

FILE NOTATIONS

Entered in MID File ✓
Location Map Pinned ✓
Card Indexed ✓

Checked by Chief
Approval Letter
Disapproval Letter

COMPLETION DATA:

Completed 11/14/79

Location Inspected

GW..... OS..... EA..... ✓

State or Fee Land

LOGS FILED

Driller's Log..... ✓
Electric Logs (No.) ✓

E..... I..... Dual I Lat..... GR-M..... Micro.....

BHC Sonic GR..... Lat..... MI-L..... Sonic...

CBLog..... CCLog..... Others.....

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
 DRILL DEEPEN PLUG BACK

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

2. NAME OF OPERATOR
 Marathon Oil Company

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

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface
 783' ~~883'~~ FSL & 466' FEL
 At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 5-1/2 miles east and 7 miles north of Woodruff, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
 466'

16. NO. OF ACRES IN LEASE
 2,424.93

17. NO. OF ACRES ASSIGNED TO THIS WELL
 640

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

19. PROPOSED DEPTH
 9,500'

20. ROTARY OR CABLE TOOLS
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 6,692'

22. APPROX. DATE WORK WILL START*
 August 25, 1979

5. LEASE DESIGNATION AND SERIAL NO.
 U-25465

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
 Mud Springs

9. WELL NO.
 1-8

10. FIELD AND POOL, OR WILDCAT
 Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 Sec. 8, T10N, R8E

12. COUNTY OR PARISH
 Rich

13. STATE
 Utah

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
24 "	20 "	Open	40'	35 sacks
17-1/2"	13-3/8"	54.5#	1,500'	1,900 sacks
12-1/4"	9-5/8"	40.0#	4,500'	900 sacks
	9-5/8"	43.5#	5,900'	
8-1/2"	5-1/2"	20.0#	9,500'	500 sacks

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 Harry Magnus TITLE District Operations Manager DATE May 17, 1979
 (This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____
 APPROVED BY W.P. Martin TITLE ACTING DISTRICT ENGINEER DATE JUL 13 1979
 CONDITIONS OF APPROVAL, IF ANY:

NOTICE OF APPROVAL

CONDITIONS OF APPROVAL ATTACHED
TO OPERATOR'S COPY

NECESSARY FLARING OF GAS DURING
DRILLING AND COMPLETION APPROVED
SUBJECT TO ROYALTY (NIL-4)

state OEG

MARATHON OIL COMPANY

Surface Use and Operations Plan

Mud Springs #1-8
683' FSL & 466' FEL
Sec. 8, T10N, R8E
Rich County, Utah
6692' G.L.

1. Existing Roads:

Please see attached map, General Location and Location Maps #1 and #2.

2. Access Road:

The access road is approximately 400' North of existing road, please see attached Location Map #2 of 2.

Surface materials will be only the natural material at the location.

There will be no gates, cattle guards, or fence cuts. The road into the location will be flagged.

3. Location of Existing Wells:

There are no known water wells, abandoned wells, temporarily abandoned wells, disposal wells, drilling wells, producing wells, shut in wells, injection wells or monitoring wells within two mile radius of the drill site.

4. Location of Production Facilities and Service Lines:

There are no known facilities owned or controlled by the lessee within a one mile radius of this well. All production facilities will be on the proposed location (See the attached Schematic). The dimensions of the facilities are shown on the attached Schematic. Good engineering practices will be used in the construction of these facilities, and materials will be obtained through local vendors and contractors.

Any sumps or hazardous equipment will be fenced to keep livestock out. If any sumps need to be left open, they will be flagged to keep wildlife out.

Those portions of the location not needed for production facilities will be rehabilitated by contouring and reseeding.

5. Location and Type of Water Supply:

Water supply for this project will be from a water well which will be drilled near the rig. The well location is shown on the attached location layout. The depth of the water well will be approximately 1,000' and it will be cased with plastic pipe. A permit will be obtained from the Utah state Division of Water Rights to appropriate water from this well. The water will be pumped from this well and transported by a short pipeline to the rig storage tank.

6. Source of Construction Materials:

All construction materials for this location and the access road are to be materials accumulated during the construction of the location and access road. No additional construction materials from other sources are anticipated.

7. Waste Disposal Handling:

All liquid drilling water will be stored in the reserve pit at the drill site. All burnable trash will be burned in a suitable burn pit at the well site, and all nonburnable refuse will be buried at a depth of 5' upon conclusion of the drilling and completion procedures. Drill cuttings will be covered after the reserve pit has dried up. There are no plans to line the reserve pit.

During completion, produced water and gas will be caught in a flare pit. A commercial, portable latrine will be used on the location.

Immediately upon the release of the rig, the area will be cleaned.

8. Ancillary Facilities:

There will be no ancillary facilities at this location.

There will be approximately 5 house trailers on the drill site. This is shown on the attached location Schematic.

9. Well Site Layout:

On the attached Schematic are shown the relative positions of the various components of the drilling tools. The rig will face south with the reserve pit on the east. The reserve pit will be fenced on three sides prior to drilling, and the fourth side after the rig is moved off. The reserve pit will be unlined.

The location of frac tanks and trucks are shown on a separate attached Schematic. The trucks will be at least 125' from the well, and the tanks at least 125' from the trucks, and the wellhead on all hydrocarbon fracturing.

Preparation of the location will require a maximum cut of 21.70'. There will be a fill of 5.30' to the east.

10. Plan for Restoration to Surface:

Topsoil will be stockpiled to the west side of this location. After the well is completed and the reserve pit dried out, that portion of the location not required for production equipment will be recontoured, covered with stockpiled topsoil and reseeded to BLM specifications. Any portion of the access road not needed for vehicular traffic will also be reseeded. The rehabilitation operations will commence immediately after the completion of the well. Immediately after release of the rig, the reserve pit will be fenced on the fourth side until cleanup. Any oil on the pit will be removed at the time that the rig is removed from the well.

11. Other Information:

The area has a desert environment of gently rolling land with sparse vegetation and very little surface moisture. Vegetation consists mainly of sage and native grasses. Soils are Quaternary Alluvium.

The drill site and access road are owned by the U.S. Government.

In the immediate vicinity there are no known water, occupied dwellings, archeological, historical, or cultural sites.

12. Representatives:

Marathon Oil Company's representative who is responsible for compliance with the approved surface and operation plan is:

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

(307) 235-2511 Ext. 524

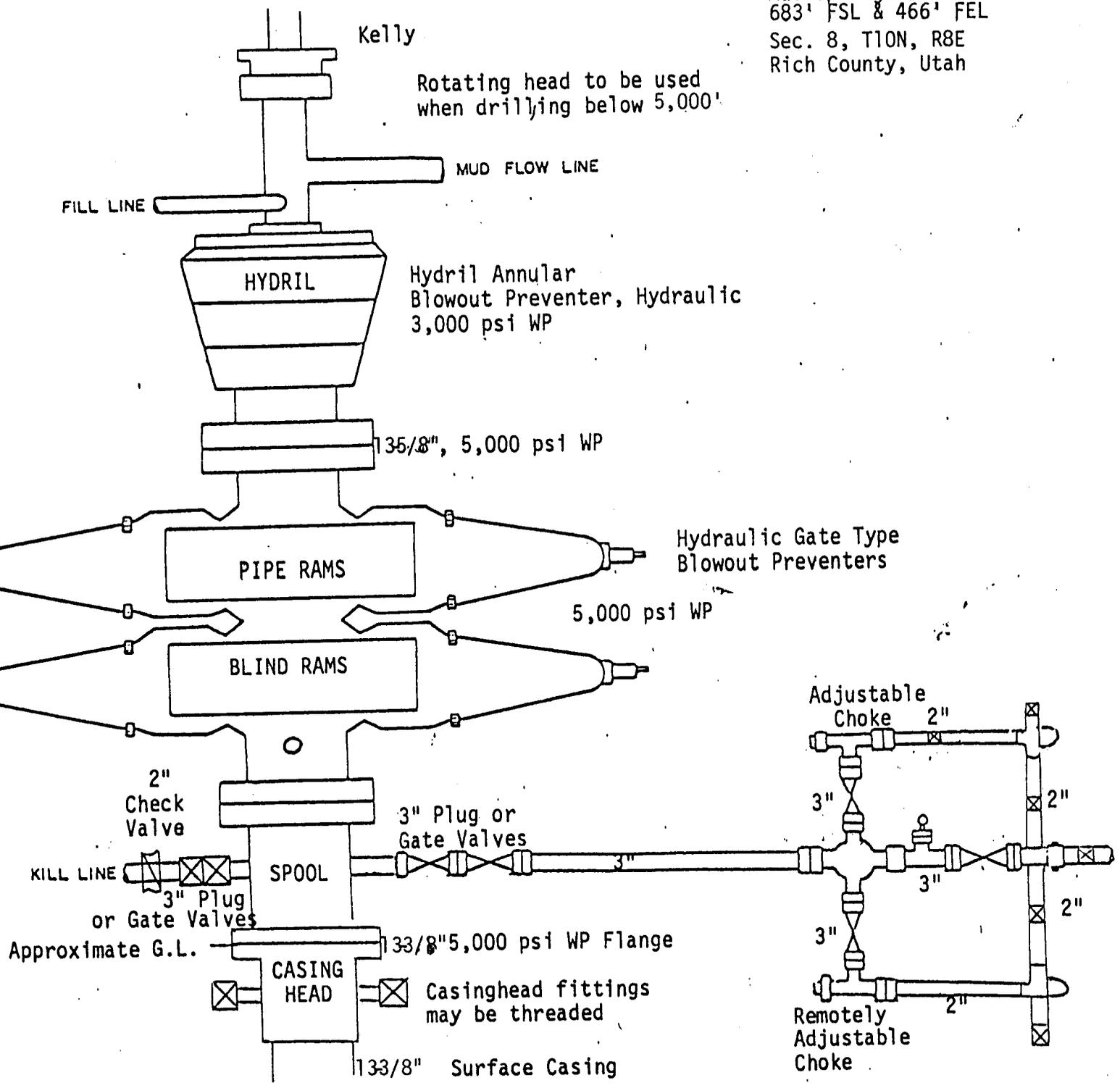
13. Certification:

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

May 17, 1979
DATE

J. F. Wirth
NAME
Drilling Superintendent
TITLE

Marathon Oil Company
 Mud Springs #1-8
 683' FSL & 466' FEL
 Sec. 8, T10N, R8E
 Rich County, Utah



1. Blowout preventers, master valve, plug valves, and all fittings must be in good condition. Use new API Sealing Rings.
2. All fittings (gates, valves, etc.) to have pressure rating equivalent to preventers. Valves to be flanged and at least 2" unless otherwise specified. Valves next to BOP to be 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 valve should be as great as I.D. of tool joints of drill pipe.
5. Kelly safety valve installed, to have 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 w/controls on the rig floor and one or more remote controls near steps or at accumulator.
8. Fillup line shall be tied to drilling nipple with connection below and approximately 90° to the flow line.
9. Gauge will be installed for testing but removed while drilling.
10. If spool is not used, the choke line can be connected to BOP side outlet, below bottom rams.
11. Casinghead and casinghead fittings to be furnished by Marathon Oil Company.
12. Chokes will be adjustable.
13. One side of casinghead may be bull plugged.

MARATHON OIL COMPANY
Mud Springs #1-8
Drilling Operations Plan
683' FSL, 466' FEL
Sec. 8, T18N, R8E
Rich County, Utah
Elevation 6692' GL

1. Geologic name of surface:

Quaternary Alluvium

2. Estimated tops of important geologic markers:

<u>Formation</u>	<u>Depth</u>	<u>Datum</u>
Quaternary Alluvium	Surface	
Cretaceous	300'	(+6,392)
Cretaceous Horizon "A"	2,150'	(+4,542)
Preuss	4,750'	(+1,942)
Twin Creek	5,800'	(+1,892)
Nugget	9,000'	(-2,308)
Total Depth	9,500'	(-2,808)

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

Water is anticipated in all of the above formations.

Cretaceous	300'	Oil and Gas
Cretaceous "A" Horizon	2,150'	Oil and Gas
Twin Creek	5,800'	Oil and Gas Primary Objective
Nugget	9,000'	Oil and Gas

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

<u>Min. Hole Size</u>	<u>Casing O.D.</u>	<u>Grade</u>	<u>Weight</u>	<u>Setting Depth</u>	<u>New or Used</u>
24 "	20 "	Open	Open	40'	New
17-1/2"	13-3/8"	K-55	54.5#	1,500'	New
12-1/4"	9-5/8"	N-80	40.0#	4,500'	New
	9-5/8"	N-80	43.5#	5,900'	New
8-1/2"	5-1/2"	N-80	20.0#	9,500'	New

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

Cement the 13-3/8" surface casing with 1,000 sacks of 50-50 Pozmix with 2% Calcium Chloride and 1/4 pound per sack flocele, followed by 900 sacks of Class "G" with 2% Calcium Chloride. Eleven centralizers will be required. WOC time will be 12 hours. The casing will be pressure tested to 2,000 psi. The shoe will be drilled out and an additional 5' of hole will be drilled. Pressure test the casing shoe to an equivalent 10 ppg mud.

The 9-5/8" intermediate casing will be cemented with approximately 700 sacks of 50-50 Pozmix containing 18% salt followed by 200 sacks of Class "G" cement containing 18% salt. Twenty centralizers will be required. WOC time will be 12 hours. Casing will be pressure tested to 3,000 psi. The shoe will be drilled out and an additional 5' of hole will be drilled. The casing shoe will be pressure tested to an equivalent 10 ppg mud.

The 5-1/2" OD production casing will be cemented with 250 sacks of 50-50 Pozmix with .75% CFR-2 and .2% HR-4 followed by 250 sacks of Class "G" with .75% CFR-2, .2% HR-4, and 3% KCl. The two plug method will be used. Twenty centralizers will be used. WOC time will be 24 hours. The casing will be pressure tested to 7,000 psi.

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

One annular BOP (Hydril) and dual ram type BOP with pipe rams and blind rams. All equipment to have a 5,000# or better working pressure. The accumulator will be of sufficient size to close and open all components of the BOP stack without operating pump. Operation of all components to be checked daily. Blind rams and pipe rams will be pressure tested to 5,000 psi and the Hydril will be tested to 1,500 psi prior to drilling out of surface casing and intermediate casing.

