wet well could serve just as well. It is pressure maintenance, not secondary recovery which is currently approved by the BLM and which is critical to preventing loss of recoverable reserves.

II. It is only during secondary recovery that sweeping the individual porosity zones (tongues), that become vertically discontinuous at the <u>periphery</u> of the field, becomes important. Transco maintains that conversion of any field wells, whether abandoned or producing, to water injectors for the purpose of secondary recovery can commence more appropriately at any time in the future when the field limits have been defined and the full effects of water injection into presently undefined portions of the reservoir are known. Indeed plans discussed at the May 17, 1985 BLM hearing included converting first structurally lowest producing wells to injectors followed by converting progressively structurally higher producers to injectors as lower wells water out and oil is driven to the structural crest of the mound. This would be a peripheral injection pattern, used for example at the Ismay Formation Cache Field,and would allow monitoring of injection water fill-up. This pattern requires that the lowest producer to the southeast be defined, which is not yet the case.

III. Questions of equitable distribution of production were not addressed in the May 17 hearing. If the 4-25 well is capable of significant economic production and drains Transco and MCOR acreage, as shown in both MCOR and Marathon mapping, and this well is made a water injector, then MCOR and Transco are being denied rightful revenue which would otherwise be obtained if their acreage were incorporated into the participating area (P.A.) of the 4-25 as established by the 80 acre circle tangent method. Marathon's contention that water injection in the 4-25 would sweep oil toward a potential location in NE 1/4 Sec 36-T38S-R25E is <u>only true</u> if such a location does <u>not</u> encounter impermeable (non-reservoir) Upper Ismay section and does <u>not</u> encounter Upper Ismay porosity structurally below the oil-water contact (and would thus be plugged and abandoned). It may be, therefore, that oil mapped by both Marathon and MCOR as lying under Transco or MCOR acreage can <u>only</u> be drained via the updip 4-25 well.

LAW OFFICES OF
VAN COTT, BAGLEY, CORNWALL & McCARTHY
A PROFESSIONAL CORPORATION
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50 SOUTH MAIN STREET
SALT LAKE CITY, UTAH 84144
TELEPHONE (801) 532-3333
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MARILYN M. HENRIKSEN
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MARK C. SAID
DAVID L. DEISLEY

BENNETT, HARKNESS & KIRKPATRICK
1874-1890

BENNETT, MARSHALL & BRADLEY
1890-1896

BENNETT, HARKNESS, HOWAT
SUTHERLAND & VAN COTT
1896-1902

SUTHERLAND, VAN COTT & ALLISON
1902-1907

VAN COTT, ALLISON & RITER
1907-1917

VAN COTT, RITER & FARNSWORTH
1917-1947

OF COUNSEL
DENNIS McCARTHY
CLIFFORD L. ASHTON
GRANT MACFARLANE, JR.
GEORGE M. McMILLAN
EDWIN J. SKEEN
MICHAEL F. RICHMAN
JOHN CRAWFORD, JR.
JAMES U. JENSEN

June 4, 1985

RECEIVED
JUN 04 1985
DIVISION OF OIL
GAS & MINING

Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Re: Cause No. UIC-057-1

Gentlemen:

Enclosed for filing in the above captioned matter is a Notice of Objection filed on behalf of MCOR Oil and Gas Corporation.

Very truly yours,

John S. Kirkham

JSK/lr

Enclosure
cc: B. L. Wade
T. J. Deacon

4745K

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF MARATHON OIL COMPANY FOR ADMINISTRATIVE APPROVAL OF THE TIN CUP MESA 4-25 WELL, LOCATED IN SECTION 25, TOWNSHIP 38 SOUTH, RANGE 25 EAST, SAN JUAN COUNTY, UTAH, AS A CLASS II ENHANCED RECOVERY INJECTION WELL	:	NOTICE OF OBJECTION Cause No. UIC-057-1

Pursuant to Rule I-5(g)(iii) of the Rules and Regulations of the Board of Oil, Gas and Mining, and to supplement the objection filed May 7, 1985 in this matter, MCOR Oil and Gas Corporation ("MCOR"), a working interest owner in the Tin Cup Mesa Unit, hereby objects to the application of Marathon Oil Company for approval of the Tin Cup Mesa #4-25 Well as a Class II Enhanced Recovery Injection Well and requests that the Board set and hold a hearing on the above referenced matter.

In support of its objection MCOR alleges:

1. Pursuant to the Stipulation of the parties dated January 24, 1985, Marathon agreed to test the Tin Cup Mesa #4-25 Well for its hydrocarbon production capacity consistent with its prior practice in its operation of the Tin Cup Mesa Field. At this time, MCOR does not have confirmation that such

testing has been accomplished and has not obtained the results of such testing. Until such time as the test results have been obtained and evaluated MCOR is not in a position to know whether or not it is in the best interest of itself, the Unit or the State of Utah to utilize the Well as a Class II Enhanced Recovery Injection Well.

2. Marathon Oil Company as the Unit Operator and as the applicant in this matter has failed to include in its application certain documents and agreements as required by the applicable statutes and regulations. These include, but are not necessarily limited to, a full description of the proposed secondary recovery operation for the unit and an agreement of the working interest owners for the conduct of such operation as required by paragraph 25 of the Unit Operating Agreement; Section 40-6-7, Utah Code Annotated, 1953, as amended; and Rule E-1 of the General Rules and Regulations.

3. Use of the Well as a water injection well before the boundaries of the reservoir are fully defined has the potential to reduce the maximum economic recovery from the reservoir and thus result in waste.

DATED this 4th day of June, 1985.

VAN COTT, BAGLEY, CORNWALL & MCCARTHY

By _____
John S. Kirkham
Attorney for Protestant
50 South Main, Suite 1600
P. O. Box 45340
Salt Lake City, Utah 84145
Telephone: (801) 532-3333

Address of Protestant:

MCOR Oil and Gas Corporation
Attention: Thomas J. Deacon
10880 Wilshire Boulevard
Los Angeles, California 90024
Telephone: (213) 879-5252

5156C
060485

BHP Petroleum

BHP Petroleum (USA) Inc.
(Incorporated in Colorado USA)
Suite 206, 6143 South Willow Drive,
Englewood, Colorado, USA 80111
Telephone: (303) 850 7203 Telex: 910 931 2294 Fax: (303) 796 8537

Our Reference:
Your Reference:

cc: DR Nielson
RJ Firth
TB Baza
MC Moench
BW Roberts
Board
CB Feight

June 4, 1985

Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Re: Tin cup Mesa #4-25 Well
Section 25-T38S-R25E
San Juan County, Utah
Our Canyon Junction Prospect

Gentlemen:

Reference is made to Marathon Oil Company's request for administrative approval of the Tin Cup Mesa #4-25 well as a class II enhanced recovery injection well.

Please be advised that BHP Petroleum (USA) Inc. objects to the granting of this approval.

From log analysis the Tin Cup Mesa #4-25 appears to have a productive zone at 5442-52 (10'). The Schlumberger analysis (cyberlook log) also indicated a possible productive zone in this interval. From these analyses we feel the well must be tested in this interval prior to consideration for water injection.

Presently there is no written agreement for pressure maintenance of this field, or a full description of the procedure to be utilized and implemented.

This well is located on the crest of the main body of the algal mound and along the same trend as the previous producing wells of this field and would therefore imply a continuation of this structure.

Until the field limits are defined to the southeast, there appears to be no basis from which to design a secondary recovery system.

Indeed, pressure maintenance is necessary but full consideration of the existing wells must be completed.

Very truly yours,

Michael K. Mendenhall

Michael K. Mendenhall
District Landman

MKM/ap

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 6, 1985

John Anderson, Esq.
Attorney at Law
200 American Savings Plaza
77 West Second South
Salt Lake City, Utah 84101

Dear John:

RE: Tin Cup Mesa Unit Well No. 4-25

As per your conversation with Dianne Nielson today, this letter is to confirm that "injectivity testing" is part of the completion process and is not considered commencement of injection operations.

Specifically, although Marathon has authority to conduct formation receptivity tests, they do not have permission to place Tin Cup Mesa well no. 4-25 in service as an injection well without written permission of Dianne Nielson, or the Board of Oil, Gas and Mining.

Best regards,

Cleon

Cleon B. Feight
UIC Manager

cc: Dianne Nielson

mfp
0009U-17

Affidavit of Publication

ADM-35B

STATE OF UTAH,

ss.

County of Salt Lake

RECEIVED

JUN 06 1985

DIVISION OF OIL GAS & MINING

Sharon Payne

Being first duly sworn, deposes and says that he/she is legal advertising clerk of THE SALT LAKE TRIBUNE, a daily newspaper printed in the English language with general circulation in Utah, and published in Salt Lake City, Salt Lake County, in the State of Utah, and of the DESERET NEWS, a daily newspaper printed in the English language with general circulation in Utah, and published in Salt Lake City, Salt Lake County, in the State of Utah.

That the legal notice of which a copy is attached hereto

Cause No UIC-057-1

was published in said newspaper on

May 31, 1985

Sharon Payne

Legal Advertising Clerk

CAUSE NO. UIC-057-1
BEFORE THE DIVISION OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF MARATHON OIL COMPANY FOR ADMINISTRATIVE APPROVAL OF THE TIN CUP MESA 4-25 WELL, LOCATED IN SECTION 25, TOWNSHIP 38 SOUTH, RANGE 25 EAST, SAN JUAN COUNTY, UTAH, AS A CLASS II ENHANCED RECOVERY INJECTION WELL.

THE STATE OF UTAH TO ALL INTERESTED PARTIES IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that Marathon Oil Company, P.O. Box 120, Casper, Wyoming 82602 has requested administrative approval of the Tin Cup Mesa 4-25 well, located 50' FSL and 2490'FWL (SESW) of Section 25, Township 38 South, Range 25 East, San Juan County, Utah as a class II enhanced recovery injection well.

The proposed operating data for the well is as follows:

Injection Interval: Ismay Zone-Paradox Formation
Depth 5430'-5530'
Maximum Estimated Surface Pressure: 3600 psig
Maximum Estimated Water Injection Rate: 3400 BWPD

Administrative approval of this application will be granted unless objections are filed with the Division of Oil, Gas and Mining within fifteen days after publication of this Notice. Objections, if any, should be mailed to: The Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

DATED this 22nd day of May, 1985.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
Marjorie L. Anderson
Administrative Assistant

B-56

Subscribed and sworn to before me this 4th day of June A.D. 19 85

Notary Public

My Commission Expires

March 1, 1988

AFFIDAVIT OF PUBLICATION

PUBLIC NOTICE

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

IN THE MATTER OF THE APPLICATION OF MARATHON OIL COMPANY FOR ADMINISTRATIVE APPROVAL OF THE TIN CUP MESA 4-25 WELL, LOCATED IN SECTION 25, TOWNSHIP 38 SOUTH, RANGE 25 EAST, SAN JUAN COUNTY, UTAH AS A CLASS II ENHANCED RECOVERY INJECTION WELL.

* * * * *

CAUSE NO. UIC-057

THE STATE OF UTAH TO ALL INTERESTED PARTIES IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that Marathon Oil Company, P.O. Box 120, Casper, Wyoming 82602 has requested administrative approval of Tin Cup Mesa 4-25 Well, located 50' FSL and 2490' FWL (SESW) of Section 25, Township 38 South, Range 25 East, San Juan County, Utah as a Class II enhanced recovery injection well.

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Injection Interval: Ismay Zone-Paradox Formation

Maximum Estimated Surface Pressure: 3600 psig

Maximum Estimated Water Injection Rate: 4000 BWPD

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DATED this 6th day of March, 1985.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
s/ MARJORIE L. ANDERSON
Administrative Assistant

Published in The San Juan Record March 13, 1985.

I, Joyce Martin, being duly sworn, depose and say that I am the publisher of the San Juan Record, a weekly newspaper of general circulation published at Monticello, Utah, every Wednesday; that the notice of application for administrative approval, Cause No. UIC-057 a copy of which is hereunto attached, was published in the regular and entire issue of each number of said newspaper for a period of 1 issues, the first publication having been made on March 13, 1985. and the last publication having been made on _____

_____

Signature Joyce A. Martin
Publisher

Subscribed and sworn to before me this 13th day of March, A.D. 1985.

Ingrid K Adams
Notary Public
Residing at Monticello, Utah

My commission expires December 2, 1987

AFFIDAVIT OF PUBLICATION

PUBLIC NOTICE

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

IN THE MATTER OF THE APPLICATION OF MARATHON OIL COMPANY FOR ADMINISTRATIVE APPROVAL OF THE TIN CUP MESA 4-25 WELL, LOCATED IN SECTION 25, TOWNSHIP 38 SOUTH, RANGE 25 EAST, SAN JUAN COUNTY, UTAH AS A CLASS II ENHANCED RECOVERY INJECTION WELL.

* * * * *

CAUSE NO. UIC-057

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DATED this 6th day of March, 1985.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
s/ MARJORIE L. ANDERSON
Administrative Assistant

Published in The San Juan Record
March 13, 1985

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_____

Signature Joyce A. Martin
Publisher

Subscribed and sworn to before me this 13th day of March, A.D. 1985.

Ingrid K Adams
Notary Public
Residing at Monticello, Utah

My commission expires December 2, 1987

AFFIDAVIT OF PUBLICATION

Public Notice

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

- - - - - - - - - - - - - - - - - - - -

IN THE MATTER OF THE APPLICATION OF MARATHON OIL COMPANY FOR ADMINISTRATIVE APPROVAL OF THE TIN CUP MESA 4-25 WELL, LOCATED IN SECTION 25, TOWNSHIP 38 SOUTH, RANGE 25 EAST, SAN JUAN COUNTY, UTAH, AS A CLASS II ENHANCED RECOVERY INJECTION WELL.

* * *

CAUSE NO. UIC-057-1

- - - - - - - - - - - - - - - - - - - -

THE STATE OF UTAH TO ALL INTERESTED PARTIES IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that Marathon Oil Company, P.O. Box 120, Casper, Wyoming 82602 has requested administrative approval of the Tin Cup Mesa 4-25 well, located 50' FSL and 2490' FWL (SESW) of Section 25, Township 38 South, Range 25 East, San Juan County, Utah as a class II enhanced recovery injection well.

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Maximum Estimated Water Injection Rate: 3400 BWPD

Administrative approval of this application will be granted unless objections are filed with the Division of Oil, Gas and Mining within fifteen days after publication of this Notice. Objections, if any, should be mailed to: The Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

DATED this 22nd day of May, 1985.

STATE OF UTAH
DIVISION OF OIL, GAS
AND MINING
MARJORIE L. ANDERSON
Administrative Assistant

Published in The San Juan Record May 29, 1985.

I, Joyce Martin, being duly sworn, depose and say that I am the publisher of the San Juan Record, a weekly newspaper of general circulation published at Monticello, Utah, every Wednesday; that notice of Cause No. UIC-057-1 before the Division of Oil, Gas and Mining

a copy of which is hereunto attached, was published in the regular and entire issue of each number of said newspaper for a period of 1 issues, the first publication having been made on May 29, 1985. and the last publication having been made on _____

_____

Signature Joyce A. Martin
Publisher

Subscribed and sworn to before me this 29th day of May, A.D. 1985.

Ingrid K Adamson
Notary Public
Residing at Monticello, Utah

My commission expires December 2, 1987

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 25, 1985

The San Juan Record
Legal Advertising
Box 879
Monticello, Utah 84535

Gentlemen:

RE: Notice of Hearings - DOCKET NOS. 84-076, 85-037

Attached are two (2) Notice of Hearings, before the Board of Oil, Gas and Mining, Department of Natural Resources, State of Utah.

It is requested that this notice be published ONCE ONLY, as soon as possible, but no later than the 3rd day of July, 1985. In the event that said notice cannot be published by this date, please notify me immediately by calling 538-5340.

Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180.

Sincerely,

Marjorie L. Anderson

Marjorie L. Anderson
Administrative Assistant

Attachment
43570

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

IN THE MATTER OF THE PETITION OF MARATHON OIL COMPANY FOR APPROVAL OF A PLAN OF OPERATION FOR PRESSURE MAINTENANCE IN THE ISMAY ZONE PARADOX FORMATION PARTICIPATING AREA OF THE TIN CUP MESA UNIT SAN JUAN COUNTY, UTAH	:	ORDER Docket No. 84-076 Cause No. 211-1

It is, therefore, adjudged and ordered that:

A. Marathon, as operator of the Tin Cup Mesa Unit, San Juan County, Utah, is authorized to immediately commence production of the Unit beginning as of 10:00 a.m., January 24, 1985.

B. The Unit Operator is directed to commence injection operations with respect to Wells No. 3-23 and No. 1-25, with the Board reserving jurisdiction over this matter for further evaluation and report upon motion of the Division or any interested party, as specified in the Stipulation.

C. The terms and conditions of the foregoing Stipulation, with respect to the other matters addressed therein, are approved by the Board.

D. The Board retains continuing jurisdiction over this cause.

Dated this 24th day of January, 1985.

STATE OF UTAH
BOARD OF OIL, GAS & MINING.

By _____
Gregory P. Williams, Chairman

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

IN THE MATTER OF THE PETITION OF MARATHON OIL COMPANY FOR APPROVAL OF A PLAN OF OPERATION FOR PRESSURE MAINTENANCE IN THE ISMAY ZONE PARADOX FORMATION PARTICIPATING AREA OF THE TIN CUP MESA UNIT SAN JUAN COUNTY, UTAH	:	STIPULATION Docket No. 84-076 Cause No. 211-1

Come now Marathon Oil Company (Marathon) and MCOR Oil and Gas Corporation (MCOR), by their respective attorneys of record, and stipulate as follows:

1. That Marathon, as the operator of the Tin Cup Mesa Unit (hereinafter "said Unit") in San Juan County, Utah, may, subject to Board approval, pursuant to § 40-6-5(2)(c), Utah Code Annotated 1953, as amended, immediately implement the two-well water injection-pressure maintenance program in said Unit, as proposed by Marathon, and reflected by the record in this matter, as supplemented by the drilling of a third injection well, as provided for in paragraph 3 hereof (hereinafter "said program"). One of the injection wells, which the parties have heretofore approved, is on the north end of said Unit and is known as Well No. 3-23. The other is near the center of the field and is known as Well No. 1-25. With the implementation of said program, the parties hereto urge the Board to rescind its shut-in order and to permit the field to go back into production.

2. The cost of said program will be a Unit cost, and, under the present Unit allocation of costs, MCOR will be charged with

approximately seventeen and one-half percent (17½%) of the cost of said program, including, but not limited to, the drilling and equipping of the injection and water wells.

3. Marathon agrees, as provided for herein, to drill a well within said Unit, as an intended injection well to be located 2,490 feet east of the west line and 50 feet north of the south line of Section 25, Township 38 South, Range 25 East, with the objective of the Ismay Zone Paradox Formation (hereinafter "said well"). MCOR agrees that it will not object to the location and/or the permitting of said well. Marathon intends to utilize said well as an injection well if it encounters the objective carbonate formation with the permeability and other characteristics necessary or desirable for use of it as an injection well for said program. The drilling will be done by Marathon, as the Unit operator and paid for as a unit cost. If the Unit working interest owners in the participating area determine that said well is not suitable for an injection well, its other utility, if any, will be determined by the Unit working owners voting in accordance with the Unit Operating Agreement, with voting percentages established with the current B.L.M. approved pressure maintence participating area. Once authority to drill said well has been granted, it will be expeditiously drilled and diligently prosecuted to completion. Consistent with prior practices by Marathon in its operations of the Tin Cup Mesa Field, Marathon will gather relevant data, including core samples and test the well for its hydro-carbon production capacity. The said data will be furnished to the said Unit working interest

owners, the Utah Division of Oil, Gas and Mining, and the B.L.M., at least five (5) working days prior to commencement of completion operations.

4. Marathon will monitor the operations of said program and will file reports containing all material data (except proprietary information) with the Utah Division of Oil, Gas and Mining and with B.L.M. at periodic intervals of not longer than thirty (30) days, until commencement of water injection into the said third well. Copies of the same will be furnished promptly to MCOR and the other parties to said program. Thereafter data acquisition and reporting will be in acordance with B.L.M. and State of Utah requirements.

5. The parties also agree that with the initiation and monitoring of said program, additional material data may develop which will be useful in further developing the field. It is also anticipated that through such monitoring of said program, appropriate injection allocations and other related adjustments in such things as the rate of injection can be made.

6. This stipulation shall not be utilized by either party as an admission or concession in regard to any reserved or continued issues. The stipulation is made so that the field can go back into production, as provided in numbered paragraphs 1 through 5 herein. Both parties agree, based on present information, that said program will protect the field against waste.

7. It is stipulated that all of the other issues raised by any of the parties in these proceedings may be continued without

date, but to be noticed for further hearing by any party, upon reasonable notice, or may be called on for hearing by the Board on its own motion. Notwithstanding the provisions of numbered paragraph 6 hereof, failure to further pursue such issues in this proceeding by any party shall not estop nor bar such party from pursuing the same in civil litigation filed in a court of competent jurisdiction.

8. MCOR will, and does hereby withdraw its pending application for an exception well in Section 25.

The foregoing stipulation is accepted and agreed to this 24th day of January, 1985.

MARATHON OIL COMPANY

By _____
Edward W. Clyde, Esq.

By _____
Delvin Menge, Esq.

MCOR OIL AND GAS CORPORATION

By _____
John S. Kirkham, Esq.

Concurs:

DIVISION OF OIL, GAS & MINING

By _____
Barbara Roberts, Esq.

PS Form 3811, July 1983

reverse side. Failure to do this will prevent this card from being returned to you. **The return receipt fee will provide you the name of the person delivered to and the date of delivery.** For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

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2. [ ] Restricted Delivery.

3. Article Addressed to:
Celsius Energy Corporation
PO Box 11076
Salt Lake City, Utah 84147

4. Type of Service:
[ ] Registered [ ] Insured
[ ] Certified [ ] COD
[ ] Express Mail

Article Number
P-001-861-901

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature — Addressee
X

6. Signature — Agent
X

7. Date of Delivery
MAR 2 1985

8. Addressee's Address *(ONLY if requested and fee paid)*

DOMESTIC RETURN RECEIPT

Poulsen
Marlayne

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. **The return receipt fee will provide you the name of the person delivered to and the date of delivery.** For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. [X] Show to whom, date and address of delivery.
2. [ ] Restricted Delivery.

3. Article Addressed to:

Mobil Oil Corporation
PO Box 5444
Denver, CO 80217

4. Type of Service:

[ ] Registered [ ] Insured
[X] Certified [ ] COD
[ ] Express Mail

Article Number: P-001-861-897

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature — Addressee

X

6. Signature — Agent

X

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

DOMESTIC RETURN RECEIPT

Poulsen - Marlana Mor

PS Form 3811, July 1983

DOMESTIC RETURN RECEIPT

SENDER: Complete items 1, 2, 3 and 4.

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1. [X] Show to whom, date and address of delivery.
2. [ ] Restricted Delivery.

3. Article Addressed to:
Chorney Oil Company
555 17th Street, Suite 1000
Denver, CO 80202-3910

4. Type of Service:
- [ ] Registered
- [X] Certified
- [ ] Express Mail
- [ ] Insured
- [ ] COD

Article Number
P-001-861-900

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature – Addressee
X

6. Signature – Agent
X Shirley Lang

7. Date of Delivery
DENVER, COLO. USPO MAY 28 1986

8. Addressee's Address *(ONLY if requested and fee paid)*

Marlene Poulsen

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. **The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available.** Consult postmaster for fees and check box(es) for service(s) requested.

1. [X] Show to whom, date and address of delivery.
2. [ ] Restricted Delivery.

3. Article Addressed to:
Marathon Oil Company
PO Box 2659
Casper WY 82602

4. Type of Service:
[ ] Registered [ ] Insured
[X] Certified [ ] COD
[ ] Express Mail

Article Number
P-001-861-899

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature – Addressee
X N. Dubois

6. Signature – Agent
X

7. Date of Delivery
5-28-85

CASPER, WY MAY 28 1985 USPO

8. Addressee's Address *(ONLY if requested and fee paid)*

Same

DOMESTIC RETURN RECEIPT

Marlene Packer

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. **The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available.** Consult postmaster for fees and check box(es) for service(s) requested.

1. [X] Show to whom, date and address of delivery.
2. [ ] Restricted Delivery.

3. Article Addressed to:

Transco Exploration Company
1700 Lincoln Street
Suite 2100
1 United Bank Center
Denver, CO 80203

4. Type of Service:

- [ ] Registered
- [X] Certified
- [ ] Express Mail
- [ ] Insured
- [ ] COD

Article Number: P-001-861-895

Always obtain signature of addressee or agent and **DATE DELIVERED**.

5. Signature – Addressee
X

6. Signature – Agent
X

7. Date of Delivery
9-12-86

8. Addressee's Address *(ONLY if requested and fee paid*

DOMESTIC RETURN RECEIPT

Marlene Poulsen

PS Form 3811, July 1983

DOMESTIC RETURN RECEIPT

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. **The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available.** Consult postmaster for fees and check box(es) for service(s) requested.

1. [X] Show to whom, date and address of delivery.
2. [ ] Restricted Delivery.

3. Article Addressed to:
Ladd Petroleum Corporation
830 Denver Club Building
Denver, Colorado 80202

4. Type of Service:
- [ ] Registered
- [ ] Insured
- [X] Certified
- [ ] COD
- [ ] Express Mail

Article Number
P-001-861-896

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature – Addressee
X

6. Signature – Agent
X A. Leigh

7. Date of Delivery
5-28-85

8. Addressee's Address *(ONLY if requested and fee paid)*
5 15 17th St # 830
Denver Colo 80202

USPO DENVER, CO MAIN OFF. MAY 28 '85

Marlayne Poulsen

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. **The return receipt fee will provide you the name of the person delivered to and the date of delivery.** For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. [X] Show to whom, date and address of delivery.
2. [ ] Restricted Delivery.