6. Mud program and anticipated pressures:

<u>From</u>	<u>To</u>	<u>Type Mud</u>	<u>Weight</u>	<u>% Oil</u>	<u>Water Loss</u>
0'	1,500'	Spud	8.5 - 9.0	NA	No control
1,500'	4,750'	Gel	8.5 - 9.0	NA	Less than 12 cc's
4,750'	5,900'	Brine	9.0 - 9.5	NA	Less than 12 cc's
5,900'	9,500'	Gel	8.5 - 9.0	NA	Less than 12 cc's

The mud weight should be no greater than necessary to prevent influx of formation fluid. Barite will be used for weight if needed. A maximum pressure of 4,100 psi is anticipated at 9,500'. Lost circulation zones may be encountered from surface to T.D. LCM will be available on the location.

7a. Type of drilling tools and auxiliary equipment:

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

The mud system will include a desander, desilter, gas separator, degasser, trip tank, pit level monitor and flowline sensor. Both a remote adjustable choke and a manual choke will be used.

A kelly cock will be used, a TIW safety valve and inside BOP will be available on the rig floor. A float valve will be used at the bit.

7b. Deviation Control:

<u>From</u>	<u>To</u>	<u>Maximum Distance Between Surveys</u>	<u>Maximum Deviation From Vertical</u>	<u>Maximum Change Per 100' of Depth</u>
0'	1,500'	100'	*	10
1,500'	5,900'	100'	*	10
5,900'	9,500'	100'	*	10

*Deviation problems are anticipated due to high angle dips. The deviation will be controlled so that safe drilling operations can continue.

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

Drilling samples will be taken every 10' from 1,500' to T.D. A two man mud logging unit will be on the well from 1,500' to T.D.

A BHC-Sonic and GR will be run from 1,500 to Surface. A GR-FDC-CNL, SP-DIL, SP-DLL, Dipmeter-Cal, and Fracture identification log will be run from 5,900' to 1,500' prior to running the 9-5/8" intermediate casing, and from 9,500' to 5,900' prior to running the 5-1/2" production casing.

Three DST's are anticipated in the Twin Creek Formation.

Two 60' cores are anticipated in the Twin Creek Formation.

9. Anticipated abnormal pressures or temperatures:

No abnormal temperatures or pressures are anticipated.

No H₂S is anticipated.

10. The anticipated starting date and duration of operation:

Starting Date: August 25, 1979

Duration: 75 Days

DISTRICT APPROVALS

<u>Approved</u>	<u>Date</u>
<u>Richard A. Carden</u>	<u>5/9/79</u>
<u>J. Smith</u>	<u>5/9/79</u>
<u>J. E. Lawrence</u>	<u>5/9/79</u>
<u>M. E. O'Keefe</u>	<u>5/10/79</u>
<u>C. F. O'Keefe</u>	<u>5/10/79</u>
<u>Harry Magness</u>	<u>May 10/79</u>

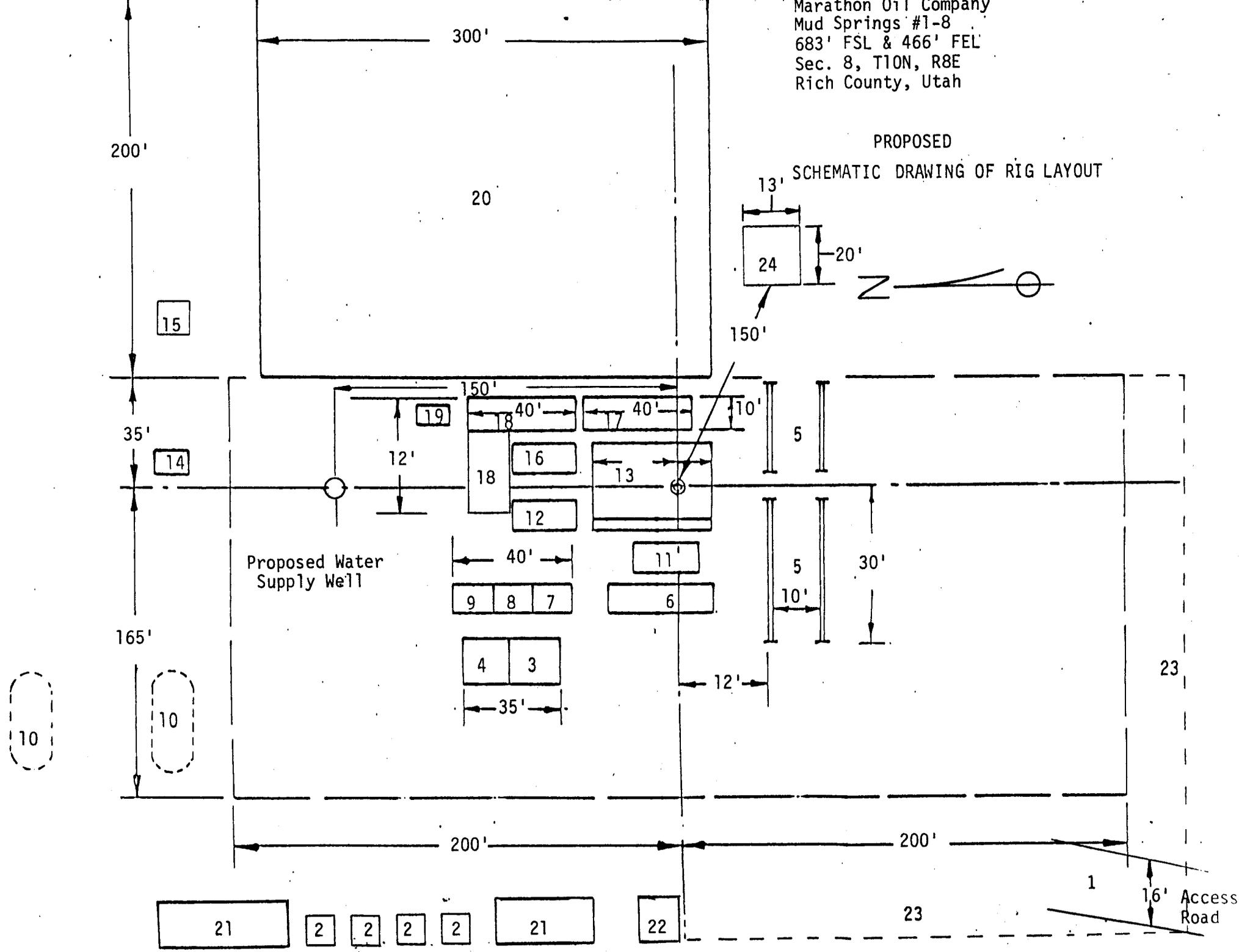
DIVISION APPROVALS

<u>Approved</u>	<u>Date</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

1. Access Road
2. Trailer House
3. Fuel Tank
4. Water Tank
5. Pipe Racks
6. Storage Pad
7. Light Pad
8. Change House
9. Accumulator
10. Soil Stock Pile
11. Dog House on Top of Tool House
12. Mud Mixer
13. Substructure
14. Boiler
15. Burn & Trash Pit (Covered w/wire mesh)
16. Rig Engines
17. Shale Shaker & Mud Tank
18. Suction Mud Tank
19. Mud House on Stand
20. Sump (Reserve Pit)
21. Parking Area
22. Toilets
23. Additional area for fracturing
24. Flare Pit

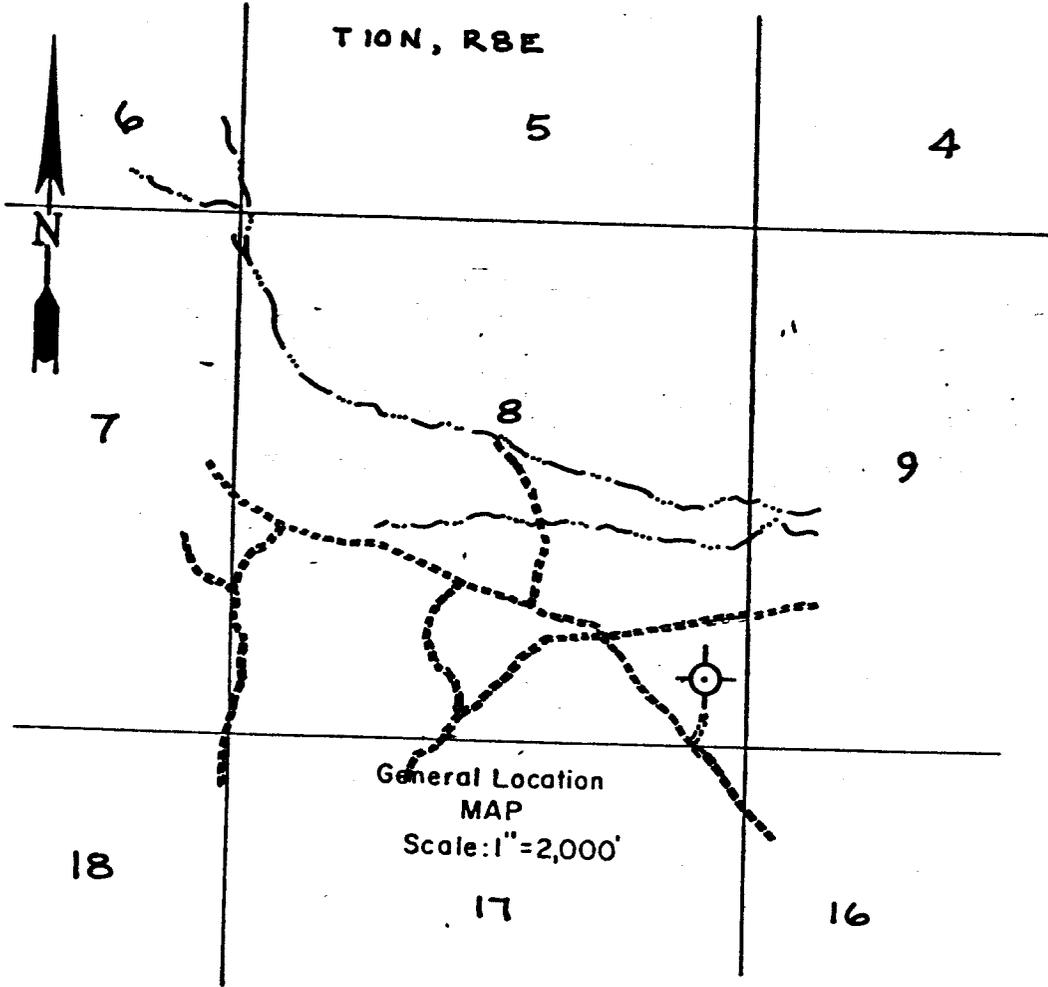
Marathon Oil Company
 Mud Springs #1-8
 683' FSL & 466' FEL
 Sec. 8, T10N, R8E
 Rich County, Utah

PROPOSED
 SCHEMATIC DRAWING OF RIG LAYOUT



TION, RBE

Marathon Oils
 Located in the
 Section 8 T
 Salt Lake B.M



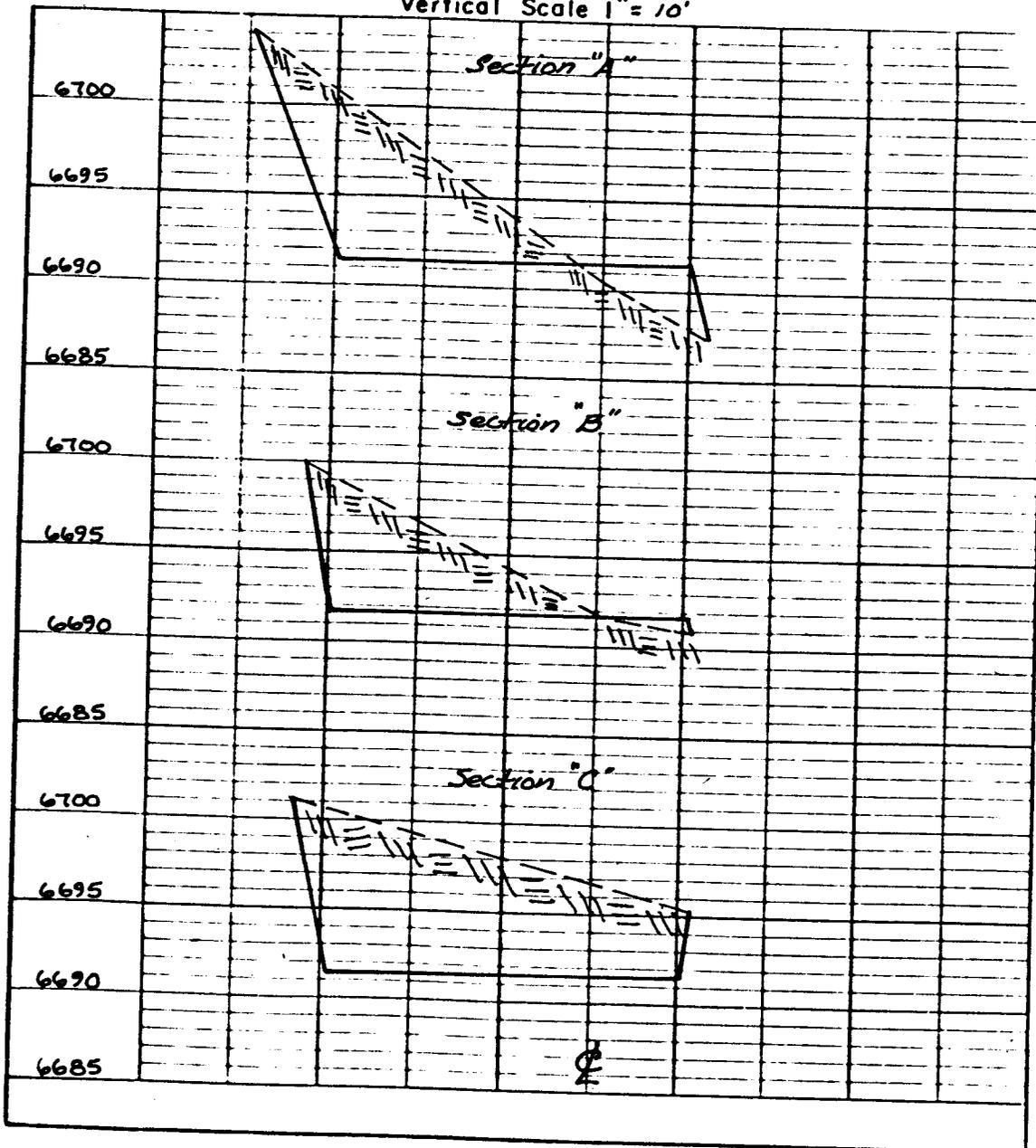
Legend

- ⊕ Well Location
- Reference Point
- Slope Stake
- ⊖ Slope Stake at Reserve Pit

⊕ --- 100'

Total Y
 Cut = 30,483
 Fill = 1,830
 Spoil pile = 23
 Top soil = 5
 Reserve pit cap
 77,283

Cross Sections
 of
 Laydown Direction
 Horizontal Scale: 1" = 100'
 Vertical Scale 1" = 10'

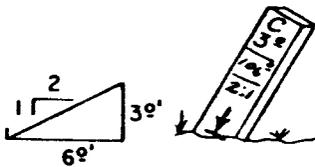


6695	
6690	
6685	
6680	
6675	
6695	
6690	
6685	
6680	
6675	

Mud Spring No. 1-8
 SE/4, SE/4 of
 ON, R 8 E of the
 , Rich County, Utah

R.P. 300' North
 Elev = 6699.0'

ical Slope
 Stake

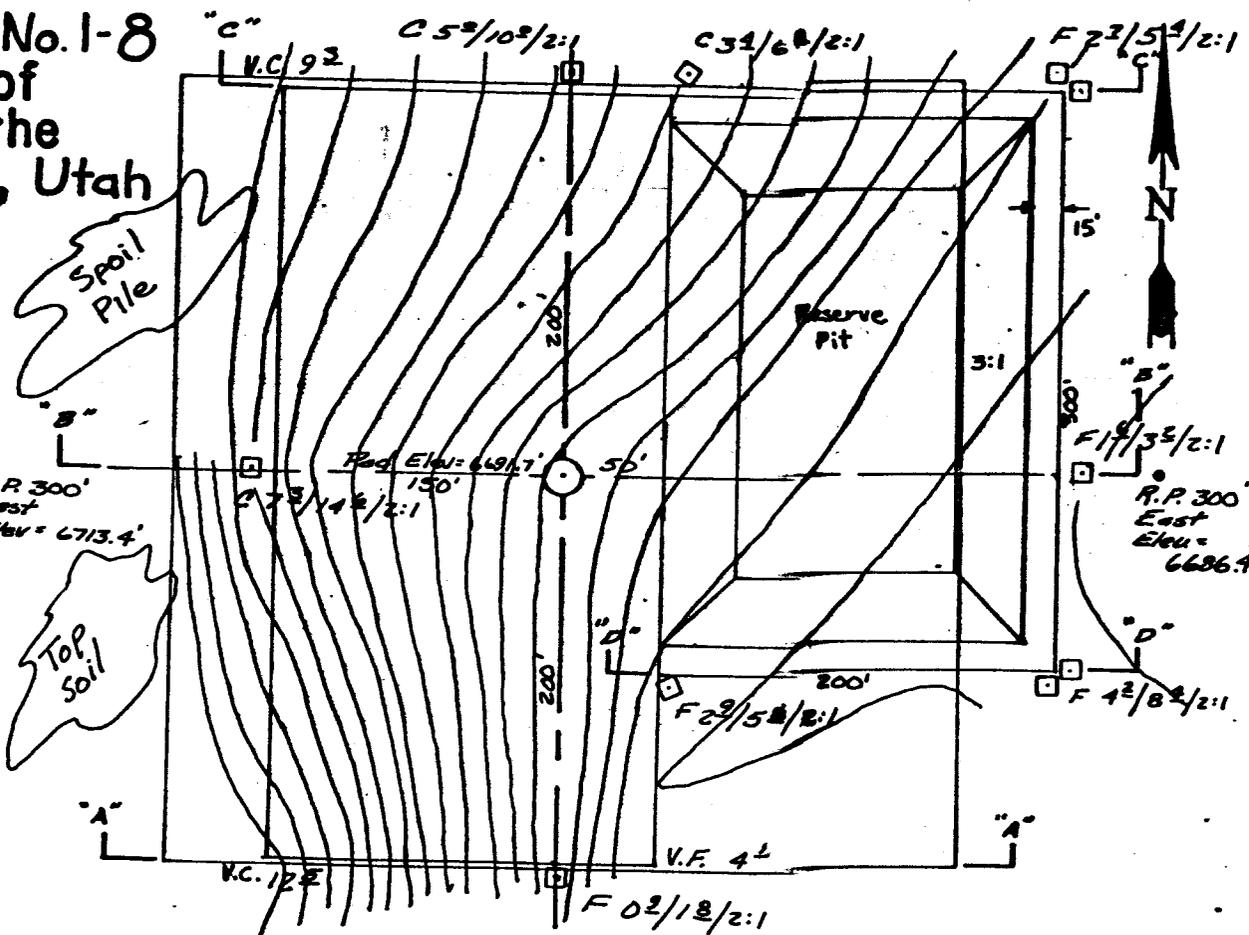
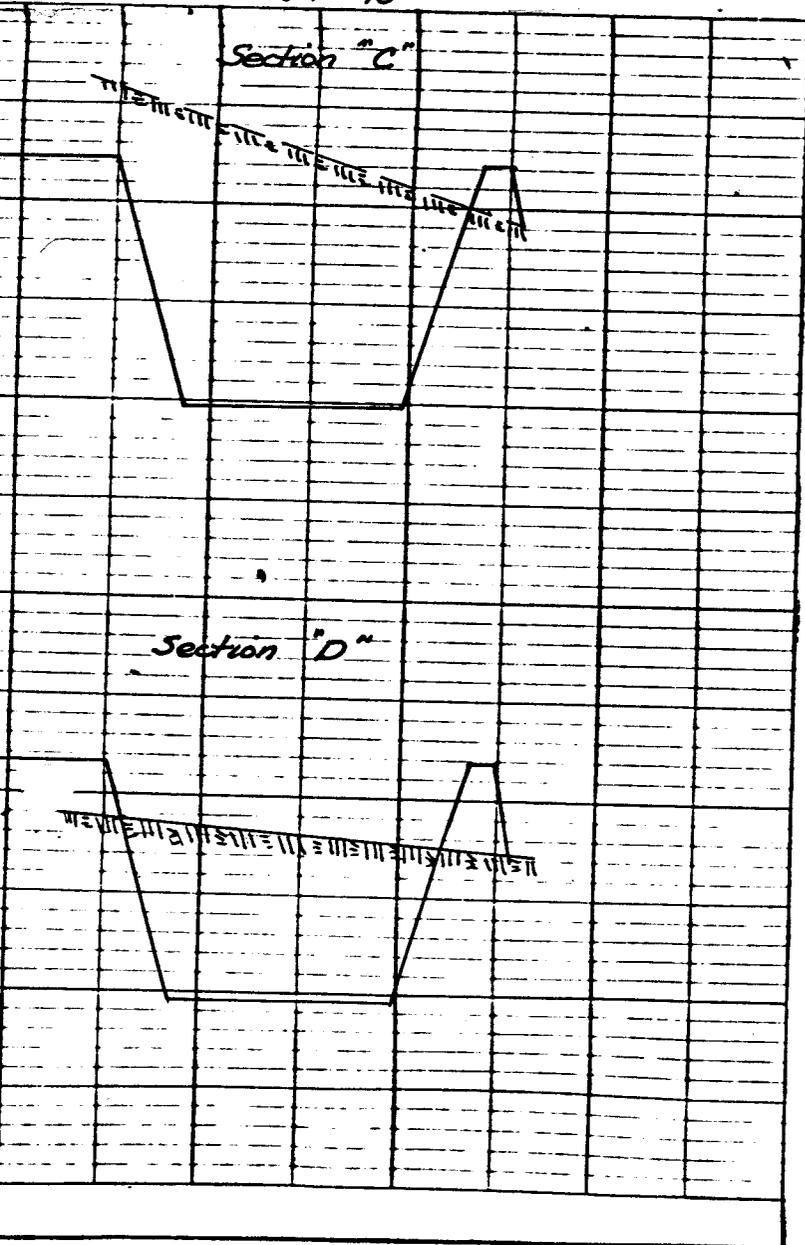


ardage

- 3 cu. yds.
- 7 cu. yds.
- 172 cu. yds.
- 86 cu. yds.

acity =
 Barrels at 12' depth

Cross Sections
 of
 Reserve Pit
 Horizontal Scale 1" = 100'
 Vertical Scale 1" = 10'



R.P. 300' South,
 Elev = 6697.9'

MAP

To
 Accompany Application
 for
 PERMIT TO DRILL
 Applicant:

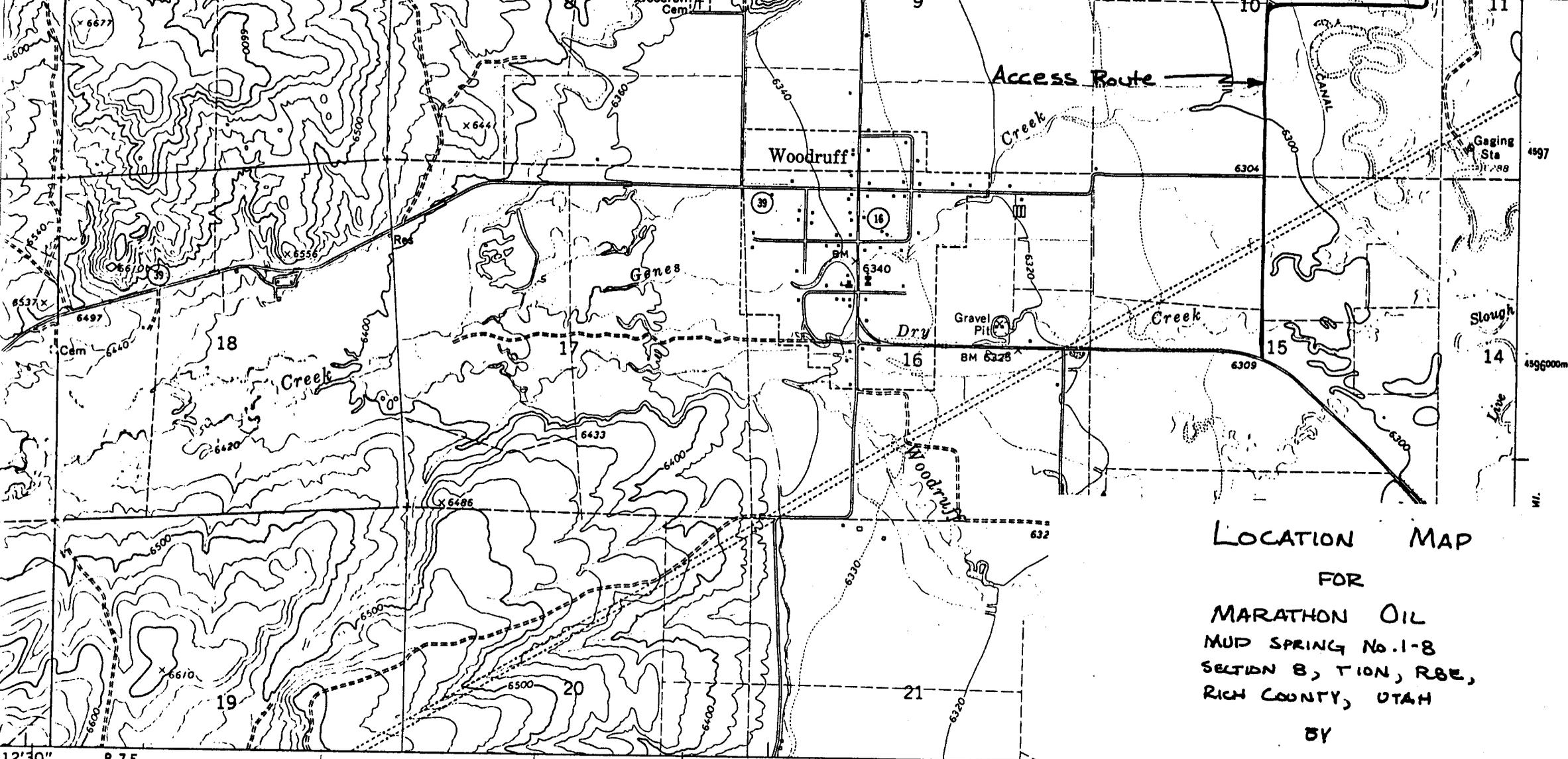
Marathon Oil Company
 P.O. Box 2659
 Casper, Wyoming

prepared
 By
 William H. Smith
 and Associates
 Surveying, Consultants

By R.R.