3. Article Addressed to:
Antelope Production
PO Box 57
Kimball, Nebraska 69145

4. Type of Service:
[ ] Registered [ ] Insured
[X] Certified [ ] COD
[ ] Express Mail

Article Number
P-001-861-902

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X

6. Signature — Agent
X Linda Wagner

7. Date of Delivery
MAY 29 1987

8. Addressee's Address *(ONLY if requested and fee paid)*
BOX 577
Kimball Ne 69145-0577

KIMBALL, NE

Markussen Paulsen

DOMESTIC RETURN RECEIPT

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. **The return receipt fee will provide you the name of the person delivered to and the date of delivery.** For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☒ Show to whom, date and address of delivery.
2. ☐ Restricted Delivery.

3. Article Addressed to:

Mr. Marvin Redburn
Flying R Ranch
25292 Highway 145
Dolores, Colorado 81323

4. Type of Service:

☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number: P-001-861-894

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature – Addressee
X Marvin Redburn

6. Signature – Agent
X

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

Marlayne Poulsen

DOMESTIC RETURN RECEIPT

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. **The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available.** Consult postmaster for fees and check box(es) for service(s) requested.

1. [X] Show to whom, date and address of delivery.
2. [ ] Restricted Delivery.

3. Article Addressed to:
MCOR Oil + Gas Corp.
PO Box 5444
Denver, CO
80217

4. Type of Service:
- [ ] Registered
- [ ] Insured
- [X] Certified
- [ ] COD
- [ ] Express Mail

Article Number: P-001-861-898

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature – Addressee
X

6. Signature – Agent
X

7. Date of Delivery
MAY 28 1985

8. Addressee's Address *(ONLY if requested and fee paid)*

Marlayne Poulsen

DOMESTIC RETURN RECEIPT

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. **The return receipt fee will provide you the name of the person delivered to and the date of delivery.** For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. [X] Show to whom, date and address of delivery.
2. [ ] Restricted Delivery.

3. Article Addressed to:

Mr. Charles Hardy Redd
Box 247
LaSal, Utah 84530

4. Type of Service:

[ ] Registered [ ] Insured
[X] Certified [ ] COD
[ ] Express Mail

Article Number: P001-861-893

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature – Addressee

X Marlayne Poulsen

6. Signature – Agent

X

7. Date of Delivery

5-24-85

8. Addressee's Address *(ONLY if requested and fee paid)*

Marlayne Poulsen

DOMESTIC RETURN RECEIPT

P 001 861 902

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Antelope Production	
Street and No. PO Box 57	
P.O., State and ZIP Code Kimball, Nebraska 69145	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

P 001 861 901

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Celsius Energy Corp.	
~~Street~~ and No. PO Box 11070	
P.O., State and ZIP Code Salt Lake City Utah 84147	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

P 001 861 900

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Gourney Oil Company	
Street and No. 555 17th Street Suite 1000	
P.O., State and ZIP Code Denver CO 80202-3910	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

P 001 861 899

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Marathon Oil Company	
Street and No. PO Box 2659	
P.O., State and ZIP Code Casper, WY 82602	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

P 001 861 898

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to MCOR Oil & Gas Corp.	
Street and No. 10880 Wilshire Blvd.	
P.O., State and ZIP Code Los Angeles CA 90024	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

P 001 861 897

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mobil Oil Corp.	
Street and No. PO Box 5444	
P.O., State and ZIP Code Denver, CO 80217	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

P 001 861 896

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Ladd Petroleum Corp.		
Street and No. 830 Denver Club Building		
P.O., State and ZIP Code Denver, CO 80202		
Postage	$	
Certified Fee		
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to whom and Date Delivered		
Return receipt showing to whom, Date, and Address of Delivery		
TOTAL Postage and Fees	$	
Postmark or Date		

PS Form 3800, Feb. 1982

★ U.S.G.P.O. 1984-446-014

P 001 861 895

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

~~Sent~~ to Transco Exploration Co.	
Street and No. 1700 Lincoln Street Suite 2100	
P.O., State and ZIP Code United Bank Center Denver, CO 80203	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

P 001 861 894

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. Marvin Redburn		
Street and No. Flying R Ranch		
P.O., State and ZIP Code 25892 Highway 145 Dolores Colorado 81323		
Postage	$	
Certified Fee		
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to whom and Date Delivered		
Return receipt showing to whom, Date, and Address of Delivery		
TOTAL Postage and Fees	$	
Postmark or Date		

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

P 001 861 893

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. Charles H. Redd	
Street and No. Box 247	
P.O., State and ZIP Code LaSal, Utah 84530	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

UIC-057-1

NOTICE WAS SENT TO THE FOLLOWING:

NEWSPAPER AGENCY
SAN JUAN RECORD

UTAH STATE DEPARTMENT OF HEALTH

U S ENVIRONMENTAL PROTECTION AGENCY

BUREAU OF LAND MANAGEMENT

SENT RETURN RECEIPT REQUESTED:

✓MR. CHARLES HARDY REDD
✓MR. MARVIN REDBURN
✓TRANSCO EXPLORATION COMPANY
✓LADD PETROLEUM CORPORATION
✓MOBIL OIL CORPORATION
MCOR OIL AND GAS CORPORATION
✓CHORNEY OIL COMPANY
✓CELSIUS ENERGY CORPORAITON
✓ANTELOPE PRODUCTION
✓MARATHON OIL COMPANY

Marlayne Poulsen
May 22, 1985

EXHIBIT A

STATE OF UTAH
DIVISION OF OIL, GAS, AND MINING
ROOM 4241 STATE OFFICE BUILDING
SALT LAKE CITY, UTAH 84114
(801) 533-5771
(RULE I-5 & RULE I-4)

FORM NO. DOGM-UIC-1
(Revised 1982)

IN THE MATTER OF THE APPLICATION OF
Marathon Oil Company
ADDRESS P.O. Box 2659
Casper, WY ZIP 82602
INDIVIDUAL ___ PARTNERSHIP ___ CORPORATION X
FOR ADMINISTRATIVE APPROVAL TO DISPOSE OR
INJECT FLUID INTO THE 4-25 Tin Cup Mesa WELL
SEC. 25 TWP. 38S RANGE 25E
San Juan COUNTY, UTAH

CAUSE NO. _____

ENHANCED RECOVERY INJ. WELL	☒
DISPOSAL WELL	☐
LP GAS STORAGE	☐
EXISTING WELL (RULE I-4)	☐

APPLICATION

Comes now the applicant and shows the Corporation Commission the following:
1. That Rule I-5 (g) (iv) authorizes administrative approval of enhanced rcovery injections, disposal or LP Gas storage operations.
2. That the applicant submits the following information.

Lease Name: Tin Cup Mesa	Well No.: 4-25	Field: Tin Cup Mesa	County: San Juan
Location of Enhanced Recovery Injection or Disposal Well: 2490' FWL 50'FSL Sec. 25	Twp. 38S	Rge. 25E	
New Well To Be Drilled: Yes ☒ No ☐	Old Well To Be Converted: Yes ☐ No ☒	Casing Test: Yes ☐ No ☐ Date (Will Notify)	
Depth-Base Lowest Known Fresh Water Within ½ Mile: None	Does Injection Zone Contain Oil-Gas-Fresh Water Within ½ Mile: YES ☒ NO ☐	State What: OIL & GAS	
Location of Injection Source(s): N26° 1' W 1,881' to NW Corner of Sec. 25	Geologic Name(s) and Depth of Source(s): Cutler 2,900' KB and Upper Ismay Produced Water		
Geologic Name of Injection Zone: Ismay	Depth of Injection Interval: 5430 to 5530 Gross (Proposed)		
a. Top of the Perforated Interval: (Proposed) 5430'	b. Base of Fresh Water: 0	c. Intervening Thickness (a minus b) 5430'	
Is the intervening thickness sufficient to show fresh water will be protected without additional data? (YES) NO			
Lithology of Intervening Zones: Sandstones, Siltstones, Shales, Limestones, & Anhydrite			
Injection Rates and Pressures: Maximum 3400 B/D; 3600 PSI			

The Names and Addresses of Those to Whom Notice of Application ~~Should be~~ Sent.

These Notices were sent by the Division based on letters from John Anderson and Steven Clyde, dated February 14 and 26, 1985, respectively. Also, your file should contain proof of publication.
See Cause No. UIC-057.

State of Wyoming)
County of Natrona)

Robert F. Unger
Applicant

Before me, the undersigned authority, on this day personally appeared Robert F. Unger known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states, that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Suscribed and sworn to before me this 3rd day of May, 19 85

SEAL PATRICK T. GEILE - Notary Public County of Natrona State of Wyoming My Commission Expires Mar. 10, 1989

My commission expires March 10 1989

Patrick T. Geile
Notary Public in and for Natrona

(OVER)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

5. LEASE DESIGNATION AND SERIAL NO.: U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1. OIL WELL ☐ GAS WELL ☐ OTHER SIMO #3443320520 Injection Well

7. UNIT AGREEMENT NAME: Tin Cup Mesa

2. NAME OF OPERATOR: Marathon Oil Company

RECEIVED

8. FARM OR LEASE NAME: Tin Cup Mesa

3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, Wyoming 82602

JUN 27 1985

9. WELL NO.: 4-25

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

DIVISION OF OIL GAS & MINING

10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa

SE SE SW 50'FSL & 2490'FWL

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 25, T38S, R25E

14. PERMIT NO. 2-14-85 / 43-037-31145

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5036'GL, 5049'KB

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	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			
(Other) Please See Below			X	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

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

Progress Report

4-30-85 to 6-8-85

Please See Attachments

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

SIGNED A.C. Raske TITLE Acting District Production Manager DATE June 24, 1985

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

TINCUP MESA #4-25 WELL HISTORY

4-30-85 RUN CEMENT BOND LOG, FLANGED UP CASING, PIPED BH UP.

6-3-85 PREPARING TO MOVE IN WORKOVER RIG TO CONDUCT PRODUCTION CAPACITY TESTS.

6-4-85 DRAKE RIG #19 MOVED IN, RU, INSTALLED BOP.

6-5-85 FIN RIH W/BIT & SCRAPER TO 5,701' KB CIRCULATED HOLE CLEAN TO PBTD (5,701' KB) PRESS TESTED CASING TO 3,000 PSI FOR 15 MIN-HELD O.K. @ 5,484' KB. GEARHART PERFORATING RU THRU LUBRICATOR TO PERFORATE. ALL PERFORATIONS WERE W/4" HOLLOW STEEL CARRIER CASING GUN W/4 JSPF ON 90 & 120° PHASING, RUN #1 PERFORATED 5,430'-36') 100% FIRE. RUN #2 PERFORATED 5,443'-63', 100% FIRE. RUN #3 PERFORATED 5,470'-84', 100% FIRE. FLUID LEVEL COMING OUT ON RUN #3 WAS 725'. DISPLACED ACID INTO FORMATION W/PRODUCED TREATED WATER (BACTERIACIDE ADDED TO WATER). DISPLACED ACID @ 1 BPM. OVERDISPLACED W/8 BBL PRODUCED TREATED WATER. MAX SURFACE PRESSURE 100 PSI. SWI. SDN.

6-6-85 RIH W/RETRIEVABLE BRIDGE PLUG & PKR. SET BRIDGE PLUG @ 5,500' KB. SET PKR @ 5,466' KB. ACIDIZED 5,470'-84' W/ 700 GAL 15% ACID. DISPLACED ACID INTO FORMATION @ 1 BPM. PRESS TOOK SHARP INCREASE TO 1,600 PSI. PRESS BROKE TO 400 PSI. OVER-FLUSHED ACID W/8 BBL PRODUCED WATER. ISIP 600 PSI. 4 MIN WELL ON VAC. RELEASED PKR @ 5,466' KB. POH W/BP SET BP @ 5,466' KB. PUH W/PKR & SET @ 5,439' KB W/PKR PARTS OPEN. PUMPED ACID W/1000 GAL TO WITHIN 1 BBL OFF PKR. CLOSED PARTS ON PKR. SET PKR IN 20,000 COMP. DISPLACED ACID INTO FORMATION @ 3/4 BPM @ 400 PSI FOR 300 GAL. CP 0. PUMPED 500 GAL ACID @ 1 BPM, @ 600 PSI, CP 0. PUMPED 200 GAL ACID @ 1-1/2 BPM, @ 800 PSI, CP 0. OVER FLUSHED ACID INTO FORMATION W/10 BBL PRODUCED WATER @ 1-1/2 BPM, @ 700 PSI. ISIP 600 PSI, SICP 0. FORMATION ON VAC. IN 3 MIN. RELEASED PKR & RBP. PU BP @ 5,466' KB. PUH W/BP & SET RBP @ 5,439' KB. PUH W/PKR & SET @ 5,420' KB W/PKR PARTS OPEN. ACIDIZED 5,430'-36', PUMPED W/300 GAL 15% ACID TO WITHIN 1 BBL. PKR CLOSED PARTS ON PKR. STAGED ACID INTO FORMATION @ 1,000-2,000 PSI, CP 0. INCREASED PRESS TO 2,200 PSI CP 0. FORMATION BROKE W/85 GAL ACID STAGED INTO FORMATION. PRESS BROKE TO 400 PSI. FINISHED DISPLACING ACID & 5 BW (OVER FLUSH) @ 2 BPM, @ 600 PSI, SICP 0. ISIP 400 PSI, WELL ON VAC IN 2 MIN. RELEASED PKR. RDH PU BP @ 5,439' KB. 6:15 P.M. RELEASED PKR & STARTED REVERSING DOUBLE TUB. VOL. 63 BBL, ON REVERSING OUT TUBING BROKE CIRCULATION ON 11 BW. SET PKR @ 5,497' KB IN 2,000 COMP. 7:15 P.M. PRESS TESTED PKR & BP TO 4,000 PSI O.K. RELEASED PKR & SA PUH TO 5,420' KB. SET PKR @ 5,420' KB IN 20,000 COMP. SWI. SDN. *ON THE ACID JOBS THE FORMATIONS HAVE CONSUMED AN EST. 200 BBL PRODUCED WATER W/BACTERIASIDE ADDED. *AROUND 1:10 P.M. LEO LEWIS ARRIVED ON LOCATION AS AN MCOR REPORTER.

6-7-85 1ST SWAB RUN FL 1,500', 1ST-14TH RUN 100% WC, 15TH SWAB RUN FL 2,300', 14 SWAB RUNS = 87 BBL. ON 15TH SWAB RUN WELL KICKED OFF, FTP 25-75 PSIG, CHOKE WIDE OPEN. 2:45 P.M. TURNED WELL THRU SEPARATOR, AFTER 4 HRS 45 MINS THRU SEPARATOR, FTP 170 PSI, SEP PRESSURE 75 PSI, CHOKE 14/64", AVERAGE HOURLY RATE 7 BBL/HR, ARE GAS RATE 182 MCFD (1" ORIFICE). WATER CUT OFF TUBING 25% (ESTIMATED).

6-8-85 22.5 HR TEST. 183 BBL FLUID, +5% W.C., OFF WELLHEAD 199 MCFD, 1,076 GOR. 14/64 CHOKE. 180 TP. 75# SEPARATOR PRESS.

PI • DD • GWT • RFS • GOR • FL • TS

TEFTELLER, INC.

reservoir engineering data

MIDLAND, TEXAS / FARMINGTON, NEW MEXICO
GRAND JUNCTION, COLORADO

P. O. Box 5247
Midland, Texas 79704
(915) 682-5574

June 28, 1985

Marathon Oil Company
Box 2659
Casper, Wyoming 82602

Attn: Mr. J. T. Keil

Subject: Buildup Measurement and Fall Off Test
Tin Cup Mesa No. 4-25
San Juan County, Utah
Our File No. 2-17057-BU&FO

Gentlemen:

Attached hereto are the results of a buildup measurement and fall off test which were conducted on the above captioned well June 19 thru 24, 1985.

The data presented are in tabular and graphical form.

It has been our pleasure to have conducted this service for you. If we may be of further assistance, please call us at any time.

Respectfully submitted,

TEFTELLER, INC.

Neil Tefteller

Neil Tefteller

NT/lw

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : TIN CUP MESA NO. 4-25 Page 1 of 7

Field : TIN CUP MESA File 2-17057-BU&FO

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1985 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	Wellhead Pressure Tbg	Csg	BHP @ 5547' Psig
6-19	Arrived on location rig running tubing	10:30			0	0	
	Tandem instruments @ 5547'	15:40	0	00			
		15:40	0	00			
		16:00	0	20	0	418	2029
	Start injection step rate test, 1st 4ate @.20 bbl/min	16:00	0	00			
		16:15	0	15	TSTM	467	2063
		16:30	0	30	TSTM	465	2067
		16:45	0	45	TSTM	469	2072
		17:00	1	00	TSTM	471	2078
	2nd rate @.40 bbl/min	17:00	0	00			
		17:15	0	15	TSTM	470	2108
		17:30	0	30	TSTM	459	2119
		17:45	0	45	Vac.	449	2127
		18:00	1	00	Vac.	432	2131
	3rd rate @.80 bbl/min	18:00	0	00			
		18:15	0	15	Vac.	423	2195
		18:30	0	30	Vac.	414	2210
		18:45	0	45	Vac.	412	2218
		19:00	1	00	Vac.	412	2222
	4th rate @2.0 bbl/min	19:00	0	00			
		19:15	0	15	85	412	2471
		19:30	0	30	172	438	2555
		19:45	0	45	209	458	2589
		20:00	1	00	250	471	2615
	5th rate @2.6 bbl/min	20:00	0	00			
		20:15	0	15	499	510	2801
		20:30	0	30	545	520	2846
		20:45	0	45	568	540	2876
		21:00	1	00	611	540	2899
	6th rate @3.6 bbl/min	21:00	0	00			
		21:15	0	15	1097	549	3240
		21:30	0	30	1176	545	3304
		21:45	0	45	1220	545	3353
		22:00	1	00	1233	550	3384
	7th rate @ 4.6 bbl/min	22:00	0	00			
		22:15	0	15	1774	600	3717
		22:30	0	30	1860	600	3811
		22:45	0	45	1875	618	3826
		22:53	0	53	1870	618	3823
	Pump truck shut down/out of water	22:53	0	00			

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : TIN CUP MESA NO. 4-25 Page 2 of 7

Field : TIN CUP MESA File 2-17057-BU&FO

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1985 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	Wellhead Pressure Tbg	Csg	BHP @ 5547' Psig
6-19	Start fall off						
		22:59	0	06			2733
		23:05	0	12			2604
		23:11	0	18			2528
		23:17	0	24			2517
		23:23	0	30			2453
		23:29	0	36			2422
		23:35	0	42			2396
		23:41	0	48			2373
		23:47	0	54			2358
		23:53	1	00			2343
6-20		00:08	1	15			2301
		00:23	1	30			2275
		00:38	1	45			2256
		00:53	2	00			2237
		01:08	2	15			2225
		01:23	2	30			2207
		01:38	2	45			2195
		01:53	3	00			2184
		02:23	3	30			2169
		02:53	4	00			2154
		03:23	4	30			2138
		03:53	5	00			2131
		04:23	5	30			2119
		04:53	6	00			2112
		05:23	6	30			2104
		05:53	7	00			2102
	Off bottom with instruments	06:15	7	22			2097
	On bottom @ 5547'	07:30					
		07:30	8	37	Vac.	631	2085
		08:05	9	12	Vac.	631	2081
	Start injecting @ 3.0 bbl/ min	08:05	0	00			
		08:20	0	15	407	511	2633
		08:35	0	30	613	495	2844
		08:40	0	45	663	490	2894
		09:05	1	00	764	500	3023
		09:20	1	15	836	520	3087
		09:35	1	30	866	535	3141
		09:50	1	45	913	540	3170
		10:05	2	00	908	545	3182

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : TIN CUP MESA NO. 4-25 Page 3 of 7

Field : TIN CUP MESA File 2-17057-BU&FO

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1985 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	Wellhead Pressure Tbg	Csg	BHP @ 5547' Psig
6-20		10:20	2	15	934	555	3209
		10:35	2	30	977	570	3257
	Pumping (3 BWPM)	10:50	2	45	985	585	3259
		11:05	3	00	978	590	3270
	Bleed off casing pressure	11:20	3	15	994	Open	3284
		11:35	3	30	1023		3309
		12:05	4	00	1047		3317
		12:35	4	30	1057		3340
		12:50	4	45	1071		3348
		13:05	5	00	1096		3367
		13:20	5	15	1108		3375
		13:35	5	30	1125		3390
		13:50	5	45	1122		3400
		14:05	6	00	1145		3421
		14:20	6	15	1132		3417
		14:35	6	30	1165		3429
		14:50	6	45	1126		3421
		15:05	7	00	1130		3427
		15:20	7	15	1147		3429
		15:35	7	30	1149		3432
		15:50	7	45	1173		3446
		16:05	8	00	1186		3456
	Stop pumping and start fall off	16:06	8	01	1186		3456
		16:06	0	00			
		16:12	0	06			2784
		16:18	0	12			2703
		16:24	0	18			2647
		16:30	0	24			2614
		16:36	0	30			2579
		16:42	0	36			2550
		16:48	0	42			2531
		16:54	0	48			2515
		17:00	0	54			2502
		17:06	1	00			2483
		17:21	1	15			2450
		17:36	1	30			2427
		17:51	1	45			2402
		18:00	2	00			2382

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : TIN CUP MESA NO. 4-25

Field : TIN CUP MESA

File 2-17057-BU&FO

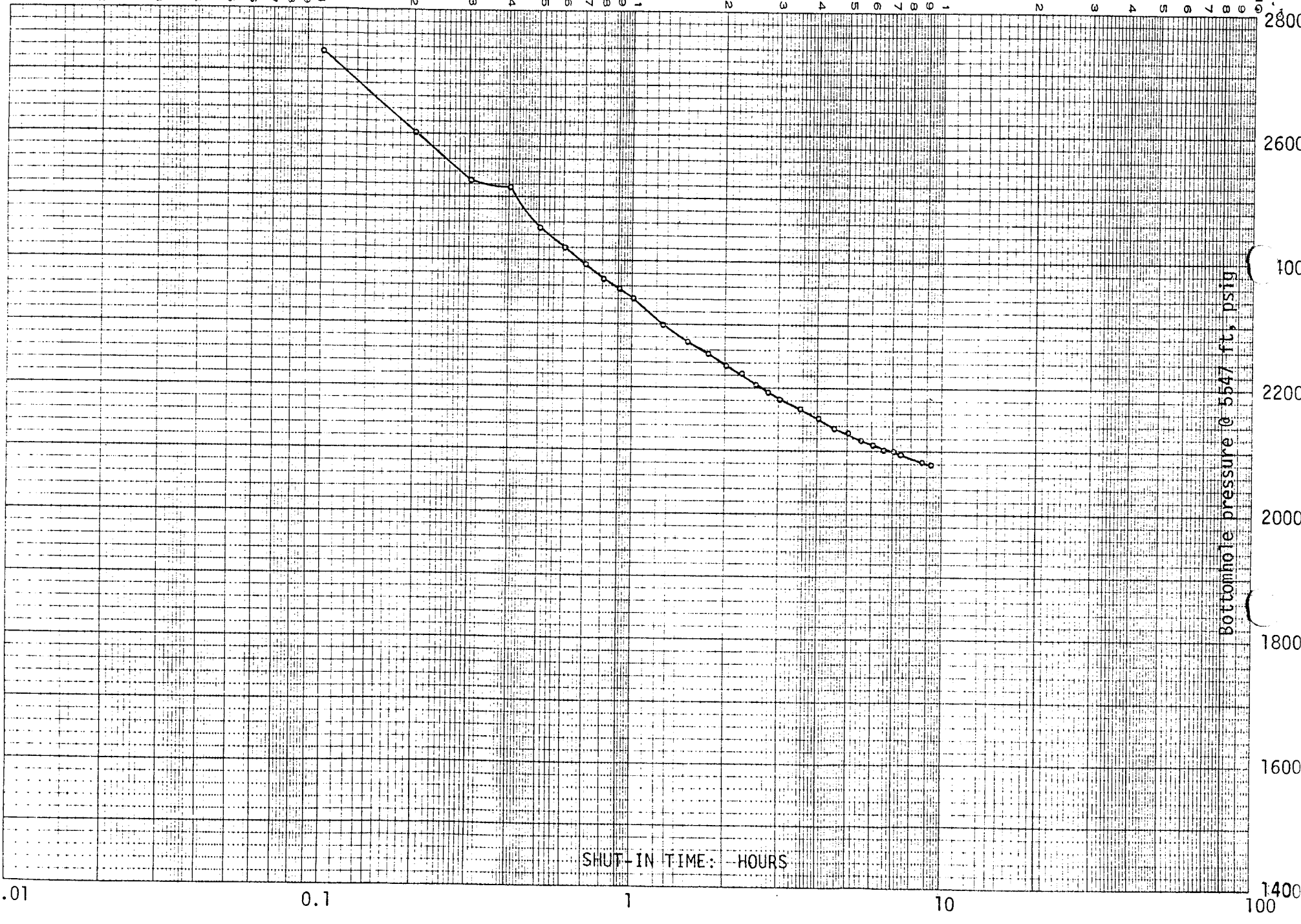
CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1985 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	Wellhead Pressure Tbg	Csg	BHP @ 5547' Psig
6-20		18:36	2	30			2348
		19:06	3	00			2322
		19:36	3	30			2301
		20:06	4	00			2282
		21:06	5	00			2255
		22:06	6	00			2228
		23:06	7	00			2212
6-21		00:06	8	00			2197
		01:06	9	00			2185
		02:06	10	00			2174
		04:06	12	00			2158
		06:06	14	00			2139
		08:06	16	00			2127
		10:06	18	00			2120
		12:06	20	00			2116
		16:06	24	00			2102
		20:06	28	00			2091
6-22		00:06	32	00			2085
		04:06	36	00			2075
		08:06	40	00			2070
		12:06	44	00			2066
		16:06	48	00			2062
		20:06	52	00			2060
6-23		-0:06	56	00			2058
	Clocks ran out	02:18	58	12			2056
6-24	On bottom @ 5547 with static gradient traverse	17:00	96	54			2019