Date: 5/9/79

Job No. 80-79

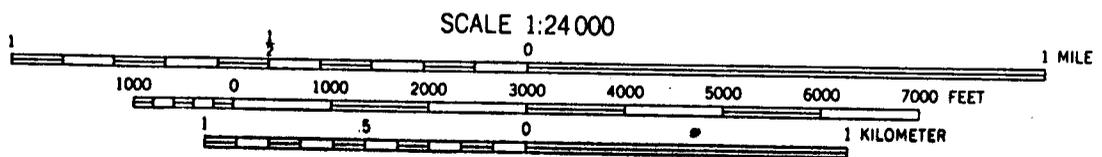


LOCATION MAP

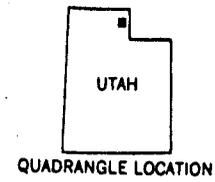
FOR
 MARATHON OIL
 MUD SPRING No. 1-8
 SECTION 8, T10N, R8E,
 RICH COUNTY, UTAH
 BY

WILLIAM H. SMITH & ASSOCIATES, P.C.
 SURVEYING CONSULTANTS

JOB No. 80-79
 DATE: MAY 9, 1979 SHEET 1 OF 2
 BY: RR



CONTOUR INTERVAL 20 FEET
 DOTTED LINES REPRESENT 10-FOOT CONTOURS
 DATUM IS MEAN SEA LEVEL

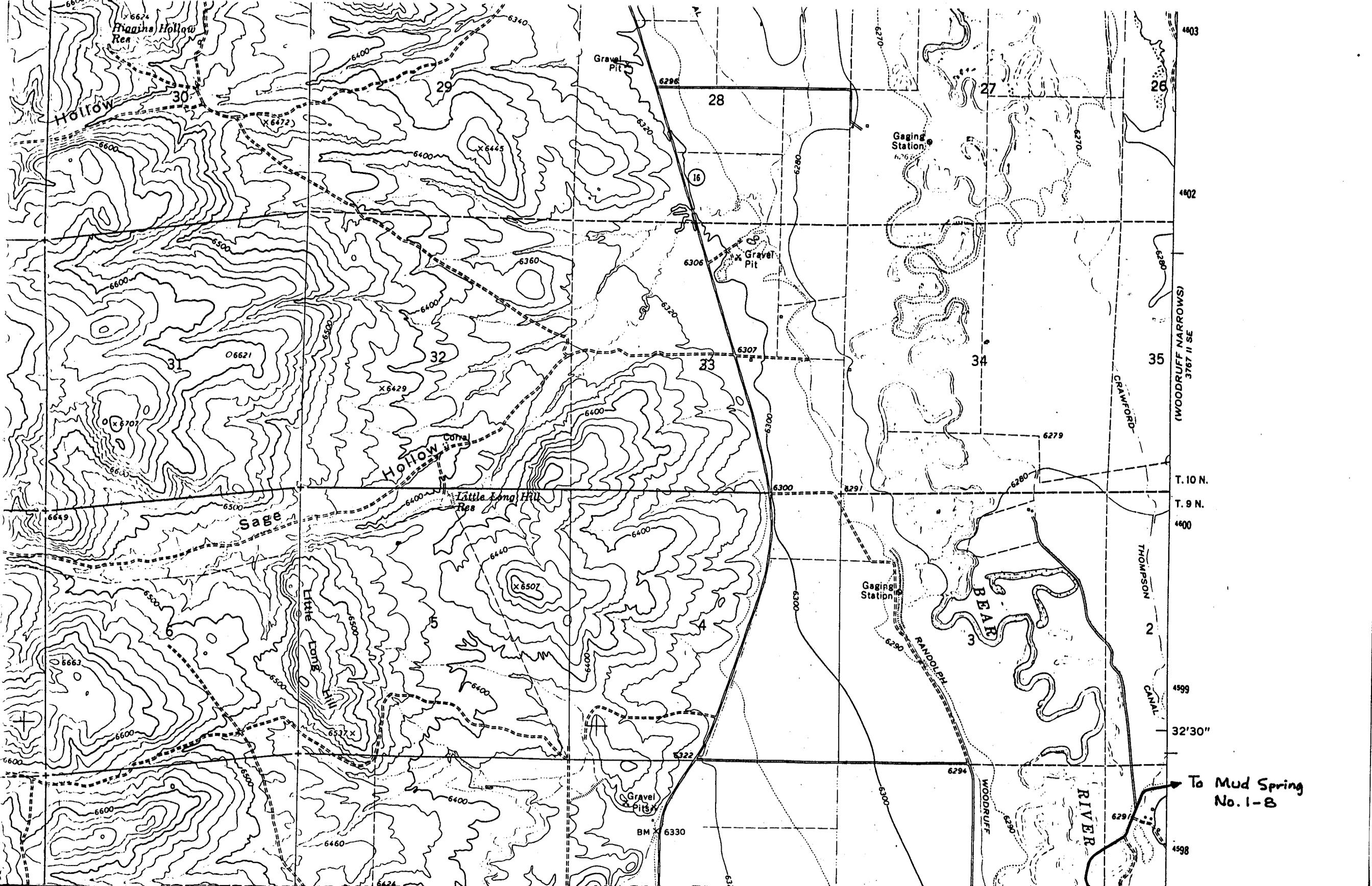


THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
 FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D. C. 20242
 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

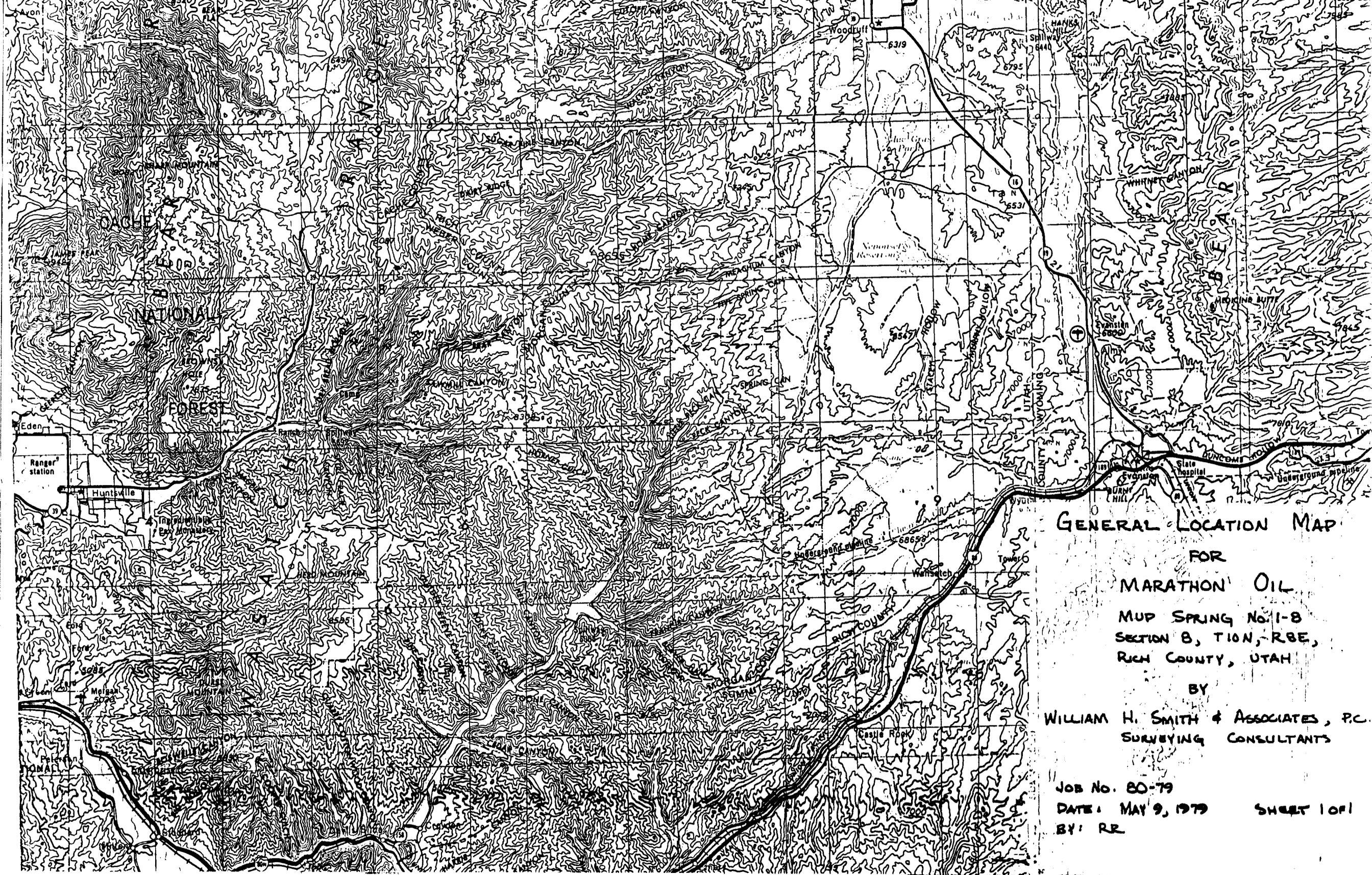
WOODRUFF, UTAH
 N4130—W11107.5/7.5

1968

AMS 3767 II SW—SERIES V897



To Mud Spring
No. 1-B

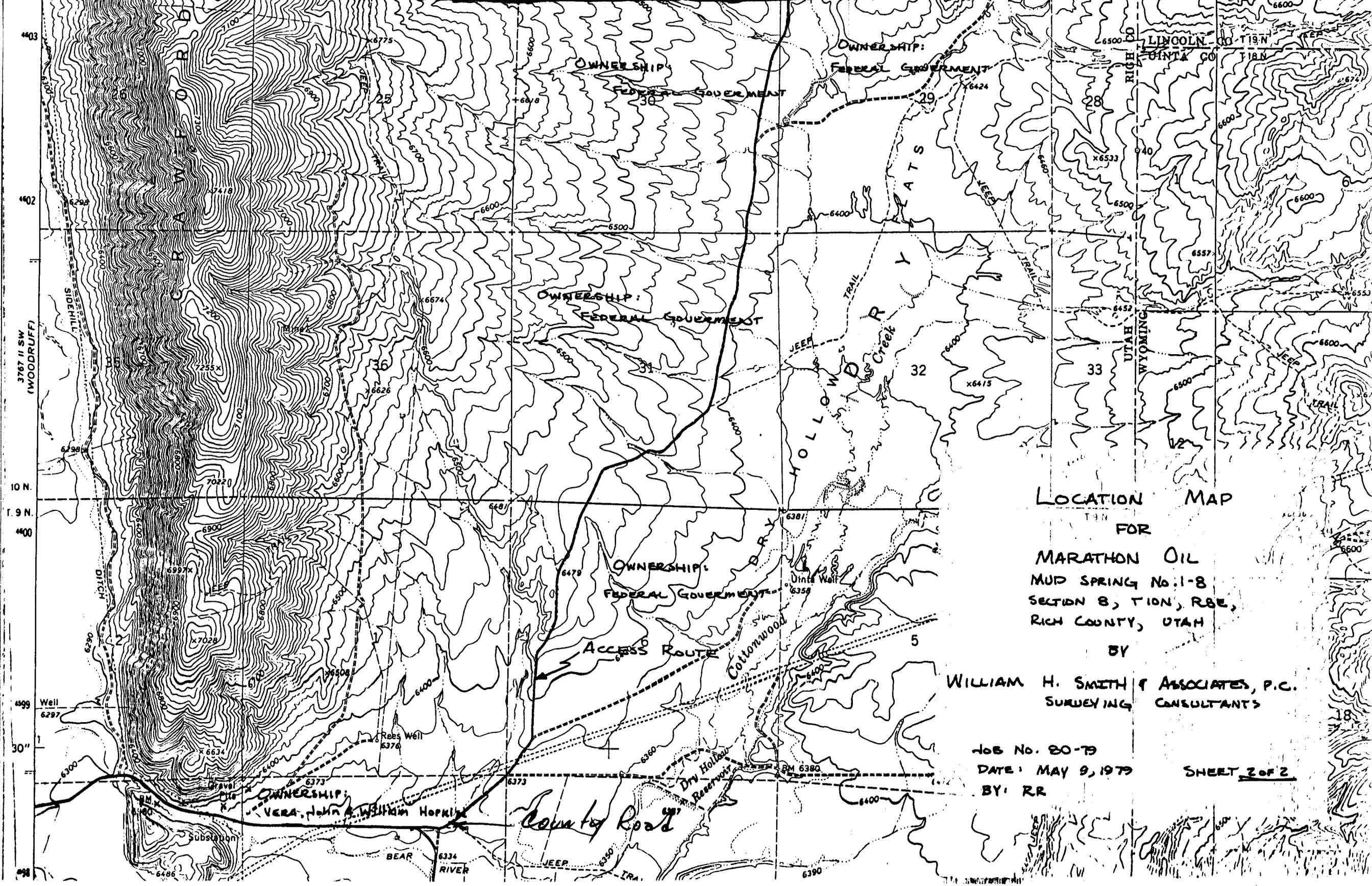


GENERAL LOCATION MAP

FOR
MARATHON OIL
MAP SPRING No. 1-8
SECTION 8, T10N, R8E,
RICH COUNTY, UTAH

BY
WILLIAM H. SMITH & ASSOCIATES, P.C.
SURVEYING CONSULTANTS

JOB No. 80-79
DATE: MAY 9, 1979
BY: RR



LOCATION MAP

FOR
MARATHON OIL
MUD SPRING No. 1-8
SECTION 8, T. 9 N., R. 29 E.,
RICH COUNTY, UTAH

BY
WILLIAM H. SMITH & ASSOCIATES, P.C.
SURVEYING CONSULTANTS

JOB No. 80-79
DATE: MAY 9, 1979
BY: RR

SHEET 2 OF 2



P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/265-7693

May 17, 1979

State of Utah
Department of Natural Resources
Division of Oil, Gas, and Mining
Atten: Mr. Cleon B. Feight, Director
1588 West North Temple
Salt Lake City, UT 84116



Dear Sir:

Our original proposal called for the staking of Mud Springs #1-8, 660' FSL & 660' FEL, Sec. 8, T10N, R8E, Rich County, Utah. Due to surface conditions, it was decided to stake the location 683' FSL & 466' FEL.

Thank you for your time on this matter.

Yours very truly,

MARATHON OIL COMPANY

A handwritten signature in cursive script that reads 'J. F. Wirth'.