MARATHON OIL COMPANY
TIN CUP MESA NO. 4-25

FALL OFF PLOT

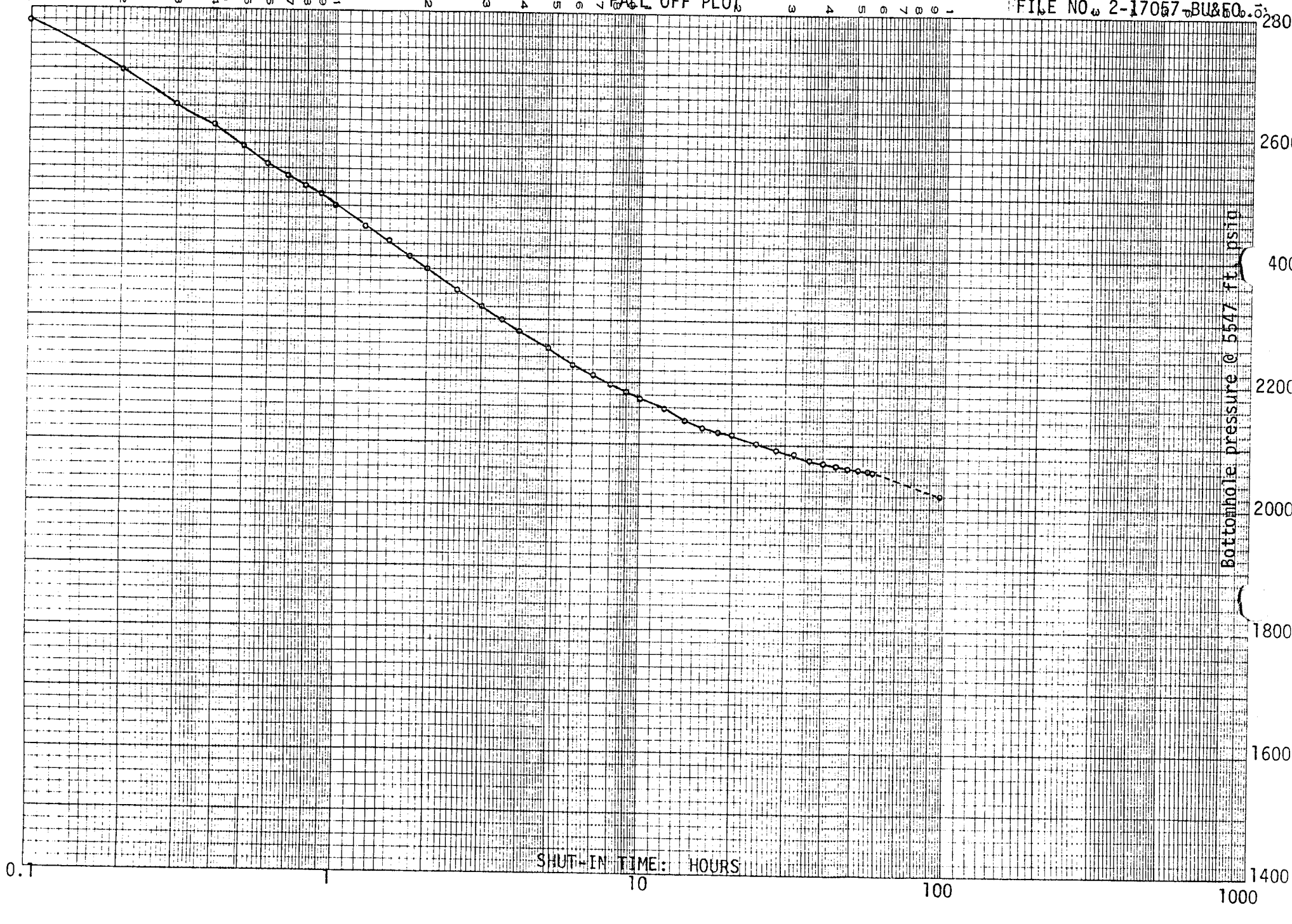
TEFTELLER, INC.
FILE NO. 2-17057-BU&FO



MARATHON OIL COMPANY
TIN CUP MESA NO. 4-25

FALL OFF PLOT

TEFTELLER, INC.
FILE NO. 2-17057-BU&SO.



EFTELLER, INC.

reservoir engineering data

MIDLAND, TEXAS

Company MARATHON OIL COMPANY Lease TIN CUP MESA Well No. 4-25

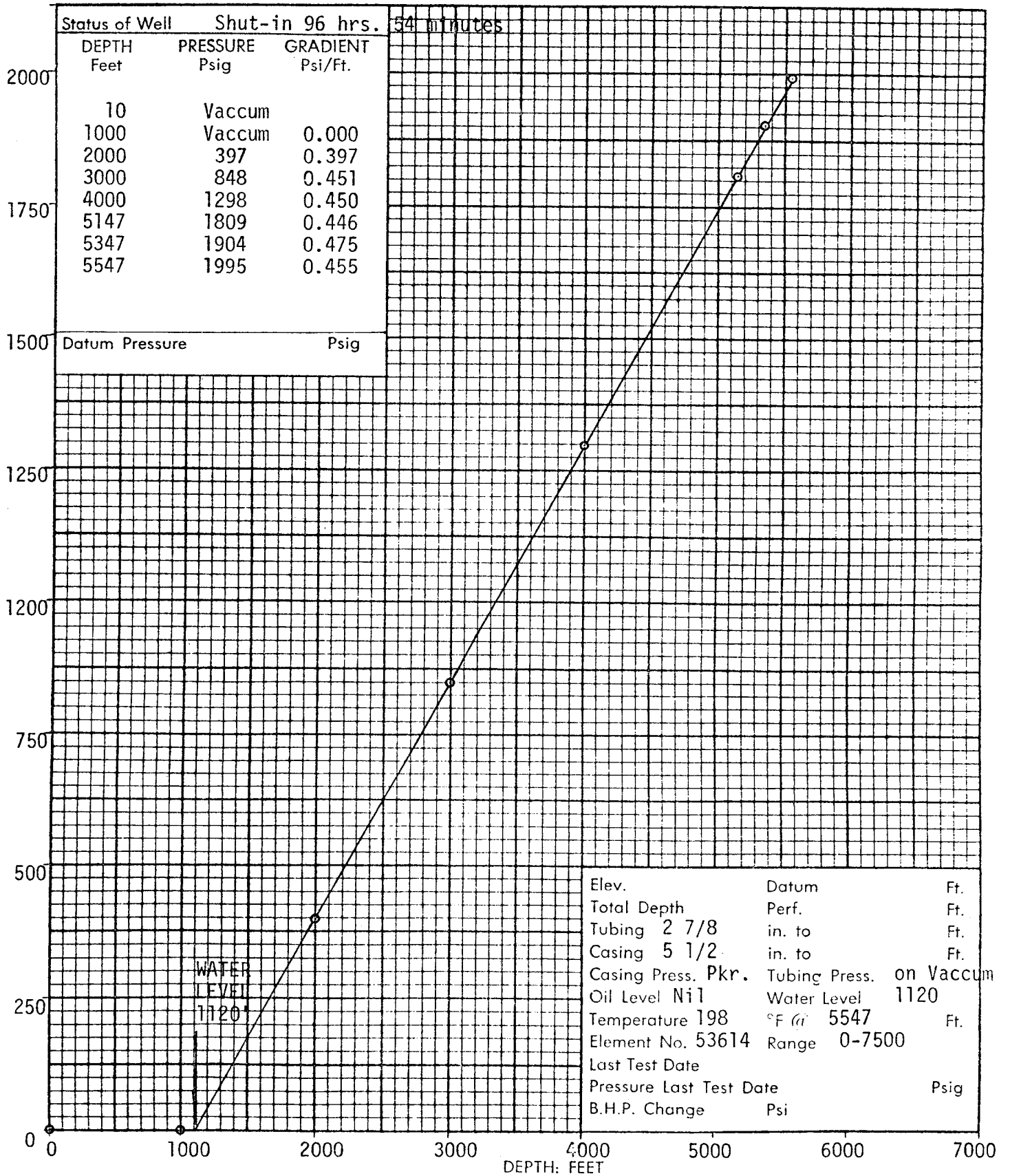
Field TIN CUP MESA County SAN JUAN State UTAH

Formation ISMAY Test Date JUNE 24, 1985

Status of Well Shut-in 96 hrs. 54 minutes

DEPTH Feet	PRESSURE Psig	GRADIENT Psi/Ft.
10	Vaccum	
1000	Vaccum	0.000
2000	397	0.397
3000	848	0.451
4000	1298	0.450
5147	1809	0.446
5347	1904	0.475
5547	1995	0.455

Datum Pressure Psig



Elev.		Datum	Ft.
Total Depth		Perf.	Ft.
Tubing	2 7/8	in. to	Ft.
Casing	5 1/2	in. to	Ft.
Casing Press.	Pkr.	Tubing Press.	on Vaccum
Oil Level	Nil	Water Level	1120
Temperature	198	°F @ 5547	Ft.
Element No.	53614	Range	0-7500
Last Test Date			
Pressure Last Test Date			Psig
B.H.P. Change		Psi	

BHP • BU • PI • DD • GWT • RFS • GOR • FL • TS

TEFTELLER, INC.

reservoir engineering data

MIDLAND, TEXAS / FARMINGTON, NEW MEXICO
GRAND JUNCTION, COLORADO

P. O. Box 5247
Midland, Texas 79704
(915) 682-5574

June 28, 1985

Marathon Oil Company
Box 2659
Casper, Wyoming 82602

Attn: Mr. J. T. Keil

Subject: Buildup Measurement and Fall Off Test
Tin Cup Mesa No. 4-25
San Juan County, Utah
Our File No. 2-17057-BU&FO

Gentlemen:

Attached hereto are the results of a buildup measurement and fall off test which were conducted on the above captioned well June 19 thru 24, 1985.

The data presented are in tabular and graphical form.

It has been our pleasure to have conducted this service for you. If we may be of further assistance, please call us at any time.

Respectfully submitted,

TEFTELLER, INC.

Neil Tefteller

Neil Tefteller

NT/lw

FINDINGS AND CONCLUSIONS

1. A three (3) well injection program as proposed by Marathon will result in the greater ultimate recovery of the oil and gas resource in the Tin Cup Mesa Unit and the greater protection of correlative rights. The immediate implementation of such a program is necessary to prevent waste, provide for greater ultimate recovery, and protect correlative rights.

2. Marathon was duly authorized by the BLM and DOGM to drill the #4-25 well as an injection well.

3. Marathon did not technically comply with the requirements of Rule E of the General Rules and Regulations. However, the record indicates that there has been in effect substantial compliance with Rule E and that the failure of Marathon to technically comply with Rule E has not materially prejudiced MCOR, TXP or BHP. Moreover, MCOR consented to the drilling (but not the use) of the #4-25 well as an injection well by the Stipulation of the parties dated January 24, 1985.

4. The Board has the power and authority to require operation as a unit of one or more pools and to prescribe a plan for such unit operations as provided in Section 40-6-8, U.C.A. However, the Board may not issue such an order absent the consent of those

owners who under such order will be required to pay 70% of the costs of the unit operations. Such consent is lacking in this case and the Board is, therefore, precluded from entering an order requiring and prescribing a plan for unit operations.

5. Inasmuch as the Board is precluded from entering an order requiring and prescribing a plan for unit operations for the reasons specified in Paragraph 4, the Board need not address the issues relating to the extent to which such an order could apply to operations on federal lands.

6. The use of the #4-25 well as an injection well will prevent drainage of oil from Section 36.

7. The evidence is divided as to the quantities of recoverable oil underlying Section 36. The evidence presented by Marathon indicates that the quantities are limited and that it is unlikely that a commercial well could be drilled in Section 36. The evidence presented by MCOR indicates that there are significant quantities of recoverable oil in Section 36 and that there is a good probability that a commercial well could be drilled. The Board need not resolve this conflict. However, MCOR has the right to drill a well in Section 36 to protect its correlative rights in oil underlying Section 36 should it choose to do so.

8. The parties have entered into a Unit Agreement and Unit Operating Agreement governing operations in the Tin Cup Mesa Unit. Issues relating to the allocation of costs and revenues, or to the consent required to conduct pressure maintenance operations, or to whether such consent has been given are contractual matters between the parties over which the Board has no jurisdiction.

ORDER

1. The plan of pressure maintenance operations submitted by Marathon for the Tin Cup Mesa Unit is approved.

2. Marathon is authorized to commence water injection into the #4-25 well pursuant to such plan effective at 7 a.m., Monday, July 15, 1985.

FORM DOGM-UIC-2
(Rule I-5 (b) 2
(Revised 1982)

PLEASE TYPE OR USE BLACK INK ONLY

(To be filed within 30 days after drilling is completed)

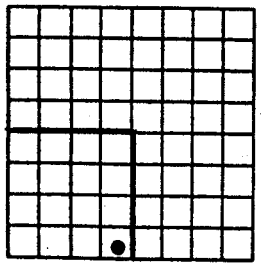
U-13655
COUNTY LEASE NO.

7

DEPARTMENT OF NATURAL RESOURCES AND ENERGY

API NO. 43-037-31145

DIVISION OF OIL, GAS, AND MINING
Room 4241 State Office Building
Salt Lake City, Utah 84114



COUNTY San Juan SEC. 25 TWP. 38S RGE. 25E

COMPANY OPERATING Marathon Oil Company

OFFICE ADDRESS P.O. Box 2659

TOWN Casper STATE ZIP Wyoming 82602

FARM NAME Tin Cup Mesa WELL NO. 4-25

DRILLING STARTED 4/3 19 85 DRILLING FINISHED 4-21 19 85

DATE OF FIRST PRODUCTION 6-7-85 COMPLETED 6-20-85

WELL LOCATED SE ¼ SE ¼ SW ¼

50 FT. FROM SL OF ¼ SEC. & 2490 FT. FROM WL OF ¼ SEC.

ELEVATION DERRICK FLOOR 5049' KB GROUND 5036' GL

TYPE COMPLETION

Single Zone ISMAY

Multiple Zone

Comingled

LOCATION EXCEPTION Lease-line water injection well as per Docket No. 84-076, Cause No. 211-1

OIL OR GAS ZONES

Name	From	To	Name	From	To
Ismay-Prod.& Inj.	5430'	5436'	Ismay - Inj.	5514'	5530'
Ismay-Prod. & Inj.	5443'	5463'	Ismay - Inj.	5484'	5504'
Ismay-Prod. & Inj.	5470'	5484'			

CASING & CEMENT

Casing Set				Csg. Test	Cement		
Size	Wgt.	Grade	Feet	Psi	Sax	Fillup	Top
8 5/8"	24#	K-55	1497'	1500	853		Surface
5 1/2"	15.5#	K-55	4564'				
5 1/2"	17#	K-55	4564-5777	3000	1200		500' CBL

TOTAL DEPTH 5778'

PACKERS SET DEPTH During water injection completion packer set at 5380'KB

NOTE: THIS FORM MUST ALSO BE ATTACHED WHEN FILING PLUGGING FORM DOGM-UIC-6

COMPLETION & TEST DATA BY PRODUCING FORMATION

	1	2	3
FORMATION	ISMAY		
SPACING & SPACING ORDER NO.	Docket No.84-076 Cause No.211-1 (Injection)		
CLASSIFICATION (DISPOSAL WELL, ENHANCED RECOVERY, LP GAS STORAGE)	Enhanced Recovery-Water Injection Well		
PERFORATED	5430'-5436'		
	5443'-5463'		
INTERVALS	5470'-5484'		
ACIDIZED?	See Attachment		
FRACTURE TREATED?	No Fracture Treatment		
INITIAL TEST DATA	Production Test Ismay Zone	Injection Test Ismay Zone	
Date	6-8-85	6-20-85	
Oil, bbl./day	*186	Refer to Attachment for rates	
Oil Gravity	*40° API		
Gas, Cu. Ft./day	*199M CF	CF	CF
Gas-Oil Ratio Cu. Ft./Bbl.	*1076		
Water-Bbl./day	*10 BW		
Pumping or Flowing	Flowing		
CHOKE SIZE	*14/64"		
FLOW TUBING PRESSURE	* 180 PSI		

RECEIVED
JUL 08 1985
DIVISION OF OIL GAS & MINING

A record of the formations drilled through, and pertinent remarks are presented on the reverse. (use reverse side)

Please refer to attachments for additional information

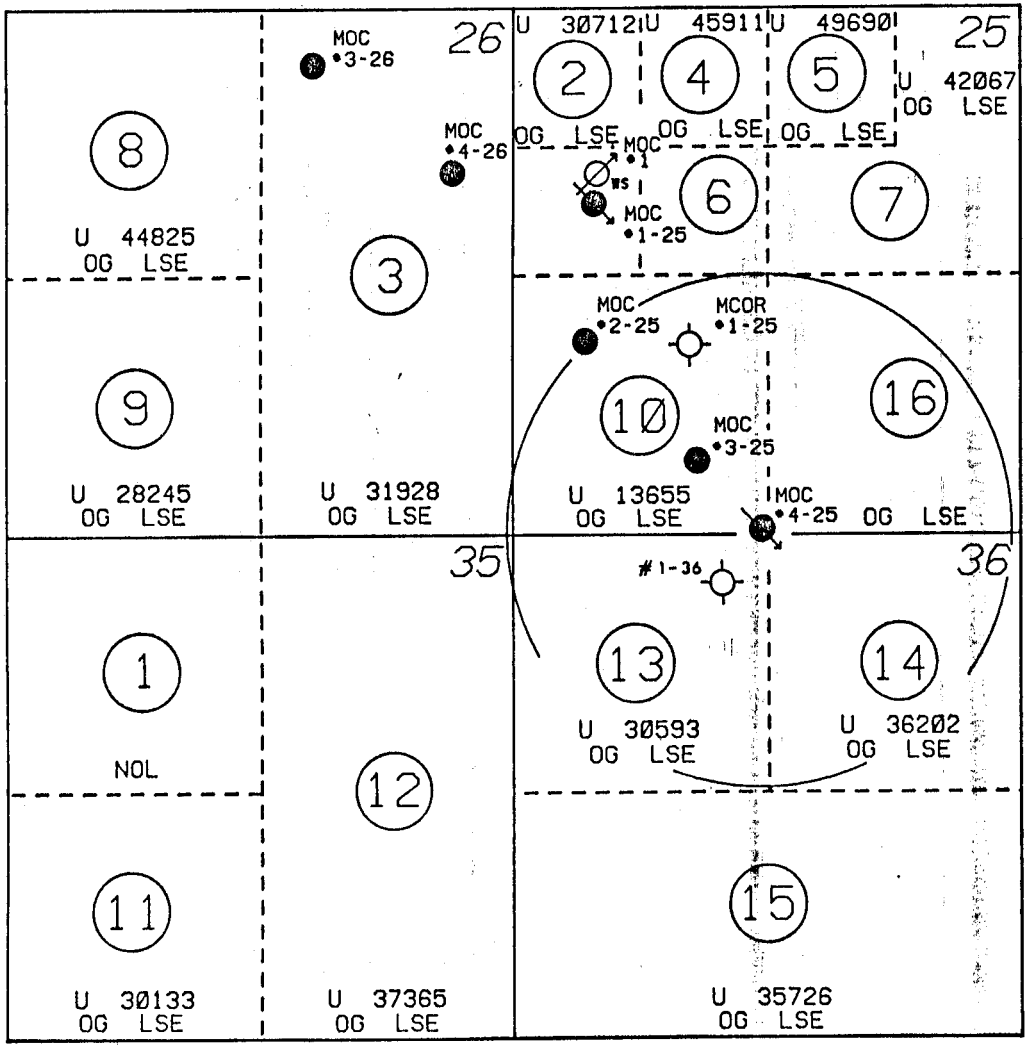
I, the undersigned, being first duly sworn upon oath, state that this well record is true, correct and complete according to the records of this office and to the best of my knowledge and belief.

Telephone (307)577-1555 Doyle L. Jones
Name and title of representative of company

Subscribed and sworn before me this 8 day of July 19 85

*Daily Production Rates extrapolated from a 22.5 hour production test

R 25 E



T 38 S

MOC 1-25 T.D. 5714'
MOC 3-26 T.D. 5780'
MOC 4-26 T.D. 5815'
MCOR 1-25 T.V.D. 5631'
MOC 1 WS P.T.D. 3400'
MOC 2-25 T.D. 5619'
MOC 3-25 T.D. 5788'
MCOR 1-36 T.D. 5708'
MOC 4-25 T.D. 5778'

INJECTION WELL

PRODUCING OIL WELL

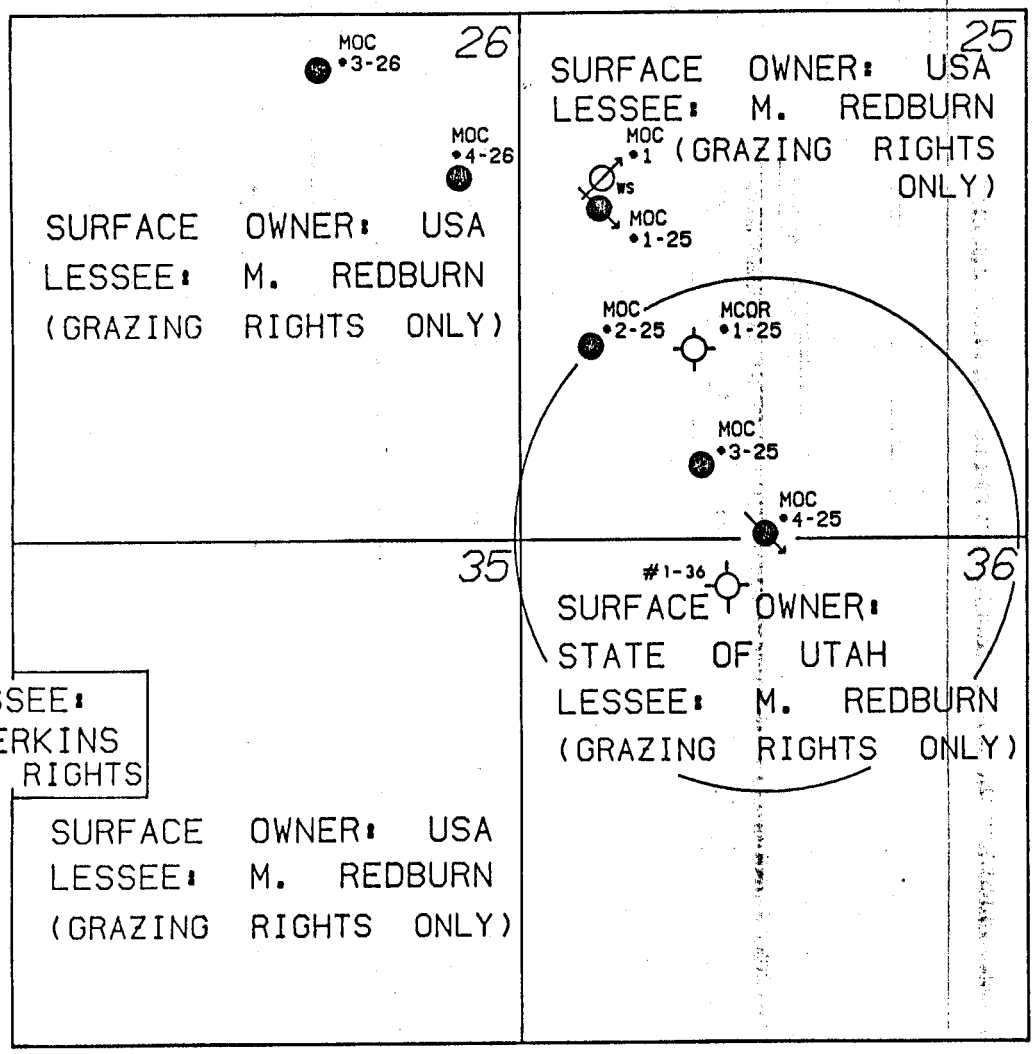
WATER SUPPLY WELL (NOT POTABLE)

DRYHOLE

EXHIBIT B2

TIN CUP MESA
SAN JUAN CO., UTAH
MINERAL RIGHTS

R 25 E



T 38 S

MOC	1-25	T.D.	5714'
MOC	3-26	T.D.	5780'
MOC	4-26	T.D.	5815'
MCOR	1-25	T.V.D.	5631'
MOC	1 WS	P.T.D.	3400'
MOC	2-25	T.D.	5619'
MOC	3-25	T.D.	5788'
MCOR	I-36	T.D.	5708'
MOC	4-25	T.D.	5778'

- INJECTION WELL
- PRODUCING OIL WELL
- WATER SUPPLY WELL (NOT POTABLE)
- DRYHOLE

EXHIBIT B1

TIN CUP MESA
SAN JUAN CO., UTAH
SURFACE RIGHTS

RULE 1-5 APPLICATION FOR APPROVAL OF CLASS II INJECTION WELLS

(a) Each application for the approval of a newly drilled or newly converted Class II Injection Well shall be filed on Form DOGM-UIC-1. The original and six (6) copies of the application and three complete sets of attachments shall be furnished to the Board.