J. F. Wirth
Drilling Superintendent

JFW:WEW:mbb

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
 DRILL DEEPEN PLUG BACK

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

2. NAME OF OPERATOR
 Marathon Oil Company

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

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 16. NO. OF ACRES IN LEASE 2,424.93

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. None
 19. PROPOSED DEPTH 9,500' *nugget*

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6,692'
 17. NO. OF ACRES ASSIGNED TO THIS WELL 640
 20. ROTARY OR CABLE TOOLS Rotary

22. APPROX. DATE WORK WILL START* August 25, 1979

23. PROPOSED CASING AND CEMENTING PROGRAM

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24. SIGNED Harry Magnus TITLE District Operations Manager DATE May 17, 1979

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:



5. LEASE DESIGNATION AND SERIAL NO.
U-25465

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Mud Springs

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Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 8, T10N, R8E

12. COUNTY OR PARISH
Rich

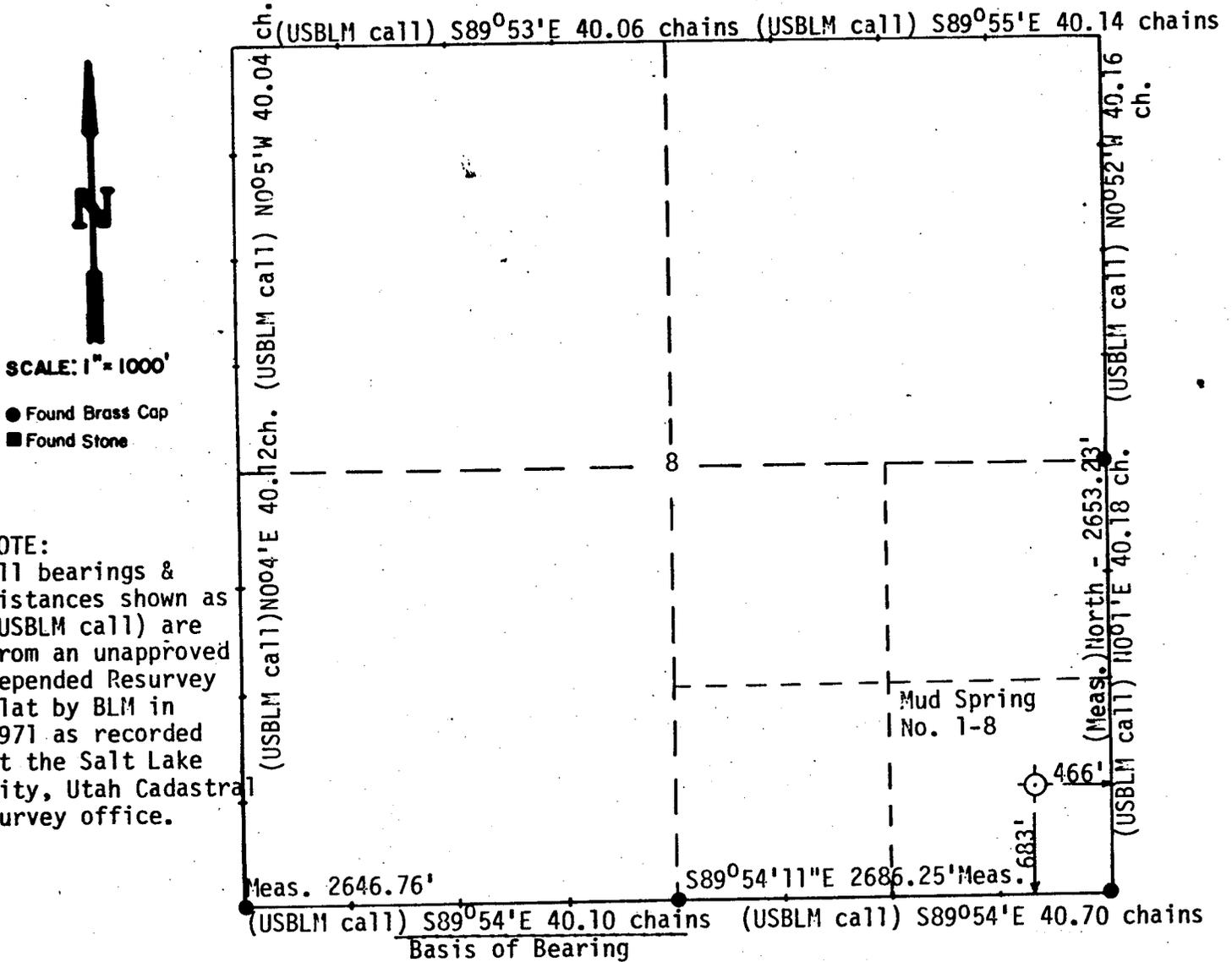
13. STATE
Utah

P.O. BOX 654
 GREEN RIVER, WYOMING
 82935
 TELEPHONE: (307) 875-3638

WILLIAM H. SMITH & ASSOCIAT
 SURVEYING CONSULTANTS

P.O. BOX 1300
 MOAB, UTAH
 84532
 TELEPHONE: (801) 259-6861

T 10 North R 8 East

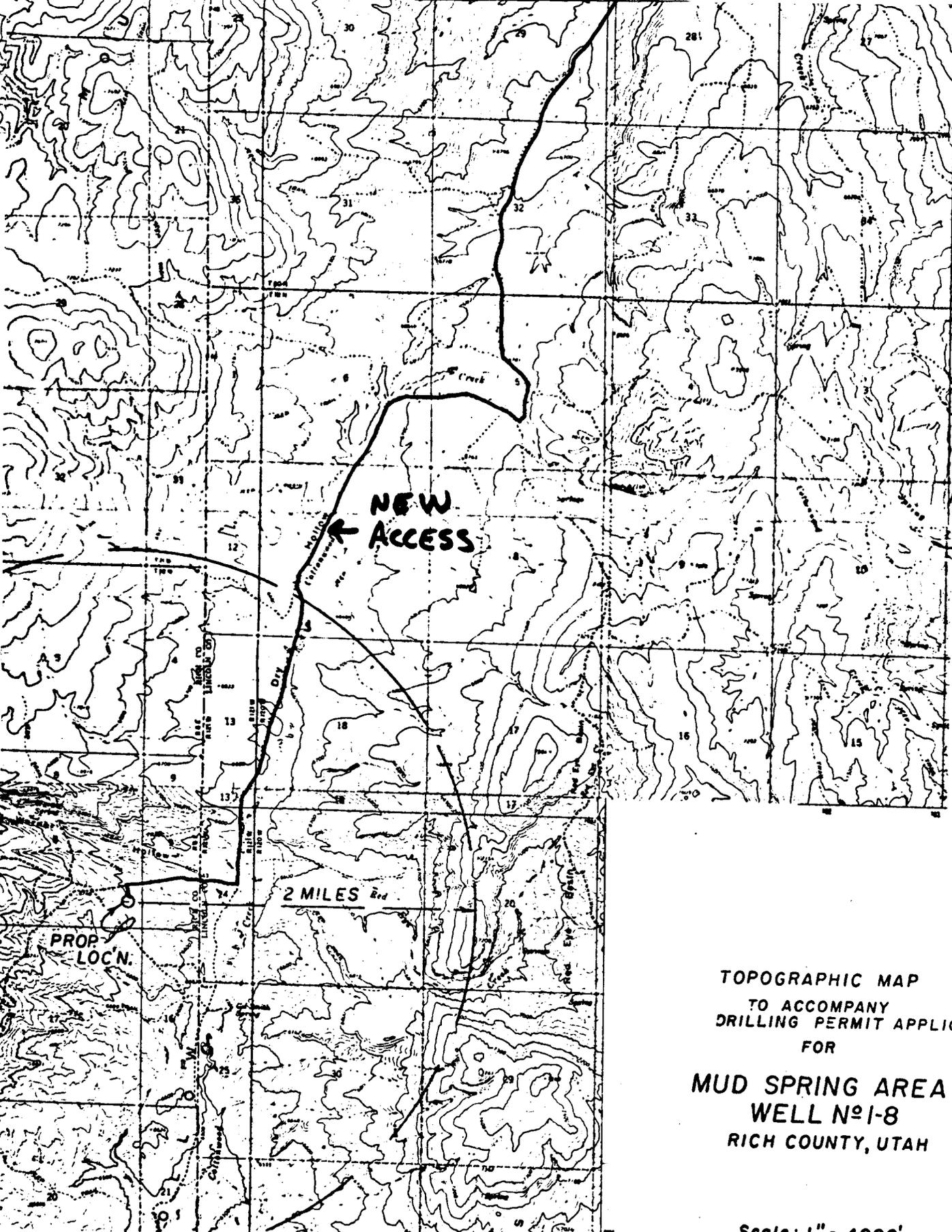


I, William H. Smith of Green River, Wyoming hereby certify that in accordance with a request from Walt West of Casper, Wyoming for Marathon Oil Company Randy Rowley under my supervision and direction made a survey on the 8th day of May, 1979 for location and elevation of the Mud Spring No. 1-8. As shown on the above map, the wellsite is in the SE/4, SE/4 of Section 8, Township 10N, Range 8E of the Salt Lake Base Meridian, Rich County, State of Utah. Elevation is 6691.7 feet ungraded ground Datum established from a spot elevation of the Southwest section corner of Section 8, T10N, R8E as shown on the USGS 7 1/2' topo "Woodruff Narrows, Utah-Wy

Reference Point	300' North	rebar & lath	elevation = 6699.0'
Reference Point	300' South	rebar & lath	elevation = 6690.8'
Reference Point	300' East	rebar & lath	elevation = 6686.4'
Reference Point	300' West	rebar & lath	elevation = 6713.4'

Job #80-79

William H. Smith
 Utah R.L.S. NO. 2764

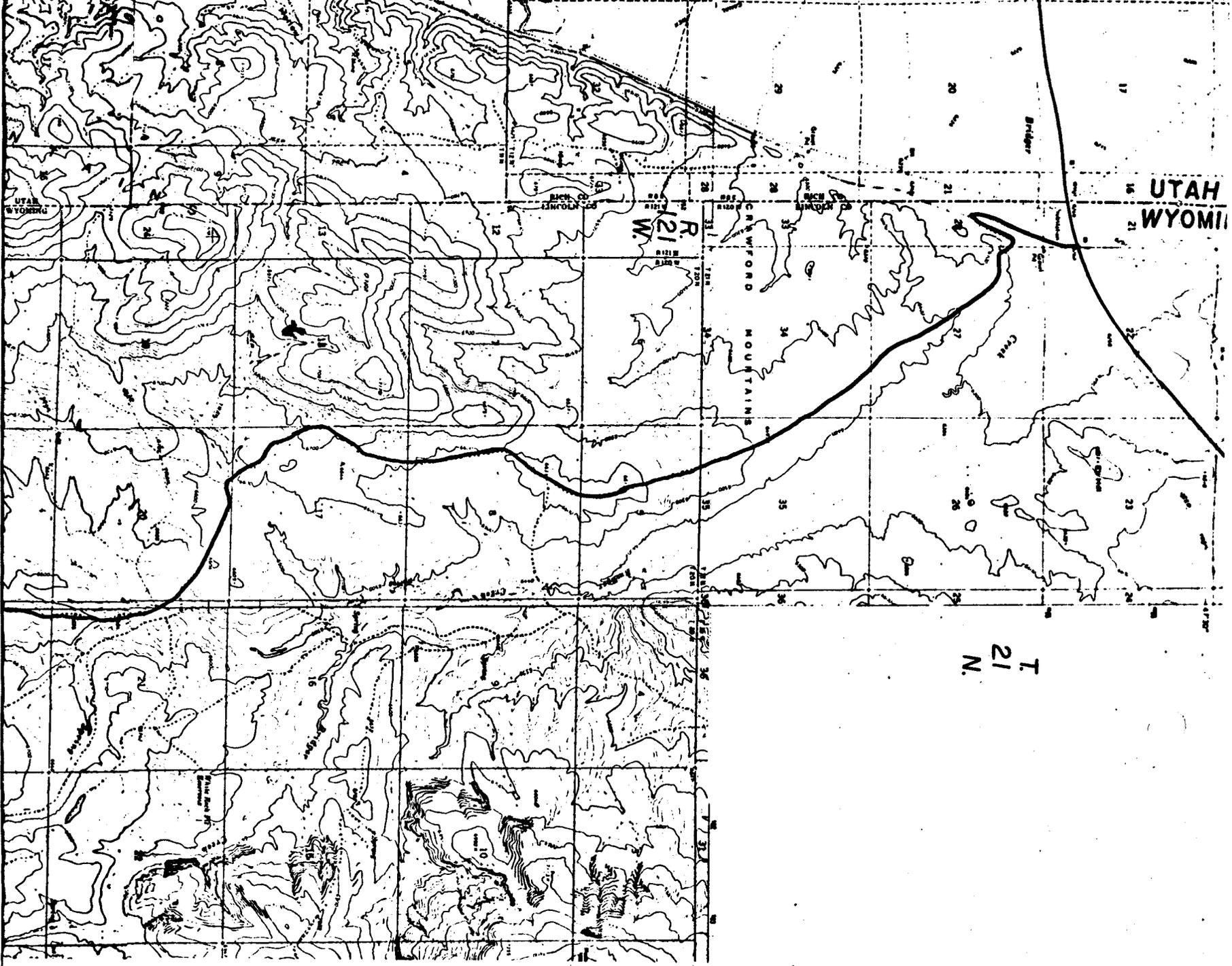


T. 19 N.

TOPOGRAPHIC MAP
TO ACCOMPANY
DRILLING PERMIT APPLICATION
FOR

MUD SPRING AREA
WELL N°1-8
RICH COUNTY, UTAH

Scale: 1" = 4000'



UTAH
WYOMING

R
21
W

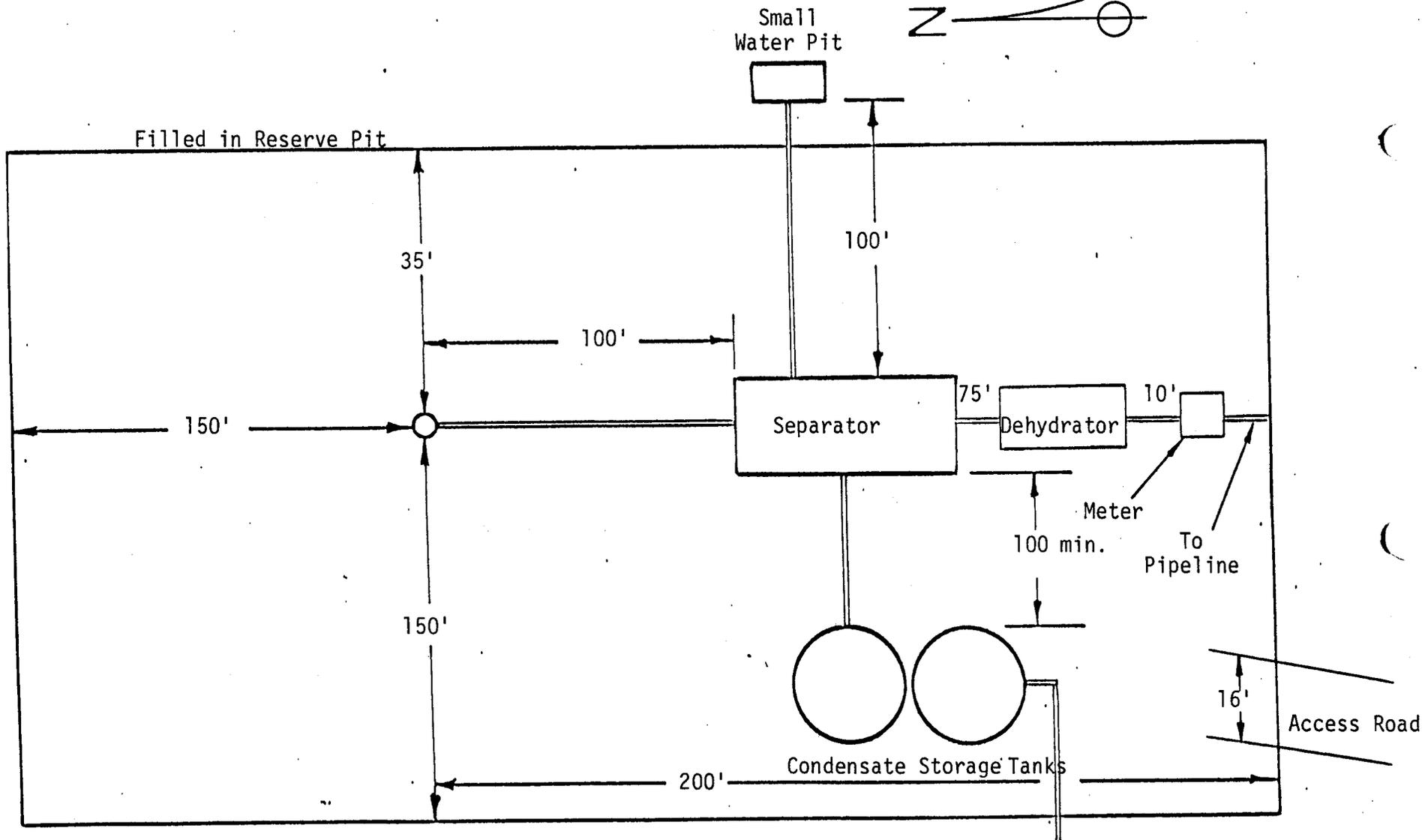
CRAWFORD
MOUNTAINS

T
21
N.