Answer:

Form DOGM-UIC-1 is attached as Exhibit A.

(b) The application for the approval of Class II Injection Well(s) shall be accompanied by:

(1) A plat showing the location and total depth of the following wells: The Class II Injection Well, each water well(s), each abandoned, producing or drilling well, and dry hole, within one-half mile of the Class II Injection well. The plat must identify the surface owner(s) of the land within one-half mile of the Class II Injection Well, and each operator of a producing leasehold within one-half mile of each Class II Injection Well. Only wells of available public record are required to be included on the plat.

Answer:

See Exhibits B1, B2, and C. Marathon Oil Company is the only operator of a producing leasehold within one-half mile of the proposed Class II Injection Well #4-25. There is no known source of potable water within one-half mile of Well #4-25.

(2) A copy of the notice of completion Form DOGM-UIC-2, and if required by the Board and/or Director:

Answer:

Form DOGM-UIC-2 will be submitted for Well #4-25 upon completion as an injector.

(i) for a surface casing intended to protect underground sources of drinking water: resistivity, spontaneous potential, and caliper logs; and a cement bond, temperature, or density log after the casing is set and cemented.

Answer:

Three copies of the Dual Induction-SFL are attached.

(ii) For intermediate and long strings of casing intended to facilitate injection: resistivity, spontaneous potential, porosity, and gamma ray logs before the casing is installed; fracture finder logs, and a cement bond, temperature or density log after the casing is set and cemented.

Answer:

Three copies of the (1) Dual laterolog-SFL, (2) Formation Density-Compensated Neutron, (3) Natural Gamma Ray, (4) Borehole Compensated Sonic/VDL and (5) Cement Bond Log are attached.

(3) A schematic diagram of the Class II well showing:

i the total depth or plug-back depth of the well;

ii the depth of the injection or disposal interval;

iii the geological name of the injection or disposal zone;

vi the depth of the tops and bottoms of the casing and cement;

v the size of the casing and tubing, and the depth of the packer;

vi an assessment of the presently existing cement bond between the casing and formation;

vii the location of bottom hole.

Answer:

See Exhibit D.

(4) Information showing that injection into the proposed zone will not initiate fractures through the confining strata which could enable the injection fluid or formation fluid to enter a USDW.

i The Board may approve injection provided a finding is made from data, the applicant is required to furnish, and affidavits supporting the validity of such information.

Answer:

Supporting data: Injectivity tests have been performed on Tin Cup Mesa #1-25 and #3-23 in the same upper Ismay reservoir. Water was injected through existing production perforations. From these tests a fracture pressure and frac gradient were obtained. See exhibits E and F. Results are summarized below.

	Tin Cup Mesa #3-23	Tin Cup Mesa #1-25
Frac Gradient	1.12 psi/ft.	1.14 psi/ft.
Fracture Pressure (Bottom Hole)	6,300 psi.	6,200 psi.
Fracture Pressure (Surface)	3,867 psi.	3,848 psi.

Maximum surface injection pressure requested for well #4-25 is 3,600 psi, which is more than 200 psi below fracture pressure. High pressure shut down devices and relief valves will be designed to operate at 3,500 psi and 3,600 psi, respectively, to insure that the fracture pressure will not be exceeded.

Affidavit supporting the validity of the information submitted is attached as Exhibit "H".

ii The applicant is required to provide data including the maximum injection rate, maximum surface injection pressure, injection fluid and the lithology and rock properties of the injection zone and confining strata. The applicant's data must demonstrate that the proposed maximum surface injection pressure combined with the pressure of the well's hydrostatic head above the injection zone results in a pressure at the injection zone which is less than that pressure which could initiate fractures in the confining strata and enable the injection fluid or the formation fluid to enter a USDW.

Answer:

Maximum Injection Rate: 3400 BWPD

Maximum Surface Injection Pressure: 3,600 (At 3,500 psi, high pressure shut down devices will shut down injection operations)

Injection Fluid: Cutler water and Upper Ismay water (see Exhibit G for injection fluid properties).

The injection zone is composed of porous and permeable limestone and dolomite. The carbonate rock has vugular, intergranular, and intercrystalline porosity.

The confining strata above the injection zone are composed of anhydrite and calcareous and dolomitic shales. These strata are impermeable and provide an effective seal for oil, gas, and water.

The confining strata below the injection zone are composed of calcareous and dolomitic shales. These shales are impermeable and effectively seal off oil, gas, and water from strata below.

(5) Proposed operating data:

i design injection rates and pressures and a procedure for controlling injection rates and pressures such as a relief valve, regulator, or other pressure control device.

Answer:

Design Injection Rate: 1700 BWPD

Design Injection Pressures: 3,600 psi.

Injection rates will be controlled by pump speed and throttling valves for the injector. Injection pressures will be kept within design specifications by utilizing high pressure shut-down devices set at or below 3,500 psi. Relief valves will be set at or below 3,600 psi so that if shut-down devices fail, relief valves will not allow pressure buildup above 3,600 psi.

ii geologic name, depth, and location of injection fluid source;

Answer:

The injection fluid comes both from the Cutler Formation at a depth of approximately 2,900' and the Upper Ismay Zone (produced water). The Cutler fluid source well is located N26° 1'W 1,881' to the NW corner of Section 25.

iii qualitative and quantitative analysis of representative sample of water to be injected;

Answer:

A qualitative and quantitative analysis of a representative sample of both Cutler and Upper Ismay water is shown on Exhibit G.

iv appropriate geological data on the injection zone and confining zones including the lithologic description, geologic name, thickness, depth, and lateral extent;

Answer:

The injection zone is the Upper Ismay Zone of the Paradox Formation. The Upper Ismay is composed of porous and permeable limestone and dolomite. At the #4-25 Tin Cup Mesa Location, the injection zone is 122' thick with the top at 5430'. The porous and permeable carbonate rocks vary in thickness from 0' to 120', but they are restricted to the Tin Cup Mesa Field only. Outside the field, the carbonate rocks are composed of tight limestone and they are less than 20' thick.

The confining stratum directly above the injection zone is the Upper Ismay massive anhydrite. The massive anhydrite is a dense, tight rock which is 9' thick at the #4-25 Tin Cup Mesa location with the top at 5421'. The anhydrite thins across the field to 5' and thickens away from the field to 90' or more. Above the massive anhydrite is an impermeable layer of interbedded anhydrite and calcareous and dolomitic shales. The thickness of this layer ranges between 20' and 45' and it is 25' thick at the #4-25 location with the top at 5396'. A black shale overlies the layer of interbedded anhydrite and shales.

The black shale is 14' thick at the #4-25 Tin Cup Mesa location and the top is at 5382'.

The massive anhydrite overlying the injection zone extends for three miles from the Tin Cup Mesa Field. The interbedded anhydrite and shales extend more than 3 miles from the Tin Cup Mesa Field. The black shale above the interbedded anhydrite and shales extends throughout the southern Paradox Basin. All three of these units, the massive anhydrite, the interbedded anhydrite and shales, and the black shale, are impermeable and they will effectively seal off the oil, gas, and water of the injection zone from any strata above the Upper Ismay.

The confining stratum below the injection zone is the Hovenweep Shale. The Hovenweep Shale is composed of impermeable calcareous and dolomitic shales. The Hovenweep is 34' thick at the #4-25 Tin Cup Mesa location and the top is at 5552'. The Hovenweep extends more than a few miles beyond the Tin Cup Mesa Field and throughout the southern Paradox Basin. The Hovenweep is impermeable and it will effectively seal off the oil, gas, and water of the injection zone from any strata below the Upper Ismay.

v the geologic name, lateral extent, and depth to the top and bottom of all underground sources of drinking water which may be affected by the injection;

Answer:

There are no known sources of drinking water within one-half mile of the proposed injection well, Tin Cup Mesa #4-25.

vi qualitative analysis of injection formation water on basis for exemption under Rule I-5(C).

Answer:

A qualitative analysis of the injection formation water is shown on Exhibit G under "Ismay Water Properties".

(6) Contingency plans to cope with all shut-ins or well failures so as to prevent migration of polluting fluids into any underground source of drinking water.

Answer:

The injection system will be equipped with high and low pressure shut-down devices which will automatically shut-in injection waters if a system blockage or leakage occurs. One way check valves will also insure proper flow management. Relief valves will also be utilized for high pressure relief.

(7) The results of any formation testing programs.

Answer:

The Ismay formation has been tested for injectivity in injectors, T.C.M. #3-23 and T.C.M. #1-25. Results of the water injection test through existing production perforations are attached. The test results show a fracture pressure at the surface of approximatley 3,850 psi for both wells. Maximum injection pressure in #4-25 is 3,600 psi with high level shut downs and relief valves to be set at 3,500 psi and 3,600 psi respectively. See exhibits F and G.

(8) A description of the mechanical intergrity test, the actual injection procedure and notification to the Division of the date and time of test to provide the Division the opportunity to monitor the test.

Answer:

The casing outside the tubing shall be tested to a pressure greater than maximum injection pressure (3,600 psi) as indicated in Rule I-6 (a) (3). The Division will be notified of the date and time of test, as requested in Rule I-5 (b) 8.

(9) For new wells, the status of corrective action on defective wells in the area of review.

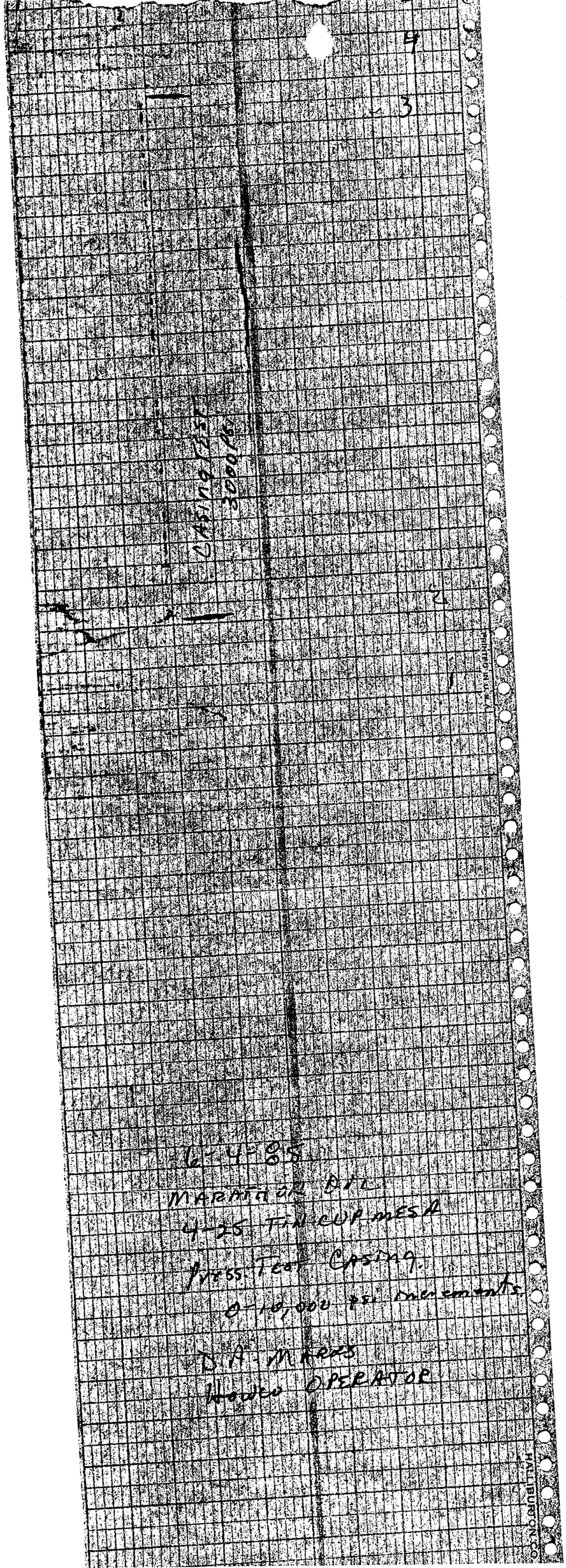
Answer:

This does not apply to our application, as no corrective action needs to be taken on any wells in the area of review.

(10) Any other additional information which the Board shall determine is necessary in order to adequately review the application.

Answer:

Marathon will await review of this application and additional information will be submitted if requested.



Form OGC-3

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

14

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☐ Other Water Injection

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other Water Injection

2. NAME OF OPERATOR: Marathon Oil Company

3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, Wyoming 82602

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: SE SW 50' FSL & 2490' FWL
At top prod. interval reported below
At total depth

5. LEASE DESIGNATION AND SERIAL NO.: U-13655
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: ---
7. UNIT AGREEMENT NAME: Tin Cup Mesa
8. FARM OR LEASE NAME: Tin Cup Mesa
9. WELL NO.: 4-25
10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa
11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 25, T38S, R25E

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
43-037-31145	2-14-85	San Juan	Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
4-3-85	4-21-85	6-20-85 (Injection)	5049' KB	5036' GL

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5778' KB	5701' KB	---	0 →	5778' KB	---

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: Injection Interval Ismay 5430' - 5530' KB

25. WAS DIRECTIONAL SURVEY MADE: YES

26. TYPE ELECTRIC AND OTHER LOGS RUN: 4-21-85 DLL-MSFL-GR, CNL-FDC-Spectra, BHC-VDL-GR, 4-29-85 CBL 4-4-85 DIL-GR

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#	1497'		853 SX to Surface	None
5 1/2"	15.5#	4564'			
5 1/2"	17#	4564'-5777'		1200 SX to 500' KB	None

29. LINER RECORD

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

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8"	5380' KB	5380' KB

31. PERFORATION RECORD (*Interval, size and number*)
Ismay Formation - 5430'-5436', 5443'-5463'
5470'-5484', 5484'-5504', 5514'-5530'.
All perforations were 4" Casing Gun, 4JSPF

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
Please refer to	attachment

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
Injection 6-20-85	Water Injection	Shut-in awaiting approval

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
6-21-85	8	---		---	---	1431 Inj.	---

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
Inj.1186 PSI	590 PSI		---	---	4293 Injected	---

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

TEST WITNESSED BY: Jim Van Gilder - MOC

35. LIST OF ATTACHMENTS
Injection Perforations & Treatment, Well Bore Diagram Log Injection Perfs & Formation Tops

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

SIGNED Doyle T. Hamm TITLE District Production Manager DATE July 8, 1985

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

CAUSE NO. UIC-057-1/DOCKET NO. 85-037

Notice of Hearing was sent to the following:

Board Members
Notice of Hearing List
Newspapers: Newspaper Agency Corporation
The San Juan Record

MCOR Oil and Gas Corporation
P.O. Box 5444
Denver, Colorado 80217

Charles Hardy Redd
Box 247
LaSol, Utah 84530

Marvin Redburn
Flying R Ranch
25292 Highway 145
Dolores, Colorado 81323

Antelope Production
P.O. Box 57
Kimball, Nebraska 69145

Ladd Petroleum Corporation
830 Denver Club Building
Denver, Colorado 80202

Transco Exploration Company
1700 Lincoln St., Suite 2100
1 United Bank Center
Denver, Colorado 80203

Marathon Oil Company
P.O. Box 2659
Casper, Wyoming 82602

Chorney Oil Company
555 17th Street, Suite 1000
Denver, Colorado 80202-3910

Celsius Energy Corporation
P.O. Box 11070
Salt Lake City, Utah 84147

Mobil Oil Corporation
P.O. Box 5444
Denver, Colorado 80217

Bureau of Land Management
Consolidated Financial Center
324 South State Street
Salt Lake City, Utah 84111-2303

Utah State Dept. of Health
Water Pollution Control
ATTN: Loren Morton
4241 State Office Building
Salt Lake City, Utah 84114

U.S. Environmental Protection Agency
Suite 1300
ATTN: Mike Strieby
999 18th Street
Denver, Colorado 80202-2413

Marjorie L. Anderson
Secretary of the Board

Notice sent June 26, 1985 mm

Order sent _____

0358V

AFFIDAVIT OF PUBLICATION

RECEIVED

JUL 08 1985

DIVISION OF OIL GAS & MINING

I, Joyce Martin, be[illegible] duly sworn, depose and say that I am the publisher of the San Juan Record, a weekly newspaper of general circulation published at Monticello, Utah, every Wednesday; that notice of hearing: Docket No. 85-037, Cause No. UIC-057-1

a copy of which is hereunto attached, was published in the regular and entire issue of each number of said newspaper for a period of 1 issues, the first publication having been made on July 3, 1985. and the last publication having been made on _____

Signature Joyce A. Martin
Publisher

Subscribed and sworn to before me this 3rd day of July, A.D. 1985.

Ingrid K Adams
Notary Public
Residing at Monticello, Utah

My commission expires December 2, 1987

Notice of hearing

BEFORE THE BOARD OF OIL, GAS AND MINING DEPARTMENT OF NATURAL RESOURCES IN AND FOR THE STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF MARATHON OIL COMPANY FOR ADMINISTRATIVE APPROVAL OF THE TIN CUP MESA 4-25 WELL, LOCATED IN SECTION 25, TOWNSHIP 38 SOUTH, RANGE 25 EAST, SAN JUAN COUNTY, UTAH, AS A CLASS II ENHANCED RECOVERY INJECTION WELL

* * *

NOTICE OF HEARING
DOCKET NO. 85-037
CAUSE NO. UIC-057-1

THE STATE OF UTAH TO ALL OPERATORS, TAKERS OF PRODUCTION, MINERAL AND ROYALTY OWNERS, AND PARTICULARLY ALL PERSONS INTERESTED IN SECTIONS 23, 25, AND 26, TOWNSHIP 38 SOUTH, RANGE 25 EAST, SAN JUAN COUNTY, UTAH.

Notice is hereby given that the Board of Oil, Gas and Mining will conduct a hearing on the above-captioned matter at 10:00 a.m., on Tuesday, July 9, 1985 in the Board Room of the Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 301, Salt Lake City, Utah.

The purpose of this proceeding will be for the Board to receive information regarding the objections to the requested administrative approval of the Tin Cup Mesa 4-25 Well as a water injection well.

This matter was noticed on March 6, 1985 and published on March 31, 1985. Pursuant to Rule I-5(g)(iii) of the Rules and Regulations of the Board of Oil, Gas and Mining, objections were received from BHP Petroleum, TXP Operating Company and MCOR Oil and Gas Corporation.

This matter will be considered by the Board in conjunction with the scheduled hearing for Docket No. 84-076, Cause No. 211-1, which is a petition for approval of a plan of operation for pressure maintenance in the Ismay Zone Paradox Formation participating area of the Tin Cup Mesa Unit, San Juan County, Utah.

Persons interested in this matter may participate pursuant to the Procedural Rules of the Board. The application and any subsequent pleadings may be inspected in the office of the undersigned, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah.

DATED this 24th day of June, 1985.

STATE OF UTAH
BOARD OF OIL,
GAS AND MINING
Marjorie L. Anderson
Secretary of the Board

Published in The San Juan Record

Form UIC 10
August, 1982

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
4241 State Office Building
Salt Lake City, Utah 84114

WELL INTEGRITY REPORT

Date 7/10/85 / Test date 7/5/85

Water Disposal Well_____ Enhanced Recovery Well X Other_____

DOGM/UIC Cause Number D-57-1

Company Marathon Oil Co.

Address_____

City and State_____ Zip Code_____

Lease Name or Number_____ Well Name or Number 4-25 Tin Cup Mesa

API Well Number 43-037-31145 Location SE 1/4 of SW 1/4 of____

Section 25 Township 38S Range 25E County San Juan

Present at Completion: _____ Yes X No

Casing Tested in My Presence: ____Yes X No Pressure 3000 PSI ____ Minutes

Packer Tested in My Presence: X Yes ____No Pressure 1200 PSI 15 Minutes

Surface-Prod. Csg. Annulus_____ PSI Prod. Csg.-Tubing Annulus 1200 PSI 15 minutes

Disposed/Injected Water Sample Taken:
____Yes X No (Attach water analysis when obtained)

This well seems to be completed in accordance with DOGM Rule I:
Yes X No____. If NO, write report.

Remarks: Halliburton press. tested Annulus to 1200 psig for 15 min. held OK a strip chart was run and copy will be forwarded to DOGM.

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

Name of Operator Marathon Oil Co.

Tom VanGilder was company man present
(Signature) (Title)

7/10/85
DOGM Field Inspector

Casper Division
Production, U.S. & Canada

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

July 3, 1985

Tin Cup Mesa
Working Interest Owners
(Mailing List Attached)

Gentlemen:

Attached are copies of the pressure data for the injectivity and falloff tests run on Tin Cup Mesa #4-25. The injectivity tests were conducted on June 19 and 20, 1985.

Yours very truly,

MARATHON OIL COMPANY

A L Radke for DLJ

Doyle L. Jones
Acting District Production Manager

DLJ/JDD:mke
Attachments

cc: R.F. Unger
J.D. Davidson
F.E. Kastner
Del Menge

cc: State of Utah
J. Raffoul

Casper Division
Production United States

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

June 28, 1985

Tin Cup Mesa Unit
Working Interest Owners
(Mailing List Attached)

Gentlemen:

Attached for your information is the data from the injectivity test performed on Tin Cup Mesa #4-25. A step rate test was run on June 19, 1985 and an 8 hour injectivity test was run on June 20, 1985. The tests were run after additional zones (below those that were production tested) were perforated and acidized.

Detailed data from the pressure bombs will be sent to you as soon as we receive the reports from Tefteller.

Yours very truly,

MARATHON OIL COMPANY

A C Radke for DLJ

Doyle L. Jones
District Production Manager

DLJ/JDD:mls
Attachments

cc: R. F. Unger
J. D. Davidson
F. E. Kastner
Del Menge

Casper Division
Production, U.S. & Canada

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

July 3, 1985

Tin Cup Mesa
Working Interest Owners
(Mailing List Attached)

Gentlemen:

Attached are copies of the pressure data for the injectivity and falloff tests run on Tin Cup Mesa #4-25. The injectivity tests were conducted on June 19 and 20, 1985.

Yours very truly,

MARATHON OIL COMPANY

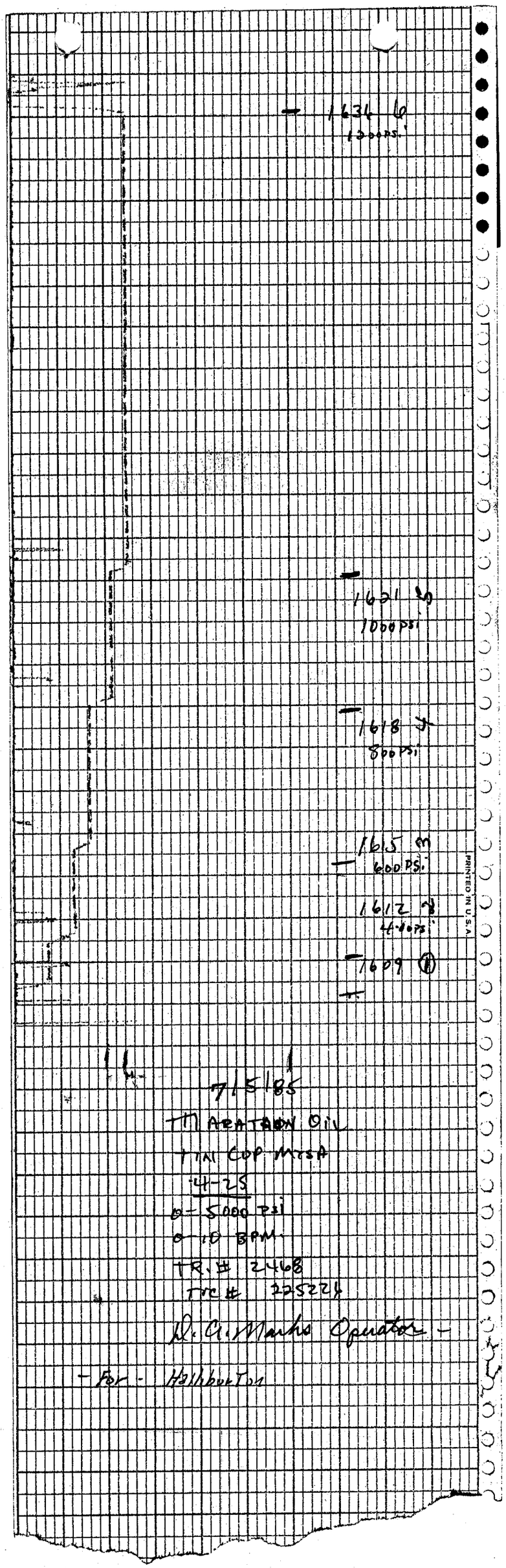
A L Radke for DLJ

Doyle L. Jones
Acting District Production Manager

DLJ/JDD:mke
Attachments

cc: R.F. Unger
J.D. Davidson
F.E. Kastner
Del Menge

cc: State of Utah
J. Raffoul



Tin Cup Mesa #4-25
Injectivity Test Results

Tubing - 2-7/8" with Lynes packer set at 5376'
Perforations: 5430-36', 5443-63' 5470-5504', 5514-30', 4 SPF

Step Rate Test
Date run: 6/19/85

Time (Min)	Rate (BPM)	Tubing Press (psi)	Cum Vol Pumped (gal)	Pressure at 5547' (psi)
15	0.2	0	161	
30	0.2	0	305	
45	0.2	0	452	
60	0.2	0	606	2,078
15	0.4	0	880	
30	0.4	0	1,169	
45	0.4	0	1,448	
60	0.4	0	1,734	2,131
15	0.8	0	2,255	
30	0.8	0	2,756	
45	0.8	0	3,228	
60	0.8	0	3,692	2,222
15	2.0	85	4,833	
30	2.0	172	6,107	
45	2.0	209	7,384	
60	2.0	250	8,621	2,615
15	2.6	499	10,137	
30	2.6	545	11,865	
45	2.6	568	13,436	
60	2.6	611	15,130	2,899
15	3.6	1,097	17,256	
30	3.6	1,176	19,635	
45	3.6	1,220	21,926	
60	3.6	1,233	24,208	3,384
15	4.6	1,774	26,930	
30	4.6	1,860	29,840	
45	4.6	1,875	32,728	3,823

At the end of a 7 hr, 22 min falloff, the pressure at 5547' was 2097 psi.