T
20
N.

Marathon Oil Company
Mud Springs #1-8
683' FSL & 466' FEL
Sec. 8, T10N, R8E
Rich County, Utah

PROPOSED PRODUCTION FACILITIES.



STATE OF UTAH
DIVISION OF OIL, GAS, AND MINING

** FILE NOTATIONS **

Date: May 21, 1979
Operator: Marathon Oil Company
Well No: Mud Springs # 1-8
Location: Sec. 8 T. 10N R. 8E County: Rich

File Prepared: Entered on N.I.D.:
Card Indexed: Completion Sheet:
API Number: 43-033-30021

CHECKED BY:

Administrative Assistant: _____
Remarks:
Petroleum Engineer: _____
Remarks:
Director: OK
Remarks:

INCLUDE WITHIN APPROVAL LETTER:

Bond Required: Survey Plat Required:
Order No. _____ Surface Casing Change
to _____
Rule C-3(c), Topographic exception/company owns or controls acreage
within a 660' radius of proposed site
O.K. Rule C-3 O.K. In _____ Unit
Other:

Letter Written/Approved



SCOTT M. MATHESON
Governor

OIL, GAS, AND MINING BOARD

GORDON E. HARMSTON
Executive Director,
NATURAL RESOURCES

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

CHARLES R. HENDERSON
Chairman

JOHN L. BELL
C. RAY JUVELIN
THADIS W. BOX
CONSTANCE K. LUNDBERG
EDWARD T. BECK
E. STEELE McINTYRE

CLEON B. FEIGHT
Director

May 22, 1979

MARATHON OIL COMPANY
P O BOX 2659
CASPER WY 82602

Re: Well No. Mud Springs #1-8, Sec. 8, T. 10N, R. 8E, Rich County, UT

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to well is hereby granted in accordance with Rule C-3, General Rules and Regulations and Rules of Practice and Procedure.

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

MICHAEL T. MINDER - Geological Engineer
HOME: 876-3001
OFFICE: 533-5771

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

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

The API number assigned to this well is 43-033-30021.

Yours very truly,

DIVISION OF OIL, GAS, AND MINING

Cleon B Feight
Cleon B. Feight, Director

/lw

cc: U. S. Geological Survey

DISTRICT ENGINEER, O&G, SALT LAKE CITY, UTAH

SUBJECT: APD MINERAL EVALUATION REPORT

LEASE NO. U-25465

OPERATOR: Marathon Oil Company

WELL NO. Mud Springs 1-8

LOCATION: 1/2 NE 1/2 SE 1/4 sec. 8, T. 10 N, R. 8 E, SLM

Rich County, Utah

Stratigraphy: This area is relatively undrilled & structurally complex.

Therefore, the stratigraphy is uncertain and the operators projected tops are acceptable.

Fresh Water: See attached WRD report.

Leasable Minerals: None

Additional Logs Needed: None

Potential Geologic Hazards: High Dip Angles may cause deviation problems while drilling. Measures should be taken to monitor and control deviation.

References and Remarks:

U.S.G.S. files.

Signature: J. Paul Mathony

Date: June 6, 1979

REQUEST FOR INFORMATION FROM WATER RESOURCES DIVISION

Date June 6, 1979

Person and Division making request Paul Matheny - Mineral Evaluation

AREA: County and State Rich County, Utah

Township 10 ^N Range 8 ^E Section 8 $\frac{1}{4}$ $\frac{1}{4}$ SE $\frac{1}{4}$ SLM BL&M

Altitude of surface at site 6692 Formation at surface (if known) Quaternary Alluvium

PURPOSE: Proposed Depth - 9500'
 Protection of useful ground water (casing program); check
 Other (describe):

For WRD use Date in: 6-6-79
 Person assigned: Joe Gates Date out: "

Evaluation: No WRD studies in area (except for HA-417 on surface water). No data in files except for a few shallow (50') wells in valley alluvium. Limestone bedrock formations may be aquifers or at least contain water - but we have no definite data.

GEOLOGICAL SURVEY

JUN 6 - 1979

continue over
 Signed by evaluator [Signature] SALT LAKE CITY, UTAH
 MINERAL EVALUATION Time used 1/2 hr

Evaluator: Send copy to coordinator - original direct to originator of request

United States Department of the Interior
 Geological Survey
 8440 Federal Building
 Salt Lake City, Utah 84138

Usual Environmental Analysis

Lease No. U-25465
 Operator Marathon Oil Company Well No. 1-8
 Location 683' FWL & 466' FEL Sec. 8 T. 10N R. 8E
 County Rich State Utah Field Wildcat
 Status: Surface Ownership Public Minerals Federal
 Joint Field Inspection Date June 19, 1979

Participants and Organizations:

<u>George Diwachak</u>	<u>U.S. Geological Survey, Salt Lake City</u>
<u>Dan Washington</u>	<u>Bureau of Land Management, Salt Lake City</u>
<u>Kenn Fry</u>	<u>Bureau of Land Management, Salt Lake City</u>
<u>Bill Bratney</u>	<u>Bureau of Land Management, Salt Lake City</u>
<u>Ray Rosenthal</u>	<u>Marathon Oil Company</u>
<u>Harvey Undershausen</u>	<u>Opal Construction</u>
<u>Rich Holt</u>	<u>Opal Construction</u>

Related Environmental Analyses and References:

- (1) Unit Resource Analysis, Randolph Planning Unit
- (2)

Analysis Prepared By: George Diwachak
 Environmental Scientist
 Salt Lake City, Utah

Date: June 20, 1979

*Pad 200 x 400
 Pit 200 x 300
 - 0.3 ac for base habitat
 400' - 16" access road
 Flow line not used
 Start pits top soil
 3.7 ac
 → Wtr used to 1000'*

Proposed Action:

On May 18, 1979, Marathon Oil Company filed an Application for Permit to Drill the No. 1-8 exploratory well, a 9,500 foot gas test of the Twin Creek Formation; located at an elevation of 6692 ft. in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 8, T. 10N., R. 8E. on Federal mineral lands and public surface; lease No. U-25465. There was no objection raised to the wellsite nor to the access road.

A rotary rig would be used for the drilling. An adequate casing and cementing program is proposed. Fresh-water sands and other mineral-bearing formations would be protected. A blowout Preventor would be used during the drilling of the well. The proposed pressure rating should be adequate. Details of the operator's NTL-6 10-Point Subsurface Plan are on file in the USGS District Office in Salt Lake City, Utah and the USGS Northern Rocky Mountain Area Office in Casper, Wyoming. The 13-Point Surface Protection Plan is on file in the District Office in Salt Lake City.

A working agreement has been reached with the Bureau of Land Management, the controlling surface agency. Rehabilitation plans would be decided upon as the well neared completion; the Surface Management Agency would be consulted for technical expertise on those arrangements.

The operator proposes to construct a drill pad 200 ft. wide by 400 ft. long and a reserve pit 200 ft. by 300 ft. An additional area approximately 0.3 acres would be necessary for fracturing procedures. (See APD, Rig Layout Schematic for designation of fracing area) A new access road would be constructed 16 ft. wide by 400 ft. long. An existing road would be upgraded by minor blading wherever deemed necessary to allow for adequate equipment travel. The operator proposes to construct production facilities on the disturbed area of the proposed drill pad.

If production is established, plans for a gas flowline would be submitted to the appropriate agencies for approval. The anticipated starting date is upon approval and duration of drilling activities would be about 75 days.

Location and Natural Setting:

The proposed drillsite is approximately 9 miles northeast of Woodruff, Utah, the nearest town. A poor road runs to within 400 ft. of the location. This well is a wildcat.

Topography:

The proposed location sits to the east of the Crawford Mountains in a gently

undulating to rolling hills valley, that slopes gently to the east.

Geology:

The surface geology is Quaternary Alluvium. The soil is sandy clay. No geologic hazards are known near the drillsite. Seismic risk for the area is minor. Anticipated geologic tops are filed with the 10-Point Subsurface Protection Plan.

Although hydrogen sulfide is prevalent in the area, it is confined to the Phosphoria Formation, approximately 5000 ft. below the total depth of this proposed well.

Approval of the proposed action would be conditioned that adequate and sufficient electric/radioactive/density logging surveys would be made to locate and identify any potential mineral resources. Production casing and cementing would be adjusted to assure no influence of the hydrocarbon zones through the well bore on these minerals. In the event the well is abandoned, cement plugs would be placed with drilling fluid in the hole to assure protection of any mineral resources.

The potential for loss of circulation would exist. Loss of circulation may result in the lowering of the mud levels, which might permit exposed upper formations to blow out or to cause formations to slough and stick to drill pipe. A loss of circulation would result in contamination due to the introduction of drilling muds, mud chemicals, filler materials, and water deep in to the permeable zone, fissures, fractures, and caverns within the formation in which fluid loss is occurring. The use of special drilling techniques, drilling muds, and lost circulation materials may be effective in controlling lost circulation.

A geologic review of the proposed action has been furnished by the Area Geologist, U.S. Geological Survey, Salt Lake City, Utah.

The operator's drilling, cementing, casing and blowout prevention programs have been reviewed by the Geological Survey engineers and determined to be adequate.

Soils:

No detailed soil survey has been made of the project area. The top soils in the area range from a sandy clay to a clay type soil. The soil is well drained and has a medium runoff potential and sediment production would be moderate. The soils are mildly alkaline and support the salt-desert shrub community.

Top soil would be removed from the surface and stockpiled. The soil would be spread over the surface of disturbed area when abandoned to aid

in rehabilitation of the surface. Rehabilitation is necessary to prevent erosion and encroachment of undesired species on the disturbed areas. The operator proposes to rehabilitate the location and access road per the recommendations of the Bureau of Land Management.

Approximately 3.7 acres of land would be stripped of vegetation. This would increase the erosional potential. Proper construction practice, construction of water bars, reseeding of slope-cut area would minimize this impact.

Air:

No specific data on air quality is available at the proposed location. There would be a minor increase in air pollution due to emissions from rig and support traffic engines. Particulate matter would increase due to dust from travel over unpaved dirt roads. The potential for increased air pollution due to leaks, spills, and fire would be possible.

Relatively heavy traffic would be anticipated during the drilling-operations phase, increasing dust levels and exhaust pollutants in the area. If the well was to be completed for production, traffic would be reduced substantially to a maintenance schedule with a corresponding decrease of dust levels and exhaust pollutants to minor levels. If the project results in a dry hole, all operations and impact from vehicular traffic would cease after abandonment. Due to the limited number of service vehicles and limited time span of their operation, the air quality would not be substantially reduced.

Toxic or noxious gases would not be anticipated.

Precipitation:

Annual rainfall should range from about 9 to 15" at the proposed location. The majority of the numerous drainages in the surrounding area are of a non-perennial nature flowing only during early spring runoff and during extremely heavy rain storms. This type of storm is rather uncommon as the normal annual precipitation is around 13".

Winds are medium and gusty, occurring predominately from southwest to northeast. Air mass inversions are rare. The climate is semi-arid with abundant sunshine, hot summers and cold winters with temperature variations on a daily and seasonal basis.

Surface Water Hydrology:

Drainage from the location would be toward the east to Cottonwood Creek, which flows in a south, southwesterly direction, eventually reaching the Bear River.

Some additional erosion would be expected in the area since surface vegetation would be removed. If erosion became serious, drainage systems such as water bars and dikes would be installed to minimize the problem. The proposed project should have minor impact on the surface water systems. The potential for pollution would be present from leaks or spills. The operator is required to report and clean-up all spills or leaks.

Ground Water Hydrology:

Some minor pollution of ground water systems would occur with the introduction of drilling fluids (filtrate) into the aquifer. This is normal and unavoidable during rotary drilling operations. The potential for communication, contamination and comingling of formations via the well bore would be possible. The drilling program is designed to prevent this. There is need for more data on hydrologic systems in the area and the drilling of this well may provide some basic information as all shows of fresh water would be reported. Water production with the gas would require disposal of produced water per the requirements of NTL-2B. The depths of fresh water formations are listed in the 10-Point Sub-surface Protection Plan. The pits would be unlined.

A water well would be drilled approximately 1000 ft. deep near the location. The BLM may request that the well remain after drilling activities cease.

Vegetation:

Sagebrush, grasses and prickley pear cacti are present on the location.

Plants in the area are of the salt-desert-shrub types.

Proposed action would remove about 3.7 acres of vegetation. Removal of vegetation would increase the erosional potential and there would be a minor decrease in the amount of vegetation available for grazing.