8 Hour Injectivity Test
Date run: 6/20/85
Pumped at rate of 3 BPM throughout test

Time (Min)	Tubing Press.	Cum Vol Pumped (gal)	Pressure at 5547' (psi)
0	0	--	
30	613	3,860	
60	764	7,355	
90	866	11,225	
120	908	14,997	
150	977	18,787	
180	978	22,557	
210	1,023	26,321	
240	1,047	30,062	
270	1,057	33,813	
300	1,096	37,555	
330	1,125	41,340	
360	1,145	45,145	
390	1,165	48,903	
420	1,130	52,614	
450	1,149	56,321	
480	1,186	60,098	3,456

At the end of a 58 hr, 12 min falloff, the pressure at 5,547' was 2056 psi.

TIN CUP MESA UNIT
WORKING INTEREST OWNERS
(Mailing List)

MCOR Oil and Gas Corporation
Attn: J. E. Walton
Manager - Operations
Western Region
10880 Wilshire Blvd.
Los Angeles, CA 90024

Celsius Energy Company
Attn: E. A. Farmer
P.O. Box 11070
Salt Lake City, UT 84147

Mobil Oil Corporation
Attn: J. L. Wolfe
Joint Interest Advisor - West
P.O. Box 5444
Denver, CO 80217

Revised 4-2-85

File 7

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

July 12, 1985

TO: Jack Feight, Manager
UIC Program

FROM: Dianne R. Nielson, Director

RE: Marathon #425 Proposed Injection Well, Tin Cup Mesa Unit

The Board of Oil, Gas and Mining has directed that the above-captioned well be used as an injection well. I have also been informed by you and Gil Hunt that the application for injection is in order and all Division requirements have been met. Therefore, please prepare a letter of approval for my signature, including reference to the Board order.

mjm
cc: R. J. Firth
0262V-30

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

July 12, 1985

Marathon Oil Company
P. O. Box 2659
Casper, Wyoming 82602

Gentlemen:

RE: Well No. Tin Cup Mesa Unit 4-25, Section 25, Township 38 South, Range 25 East, San Juan County, Utah

Approval of the above mentioned well as a Class II enhanced recovery injection well is hereby granted, in accordance with the rules and regulations of the Board of Oil, Gas and Mining and the Order issued by the Board in Cause No. 211-1 (UIC 057-1) on July 9, 1985. Said Order and approval take effect at 7:00 a.m., July 15, 1985.

This approval is conditional upon full compliance with the UIC rules adopted by the Board and operation of the well as outlined in the application submitted.

Best regards,

Dianne R. Nielson

Dianne R. Nielson
Director

vb
cc: Raymond S. Blunk, TXP Operating Co.
Thomas J. Deacon, MCOR Oil & Gas Corp.
Michael K. Mendenhall, BHP Petroleum
John W. Anderson, Esq.
John S. Kirkham, Esq.

0266V-56

Form OGC-1b

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL ☐ GAS WELL ☐ OTHER Water Injection Well

2. NAME OF OPERATOR: Marathon Oil Company

3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, Wyoming 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: SE SW 50' FSL & 2490' FWL

RECEIVED
JUL 25 1985
DIVISION OF OIL GAS & MINING

5. LEASE DESIGNATION AND SERIAL NO.: U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: ----

7. UNIT AGREEMENT NAME: Tin Cup Mesa

8. FARM OR LEASE NAME: Tin Cup Mesa

9. WELL NO.: 4-25

10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 25, T38S, R25E

14. PERMIT NO.: 2-14-85 / 43-037-31145

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5049' KB 5036' GL

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	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			☐
(Other) Please See Below			X	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

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

Water Injection commenced at the above referenced well on July 15, 1985. The injection rate was 1964 BWIPD with a tubing pressure of 360 PSI.

Injection start-up was reported to Mr. Gilbert Hunt, Utah, Oil, Gas & Mining by Mr. Frank Krugh, Marathon Oil Company, Casper, Wyoming on July 18, 1985.

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

SIGNED Douglas Jones TITLE District Production Manager DATE July 19, 1985

(This space for Federal or State office use)

APPROVED BY Glen B Feight TITLE VIC Manager DATE 7-29-85

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

DIVISION OF OIL, GAS AND MINING
CLASS II INSPECTION REPORT

DATE OF INSPECTION: 8 / 13/82 85 Time of Day 3:37 COUNTY San Juan

Legal Description: Sec. 25 T. 38S R. 25E OPERATOR: Marathon

NAME OF WELL: Tin Cup Mesa 4-25

* * * * *

Guage
MURPHY INJECTION PRESSURE: 600 psi PRESSURE CHART: _____

HIGH SHUT-OFF: 3500 psi LOW SHUT-OFF: _____

FLO-TRAC TOTALIZER _____ START-UP COUNT: _____
(if applicable)

INJECTION RATE: (X 1,000) BPD: _____

Maximum authorized injection pressure: 3600 psi

Maximum authorized injection rate: 3400 BWPD

PREVIOUS MONTH'S INJECTION PRESSURE: _____

* * * *

REMARKS: Casing tubing annulus pressure = 30 psi. This is a new enhanced recovery well.

C B Feight
FIELD INSPECTOR

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

CORE ANALYSIS REPORT

FOR

MARATHON OIL COMPANY

4-25 TIN CUP MESA
TIN CUP MESA
SAN JUAN, UTAH

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

MARATHON OIL COMPANY
4-25 TIN CUP MESA
TIN CUP MESA
SAN JUAN,UTAH

DATE : 22-APRIL-198
FORMATION : PARADOX
DRLG. FLUID: WBM
LOCATION : SE,SW SEC. 25-T38S-R25E

FILE NO : 3803-003382
ANALYSTS : DS;EV
ELEVATION: 5049 KB

FULL DIAMETER ANALYSIS-BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	VERTICAL	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
	ISMAY ZONE CORE # 1 5432-5492								
	5432.0-34.0								ANHY SL/DOL-LM -- NO ANALYSIS
1	5434.0-35.0	0.08	*	0.01	5.7	3.4	26.9	2.89	DOL BRN VFXLN SL/ANHY
2	5435.0-36.0	15.	13.		17.8	8.9	29.1	2.86	DOL BRN FNXLN SL/ANHY
3	5436.0-37.0	2.00	1.96		11.4	8.6	34.5	2.89	DOL BRN FNXLN SL/ANHY
4	5437.0-38.0	4.27	4.10		10.3	0.0	44.3	2.82	DOL BRN FNXLN SL/ANHY SL/CALC
5	5438.0-39.0	0.26	0.03		4.2	0.0	57.4	2.84	DOL BRN FNXLN SL/ANHY SL/CALC
6	5439.0-40.0	3.72	3.41		12.0	8.4	28.3	2.82	DOL BRN FNXLN SL/ANHY SL/CALC
7	5440.0-41.0	0.11	0.07		7.0	2.7	47.7	2.84	DOL BRN FNXLN SL/ANHY SL/CALC
8	5441.0-42.0	0.05	0.04		6.1	2.4	52.9	2.82	DOL BRN FNXLN SL/ANHY SL/CALC
9	5442.0-43.0	0.06	0.05		6.4	6.6	15.1	2.84	DOL BRN FNXLN SL/ANHY SL/CALC
10	5443.0-44.0	0.33	0.32		8.8	12.9	34.5	2.83	DOL BRN FNXLN SL/ANHY SL/CALC
11	5444.0-45.0	0.11	0.09	0.28	8.7	8.1	39.5	2.83	DOL BRN FNXLN SL/ANHY SL/CALC
12	5445.0-46.0	0.13	0.12		7.0	7.4	40.3	2.84	DOL BRN FNXLN SL/ANHY SL/CALC
13	5446.0-47.0	0.13	0.10		10.9	8.9	35.5	2.84	DOL BRN FNXLN SL/ANHY SL/CALC
14	5447.0-48.0	9.00	8.00		19.4	10.6	35.4	2.87	DOL BRN FNXLN SL/ANHY
15	5448.0-49.0	7.10	5.50		17.9	13.6	43.9	2.88	DOL BRN FNXLN SL/ANHY
16	5449.0-50.0	27.	24.		21.6	10.6	38.3	2.87	DOL BRN FNXLN SL/ANHY
17	5450.0-51.0	24.	22.		20.7	16.5	41.2	2.88	DOL BRN FNXLN SL/ANHY
18	5451.0-52.0	21.	20.	13.	27.2	14.1	41.6	2.84	DOL BRN FNXLN SL/ANHY
19	5452.0-53.0	20.	19.		25.0	12.2	29.2	2.89	DOL BRN FNXLN SL/ANHY
20	5453.0-54.0	15.	15.		21.2	11.2	32.5	2.89	DOL BRN FNXLN SL/ANHY
21	5454.0-55.0	2.10	1.85		12.3	11.1	29.7	2.83	DOL BRN FNXLN SL/ANHY SL/CALC
22	5455.0-56.0	12.	9.77		18.3	13.1	48.6	2.86	DOL BRN FNXLN SL/ANHY
23	5456.0-57.0	0.29	0.21		8.1	10.4	29.7	2.81	LM GRY VFXLN SL/DOL SL/ANHY
24	5457.0-58.0	0.59	0.47	0.11	5.6	10.8	38.8	2.80	LM GRY VFXLN SL/DOL SL/ANHY

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

MARATHON OIL COMPANY
4-25 TIN CUP MESA

DATE : 22-APRIL-198
FORMATION : PARADOX

FILE NO : 3803-003382
ANALYSTS : DS;EV

FULL DIAMETER ANALYSIS-BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	VERTICAL	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
25	5458.0-59.0	2.32	2.12		5.8	2.2	56.3	2.80	LM GRY VFXLN SL/ANHY SL/VUG
26	5459.0-60.0	0.76	0.72		4.6	2.8	39.0	2.79	LM GRY VFXLN SL/ANHY SL/VUG
27	5460.0-61.0	1.10	0.75		5.5	1.8	25.4	2.79	LM GRY VFXLN SL/ANHY SL/VUG
28	5461.0-62.0	4.58	4.10		5.5	0.0	64.4	2.79	LM GRY VFXLN SL/ANHY SL/VUG
29	5462.0-63.0	0.93	0.40		5.1	3.1	49.5	2.79	LM GRY VFXLN SL/ANHY SL/VUG
30	5463.0-64.0	3.90	3.39		7.8	9.8	31.3	2.80	LM GRY VFXLN SL/ANHY SL/VUG
31	5464.0-65.0	4.30	3.11	1.93	8.6	13.2	41.6	2.78	LM GRY VFXLN SL/ANHY SL/VUG
32	5465.0-66.0	2.28	1.89		6.9	11.9	34.0	2.76	LM GRY VFXLN SL/ANHY SL/VUG
33	5466.0-67.0	5.44	4.78		12.9	12.1	29.0	2.84	LM GRY VFXLN ANHY/DOL SL/VUG
34	5467.0-68.0	0.45	0.41		3.9	0.0	21.9	2.78	LM GRY VFXLN SL/ANHY SL/VUG
35	5468.0-69.0	0.20	0.20		3.6	0.0	38.6	2.79	LM GRY VFXLN SL/ANHY SL/VUG
36	5469.0-70.0	0.39	0.31	0.63	4.7	3.7	29.5	2.78	LM GRY VFXLN SL/ANHY SL/VUG
37	5470.0-71.0	0.30	0.30		4.2	3.2	25.3	2.78	LM GRY VFXLN SL/ANHY SL/VUG
38	5471.0-72.0	1.07	0.90		5.3	2.2	26.8	2.78	LM GRY VFXLN SL/ANHY SL/VUG
39	5472.0-73.0	0.60	0.46		6.5	6.9	55.2	2.79	LM GRY VFXLN SL/ANHY SL/VUG
40	5473.0-74.0	2.68	2.48		22.9	0.0	69.4	2.83	DOL LTBRN VFXLN SL/ANHY
41	5474.0-75.0	3.56	3.52		25.4	0.0	69.5	2.83	DOL LTBRN VFXLN
42	5475.0-76.0	3.39	3.39		20.3	6.4	51.4	2.84	DOL LTBRN VFXLN
43	5476.0-77.0	2.95	2.70		21.0	4.0	51.3	2.85	DOL LTBRN VFXLN
44	5477.0-78.0	7.06	6.75		8.0	0.0	44.2	2.78	LM GRY VFXLN SL/ANHY SL/VUG
45	5478.0-79.0	18.	17.		17.1	4.8	27.8	2.77	LM GRY VFXLN SL/DOL SL/VUG
46	5479.0-80.0	15.	13.	2.88	9.7	9.5	22.7	2.75	LM GRY VFXLN ANHY/DOL SL/VUG
47	5480.0-81.0	13.	9.58		10.7	6.2	22.9	2.74	LM GRY VFXLN ANHY/DOL SL/VUG
48	5481.0-82.0	2.06	2.06		9.1	2.1	42.7	2.76	LM GRY VFXLN ANHY/DOL SL/VUG
49	5482.0-83.0	16.	*		10.9	0.0	62.0	2.75	LM GRY VFXLN ANHY/DOL SL/VUG
50	5483.0-84.0	1.72	1.44	1.35	5.7	0.0	59.4	2.76	LM GRY VFXLN ANHY/DOL SL/VUG
51	5484.0-85.0	6.61	2.58		8.8	2.4	18.9	2.77	LM GRY VFXLN ANHY/DOL SL/VUG
52	5485.0-86.0	9.17	5.18		6.2	0.0	63.8	2.78	LM GRY VFXLN ANHY/DOL SL/VUG
53	5486.0-87.0	1.29	0.59		7.3	3.0	42.4	2.78	LM GRY VFXLN ANHY/DOL SL/VUG
54	5487.0-88.0	9.02	5.35		6.3	2.6	28.3	2.77	LM GRY VFXLN ANHY/DOL VUG **

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

MARATHON OIL COMPANY
4-25 TIN CUP MESA

DATE : 22-APRIL-198
FORMATION : PARADOX

FILE NO : 3803-003382
ANALYSTS : DS;EV

FULL DIAMETER ANALYSIS-BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	VERTICAL	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
55	5488.0-89.0 5489.0-92.0	3.59	*		8.1	2.9	32.4	2.77	LM GRY VFXLN ANHY/DOL SL/VUG CORE LOSS
	ISMAY ZONE CORE # 2 5492-5552								
56	5492.0-93.0	10.	2.53		9.5	2.0	48.2	2.73	LM GRY VFXLN SL/VUG
57	5493.0-94.0	1.67	1.30		10.6	1.4	57.5	2.73	LM GRY VFXLN SL/VUG
58	5494.0-95.0	15.	8.68	1.28	12.8	6.8	56.8	2.72	LM GRY VFXLN SL/VUG
59	5495.0-96.0	0.98	0.67	1.11	10.1	6.9	25.8	2.72	LM GRY VFXLN SL/VUG
60	5496.0-97.0	2.65	0.96		12.6	6.8	35.5	2.73	LM GRY VFXLN SL/VUG
61	5497.0-98.0	5.34	3.92		9.2	0.0	46.4	2.75	LM GRY VFXLN SL/ANHY SL/VUG
62	5498.0-99.0	0.94	0.69	0.44	5.5	2.5	29.4	2.74	LM GRY VFXLN SL/ANHY SL/VUG
63	5499.0-00.0	2.03	1.10		5.5	3.4	41.0	2.80	LM GRY VFXLN SL/DOL SL/VUG
64	5500.0-01.0	0.47	0.45		14.9	1.7	39.5	2.83	DOL LTBRN VFXLN SL/ANHY
65	5501.0-02.0	0.32	0.32		14.7	1.6	55.9	2.80	DOL LTBRN VFXLN SL/CALC
66	5502.0-03.0	1.65	1.51		17.4	1.5	44.3	2.83	DOL LTBRN VFXLN
67	5503.0-04.0	0.06	0.05		6.3	1.9	37.6	2.81	DOL LTBRN VFXLN SL/SHY
68	5504.0-05.0	0.01	<0.01	0.17	2.3	0.0	43.8	2.73	LM GRY VFXLN
69	5505.0-06.0	0.02	0.01		4.9	0.0	18.3	2.74	LM GRY VFXLN
70	5506.0-07.0	0.02	<0.01		2.7	0.0	31.7	2.74	LM GRY VFXLN
71	5507.0-08.0	5.22	5.02	1.90	15.6	1.3	10.0	2.86	DOL LTBRN VFXLN SL/ANHY
72	5508.0-09.0	7.50	7.40		18.7	0.0	13.4	2.85	DOL LTBRN VFXLN SL/ANHY
73	5509.0-10.0	0.31	0.20		7.8	0.0	54.5	2.79	LM GRY VFXLN SL/DOL
74	5510.0-11.0	<0.01	<0.01		1.9	0.0	67.0	2.74	LM GRY VFXLN FOSS
75	5511.0-12.0	<0.01	*	0.01	1.6	0.0	66.7	2.73	LM GRY VFXLN FOSS
76	5512.0-13.0	<0.01	<0.01		2.4	0.0	63.2	2.77	LM GRY VFXLN SL/ANHY FOSS
77	5513.0-14.0	1.17	1.16		17.0	0.0	52.5	2.80	DOL LTBRN VFXLN
78	5514.0-15.0	0.09	0.08		3.6	0.0	65.8	2.72	LM GRY VFXLN SL/ANHY SL/VUG
79	5515.0-16.0	1.19	0.67		7.8	2.1	54.9	2.73	LM GRY VFXLN SL/ANHY SL/VUG
80	5516.0-17.0	4.60	1.73		8.5	1.9	37.4	2.73	LM GRY VFXLN SL/ANHY SL/VUG

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

MARATHON OIL COMPANY
4-25 TIN CUP MESA

DATE : 22-APRIL-198
FORMATION : PARADOX

FILE NO : 3803-003382
ANALYSTS : DS;EV

FULL DIAMETER ANALYSIS-BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	VERTICAL	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
81	5517.0-18.0	2.29	2.09		9.7	0.0	55.7	2.74	LM GRY VFXLN SL/ANHY SL/VUG
82	5518.0-19.0	1.71	0.93		8.7	1.2	48.8	2.75	LM GRY VFXLN SL/ANHY SL/VUG
83	5519.0-20.0	0.87	0.82		8.3	0.0	63.0	2.77	LM GRY VFXLN SL/ANHY SL/VUG
84	5520.0-21.0	10.	3.45		10.3	0.0	40.8	2.76	LM GRY VFXLN SL/ANHY SL/VUG
85	5521.0-22.0	5.46	4.97		12.1	1.5	36.6	2.75	LM GRY VFXLN SL/ANHY SL/VUG
86	5522.0-23.0	26.	17.		14.7	1.5	44.9	2.76	LM GRY VFXLN SL/ANHY SL/VUG
87	5523.0-24.0	5.41	4.10		14.3	0.0	94.6	2.74	LM GRY VFXLN SL/DOL SL/VUG
88	5524.0-25.0	15.	14.		16.3	0.0	86.3	2.75	LM GRY VFXLN SL/DOL SL/VUG
89	5525.0-26.0	7.55	6.97		15.3	0.0	77.0	2.75	LM GRY VFXLN SL/DOL SL/VUG
90	5526.0-27.0	13.	12.	20.	15.1	0.0	65.4	2.75	LM GRY VFXLN SL/DOL SL/VUG
91	5527.0-28.0	6.64	4.74		13.8	0.0	63.4	2.76	LM GRY VFXLN SL/DOL SL/VUG
92	5528.0-29.0	9.27	6.47		14.0	0.0	79.5	2.75	LM GRY VFXLN SL/DOL SL/VUG
93	5529.0-30.0	10.	8.36		13.8	0.0	83.0	2.76	LM GRY VFXLN SL/DOL SL/VUG
94	5530.0-31.0	9.40	7.59		14.3	0.0	73.0	2.75	LM GRY VFXLN SL/DOL SL/VUG
95	5531.0-32.0	7.91	6.48		13.6	0.0	82.5	2.75	LM GRY VFXLN SL/DOL SL/VUG
96	5532.0-33.0	7.01	4.27		15.5	0.0	88.1	2.82	LM GRY VFXLN SL/DOL SL/VUG
97	5533.0-34.0	11.	11.		15.9	0.0	75.6	2.77	LM GRY VFXLN SL/DOL SL/VUG
98	5534.0-35.0	6.50	4.38		12.2	0.0	75.5	2.76	LM GRY VFXLN SL/DOL SL/VUG
99	5535.0-36.0	14.	13.		13.9	0.0	77.0	2.75	LM GRY VFXLN SL/DOL SL/VUG
100	5536.0-37.0	7.22	5.33		13.4	0.0	76.3	2.75	LM GRY VFXLN SL/DOL SL/VUG
101	5537.0-38.0	2.78	2.06		10.8	0.0	76.2	2.77	LM GRY VFXLN SL/DOL SL/VUG
102	5538.0-39.0	1.00	0.86		9.0	0.0	53.9	2.77	LM GRY VFXLN SL/DOL SL/ANHY
103	5539.0-40.0	0.92	0.76		9.1	0.0	62.6	2.80	LM GRY VFXLN SL/DOL SL/ANHY
104	5540.0-41.0	0.43	0.35		6.4	0.0	59.8	2.80	LM GRY VFXLN SL/DOL SL/ANHY
105	5541.0-42.0	1.00	0.87		6.4	0.0	39.1	2.78	LM GRY VFXLN SL/DOL SL/ANHY
106	5542.0-43.0	1.12	1.00		8.1	0.0	34.8	2.78	LM GRY VFXLN SL/DOL SL/ANHY
107	5543.0-44.0	1.14	1.06		8.6	0.0	71.2	2.78	LM GRY VFXLN SL/DOL SL/ANHY
108	5544.0-45.0	1.95	1.20		9.4	0.0	79.8	2.78	LM GRY VFXLN SL/DOL SL/ANHY
109	5545.0-46.0	0.75	0.65		8.0	0.9	69.2	2.76	LM GRY VFXLN SL/DOL SL/ANHY
110	5546.0-47.0	1.38	0.71		7.6	1.3	46.1	2.78	LM GRY VFXLN SL/DOL SL/ANHY

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

MARATHON OIL COMPANY
4-25 TIN CUP MESA

DATE : 22-APRIL-198
FORMATION : PARADOX

FILE NO : 3803-003382
ANALYSTS : DS;EV

FULL DIAMETER ANALYSIS-BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	VERTICAL	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
111	5547.0-48.0	0.96	0.82		5.4	0.0	65.4	2.78	LM GRY VFXLN SL/DOL SL/ANHY
112	5548.0-49.0	0.15	0.14		3.9	0.0	25.7	2.79	LM GRY VFXLN SL/DOL SL/ANHY
113	5549.0-50.0	0.07	0.06		4.9	0.0	57.1	2.83	LM GRY VFXLN SL/DOL SL/ANHY
	5550.0-52.0								CORE LOSS
	5552.0-16.0								DRILLED TO DESERT CREEK
	DESERT CREEK ZONE CORE # 3 5716-5758								
	5716.0-33.0								LM SL/SHY -- NO ANALYSIS
	5733.0-58.0								SHALE -- NO ANALYSIS

** DENOTES FRACTURE PERMEABILITY

* SAMPLE NOT SUITABLE FOR FULL DIAMETER ANALYSIS

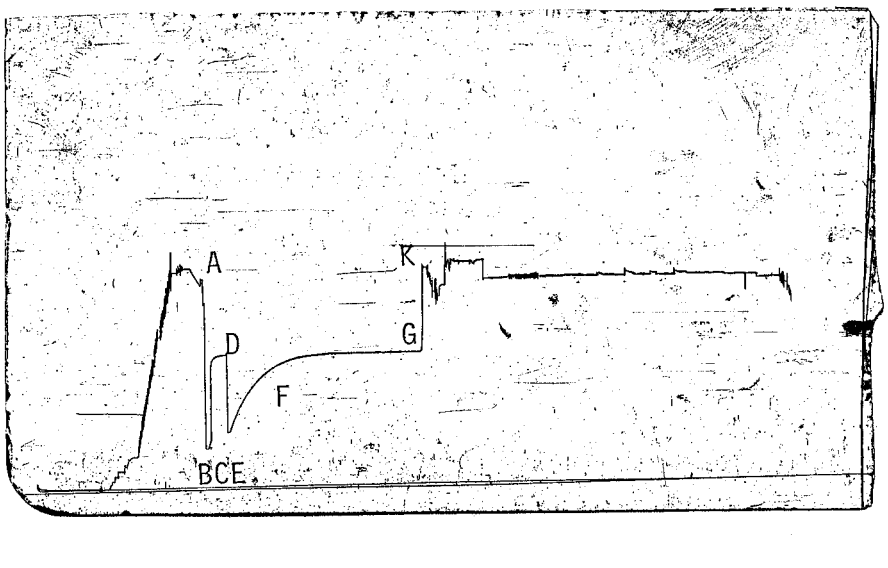
LYNES
TECHNICAL SERVICES, Security Life [illegible]. • Suite 1350 • 1616 Glenarm • Denver, Colora[illegible]0202 • Phone: (303) 573-8027

Contractor	Energy Search	Top Choke	1/4"
Rig No.	12	Bottom Choke	3/4"
Spot	--	Size Hole	7 7/8"
Sec.	25	Size Rat Hole	--
Twp.	38S	Size & Wt. D. P.	4½" XH 16.60#
Rng.	25E	Size Wt. Pipe	--
Field	TCM	I. D. of D. C.	2¼"
County	San Juan	Length of D. C.	512 ft
State	Utah	Total Depth	5778 ft
Elevation	--	Interval Tested	5429-5510 ft
Formation	Ismay	Type of Test	Inflate Straddle

Flow No. 1	8	Min.
Shut-in No. 1	31	Min.
Flow No. 2	179	Min.
Shut-in No. 2	174	Min.
Flow No. 3	--	Min.
Shut-in No. 3	--	Min.
Bottom Hole Temp.	130.6°F	
Mud Weight	11.2	
Gravity	--	
Viscosity	36	

Tool opened @ 8:30 am

Outside Recorder



PRD Make Kuster K-3
No. 24552 Cap. 6625 @ 5439'

Press		Corrected
Initial Hydrostatic	A	3167
Final Hydrostatic	K	3125
Initial Flow	B	564
Final Initial Flow	C	689
Initial Shut-in	D	1914
Second Initial Flow	E	794
Second Final Flow	F	1865
Second Shut-in	G	1914
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Lynes Dist.: Cortez, CO
Our Tester: Bryan Scott
Witnessed By: Mac Hansen

Did Well Flow – Gas Yes Oil No Water No

Ran 500 ft fresh water cushion
Test was reverse circulated

RECOVERY IN PIPE:

1712 ft total fluid recovered (estimated)	=	19.20 bbls.
182 ft gas cut oil	=	2.58 bbls.
500 ft highly gas cut water with trace of oil	=	7.10 bbls.
1007 ft water cut emulsion salt water	=	9.52 bbls.