The operator proposes to rehabilitate the surface upon completion of operations.

Wildlife:

The fauna of the area consists predominately of pronghorn antelope, mule deer, coyotes, rabbits, foxes, and varieties of small ground squirrels and other types of rodents and various types of reptiles. The area is used by man for the primary purpose of grazing domestic livestock and sheep. The birds of the area are raptors, sage grouse, finches, ground sparrow, magpies, crows, and jays.

A sage grouse strutting ground is located about 1.5 miles south of the test site. Drilling activities should not impact the breeding site.

An animal and plant inventory has been made by the BLM. No endangered plants or animals are known to inhabit the project area.

Social-Economic Effect:

An on the ground surface archaeological reconnaissance would be required prior to approval of the proposed action. Appropriate clearances would then be obtained from the surface managing agency. If a historic artifact, an archaeological feature or site is discovered during construction operations; activity would cease until the extent, the scientific importance and the method of mitigating the adverse effects could be determined by a qualified resource specialist.

There are no occupied dwellings or other facilities of this nature in the general area. Minor distractions from aesthetics would occur over the lifetime of the project and is judged to be minor. All permanent facilities placed on the location would be painted a color to blend in with the natural environment. Present use of the area is grazing, recreation, and oil and gas activities.

Noise from the drilling operation may temporarily disturb wildlife and people in the area. Noise levels would be moderately high during drilling and completion operations. Upon completion, noise levels would be infrequent and significantly less. If the area is abandoned, noise levels should return to pre-drilling levels.

- The site is not visible from any major roads. After drilling operations, completion equipment would be visible to passersby of the immediate area but should not present a major intrusion.

The economic effect of one well would be difficult to determine. The overall effect of oil and gas drilling and production are significant in Rich County.

But should this well discover a significant new hydrocarbon source, local, state and possibly national economics might be improved. In this instance, other development wells would be anticipated, with substantially greater environmental and economic impacts.

Should the wellsite be abandoned, surface rehabilitation would be done according to the surface agency's requirements and to USGS's satisfaction. This would involve leveling, contouring, reseeding, etc., of the location and possibly the access road. If the well should produce hydrocarbons, measures would be undertaken to protect wildlife and domestic stock from the production equipment.

There are no national state, or local parks, forests, wildlife refuges or ranges, grasslands, monuments, trails or other formally designated recreational facilities near the proposed location.

The proposed location is within the Randolph Planning Unit. This Environmental Assessment Record was compiled by the Bureau of Land Management, the surface managing agency of the Federal surface in the area. The study includes additional information on the environmental impact of oil and gas operations in this area and gives land use recommendations. The E.A.R. is on file in the agency's State offices and is incorporated herein by reference.

Waste Disposal:

The mud and reserves pits would contain all fluids used during the drilling operations. A trash pit would be utilized for any solid wastes generated at the site and would be buried at the completion of the operations. Sewage would be handled according to State sanitary codes. For further information, see the 13-Point Surface Plan.

Alternative to the Proposed Action:

(1) Not approving the proposed permit--The oil and gas lease grants the lessee exclusive right to drill for, mine, extract, remove and dispose of all oil and gas deposits. Under leasing provisions, the Geological Survey has an obligation to allow mineral development if the environmental consequences are not too severe or irreversible. Upon rehabilitation of the site, the environmental effects of this action would be substantially mitigated, if not totally annulled. Permanent damage to the surface and subsurface would be prevented as much as possible under USGS and other controlling agencies supervision with rehabilitation planning reversing almost all effects. Additionally, the growing scarcity of oil and gas should be taken into consideration. Therefore, the alternative of not proceeding with the proposed action at this time is rejected.

(2) Minor relocation of the wellsite and access road or any special, restrictive stipulations or modifications to the proposed program would not significantly reduce the environmental impact. There are no severe vegetative, animal or archaeological-historical-cultural conflicts at the site. Since only a minor impact on the environment would be expected, the alternative of moving the location is rejected. At abandonment, normal rehabilitation of the area such as contouring, reseeding, etc., would be undertaken with an eventual return to the present status as outlined in the 13-Point Surface Plan.

Adverse Environmental Effects Which Cannot Be Avoided:

Surface disturbance and removal of vegetation from approximately 3.7 acres of land surface for the lifetime of the project which would result in increased and accelerated erosional potential. Grazing would be eliminated in the disturbed areas and there would be a minor and temporary

disturbance of wildlife and livestock. Minor induced air pollution due to exhaust emissions from rig engines of support traffic engines would occur. Minor increase in dust pollution would occur due to vehicular traffic associated with the operation. If the well is a producer, additional surface disturbance would be required to install production pipelines. The potential for fires, gas leaks, and spills of oil and water would exist. During the construction and drilling phases of the project, noise levels would increase. Potential for sub-surface damage to fresh water aquifers and other geologic formations exists. Minor distractions from aesthetics during the lifetime of the project would exist. If the well is a producer, an irreplaceable and irretrievable commitment of resources would be made. Erosion from the site would eventually be carried as sediment in the Bear River. The potential for pollution to Cottonwood Creek would exist through leaks and spills

Determination:

This requested action ~~does~~/does not constitute a major Federal action significantly affecting the environment in the sense of NEPA, Section 102(2)(C).

Date

7/12/79



District Engineer
U.S. Geological Survey
Conservation Division
Oil and Gas Operations
Salt Lake City District

Addendum:

Per Sundry Notice dated July 2, 1979, and discussions at the pre-drill inspection, the location was moved 100 feet north to lessen cuts necessary for the original pad alignment. Additionally, the access route was changed to accomodate travel from the north [REDACTED], and would not alter new road construction. These changes would not pose any additional environmental impacts to the area. See attached map for new access route.



ACTING DISTRICT ENGINEER

JUL 13 1979



P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/265-7693

July 3, 1979



State of Utah
Department of Natural Resources
Division of Oil, Gas, and Mining
Attn: Mr. Cleon B. Feight, Director
1588 West North Temple
Salt Lake City, UT 84116

Dear Sir:

A predrill meeting was held June 19, 1979, on Mud Springs #1-8, Sec. 8, T10N, R8E, Rich County, Utah.

It was requested at this meeting by BLM & USGS for environmental reasons that the location stake be moved 100' to the north. This development now makes the location 783' FSL & 466' FEL; it also cancels our correspondence to you dated May 17, 1979.

They also requested that we use existing and access roads from the Wyoming side to arrive at the location instead of the roads in Utah, that we had originally submitted on the NTL-6.

Attached is a copy of our correspondence and a map that was submitted to USGS, Salt Lake City, Utah.

Thank you for your time on this matter.

Yours very truly,

A handwritten signature in cursive script that reads 'J. F. Wirth'.

J. F. Wirth
Drilling Superintendent

JFW:WEW:jmo

attachments

M 40

Well No.

Marathon oil Co.
was required
to move ~~them~~ original location
by BLM^{USGS} (for Topographic and
Environmental reasons). A
Rig was stacked on site
and verbal approval to
commence ^{operations} requested. [In as
much as the location change
was only 100' and didn't
~~appear to~~ effect off set
leases ^{verbal} approval was granted
on this date, conditioned
on a ^{written} statement from Marathon
declaring their company owns
or controls acreage within
a 660' radius of the new
proposed site at:

Section 8, T10N, R8E
Rich County Ut. - 783 FSL, E466 FEL.



P.O. Box 120
Casper, Wyoming 82602
Telephone 307/235-2511

July 11, 1979

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Gentlemen:

Re: Federal Oil & Gas Lease
Utah - 25465

This is to advise that Lots 1,2,3,4, $W\frac{1}{2}W\frac{1}{2}$ (All) Sec. 9, T. 10 N., R. 8 E., SLM and the $NE\frac{1}{4}$, $N\frac{1}{2}NW\frac{1}{4}$, $SW\frac{1}{4}NW\frac{1}{4}$, $S\frac{1}{2}$ Sec. 8, T. 10 N., R. 8 E., are part of the above numbered Federal oil and gas lease.

Marathon Oil Company, as operator for itself and others, has staked a well location, Mud Springs No. 1-8, 783 feet from the south line and 466 feet from the east line of Section 8, and our pooling and operating agreements cover the lands in Section 8 and 9, among other lands.

The pre-drill inspection with BLM and U.S.G.S. representatives dictated the above location due to terrain problems.

Very truly yours,

A handwritten signature in cursive script that reads 'W. F. Heagney'.

W. F. Heagney,
Landman

WFH/mm

cc: Jim Wirth



P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/265-7693

July 11, 1979

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, Utah 84116



Attn: Mr. Michael T. Minder, Geological Engineer

Dear Sir,

Attached is a letter from our land department to your office covering item C,1 and 2 of rule C-3. prior to our drilling of Mud Springs #1-8, Sec. 8, T10N, R8E, Rick County, Utah.

Thank you for informing us of your needs on this matter.

Very truly yours,

A handwritten signature in cursive script that reads 'J.F. Wirth'.

J.F. Wirth
Drilling Superintendent

JFW/WEW/jgh

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

NAME OF COMPANY: Marathon Oil Company

WELL NAME: Mud Springs #1-8

SECTION 8 SE SE TOWNSHIP 10N RANGE 8E COUNTY Rich

DRILLING CONTRACTOR Viersen and Cochran

RIG # 9

SPUDED: DATE Aug. 6, 1979

TIME 4:30 a.m.

HOW rotary

DRILLING WILL COMMENCE immediately

REPORTED BY Walt West

TELEPHONE # 307-235-2511

DATE August 6, 1979

SIGNED M. J. Minder

cc: USGS

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25465

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Mud Springs

9. WELL NO.

#1-8

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 8, T10N, R8E

12. COUNTY OR PARISH 13. STATE

Rich

Utah

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
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

783' FSL & 466' FEL

14. PERMIT NO.

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

6,692' GL, 6,724' KB

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(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

See Attachment

From 7-25-79 To 8-13-79

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

SIGNED

[Signature]

TITLE

Drilling Superintendent

DATE

8-15-79

(This space for Federal or State office use)

APPROVED BY _____

TITLE _____

DATE _____

CONDITIONS OF APPROVAL, IF ANY:

DATE
7-25-79
25-79

70' Made 70'. Drilled 70' of 26" hole w/dry hole digger & set 70' of 20" lap weld csg & cmtd to surface. Drilled 6' x 3' cellar, & lined same w/6' corrugated culvert ring. Now moving in rotary tools.

-26-79 - Present operation MIRT.

-28-79

-29-79 - Present operation Rigging Up Rotary Tools.

-2-79

-3-79 Rigging up.

-4-79 RU rotary tools, Installing super charger pmps on pmp suction.

-5-79 Rig up.

-6-79 117' Made 47'. MW 8.4, Vis 33. Pmp press 200#, GPM 363, Bit No. 1, size 12 1/4, Make Smith, Type DSJ, RPM 50, Wt on Bit 4,000. Drilling assembly as follows:

<u>Component</u>	<u>Length</u>	<u>O.D.</u>	<u>I.D.</u>	
Bit	1.00	12-1/4		
Near Bit	5.20	9	2-7/8	
Teledrift	8.20	9-1/4	3-7/8	
IBS	5.90	10	2-3/4	
Shock Sub	9.45	10	3-7/8	
IBS	5.90	10	2-3/4	
1 D.C.	31.00	10	3	
1 BB	5.80	10	2-3/4	Total BHA 72.45.

Spud at 4:30 a.m., 8-6-79. Present operation Drilling.

-7-79 369' Made 252' in Cretaceous Formation. MW 9, vis 43, WL 10.0, Pmp press 300# (1), 300# (2), GPM 370 (1), 330 (2), Annular Velocity 71/130, RPM 68, Wt on Bit 10-15. Drilling Assembly as follows:

<u>Component</u>	<u>Length</u>	<u>O.D.</u>	<u>I.D.</u>	
Bit	1.00	12-1/4		
Near Bit	5.17	9	2-7/8	
Teledrift	8.42	9-1/4	3-7/8	
IBS	5.84	10	2-3/4	
Shock Sub	9.39	10	3-7/8	
IBS	5.84	10	2-3/4	
1 D.C.	31.00	10	3	
IBS	5.80	10	2-3/4	
1 D.C.	31.08	10	2-3/4	
IBS	5.85	10	2-3/4	
1 D.C.	31.01	10	3	
X - 0	4.55	7-7/8	3	
6 D.C.	183.81	9	2-3/4	

Total BHA 328.72. Present operation drilling.