Blow Description:

1st flow: Tool opened with a ½" blow increasing to 50" blow at the end of the flow.

2nd flow: Tool opened with a 5" blow increasing to 3 psi (with gas to surface in 115 minutes). See gas volume report.

Comments: The test results indicate a mechanically successful test. The flow and shut-in curves suggest excellent permeability within the zone tested. The final shut-in stabilized in 80 minutes, therefore no extrapolation was performed. DMR pressures are recorded in psia.

Operator Marathon Oil Co.
Address P.O. Box 2659 Casper, WY 82602
Well Name and No. #4-25 Tin Cup Mesa
Ticket No. 00760
Date 4-23-85
DST No. 1
No. Final Copies 17

Form 1

LY-230

MARATHON OIL CO.
DST#: 1
#4-2 TIN CUP MESA
5429 - 5510ft.

Location: SEC. 25 T38S R25E
Test Type: INFLATE STRADDLE
Formation: ISMAY

Recorder Number: 6021
Recorder Depth: 5439 ft.

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P psi	PRESSURE psi	(T+dt)/dt ABSCISSA	PRESSURE SQUARED psi^2/10^6
A	INITIAL HYDROSTATIC	0.00		2998.0		
B	START OF 1st FLOW	0.00		528.0		
	1st FLOW PERIOD	1.00	10.0	538.0		
		2.00	15.0	543.0		
		3.00	30.0	558.0		
		4.00	55.0	583.0		
		5.00	85.0	613.0		
		6.00	110.0	638.0		
C	END OF 1st FLOW	8.00	165.0	693.0		
	1st SHUTIN PERIOD	0.00	0.0	693.0	0.0000	
		1.00	750.0	1443.0	9.0000	
		2.00	1110.0	1803.0	5.0000	
		3.00	1160.0	1853.0	3.6667	
		4.00	1180.0	1873.0	3.0000	
		5.00	1190.0	1883.0	2.6000	
		6.00	1200.0	1893.0	2.3333	
		8.00	1205.0	1898.0	2.0000	
		9.00	1215.0	1908.0	1.8889	
		10.00	1215.0	1908.0	1.8000	
		12.00	1225.0	1918.0	1.6667	
		14.00	1225.0	1918.0	1.5714	
		16.00	1225.0	1918.0	1.5000	
		18.00	1230.0	1923.0	1.4444	
		20.00	1230.0	1923.0	1.4000	
		22.00	1235.0	1928.0	1.3636	
		24.00	1235.0	1928.0	1.3333	
		26.00	1235.0	1928.0	1.3077	
		28.00	1240.0	1933.0	1.2857	
		30.00	1240.0	1933.0	1.2667	
D	END OF 1st SHUTIN	31.00	1240.0	1933.0	1.2581	
E	START OF 2nd FLOW	0.00		743.0		
	2nd FLOW PERIOD	5.00	100.0	843.0		
		10.00	210.0	953.0		
		16.00	325.0	1068.0		

MARATHON OIL CO.
DST#: 1
#4-2 TIN CUP MESA
5429 - 5510ft.

Location: SEC. 25 T38S R25E
Test Type: INFLATE STRADDLE
Formation: ISMAY

Recorder Number: 6021
Recorder Depth: 5439 ft.

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P psi	PRESSURE psi	(T+dt)/dt ABSCISSA	PRESSURE SQUARED psi^2/10^6
		20.00	395.0	1138.0		
		25.00	475.0	1218.0		
		30.00	545.0	1288.0		
		35.00	610.0	1353.0		
		40.00	670.0	1413.0		
		45.00	720.0	1463.0		
		50.00	770.0	1513.0		
		56.00	820.0	1563.0		
		60.00	855.0	1598.0		
		65.00	890.0	1633.0		
		70.00	925.0	1668.0		
		75.00	955.0	1698.0		
		80.00	980.0	1723.0		
		85.00	1005.0	1748.0		
		90.00	1025.0	1768.0		
		96.00	1050.0	1793.0		
		100.00	1065.0	1808.0		
		110.00	1095.0	1838.0		
		120.00	1115.0	1858.0		
		130.00	1135.0	1878.0		
		140.00	1150.0	1893.0		
		150.00	1155.0	1898.0		
		160.00	1160.0	1903.0		
		170.00	1170.0	1913.0		
F	END OF 2nd FLOW	179.00	1175.0	1918.0		
	2nd SHUTIN PERIOD	0.00	0.0	1918.0	0.0000	
		1.00	5.0	1923.0	188.0000	
		2.00	5.0	1923.0	94.5000	
		3.00	5.0	1923.0	63.3333	
		5.00	5.0	1923.0	38.4000	
		6.00	5.0	1923.0	32.1667	
		7.00	5.0	1923.0	27.7143	
		8.00	5.0	1923.0	24.3750	
		9.00	5.0	1923.0	21.7778	
		10.00	5.0	1923.0	19.7000	
		15.00	5.0	1923.0	13.4667	
		20.00	5.0	1923.0	10.3500	
		25.00	5.0	1923.0	8.4800	

MARATHON OIL CO.
DST#: 1
#4-2 TIN CUP MESA
5429 - 5510ft.

Location: SEC. 25 T38S R25E
Test Type: INFLATE STRADDLE
Formation: ISMAY

Recorder Number: 6021
Recorder Depth: 5439 ft.

TIME-PRESSURE LISTING

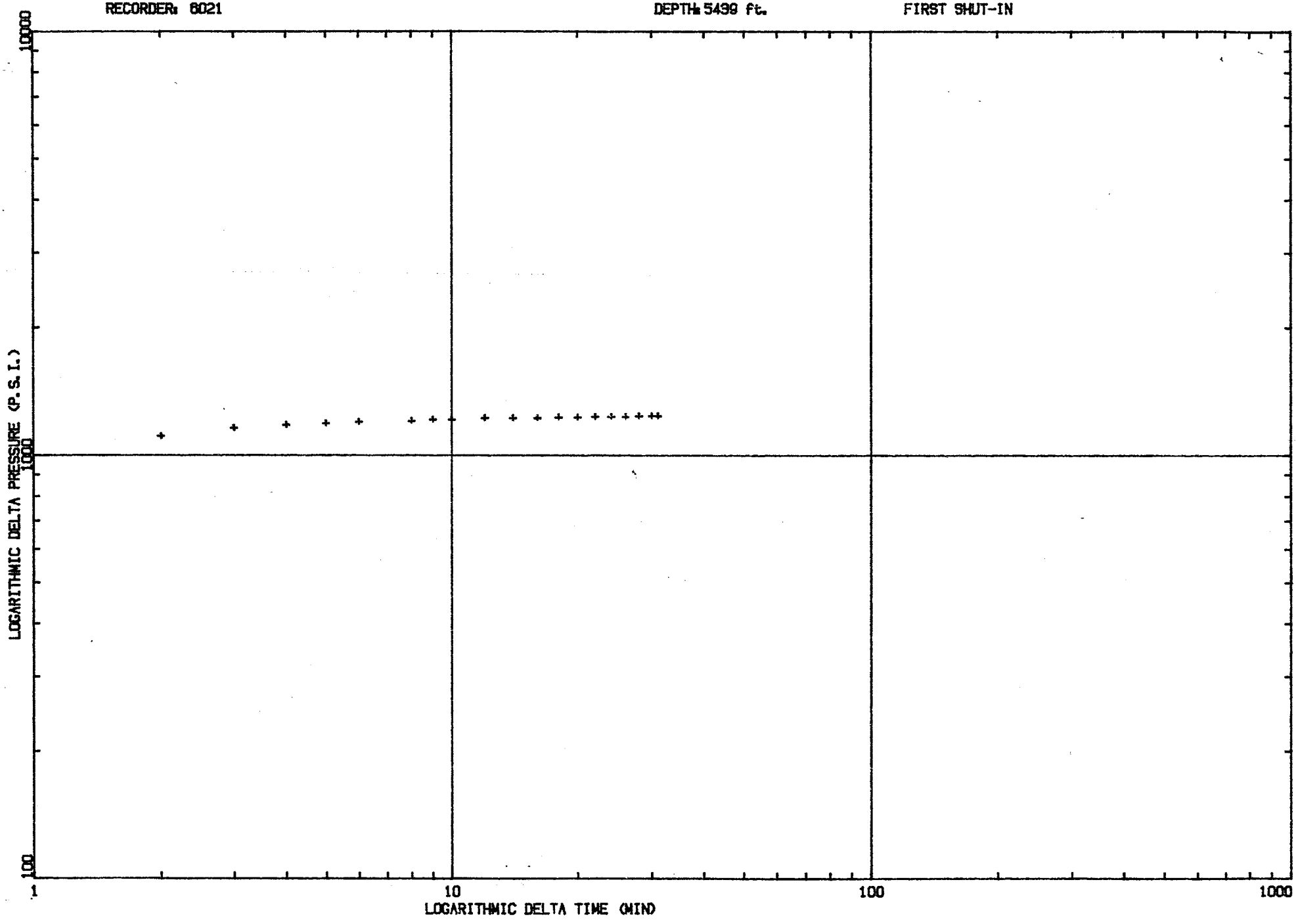
CHART LABEL	COMMENTS	TIME MIN.	DELTA P psi	PRESSURE psi	(T+dt)/dt ABSCISSA	PRESSURE SQUARED psi^2/10^6
		30.00	10.0	1928.0	7.2333	
		36.00	10.0	1928.0	6.1944	
		40.00	10.0	1928.0	5.6750	
		45.00	10.0	1928.0	5.1556	
		50.00	10.0	1928.0	4.7400	
		55.00	10.0	1928.0	4.4000	
		60.00	10.0	1928.0	4.1167	
		65.00	10.0	1928.0	3.8769	
		70.00	10.0	1928.0	3.6714	
		75.00	10.0	1928.0	3.4933	
		80.00	15.0	1933.0	3.3375	
		85.00	15.0	1933.0	3.2000	
		90.00	15.0	1933.0	3.0778	
		95.00	15.0	1933.0	2.9684	
		100.00	15.0	1933.0	2.8700	
		105.00	15.0	1933.0	2.7810	
		110.00	15.0	1933.0	2.7000	
		115.00	15.0	1933.0	2.6261	
		120.00	15.0	1933.0	2.5583	
		130.00	15.0	1933.0	2.4385	
		140.00	15.0	1933.0	2.3357	
		150.00	15.0	1933.0	2.2467	
		160.00	15.0	1933.0	2.1688	
		170.00	15.0	1933.0	2.1000	
G	END OF 2nd SHUTIN	174.00	15.0	1933.0	2.0747	
Q	FINAL HYDROSTATIC	0.00		3108.0		

* VALUES USED FOR EXTRAPOLATIONS

OPERATOR: MARATHON OIL CO.
LOCATION: SEC. 25 T38S R25E
RECORDER: 6021

WELL NAME: #4-2 TIN CUP MESA
DST #: 1
DEPTH: 5439 ft.

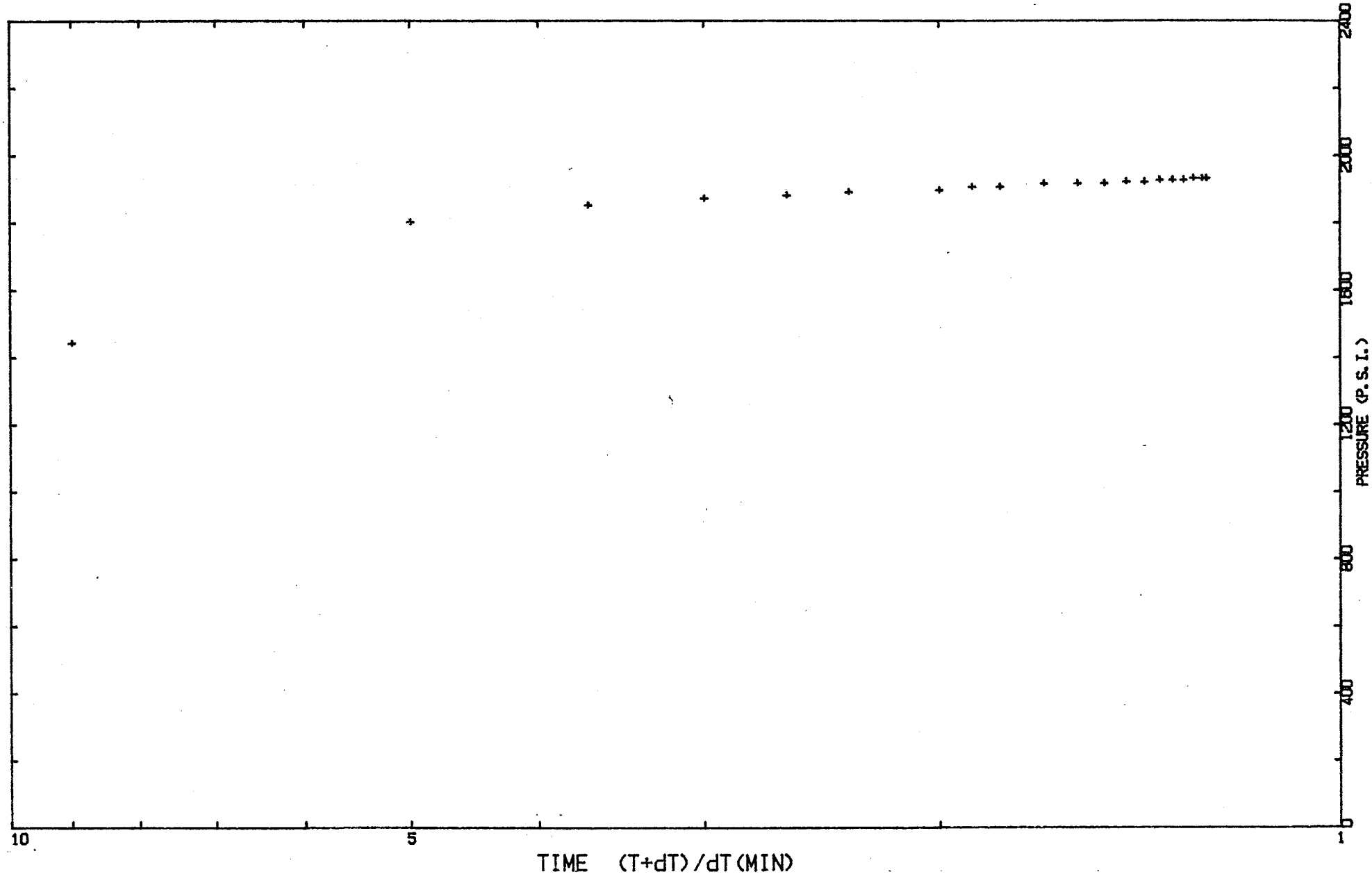
FIRST SHUT-IN



OPERATOR: MARATHON OIL CO.
WELL NAME: #4-2 TIN CUP MESA
LOCATION: SEC. 25 T38S R25E
FIRST SHUT-IN
RECORDER: 6021

DST #: 1

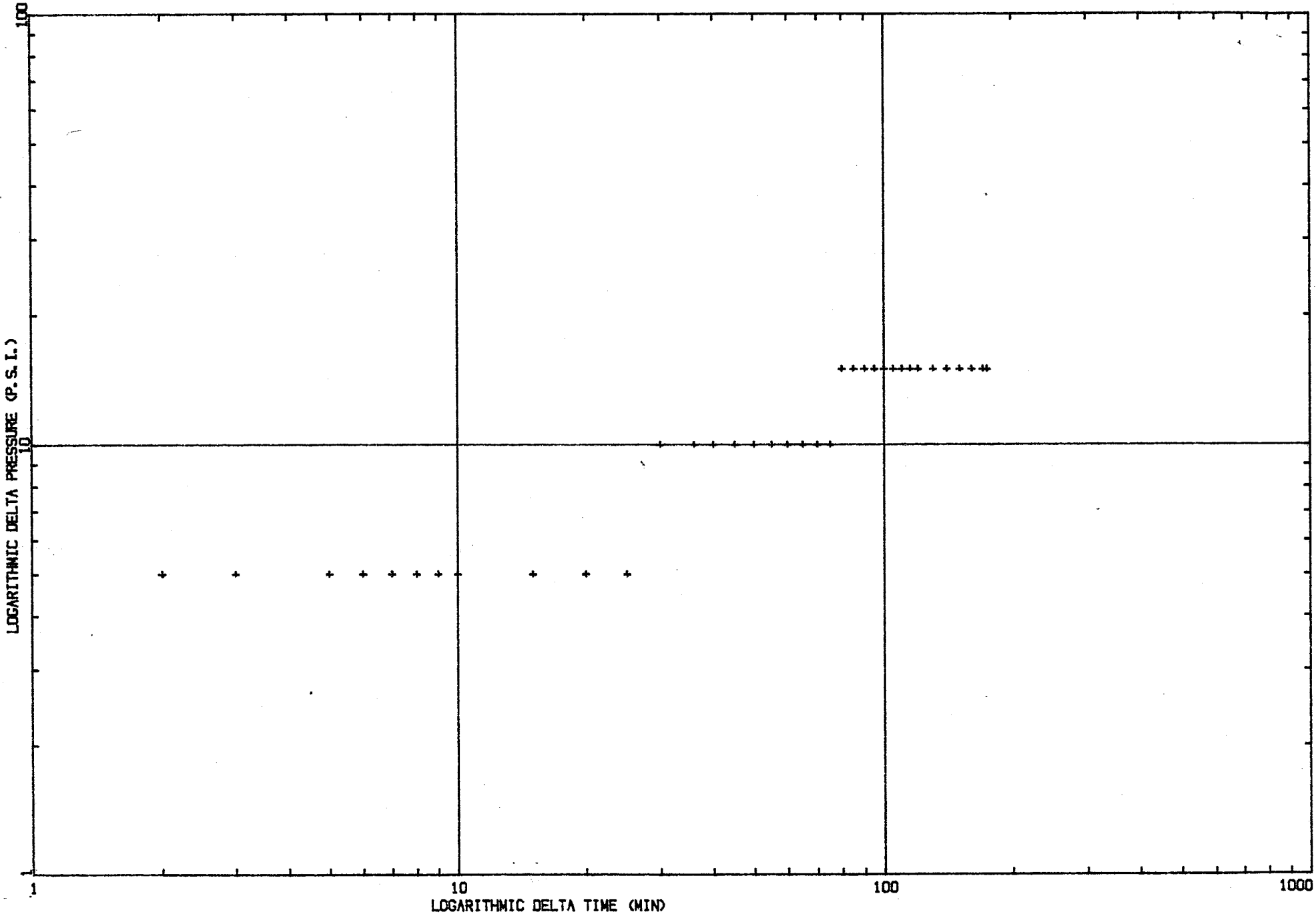
DEPTH: 5439 ft.



OPERATOR: MARATHON OIL CO.
LOCATION: SEC. 25 T38S R25E
RECORDER: 8021

WELL NAME: #4-2 TIN CUP MESA
DST #: 1
DEPTH: 5439 ft.

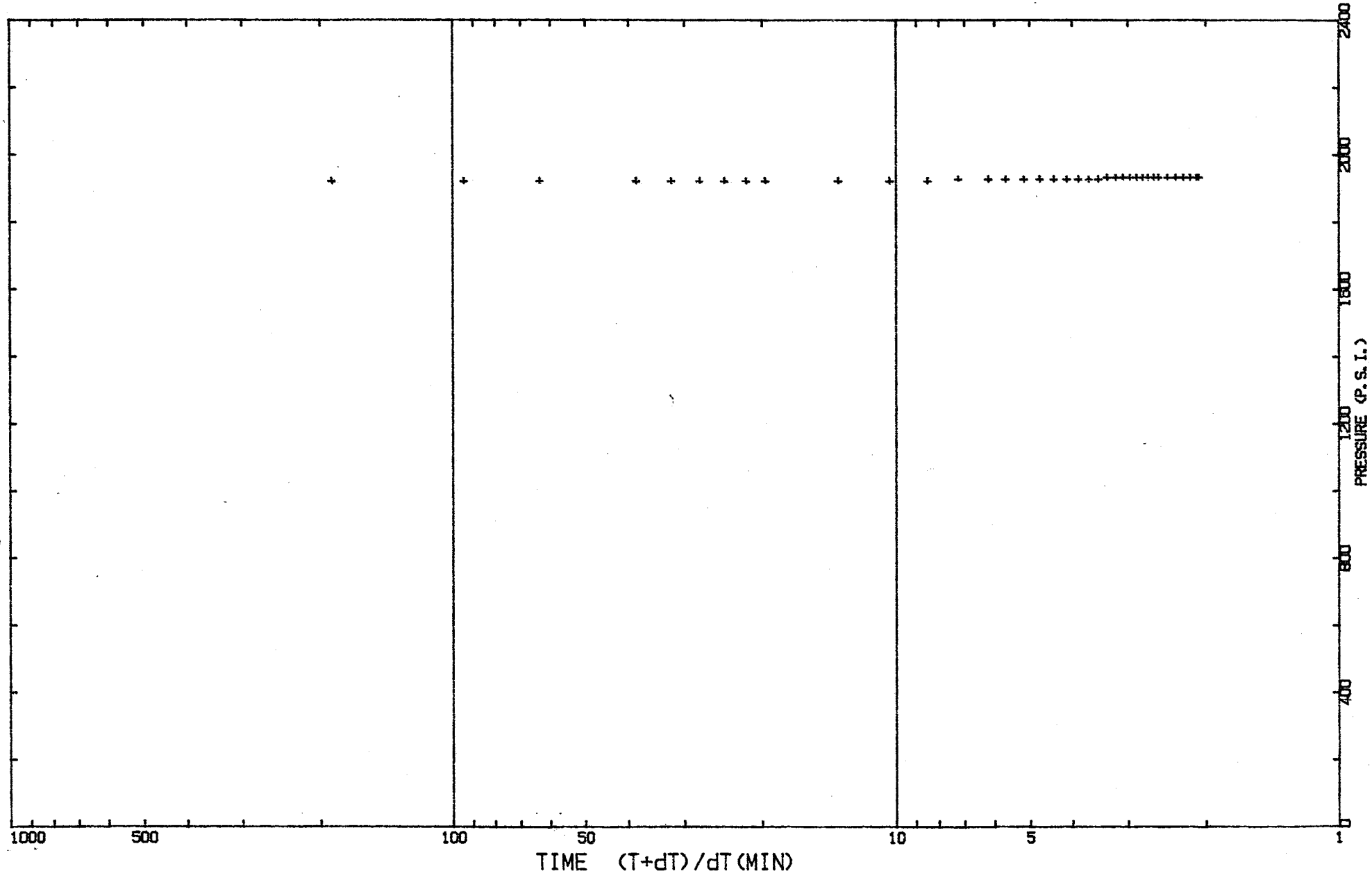
SECOND SHUT-IN



OPERATOR: MARATHON OIL CO.
WELL NAME: #4-2 TIN CUP MESA
LOCATION: SEC. 25 T38S R25E
SECOND SHUT-IN
RECORDER: 6021

DST #: 1

DEPTH: 5439 ft.



MARATHON OIL CO.
DST#: 1
#4-2 TIN CUP MESA
5429 - 5510ft.

GAS MEASUREMENTS
****

Device: FLOOR MANIFOLD Riser: 0.0 in. Bomb #:
Sent to:

FLOW #	TIME (min)	READING(psi)	CHOKE (in)	Mcf/d
2	115	3.0	.250	26.5
2	130	4.0	.250	28.0
2	140	5.0	.250	29.5
2	150	5.0	.250	29.5
2	160	5.0	.250	29.5
2	170	6.0	.250	30.9
2	180	6.0	.250	30.9

LYNES INC.

DMR—312 DIGITAL MEMORY RECORDER NO. 6021 CAP 10000 AT 5439

OPERATOR Marathon Oil Co. WELL NAME #4-25 Tin Cup Mesa TICKET NO. 00760 DST. NO. 1

DMR TYPE #2
SKIP = 9.00000
BIAS = 00:00:00
TEMP. IN DEG. F
PRES. IN P.S.I.

03:12:30 T	122.312
Initial Hydro.	2997.50
	2982.50
	2967.50
	2957.50
	2737.50
	2632.50
	2702.50
03:20:30 T	122.437
Start 1st flow	527.500
	537.500
	542.500
	557.500
	582.500
	612.500
	637.500
03:28:30 T	123.562
End 1st flow	692.500
	1442.50
	1802.50
	1852.50
	1872.50
	1882.50
	1892.50
03:36:30 T	126.187
	1897.50
	1907.50
	1907.50
	1912.50
	1917.50
	1917.50
	1917.50
03:44:30 T	127.312
	1917.50
	1922.50
	1922.50
	1922.50
	1922.50
	1922.50
	1927.50
03:52:30 T	127.437
	1927.50
	1932.50
	1927.50
	1932.50
	1932.50
	1932.50
	1932.50
04:00:30 T	127.312
End 1st shut-in	1932.50
Start 2nd flow	742.500
	767.500
	797.500
	817.500
	842.500
	867.500
04:08:30 T	127.312
	907.500
	932.500
	952.500
	972.500
	992.500
	1012.50
	1032.50
04:16:30 T	128.437
	1067.50
	1087.50
	1107.50
	1122.50
	1137.50
	1157.50
	1172.50
04:24:30 T	129.437
	1202.50
	1217.50
	1232.50
	1247.50
	1262.50
	1277.50
	1287.50
04:32:30 T	130.062
	1312.50
	1327.50
	1342.50
	1352.50
	1367.50
	1377.50
	1387.50
04:40:30 T	130.437
	1412.50
	1422.50
	1432.50
	1442.50
	1452.50
	1462.50
	1472.50
04:48:30 T	130.562
	1492.50
	1502.50
	1512.50
	1522.50
	1532.50
	1537.50
	1547.50
04:56:30 T	130.562
	1562.50
	1572.50
	1582.50
	1587.50
	1597.50
	1602.50
	1612.50
05:04:30 T	130.687
	1627.50
	1632.50
	1642.50
	1647.50
	1652.50
	1662.50
	1667.50
05:12:30 T	130.687
	1677.50
	1687.50
	1692.50
	1697.50
	1702.50
	1707.50
	1712.50
05:20:30 T	130.562
	1722.50
	1727.50
	1732.50
	1737.50
	1742.50
	1747.50
	1752.50
05:28:30 T	130.562
	1762.50
	1762.50
	1767.50
	1772.50
	1777.50
	1782.50
	1782.50
05:36:30 T	130.437
	1792.50
	1797.50
	1797.50
	1802.50
	1807.50
	1807.50
	1812.50
05:44:30 T	130.437
	1817.50
	1822.50
	1822.50
	1827.50
	1827.50
	1832.50
	1837.50
05:52:30 T	130.312
	1842.50
	1842.50
	1847.50
	1847.50
	1852.50
	1857.50
	1857.50
06:00:30 T	130.187
	1857.50
	1862.50
	1862.50
	1867.50
	1867.50
	1867.50
	1872.50
06:08:30 T	130.062
	1872.50
	1877.50
	1877.50
	1877.50
	1882.50
	1882.50
	1882.50
06:16:30 T	130.062
	1887.50
	1887.50
	1887.50
	1887.50
	1892.50
	1892.50
	1892.50
06:24:30 T	129.937
	1892.50
	1897.50
	1897.50
	1897.50
	1897.50
	1897.50
	1897.50
06:32:30 T	129.812
	1902.50
	1902.50
	1902.50
	1902.50
	1902.50
	1902.50
	1902.50
06:40:30 T	129.687
	1902.50
	1907.50
	1907.50
	1907.50
	1907.50
	1907.50
	1907.50
06:48:30 T	129.687
	1912.50
	1912.50
	1912.50
	1912.50
	1912.50
	1912.50
	1912.50
06:56:30 T	129.562
	1912.50
	1912.50
	1917.50
End 2nd flow	1917.50
	1922.50
	1922.50
	1922.50
07:04:30 T	129.437
	1922.50
	1922.50
	1922.50
	1922.50
	1922.50
	1922.50
	1922.50
07:12:30 T	129.437
	1922.50
	1922.50
	1922.50
	1922.50
	1922.50
	1922.50
	1922.50
07:20:30 T	129.312
	1922.50
	1922.50
	1922.50
	1922.50
	1922.50
	1922.50
	1922.50
07:28:30 T	129.312
	1927.50
	1927.50
	1927.50
	1922.50
	1927.50
	1927.50
	1927.50
07:36:30 T	129.187
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50
07:44:30 T	129.187
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50

LYNES INC.

DMR—312 DIGITAL MEMORY RECORDER NO. 6021 CAP 10000 AT 5439

OPERATOR Marathon Oil Co. WELL NAME #4-25 Tin Cup Mesa TICKET NO. 00760 DST. NO. 1

07:52:30 T	129.062
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50
08:00:30 T	128.937
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50
08:08:30 T	128.937
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50
	1927.50
08:16:30 T	128.937
	1927.50
	1927.50
	1927.50
	1927.50
	1932.50
	1927.50
	1927.50
08:24:30 T	128.812
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
08:32:30 T	128.812
	1932.50
	1932.50
	1927.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
08:40:30 T	128.812
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
08:48:30 T	128.687
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
08:56:30 T	128.687
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50

09:04:30 T	128.687
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
09:12:30 T	128.562
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
09:20:30 T	128.562
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
09:28:30 T	128.562
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
09:36:30 T	128.562
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
09:44:30 T	128.437
	1937.50
	1932.50
	1932.50
	1937.50
	1932.50
	1932.50
	1932.50
09:52:30 T	128.437
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
	1932.50
End 2nd shut-in	1932.50
10:00:30 T	128.437
	1987.50
	1942.50
	1937.50
	2202.50
	3122.50
	3127.50
	3117.50
10:08:30 T	128.562
	3112.50
Final Hydro.	-3107.50
	3107.50
	3107.50
	3082.50
	3047.50
	3067.50

RATHON OIL CO.
DST#: 1
#4-2 TIN CUP MESA
5429 - 5510ft.

Location: SEC. 25 T38S R25E
Test Type: INFLATE STRADDLE
Formation: ISMAY

Recorder Number: 6021
Recorder Depth: 5439

SAMPLE DATA

SAMPLE CHAMBER:

Capacity of sample chamber	2300	cc
Volume of sample.....	2300	cc
Pressure in sampler.....	110	psig
Where sampler was drained...	on location	

Sampler contained:
Mud 2300 cc

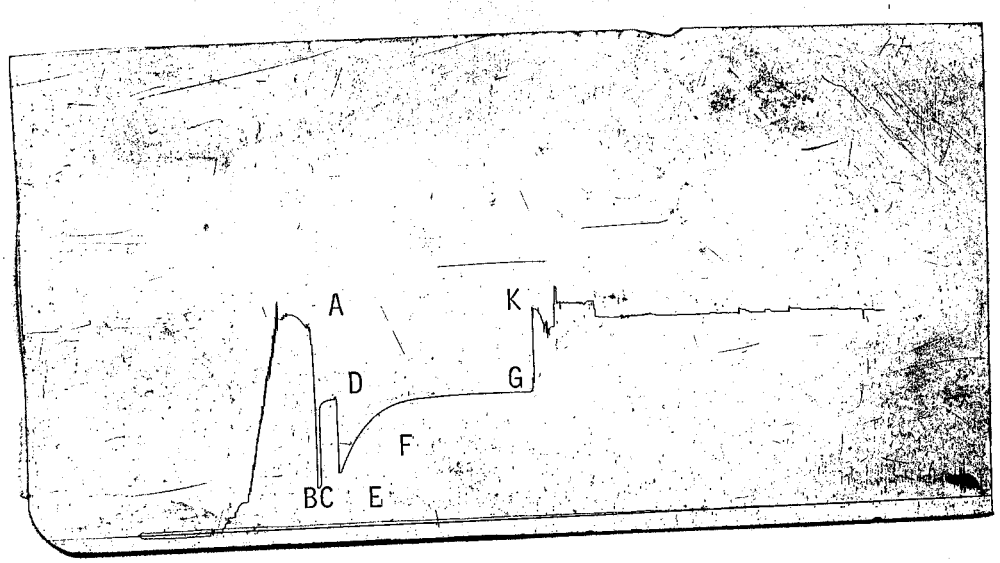
RESISTIVITY DATA:

Top.....:	
Middle.....:	132 000 PPM NACL
Bottom.....:	132 000 PPM NACL
Sampler.....:	6000 PPM NACL
Mud pit.....:	6000 PPM NACL
Make-up Water..:	

ARATHON OIL CO
ST#: 1
#4-25 TIN CUP MESA
5429 - 5510ft.

PRESSURE RECORDER NUMBER : 24521

DEPTH : 5439.00ft. LOCATION : OUTSIDE
TYPE : K-3 CAPACITY : 6625.00psi

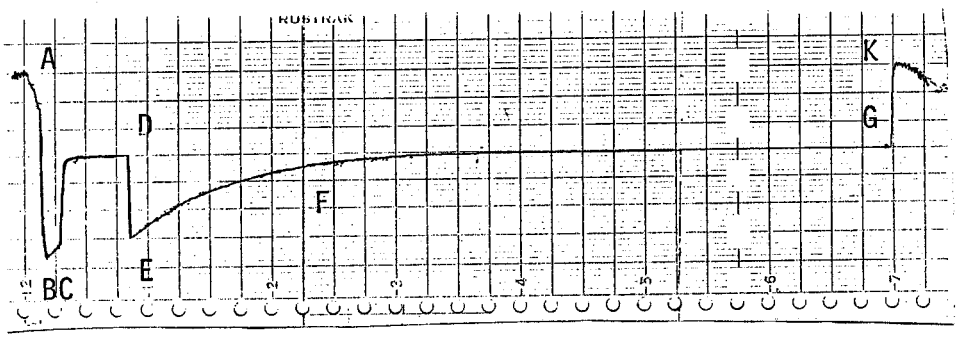


	PRESSURE psi
A)Initial Hydro :	3099.0
B)1st Flow Start:	570.0
C)1st Flow End :	617.0
D)END 1st Shutin:	1832.0
E)2nd Flow Start:	777.0
F)2nd Flow End :	1835.0
G)END 2nd Shutin:	1808.0
Q)Final Hydro. :	3086.0

TEST TIMES(MIN)	
1st FLOW :	8
SHUTIN:	31
2nd FLOW :	179
SHUTIN:	174

PRESSURE RECORDER NUMBER : 6021

DEPTH : 5439.00ft. LOCATION : OUTSIDE
TYPE : DMR CAPACITY : 10000.00psi



	PRESSURE psi
A)Initial Hydro :	2998.0
B)1st Flow Start:	528.0
C)1st Flow End :	693.0
D)END 1st Shutin:	1933.0
E)2nd Flow Start:	743.0
F)2nd Flow End :	1918.0
G)END 2nd Shutin:	1933.0
Q)Final Hydro. :	3108.0

2. Because of the proximity of the proposed well to the unit boundary, the Division requires documentation of concurrence with the proposed location from the offset leaseholder in order to ensure protection of correlative rights. Therefore, Marathon shall obtain and submit to the Division written authorization from the owners of leases within a 500' radius of the proposed location for the drilling of the proposed well. In addition, ~~Marathon shall~~ if the proposed well intersects a sufficient amount of productive pay to warrant expansion of the unit, Marathon shall take the appropriate steps to proceed with such action.

Copied & sent 7/27/87 mp

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

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

5. LEASE DESIGNATION AND SERIAL NO.: U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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 Injection Well

RECEIVED
JUL 22 1987
DIVISION OF OIL, GAS & MINING

7. UNIT AGREEMENT NAME: Tin Cup Mesa

2. NAME OF OPERATOR: Marathon Oil Company

8. FARM OR LEASE NAME: Tin Cup Mesa

3. ADDRESS OF OPERATOR: P. O. Box 2690, Cody, Wyoming 82414

9. WELL NO.: 4-25

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface: SESW 50' FSL & 2490' FWL

10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 25, T38S, R25E

14. PERMIT NO.: 43-037-31145

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5036' GL

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	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			
(Other) Please See Below			X	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

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

A packer change is scheduled in the near future for this injection well. Marathon Oil Company requests permission to dig a small earthen pit on the existing disturbed location in order to collect any fluids which might be spilled.

Once the work is finished, the fluids will be transported to and disposed of in the Tin Cup Mesa Evaporative Pit. The small temporary pit will then be backfilled and reclaimed.

Accepted
~~APPROVED~~ BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 7/27/87
BY:

BLM Orig & 3 cc: UDOGM-2 WRF, FMK, WTR, RDT, JLS, WRW, Title & Contract (Houston)

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

SIGNED R P Nealon TITLE Regulatory Coordinator DATE July 6, 1987

(This space for Federal or State office use)

APPROVED BY Gene Rodina TITLE District Manager DATE 7/14/87

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

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

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

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

5. LEASE DESIGNATION AND SERIAL NO.: U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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: Injector

7. UNIT AGREEMENT NAME: Tin Cup Mesa

2. NAME OF OPERATOR: Marathon Oil Company

8. FARM OR LEASE NAME: Tin Cup Mesa

3. ADDRESS OF OPERATOR: P. O. Box 2690, Cody, Wyoming 82414

9. WELL NO.: 4-25

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 50' FSL & 2490' FWL

10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 26, T38S, R25E

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5037' GL

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	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) Returned to Production			X
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

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

The use of the temporary pit which was approved for work at the above referenced well is no longer needed. The pit was reclaimed on August 21, 1987.

4 DOGM

BLM-Orig & 3--cc: ~~WOGCC~~-2, WRF, FMK, WTR, RDT, Title & Contract (Houston)

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

SIGNED R P Mealer TITLE Regulatory Coordinator DATE August 25, 1987

(This space for Federal or State office use)

APPROVED BY NOTED TITLE BRANCH OF FLUID MINERALS MOAB DISTRICT DATE AUG 27 1987

CONDITIONS OF APPROVAL, IF ANY:

RECEIVED
SEP 2 1987
DIVISION OF OIL, GAS & MINING

*See Instructions on Reverse Side

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

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

5. LEASE DESIGNATION AND SERIAL NO.: U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1. OIL WELL ☐ GAS WELL ☐ OTHER: Injector

7. UNIT AGREEMENT NAME: Tin Cup Mesa

2. NAME OF OPERATOR: Marathon Oil Company

8. FARM OR LEASE NAME: Tin Cip Mesa

3. ADDRESS OF OPERATOR: P. O. Box 2690, Cody, Wyoming 82414

9. WELL NO.: 4-25

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 50' FSL & 2490' FWL

RECEIVED
MAY 26 1989
DIVISION OF OIL, GAS & MINING

10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 25 Sec. 24, T38S, R25E

14. PERMIT NO.: 43-037-31145

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5037' GL

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	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) Shut-In			X
(Other)			☐	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

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

The above referenced well has been shut-in so testing of nearby injection wells can be performed. The well will remain shut-in until testing and observation is complete.

BLM-Orig & 3--cc: Subdog-2, WRF, FMK, TKS, GBP, Title & Contract (Houston)

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

SIGNED R P Mcalan TITLE Regulatory Coordinator DATE May 3, 1989

(This space for Federal or State office use)

APPROVED BY ACCEPTED TITLE Branch of Fluid Minerals, Moab District DATE MAY 16

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

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

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

RECEIVED
AUG 24 1989
DIV. OIL & GAS & MINING

5. LEASE DESIGNATION AND SERIAL NO.: U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME: Tin Cup Mesa

8. FARM OR LEASE NAME: Tin Cup Mesa

9. WELL NO.: 4-25

10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 25, T38S, R25E

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

1. OIL WELL ☐ GAS WELL ☐ OTHER: Injector

2. NAME OF OPERATOR: Marathon Oil Company

3. ADDRESS OF OPERATOR: P. O. Box 2690, Cody, Wyoming 82414

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 50' FSL & 2490' FWL

14. PERMIT NO.: 43-037-31145

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5037' GL

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

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

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

The above referenced injection well was reactivated on June 10, 1989.

OIL AND GAS
DRN RJF
JRB 1- GLH
DTS SLS
2-TAS
MICROFILM
3- FILE

BLM-Orig & 3--cc: SUDOGM-2, WRF, FMK, Title & Contract (Houston)

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

SIGNED [signature] TITLE Regulatory Coordinator DATE August 7, 1989

(This space for Federal or State office use)

APPROVED BY ACCEPTED TITLE Branch of Fluid Minerals, Moab District DATE AUG 15 1989

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

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

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

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

5. LEASE DESIGNATION AND SERIAL NO.
U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

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

RECEIVED
OCT 23 1989
DIVISION OF OIL, GAS & MINING

1. OIL WELL ☐ GAS WELL ☐ OTHER Injector

7. UNIT AGREEMENT NAME
Tin Cup Mesa

2. NAME OF OPERATOR
Marathon Oil Company

8. FARM OR LEASE NAME
Tin Cup Mesa

3. ADDRESS OF OPERATOR
P. O. Box 2690, Cody, Wyoming 82414

9. WELL NO.
4-25

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
SESESW 50' FSL & 2490' FWL

10. FIELD AND POOL, OR WILDCAT
Tin Cup Mesa

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 25, T38S, R25E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

14. PERMIT NO.
43-037-31145

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
5049' KB

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

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

READ AND UNDERSTAND ATTACHED BLM STIPULATIONS PRIOR TO CONSTRUCTION.

OIL AND GAS	
DRN	RJF
JRB	GLH
DTS	SLS
2-TAS	
MICROFILM	
3. FILE	

Marathon Oil Company requests approval to isolate some existing perforations by following the attached procedure so that injected fluids will be isolated to the Upper portion of perforations within the Upper Ismay Formation.

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 10-30-89
BY:

BLM-Orig & 3--cc: ~~WOGCC~~ 54-2, WRF, FMK, TKS, Title & Contract (Houston) WTR(5)

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

SIGNED R P Mealer TITLE Regulatory Coordinator DATE October 4, 1989

(This space for Federal or State office use)

APPROVED BY Kenneth V Rhee TITLE Acting District Mgr DATE 10/13/89
CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED

*See Instructions on Reverse Side

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

Procedure for Conformance Work
Tin Cup Mesa #4-25
Tin Cup Mesa Field
San Juan County, Utah

Well Data:

Elevation: 5036' GL; 5049' KB

Depth: TD @ 5778' KB; PBTD @ 5701' KB

Casing Record:
Surface: 8-5/8", 24#, K-55 set at 1497'
Production: 5-1/2", 15.5# & 17#, K-55 set at 5777'

Tubing Record: 173 jts. 2-7/8", 6.5#, J-55 with Internal Coating

Packer: Baker 47B Inverted Lok-Set with Internal Coating, and 6 element system. Bottom of packer set at 5372'.

Perforation: Upper Ismay: 5430-36'
5443-63'
5470-5504'
5514-30'

Proposed Retainer Setting Depth: 5509' KB

Procedure Summary

The purpose of this procedure is to place a wireline-set cement retainer near the oil-water contact in order to divert most of the water currently entering perforations below this level into oil-saturated intervals. The estimated cost for this procedure is , there is no AFE for this work.

Procedure:

1. Bleed pressure off injection head. MIRU rig. NU BOPE.
2. Release the Baker Inverted Lok-set packer and POOH with the internally coated tubing. found Tripoli 5½" csg. scrape TOP&TD. Clean Tubing for pump fin build up & clean as necessary - DTS
3. RU wireline company and packoff. RIH with a 5-1/2" wireline-set cement retainer and set at 5509' KB using collars for depth control on CBL run on 4-29-85. POOH and RD wireline company.
4. Tally back into the hole with redressed packer to 5372' KB.
5. Pump 89 bbls. fresh city water containing bactericide and corrosion inhibitor down the backside and set the packer. Notify the Utah Board of Oil, Gas and Mining of our intentions to conduct a UIC test. Pressure test the tubing-casing annulus to 1000 psi with a UBOGM representative on location.
6. ND BOPE. RD and move off rig. Place well back on injection.
   Note: Use stabbing guides when handling the coated tubing.

TMB/sp

Approval: S W Flemings 9-20-89 _____
R D Wunderlich 9-25-89 _____
T B Lewis 9/20/89 _____

Marathon Oil Company
Tin Cup Mesa 4-25
Sec. 27, T. 38 S., R. 25 E.
San Juan County, Utah
Lease U-13655

CONDITIONS OF APPROVAL

Notify Mike Wade of the BLM, San Juan Resource Area, at least 24 hours prior to commencing operations.

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

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

5. LEASE DESIGNATION AND SERIAL NO.: U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

SUNDRY NOTICES AND REPORTS ON WELLS

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

RECEIVED
NOV 13 1989
DIVISION OF OIL, GAS & MINING

1. OIL WELL ☐ GAS WELL ☐ OTHER: Surface Disturbance

7. UNIT AGREEMENT NAME: Tin Cup Mesa

2. NAME OF OPERATOR: Marathon Oil Company

8. FARM OR LEASE NAME: Tin Cup Mesa

3. ADDRESS OF OPERATOR: P. O. Box 2690, Cody, Wyoming 82414

9. WELL NO.: 4-25

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 50' FSL & 2490' FWL

10. FIELD AND POOL, OR WILDCAT: Tin Cup Mesa

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 25, T38S, R25E

12. COUNTY OR PARISH: San Juan

13. STATE: Wyoming

14. PERMIT NO.: 43-037-31145

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5049' KB

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

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

OIL AND GAS

DRN	RJF
JRB	GLH
DTS	SLS
2-TAS	
3- MICROFILM	
4-WIW FILE	

A surface disturbance is requested to construct a temporary pit approximately 10'x12'x6' in size to contain any well fluids encountered during the well work at the above referenced well. The pit will be located on the existing pad area which was previously disturbed. Once work is completed the pit will be allowed to dry then it will be backfilled.

Accepted by the State of Utah Division of Oil, Gas and Mining
Date: 11-16-89
By:

BLM-Orig & 3--cc: (attach) SUDOGM-2, WRF, FMK, TKS, Title & Contract (Houston)

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

SIGNED R P Mealer TITLE Regulatory Coordinator DATE October 9, 1989

(This space for Federal or State office use)

APPROVED BY [illegible] TITLE District Mgr. DATE 10/30/89

CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED

*See Instructions on Reverse Side

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

Marathon Oil Company
Well No. Tin Cup Mesa 4-25
SESW Sec. 25, T. 38 S., R. 25 E.
San Juan County, Utah
Lease U-13655

CONDITIONS OF APPROVAL

1. If fluids are discharged into the pit, the pit shall be fenced with four strands of barbed wire.

2. Accumulations of salt water in the pit shall be transferred into the previously approved salt water pit.

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

WRF-999

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: U-13655

6. If Indian, Allottee or Tribe Name: -----

7. If Unit or CA, Agreement Designation: Tin Cup Mesa

1. Type of Well: ☐ Oil Well ☐ Gas Well ☒ Other Injector WIW #

8. Well Name and No.: Tin Cup Mesa #4-25

2. Name of Operator: Marathon Oil Company

9. API Well No.: 43-037-31145

3. Address and Telephone No.: P.O. Box 2690 Cody, Wyoming 82414 (307) 587-4961

10. Field and Pool, or Exploratory Area: Tin Cup Mesa

4. Location of Well (Footage, Sec., T., R., M., or Survey Description): 50' FSL & 2490' FWL Sec.25, T38S, R25E

11. County or Parish, State: San Juan Utah

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

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other See Below	☐ Dispose Water

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

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

See attached sheet for the underground injection control (UIC) information concerning a possible leak in the injection tubing or packer in Tin Cup Mesa well, #4-25.

RECEIVED
FEB 03 1992
DIVISION OF
OIL GAS & MINING

Dist: BLM-orig.+3,SUDOGM-2,WRF,FMK,WTR-5,Title & Cont.(Hou.),EMG

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

Signed Eugene M Grant Title Regulatory Coordinator Date January 30, 1992

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions of approval, if any:

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

*See Instruction on Reverse Side

Tin Cup Mesa Well #4-25 (TCM #4-25)

The following is a summary of the telephone conversation held on January 27, 1992,between Mr. Ken Walsh, Marathon Oil Company Engineer, and Mr. Gil Hunt, Utah Board of Oil, Gas, and Mining (UBOGM) representative, regarding the water injection well, Tin Cup Mesa #4-25 (TCM #4-25), located in San Juan County, Utah.

Mr. Walsh received verbal notification on January 23, 1992 from Mr. Tom Kloberdanz, Marathon Field Foreman, that surface casing pressure had been identified the day before at TCM #4-25. The following is the chronological order of the pressure observations of TCM #4-25 that was discussed.

January 22, 1992, 9:00 A.M. to 3:00 A.M. January 23, 1992, pressure increased from 250 psi to 1325 psi.
January 23, 1992, was bled pressure to 0 psi in about one minute. Approximately 5 gallons of water was recovered in the galvanized holding tank.
January 23, 1992, casing pressure increased from 0 psi to 340 psi. The pressure was bled off to 0 psi.
January 24, 1992, injection into TCM #4-25 ceased at 2:00 P.M. A relief valve, set to open at 1,000 psi, was installed on the casing.
January 25, 1992, the casing pressure was bled from 200 psi to 0 psi.
January 25, 1992, to January 27, 1992, the casing and tubing pressures were monitored four times daily. Casing pressure remained at 0 psi, while the shut-in tubing pressure remained at 2690 psi.
January 27, 1992, at 1:00 P.M., TCM #4-25 was returned to injection
January 29, 1992, the casing pressure remains at 0 psi.

Should surface casing pressure become apparent again, Marathon will contact the UBOGM office immediately and discuss Marathon's plans for remedial treatment of the downhole equipment in this well. Mr. Hunt concurred with the above-mentioned decisions.

Mr. Hunt asked and was informed that the 8-5/8" surface casing was set to a depth of 1492' KB in this well.

WRF-999

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: U-13655

6. If Indian, Allottee or Tribe Name: -----

7. If Unit or CA, Agreement Designation: Tin Cup Mesa

1. Type of Well: ☐ Oil Well ☐ Gas Well ☒ Other W/W Surface Disturbance Request

8. Well Name and No.: Tin Cup Mesa #4-25

2. Name of Operator: Marathon Oil Company

9. API Well No.: 43-037-31145

3. Address and Telephone No.: P.O. Box 2690 Cody, Wyoming 82414 (307) 587-4961

10. Field and Pool, or Exploratory Area: Tin Cup Mesa

4. Location of Well (Footage, Sec., T., R., M., or Survey Description): 50' FSL & 2490' FWL Sec.25, T38S, R25E

11. County or Parish, State: San Juan Utah

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

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☒ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Surface Disturbance	☐ Dispose Water

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

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

A surface disturbance is requested to construct a temporary pit approximately 10'X12'X6' in size to contain any fluids encountered during well work at the above referenced well. The pit will be located on the existing pad area which was previously disturbed. Once the work is completed the pit will be backfilled.

RECEIVED
FEB 10 1992
DIVISION OF
OIL GAS & MINING

Dist: BLM-orig.+3, SUDOGM-2, WRF, FMK, WTR-5, Title & Cont.(Hou.)

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

Signed R R Meeks Title Regulatory Coordinator Date Jan. 24, 1992

(This space for Federal or State office use)

Approved by William C. Stringer Title Assistant District Manager for Minerals Date 2/6/92

Conditions of approval, if any:

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

*See Instruction on Reverse Side

Marathon Oil Company
Well No. Tin Cup Mesa 4-25
Sec. 25, T. 38 S., R. 25 E.
San Juan County, Utah
Lease U-13655

CONDITIONS OF APPROVAL

1. The pit will be fenced with four (4) strands of barbed wire, or woven wire topped with barbed wire to the height of not less than four (4) feet. The fence will be kept in good repair prior to back-filling the pit.

2. All hydrocarbons and any other liquids will be removed from the pit prior to backfilling.

WRF-999

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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Use "APPLICATION FOR PERMIT—" for such proposals

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6. If Indian, Allottee or Tribe Name: -----

SUBMIT IN TRIPLICATE

7. If Unit or CA, Agreement Designation: Tin Cup Mesa

1. Type of Well: ☐ Oil Well ☐ Gas Well ☒ Other Injector

8. Well Name and No.: Tin Cup Mesa #4-25

2. Name of Operator: Marathon Oil Company

9. API Well No.: 43-037-31145

3. Address and Telephone No.: P.O. Box 2690 Cody, Wyoming 82414 (307) 587-4961

10. Field and Pool, or Exploratory Area: Tin Cup Mesa

4. Location of Well (Footage, Sec., T., R., M., or Survey Description): 50' FSL & 2490' FWL Sec.25, T38S, R25E

11. County or Parish, State: San Juan Utah

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See attached sheet for the underground injection control (UIC) information concerning a possible leak in the injection tubing or packer in Tin Cup Mesa well, #4-25.

RECEIVED
FEB 18 1992
DIVISION OF
OIL GAS & MINING

Dist: BLM-orig.+3 (SUDOGM-2,WRF,FMK,WTR-5,Title & Cont.(Hou.),EMG)

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

Signed Eugene M Grant Title Regulatory Coordinator Date January 30, 1992

(This space for Federal or State office use)

Approved by _____ Title Branch of Fluid Minerals Moab District Date FEB - 7 1992

Conditions of approval, if any:

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January 25, 1992, to January 27, 1992, the casing and tubing pressures were monitored four times daily. Casing pressure remained at 0 psi, while the shut-in tubing pressure remained at 2690 psi.
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Mr. Hunt asked and was informed that the 8-5/8" surface casing was set to a depth of 1492' KB in this well.

WRF-999

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

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6. If Indian, Allottee or Tribe Name: -----

7. If Unit or CA, Agreement Designation: Tin Cup Mesa

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8. Well Name and No.: Tin Cup Mesa #4-25

2. Name of Operator: Marathon Oil Company

9. API Well No.: 43-037-31145

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FEB 18 1992
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OIL GAS & MINING

Dist: BLM-orig.+3 (SUDOGM-2,WRF,FMK,WTR-5,Title & Cont.(Hou.),EMG)

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(This space for Federal or State office use)

Approved by _____ Title Branch of Fluid Minerals Moab District Date FEB - 7 1992

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Rocky Mountain Region

Marathon Oil Company

P.O. Box 2690
Cody, Wyoming 82414
Telephone 307/587-4961

August 5, 1992

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
Attn: Mr. Gil Hunt

Re: Casing Pressure History
Tin Cup Mesa #4-25
Sec. 25, T38S, R25E
San Juan County, Utah

43-037-31145

Dear Mr. Hunt:

This letter is to advise you on the recent casing pressures and steps undertaken to identify the problem and correct it. In January, 1992, Marathon sent a sundry notice to the Department describing the increase in the surface casing pressure and the actions taken by Marathon. We also referenced the conversations that took place between you and Marathon concerning Tin Cup Mesa #4-25.

On February 18, 1992, Jim Baker of Marathon notified you that due to an injection pump problem, water injection into the well had stopped on February 11, 1992. However, shortly after the injection stopped, surface pressure was noted on the casing. The injection water was then allowed to back flow through the injection string until a workover rig was able to move on the well. In the meantime, Marathon continued to monitor the casing pressure.

On April 3, 1992, the injection string was pulled after Marathon was unable to get the tubing to torque up. The lockset packer and 2 3/8' tubing were found to be in good condition and clean (no scale or corrosion). The packer elements were in very good condition. The tubing and a rebuilt packer were run in the hole and set with 14,000 pound tension. The casing was pressure tested to 1050 psi for 15 minutes. Water injection was restarted on April 4, 1992.

Since there is no evidence of any leaks since then, the well appears to be in compliance with the Underground Injection Control Program.

If you have any questions, or need additional information, please advise.

Sincerely,

MARATHON OIL COMPANY

E. M. Grant

E. M. Grant
Regulatory Coordinator
Rocky Mountain Region

/EMG (CFR-999)

COPY

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
UT-922

January 12, 1996

Cochrane Resources, Inc.
P.O. Box 1656
Roosevelt, Utah 84066

RE: Tin Cup Mesa Unit
San Juan County, Utah

Gentlemen:

On January 11, 1996, we received an indenture dated January 9, 1996, whereby Marathon Oil Company resigned as Unit Operator and Cochrane Resources, Inc. was designated as Successor Unit Operator for the Tin Cup Mesa Unit, San Juan County, Utah.

This indenture was executed by all required parties and the signatory parties have complied with Sections 5 and 6 of the unit agreement. The instrument is hereby approved effective January 12, 1996. In approving this designation, the Authorized Officer neither warrants nor certifies that the designated party has obtained all required approval that would entitle it to conduct operations under the Tin Cup Mesa Unit Agreement.

Your statewide (Utah) oil and gas bond No. 0699 will be used to cover all operations within the Tin Cup Mesa Unit.

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

Sincerely,

/s/ Robert A. Henricks

Robert A. Henricks
Chief, Branch of Fluid Minerals

Enclosure
bcc: District Manager - Moab (w/enclosure)
Division of Oil, Gas & Mining
Division of Mineral Adjudication U-923
File - Tin Cup Mesa Unit (w/enclosure)
MMS - Data Management Division ((Attn: Rose Dablo)
Agr. Sec. Chron
Fluid Chron
U-922:TAThompson:tt:01-12-96

WELL STATUS REPORTS
UTAH STATE OFFICE

INSPECTION ITEM	API NO.	WELL NUMBER	QTR	SEC	TWN	RNG	WELL STATUS	LEASE NAME		OPERATOR	
** INSPECTION ITEM 8910203910	31761	TIN CUP MESA IS A							Entity#		
8910203910	[redacted]		SWNW	25	38S	25E	NDW	UTU31928		MARATHON OIL COMPANY	
8910203910	[redacted]		SWNW	25	38S	25E	WIW	UTU31928	2765	MARATHON OIL COMPANY	U31928
8910203910	43037306080OS1	2-23	SESW	23	38S	25E	POW	UTU31928	"	MARATHON OIL COMPANY	U31928
8910203910	43037309830OS1	2-25	NWSW	25	38S	25E	POW	UTU13655	"	MARATHON OIL COMPANY	U13655
8910203910	[redacted]		SWSW	23	38S	25E	WIWS	UTU31928	"	MARATHON OIL COMPANY	U31928
8910203910	43037310200OS1	3-25	SESW	25	38S	25E	TA	UTU13655	"	MARATHON OIL COMPANY	U13655
8910203910	[redacted]		NWNE	26	38S	25E	WIW	UTU31928	"	MARATHON OIL COMPANY	U31928
8910203910	[redacted]		SESW	25	38S	25E	WIW	UTU13655	"	MARATHON OIL COMPANY	UB655
8910203910	[redacted]		SENE	26	38S	25E	WIW	UTU31928	"	MARATHON OIL COMPANY	U31928
8910203910	43037313680OS1	5-26	SWNE	26	38S	25E	POW	UTU31928	"	MARATHON OIL COMPANY	U31928
8910203910	43037315400OS1	6-26	NESE	26	38S	25E	POW	UTU31928	"	MARATHON OIL COMPANY	U31928

JAN 2 3 1996

RESIGNATION OF OPERATOR

Tin Cup Mesa Unit Area
County of San Juan
State of Utah
Unit Agreement No. 14-08-0001-20391

Under and pursuant to the provisions of Section 5 of the Unit Agreement for the Development and Operation of the Tin Cup Mesa Unit Area, San Juan County, Utah, Marathon Oil Company, the designated Unit Operator under said Unit Agreement, does hereby resign as Unit Operator, effective upon the selection and approval of a successor Unit Operator.

EXECUTED with effect as aforesaid this 29th day of November, 1995.

ATTEST:

MARATHON OIL COMPANY

By: A.R. Kukla
Title: Attorney-In-Fact

APPROVED AS TO FORM TCL

TCL\MISCTCL\TCUP3\mlv

12-19-95

Authorized Officer
Bureau of Land Management

Re: Tin Cup Mesa Unit
San Juan County, Utah

Gentlemen:

Enclosed for your consideration and approval, are four (4) copies of Resignation of Unit Operator ~~and Designation of Successor Operator~~ for the Tin Cup Mesa Unit Area.

Cochrane Resources, as the designated successor operator under the Tin Cup Mesa Unit Agreement, hereby certifies that the requisite approvals of the current working interest owners in the agreement have been obtained to satisfy the requirements for selection of a successor operator as set forth under the terms and provisions of the agreement. All operations within the Tin Cup Mesa Unit Agreement will be covered by bond no. UT0699.

Sincerely,

Ken Allen
Cochrane Resources, Inc.
President

Enclosures

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

TRANSFER OF AUTHORITY TO INJECT - UIC FORM 5

Well name and number: _____

Field or Unit name: Tin Cup Mesa Unit API no. _____

Well location: QQ ____ section ___ township 31S range 25E county San Juan

Effective Date of Transfer: 12-1-95

CURRENT OPERATOR

Transfer approved by:

Name DAVID S. GOOBINS III Company MARATHON OIL COMPANY

Signature [signature] Address PO Box 552

Title SENIOR PRODUCTION ENGINEER MIDLAND, TX 79702

Date 2/22/96 Phone (915) 687-8340

Comments:

NEW OPERATOR

Transfer approved by:

Name Ken Allen Company Cochrane Resources Inc.

Signature [signature] Address P.O. Box 1856
Roosevelt Utah 84066

Title President

Date 2-21-96 Phone (801) 722-5081

Comments:

(State use only)
Transfer approved by [signature] Title Environ Manager

Approval Date 4-4-96

Mid-Continent Region
Production United States

Marathon Oil Company

P.O. Box 552
Midland, Texas 79702
Telephone 915/682-1626

PANAFAX TRANSMITTAL SHEET

SEND THE FOLLOWING PAGES TO:

NAME Lisha Cordova

COMPANY NAME Utah Div of Oil & Gas

LOCATION

PANAFAX NUMBER: (801) 359-3940

FROM:

NAME David Goodins EXT. 8340

TOTAL NUMBER OF PAGES: 2 (including cover sheet)

IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL BACK ASAP

PHONE

COMMENTS

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

Routing:
1-LEC 7-FILM ✓
2-DTS 8-FILE
3-VLD ✓
4-RJF ✓
5-LRC ✓
6-SJ ✓

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

XX Change of Operator (well sold)
☐ Designation of Operator
☐ Designation of Agent
☐ Operator Name Change Only

The operator of the well(s) listed below has changed (EFFECTIVE DATE: 12-01-95)

TO (new operator)	COCHRANE RESOURCES INC
(address)	PO BOX 1656
	ROOSEVELT UT 84066
phone	(801) 722-5081
account no.	N 7015

FROM (former operator)	MARATHON OIL COMPANY
(address)	PO BOX 552
	MIDLAND TX 79702
phone	(915) 687-8155
account no.	N 3490

*TIN CUP MESA UNIT

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

Name: **SEE ATTACHED**	API: 037-31145	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:

OPERATOR CHANGE DOCUMENTATION

Lec 1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form). (Req. 1-19-96) (Rec'd 1-23-96)

Lec 2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form). (Req. 1-22-96) (Rec'd 1-23-96)

N/A 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) _____ If yes, show company file number: _____.

Lec 4. **(For Indian and Federal Wells ONLY)** The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of **Federal and Indian** well operator changes should take place prior to completion of steps 5 through 9 below.

Lec 5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. (2-8-96 O&G wells) (Inj. wells 4-3-96)

Lec 6. Cardex file has been updated for each well listed above. (2-8-96 O&G wells) (Inj. wells 4-3-96)

Lec 7. Well file labels have been updated for each well listed above. (2-8-96 O&G wells) (Inj. wells 4-3-96)

Lec 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission. (2-8-96 O&G wells) (Inj. wells 4-3-96)

Lec 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

– OVER –

OPERATOR CHANGE WORKSHEET (CONTINUED) Initial each item when completed. Write N/A if item is not applicable.

ENTITY REVIEW

Lec 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) ___ (If entity assignments were changed, attach copies of Form 6, Entity Action Form).

N/A 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

BOND VERIFICATION (Fee wells only)

N/A/Lec 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.

___ 2. A copy of this form has been placed in the new and former operators' bond files.

___ 3. The former operator has requested a release of liability from their bond (yes/no) ___. Today's date _____ 19___. If yes, division response was made by letter dated _____ 19___.

LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

N/A 1. (Rule R615-2-10) The former operator/lessee of any fee lease well listed above has been notified by letter dated _____ 19___, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.
DTS 4/8/96

N/A 2. Copies of documents have been sent to State Lands for changes involving State leases.

FILMING

YDR 1. All attachments to this form have been microfilmed. Date: April 17 1996.

FILING

___ 1. Copies of all attachments to this form have been filed in each well file.

___ 2. The original of this form and the original attachments have been filed in the Operator Change file.

COMMENTS

960119 Blm/SL Aprv. eff. 1-12-96.

WE71/34-35

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions reverse side)

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

5. LEASE DESIGNATION AND SERIAL NO.
U-13655

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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

7. UNIT AGREEMENT NAME
Tin Cup Mesa

2. NAME OF OPERATOR
Cochrane Resources, Inc.

8. FARM OR LEASE NAME
Tin Cup Mesa

3. ADDRESS OF OPERATOR
PO Box 1656 Roosevelt, Utah 84066

9. WELL NO.
4-25

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
50' FSL, 2490' FWL, SESW
Sec 25, T38S, R25E

10. FIELD AND POOL, OR WILDCAT
Tin Cup

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 25, T38S, R25E

14. PERMIT NO.
43-037-31145

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
5049' K.B.

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

Cochrane Resources woild like to change the status of this well from a W.I.W. to T.A., until such time as the well is put back production.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY

COPY SENT TO OPERATOR
Date: 4-15-99
Initials: CHD

RECEIVED
APR 9 1999
DIV. OF OIL, GAS & MINING

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

SIGNED _____ TITLE President DATE April 8, 1999

(This space for Federal or State office use)

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

*See Instructions on Reverse Side

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

INSPECTION FORM 6

STATE OF UTAH
DIVISION OF OIL GAS AND MINING

INJECTION WELL - PRESSURE TEST

Well Name: TIN CUP MESA 4-25 API Number: 43-037-31145

Qtr/Qtr: SE/SW Section: 25 Township: 38S Range: 25E

Company Name: COCHRANE RESOURCES INC

Lease: State _____ Fee _____ Federal X Indian _____

Inspector: J THOMPSON Date: 8/24/99

Initial Conditions:

Tubing - Rate: _____ Pressure: _____ psi

Casing/Tubing Annulus - Pressure: _____ psi

Conditions During Test:

Time (Minutes)	Annulus Pressure	Tubing Pressure
0		
5		
10		
15		
20		
25		
30		

Results: Pass/Fail

Conditions After Test:

Tubing Pressure: _____ psi

Casing/Tubing Annulus Pressure: _____ psi

COMMENTS: No Packer - will send in Sundry to change well Status.

Operator Representative

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

ROUTING
1. DJJ
2. CDW

X - Change of Operator (Well Sold) Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective: **4/1/2008**

FROM: (Old Operator):	**TO:** (New Operator):
N7015-Cochrane Resources, Inc	N8195-Mar/Reg Oil Company
PO Box 1656	PO Box 18148
Roosevelt, UT 84066	Reno, NV 89511
Phone: 1 (435-722-5081	Phone: 1 (775) 852-7444

CA No. **Unit:** **TIN CUP MESA**

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
SEE ATTACHED LIST								

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 6/4/2008
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 6/3/2008
3. The new company was checked on the **Department of Commerce, Division of Corporations Database on:** 6/23/2008
4a. Is the new operator registered in the State of Utah: _____ Business Number: 1267088-0143
4b. If **NO**, the operator was contacted contacted on:
5a. (R649-9-2)Waste Management Plan has been received on: IN PLACE
5b. Inspections of LA PA state/fee well sites complete on: _____
5c. Reports current for Production/Disposition & Sundries on: ok
6. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM 5/28/2008 BIA
7. **Federal and Indian Units:**
   The BLM or BIA has approved the successor of unit operator for wells listed on: 5/28/2008
8. **Federal and Indian Communization Agreements ("CA"):**
   The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
9. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 7/2/2008

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 7/1/2008
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 7/1/2008
3. Bond information entered in RBDMS on: n/a
4. Fee/State wells attached to bond in RBDMS on: n/a
5. Injection Projects to new operator in RBDMS on: n/a
6. Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: UTB000019
2. Indian well(s) covered by Bond Number: n/a
3a. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number n/a

COMMENTS:

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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

5. LEASE DESIGNATION AND SERIAL NUMBER: SEE ATTACHED	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
7. UNIT or CA AGREEMENT NAME: SEE ATTACHED	
1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER	8. WELL NAME and NUMBER: SEE ATTACHED
2. NAME OF OPERATOR: COCHRANE RESOURCES, INC. N7015	9. API NUMBER:
3. ADDRESS OF OPERATOR: PO BOX 1656 CITY ROOSEVELT STATE UT ZIP ~~84066~~ 84066 / PHONE NUMBER: (435) 722-5081	10. FIELD AND POOL, OR WILDCAT: TIN CUP MESA
4. LOCATION OF WELL — FOOTAGES AT SURFACE: SEE ATTACHED; EXHIBIT "A"	COUNTY: SAN JUAN
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:	STATE: UTAH

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

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

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

The successor Operator for this well will be:
Mar/Reg Oil Company N8195
PO Box 18148
Reno, NV 89511
(775) 852-7444

Agreed and accepted this 2nd day of June 2008
effective April 1, 2008

Mar/Reg Oil Company

By: Rhonda Ahmad
Rhonda Ahmad
President
Mar/Reg State Wide Bond # is UTB000019

NAME (PLEASE PRINT) KEN ALLEN TITLE PRESIDENT

SIGNATURE _____ DATE _____

(This space for State use only)

APPROVED 7/1/2008
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

(See Instructions on Reverse Side)

RECEIVED
JUN 03 2008
DIV. OF OIL, GAS & MINING

(5/2000)

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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

5. LEASE DESIGNATION AND SERIAL NUMBER: SEE ATTACHED
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT or CA AGREEMENT NAME: SEE ATTACHED
8. WELL NAME and NUMBER: SEE ATTACHED
9. API NUMBER:
10. FIELD AND POOL, OR WILDCAT: TIN CUP MESA

1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER
2. NAME OF OPERATOR: COCHRANE RESOURCES, INC. N7015
3. ADDRESS OF OPERATOR: PO BOX 1656 CITY ROOSEVELT STATE UT ZIP ~~84606~~ 84066 PHONE NUMBER: (435) 722-5081
4. LOCATION OF WELL
FOOTAGES AT SURFACE: SEE ATTACHED; EXHIBIT "A" COUNTY: SAN JUAN
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: STATE: UTAH

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

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

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

The successor Operator for this well will be:
Mar/Reg Oil Company
PO Box 18148
Reno, NV 89511
(775) 852-7444

Agreed and accepted this 3rd day of June 2008

Mar/Reg Oil Company

By: _____
Rhonda Ahmad
President
Mar/Reg State Wide Bond # is UTB000019

NAME (PLEASE PRINT) KEN ALLEN TITLE PRESIDENT

SIGNATURE _____ DATE 6-3-2008.

(This space for State use only)
APPROVED 7/1/2008
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

(See Instructions on Reverse Side)

(5/2000)

RECEIVED
JUN 04 2008
DIV. OF OIL, GAS & MINING

Exhibit A Well List

Tin Cup Mesa Unit Field

API#	Lease Type	Well Name	Well Type	County	Location	Utah Entity #
43-037-30690	Federal	TIN CUP MESA 1-25	Water Injection Well	SAN JUAN	25 SWNW T38S R25E	2765
43-037-30762	Federal	TIN CUP MESA 3-26	Oil Well	SAN JUAN	26 NWNE T38S R25E	2765
43-037-30808	Federal	TIN CUP MESA 2-23	Oil Well	SAN JUAN	23 SESW T38S R25E	2765
43-037-30815	Federal	TIN CUP MESA 3-23	Oil Well	SAN JUAN	23 SWSW T38S R25E	2765
43-037-30941	Federal	TIN CUP MESA 4-26	Oil Well	SAN JUAN	26 SENE T38S R25E	2765
43-037-30983	Federal	TIN CUP MESA 2-25	Oil Well	SAN JUAN	25 NWSW T38S R25E	2765
43-037-31020	Federal	TIN CUP MESA 3-25	Oil Well	SAN JUAN	25 SESW T38S R25E	2765
43-037-31145	Federal	TIN CUP MESA 4-25	Oil Well	SAN JUAN	25 SESW T38S R25E	2765
43-037-31368	Federal	TIN CUP MESA 5-26	Oil Well	SAN JUAN	26 SWNE T38S R25E	2765
43-037-31540	Federal	TIN CUP MESA 6-26	Oil Well	SAN JUAN	26 NESE T38S R25E	2765
43-037-31761	Federal	WDW 1	Water Disposal Well	SAN JUAN	25 SWNW T38S R25E	

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155
http://www.blm.gov/ut/st/en.html

IN REPLY REFER TO
3180
UT-922

May 28, 2008

Mar/Reg Oil Company
P. O. Box 18148
Reno, Nevada 89511

Re: Tin Cup Mesa Unit
San Juan County, Utah

Dear Ms. Ahmad:

On May 23, 2008, we received an indenture dated May 7, 2008, whereby Cochrane Resources, Inc. resigned as Unit Operator and Mar/Reg Oil Company was designated as Successor Unit Operator for the Tin Cup Mesa Unit, San Juan County, Utah.

This indenture was executed by all required parties and the signatory parties have complied with Sections 5 and 6 of the unit agreement. The instrument is hereby approved effective May 28, 2008. In approving this designation, the Authorized Officer neither warrants nor certifies that the designated party has obtained all required approval that would entitle it to conduct operations under the Tin Cup Mesa Unit Agreement.

Your statewide oil and gas bond no. UTB000019 will be used to cover all operations within the Tin Cup Mesa Unit.

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

Sincerely,

/s/ Becky J. Hammond

Becky J. Hammond
Chief, Branch of Fluid Minerals

Enclosure

Form 3160-5
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2014

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

***SUBMIT IN TRIPLICATE** – Other instructions on page 2.*

5. Lease Serial No.: UTU-13655

6. If Indian, Allottee or Tribe Name:

7. If Unit of CA/Agreement, Name and/or No.: TIN CUP MESA UNIT

1. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.: TIN CUP MESA 4-25

2. Name of Operator: MAR-REG OIL COMPANY

9. API Well No.: 43-037-31145

3a. Address: PO BOX 18148, RENO, NV 89511

3b. Phone No. *(include area code)*: 775-852-7444

10. Field and Pool or Exploratory Area: TIN CUP MESA

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*: SESW SEC 25, T38S, R25E, SLB

11. County or Parish, State: SAN JUAN, UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☑ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Requesting Temporarily Abandon status to evaluate this well on the potential for re-entry with horizontal drilling in both the Upper Ismay and Desert Creek. We have recently drill horizontally and are planning to do the same on other wells to completely drain both reservoirs.

COPY SENT TO OPERATOR
Date: 10/4/2012
Initials: KS

REQUEST DENIED
Utah Division of
Oil, Gas and Mining
Date: 10/2/2012
By:
*Requirements of R649-3-36 have not been met

Federal Approval Of This
Action Is Necessary

RECEIVED
AUG 21 2012
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*: Dan Green

Title: Petroleum Engineer

Signature: Dan Green

Date: 08/16/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)