- 3-8-79 700' Made 331' in Cretaceous Formation. MW 8.8, Vis 36, PH 10.0. Pmp press 500#, GPM 376, RPM 90, Wt. on Bit 15-35,000. Present operation Drilling.
- 3-9-79 785' Made 85' in sand & shale. MW 8.6, Vis 31, PH 10. Pmp press 600#, GPM 396, Annular velocity 194/162/75. Bit no. 1, size 12¼, Make Smith, Type DSJ, Jets 18-20-18. Depth in 70', out 724'. Made 654' in 34-¾ hrs; 18.8 ft/hr. Condition 3-3-1/8, Oper dull. RPM 90, Wt on bit 30,000. Losing 100 bbls of mud/hr from 765'. Mixing LCM and Gell, spotted LCM pill on btm. Now drlg w/partial returns. Present operation mix mud.
- 10-79 870' Made 85' in sand & shale. MW 8.6, Vis 30, pmp press 600#, GPM 396, Annular velocity 194/162/75. RPM 90, Wt on bit 30,000. Regained circulation @ 760', drilled to 870' and lost returns completely. Mixing mud & LCM.
- 11-79 963' Made 93' in sand & shale. MW 8.6, vis 37, LCM 13%. Pmp press 700#, GPM 396, Annular velocity 194/162/75. RPM 90, Wt on bit 30,000, deviation depth 932' inclination ¾ degree. Lost circulation from 760'. Now losing about 20 bbls/hr. Present operation drilling.
- 12-79 1,175' Made 212' in sand & shale. MW 8.8, vis 40, LCM 11%. Pmp press 700#, GPM 396, Annular velocity 194/162/75, RPM 90, Wt on bit 30,000. Deviation depth 987' inclination ¾ degree, depth 1,018' inc 1/2 degree, depth 1,052' inc 1/2 degree. Lost circ @ 1,010, spotted pill set 1 hr. Held ok w/slow pmp to 1,170, now losing approx 30 bbls/day. present operation drlg.
- 8-13-79
13-79 1,321' Made 146' in sand & shale. MW 8.9, Vis 38, Pmp press 700#, GPM 396, Annular velocity 194/162/75. Bit no 2, Size 12-1/4, Make HTC, Type OSC3A, Jets 15-15-15. Depth in 724, out 1,321. Made 597' in 48-¾ hrs; 12.2 ft/hr. Condition 8-6-1/4, Oper dull. RPM 90, Wt on bit 15-30,000. Deviation depth 1,180', inc ¾ degree, depth 1,262' inc 1¼ degree, 1,293' inc 1 degree, depth 1,321' inc ¾ degree. Presently losing approx 60 bbls/24 hrs. Present operation Ream to Btm.
- LCM 8%

- 8-10-79 870' Made 85' in sand & shale. MW 8.6, Vis 30, pmp press 600#, GPM 396, Annular velocity 194/162/75. RPM 90, Wt on bit 30,000. Regained circulation @ 760', drilled to 870' and lost returns completely. Mixing mud & LCM.
- 8-11-79 963' Made 93' in sand & shale. MW 8.6, vis 37, LCM 13%. Pmp press 700#, GPM 396, Annular velocity 194/162/75. RPM 90, Wt on bit 30,000, deviation depth 932' inclination 3/4 degree. Lost circulation from 760'. Now losing about 20 bbls/hr. Present operation drilling.
- 8-12-79 1,175' Made 212' in sand & shale. MW 8.8, vis 40, LCM 11%. Pmp press 700#, GPM 396, Annular velocity 194/162/75, RPM 90, Wt on bit 30,000. Deviation depth 987' inclination 3/4 degree, depth 1,018' inc 1/2 degree, depth 1,052' inc 1/2 degree. Lost circ @ 1,010, spotted pill set 1 hr. Held ok w/slow pmp to 1,170, now losing approx 30 bbls/day. present operation drlg.
- 8-13-79 1,321' Made 146' in sand & shale. MW 8.9, Vis 38, ^{LCM 8%} Pmp press 700#, GPM 396, Annular velocity 194/162/75. Bit no 2, Size 12-1/4, Make HTC, Type OSC3A, Jets 15-15-15. Depth in 724, out 1,321. Made 597' in 48-3/4 hrs; 12.2 ft/hr. Condition 8-6-1/4, Oper dull. RPM 90, Wt on bit 15-30,000. Deviation depth 1,180', inc 3/4 degree, depth 1,262' inc 1 1/4 degree, 1,293' inc 1 degree, depth 1,321' inc 3/4 degree. Presently losing approx 60 bbls/24 hrs. Present operation Ream to Btm.
- 8-14-79 1,483' Made 162' in sand & shale. MW 8.8, Vis 40. Pmp press 700#, GPM 396, Annular Velocity 194/162/75. Bit #3, 12 1/2, Smith, Type DT-J, Jets 16-16-16, Depth in 1,321'; made 162' in 19 hrs; 8.5 ft/hr. RPM 90, Wt on bit 10-20,000. Background gas 1 unit @ 1,428, 28 units of gas. Will drill 12 1/2" hole to 1,520 & log well before reaming to 17 1/2". Present operation drilling.
- 8-15-79 1,520' Made 37' in sand & shale. MW 8.7, Vis 40, RPM 90, Wt on bit 10,000. Circulated 5 hrs, waiting on Schlumberger. Ran sonic & dual induction logs from 70' to t.d. Strap drill pipe. Drillers T.D. 1,520, strap T.D. 1,526. Made no correction. Present operation RU BHA.
- 8-16-79 Made 0' in sand & shale. MW 8.8, Vis 36, Pmp press 300#, GPM 396, Annular velocity 47/43/34, RPM 50, Wt on bit 3-5,000. Drilling assembly as follows:

<u>Component</u>	<u>Length</u>	<u>O.D.</u>	<u>I.D.</u>
H. O.	5.70	17-1/2	
NB Sub	5.17	9	2-7/8
Shock Sub	9.35	10	3-7/8
2 DC	62.08	10	3
1 Stub	7.03	10	3
1 DC	31.01	10	3
17 1/2 Stub	6.92	10	2-7/8
X - 0	4.60	9-7/8	3
6 DC	181.32	9	2-3/4

Total BHA 313.18.

Reaming hole. Losing mud at 10-20 bbl/min. Present operation Reaming to 17 1/2.

- 3-17-79 Made 0' in sand & shale. MW 8.6, Vis 32. Pmp press 300#, GPM 396, Annular velocity 47/43/34. Bit no 1-H0, 17 1/2, Reed, Hole opener, Jets 16-16-16. Depth in 75', out 1,117'; made 1,042' in 29 hrs; 35.9 ft/hr. Conditon 6-6-I, Oper dull. RPM 50, Wt on bit 5-10,000. Present operation reaming 12 1/2 to 17 1/2.

-18-79 1,520' Made 0' in sand & shale. MW 8.6, Vis 36, Pmp press 300#, GPM 396, Annular velocity 47/43/34, RPM 75, Wt on bit 15,000. Present operation drlg open hole, 1,350 with 17½" hole.

-19-79 MW 8.7, Vis 40, Pmp Press 300#, GPM 396, Annular velocity 47/43/34. Bit No 2 H.O., 17½, Sec, Hole opener, Jets 16-16-16. Depth in 1,117', out 1,350'. Made 233' in 19-¾ hrs; 11.8 ft/hr. Condition 6-4-I, Oper dull. RPM 70, Wt on bit 15,000. Present operation open hole.

-20-79 Made 0' in sand & shale. Ran csg as follows:

No. Jts	Overall Length	Effective Length	Setting From	Depth To
1	1.23	1.23	1,505.00	1,503.77
	13-3/8 Differential fill shoe			
1	38.51	38.23	1,503.77	1,465.54
	54.5 8rd K-55 ST & C			
1	1.81	1.53	1,465.54	1,464.01
	Differential fill collar			
38	1,481.96	1,471.32	1,464.01	-7.31
	54.5 8rd, K-55 ST&C			
39	1,523.51	1,512.31	Totals	

No Centralizers: 1 depths or jts 10' up from shoe and on every other collar. Landed top at -7.31' KB. Landed shoe at 1,505' KB.
1st Stage: Cmtd csg w/1,000 sx of 50-50 poz with ¼ pps flocele, 2% cac12, ¼ pps gilsonite. Followed by 900 sx of class "G" with 2% cac12, ¼ pps flocele. Used 150% excess volume. Pmpd 0 gal mud flush. Then 10 BW ahead. Slurry w/13.8#/gal 15.9#/gal. Mixing time 2 hrs, pmpg time 1 hr. Maximum press 1,250, displaced cmt w/228 BW with BJ pmp. Bumped plug w/1,250 psi. Plug down at 6:30, 8-20-79. Partial returns while cmtg. Circulated 0 cmt to surface. Float equipment checked ok. Estimated cmt top in annulus unknown ft. Present operation displacing cmt.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25465

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Mud Springs

9. WELL NO.

#1-8

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 8, T10N, R8E

12. COUNTY OR PARISH 13. STATE

Rich

Utah

1. OIL WELL GAS WELL OTHER

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

783' FSL & 466' FEL

14. PERMIT NO.

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

6,692' GL, 6,724' 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)

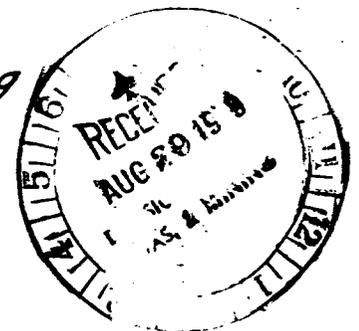
(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

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

See Attachment

From 8-14-79 To 8-20-79



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

SIGNED

RAWagony

TITLE

Drilling Superintendent

DATE

8-27-79

(This space for Federal or State office use)

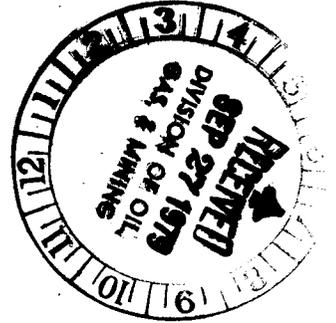
APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

FILE IN QUADRUPPLICATE
FORM OGC-8-X



STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & Number: Mud Springs #1-8 (U-25465)
Operator: Marathon Oil Company Address: P.O. Box 2659, Casper, WY 82602
Contractor: Vierson & Cochran Drilling Co. Address: P.O. Box 19227, Okla City, OK 73119
Location 1/4 1/4; Sec. 8 T. 10 N, R. 8 E; Rich County.
(783' FSL, 466' FEL)

Water Sands: As indicated by open hole well logs run from 43' to 1,520' of depth.

	<u>Depth:</u>		<u>Volume:</u>	<u>Quality:</u>
	From-	To-	Flow Rate or Head	Fresh or Salty
1.	300	385 (1)	20 GPM	Fresh
2.	542	550 (1)	60 GPM	Fresh
3.	1,164	1,200 (2)	No Test	Fresh
4.	1,335	1,345 (2)	No Test	Fresh
5.	1,443	1,460 (2)	No Test	Fresh

(Continue on Reverse Side if Necessary)

Formation Tops: None Reported

Remarks: (1) Quality as indicated by analysis of Dual Induction, Gamma Ray, and Sonic Logs run on production well. Volume as indicated by actual tests on water well drilled on location.

(2) Quality as indicated by analysis of Dual Induction, Gamma Ray, and Sonic Logs run on production well. No volume tests run while drilling.

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

[Signature] 9/29/79

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

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

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
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
783' FSL & 466' FEL

14. PERMIT NO. _____ 15. ELEVATIONS (Show whether DF, RT, GR, etc.)
6,692' GL, 6,724' KB

5. LEASE DESIGNATION AND SERIAL NO.
U-25465

6. IF INDIAN, ALLOTTEE OR TRIBE NAME _____

7. UNIT AGREEMENT NAME _____

8. FARM OR LEASE NAME
Mud Springs

9. WELL NO.
#1-8

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 8, T10N, R8E

12. COUNTY OR PARISH **Rich** 13. STATE **Utah**

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

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

(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

See Attachment

From 9-22-79 To 9-28-79



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

SIGNED Art. Smith TITLE Drilling Superintendent DATE 10-1-79

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

11-12-79 9,005' MADE 8' IN NUGGET FORMATION. MW 9.0, VIS 59, WL 9.2, PH 10.5, PV 18, YP 24, 3/8 GALS, 5.1% SOLIDS, 8,000 PPM CHLORIDE, 100 CALCIUM. PMP PRESS 1,600, GPM 289, ANNULAR VELOCITY 126/258. BIT NO 34, 8-3/4, SMITH, F-9, JETS 10-10-10. DEPTH IN 8,997'; MADE 8' IN 4-1/2 HRS; 1.77 FT/HR. OPER DRLG. RPM 55, WT ON BIT 20,000. DRILLING ASSEMBLY AS FOLLOWS:

COMPONENT	LENGTH	O.D.	I.D.
BIT	.85	8-3/4	
NB STAB	5.07	8-3/4, 7	2-3/4
IBS	4.58	8-3/4, 7	2-3/4
PONY DC	5.66	6-7/8	2-1/2
IBS	4.67	8-3/4, 7	2-13/16
IBS	4.72	8-3/4,	2-3/4
		6-15/16	
1 DC	31.00	7	2-5/16
IBS	4.71	8-3/4, 7	2-13/16
SHOCK SUB	7.30	6-3/8	2-1/16
IBS	4.87	8-3/4, 7	2-1/4
9 DC'S	280.48	7	2-1/4
DOT JARS	33.86	6-1/4	2-1/4
3 DC'S	93.37	7	2-1/4
KEY SEAT WIPER	6.81	6	2-1/4

TOTAL BHA 487.95. 73.43' STABILIZED. TRIP GAS 275 UNITS, DRLG. BGG 13 UNITS = ALL METHANE. TEST INFO AS FOLLOWS: DST #1 - LOWER PKR @ 8,885', TD @ 8,997' (TEST INTERVAL 112'). IFP = 10 MIN, ISIP = 60 MIN, FFP = 120 MIN, FSIP = 249 MIN. RECORDED PRESSURES:

	TOP GAUGE	BOTTOM GAUGE
IHP	4,277 PSI	4,313 PSI
IFP (10 MIN)	175 INCREASE TO 481 PSI	132 INCREASE TO 197 PSI
ISIP (60 MIN)	3,736 PSI	3,807 PSI
FFP (120 MIN)	569 INCREASE TO 2,972 PSI	658 INCREASE TO 3,020 PSI
FSIP (249 MIN)	3,736 PSI	3,807 PSI
FHP	4,261 PSI	4,335 PSI

RECOVERED 120' OF SLIGHTLY GAS & MUD CUT WATER. + 6,668' OF WATER (DID NOT GET CHLORIDES READING). AFTER TEST, RIH W/BIT #34, WASHED & REAMED 25' TO BTM - NOT HARD FILL, MAYBE JUST UNDERGAUGE HOLE. PRESENT OPERATION DRLG.

11-13-79 9,026' MADE 21' IN NUGGET FORMATION. MW 9.1, VIS 60, WL 9.1, PH 10.5, PV 18, YP 24, 3/8 GALS, 5.1% SOLIDS, 8,000 PPM CHLORIDE, 100 CALCIUM. PMP PRESS 1,600, GPM 289, ANNULAR VELOCITY 126/258. BIT NO 34, 8-3/4, SMITH, F9, JETS 10-10-10. DEPTH IN 8,997', OUT 9,026'; MADE 29' IN 18 HRS; 1.61 FT/HR; CONDITION 6-2-IN. OPER DULL. RPM 55, WT ON BIT 25,000. DEV DEPTH 9,026' INC 15°. TOTAL BHA 487.95. HAD 4 UNITS OF DRLD GAS @ 9,023' (ALL METHANE), NORMAL BGG - 1 UNIT. DRLD TO 9,026', LOGGERS ARRIVED ON LOCATION TO RUN SEISMIC VELOCITY SURVEY. PRESENT OPERATION LOGGING.

11-14-79 9,026' MADE 0' IN NUGGET FORMATION. MW 9.2, VIS 58. RAN VELOCITY SURVEY & R/D LOGGERS. L/D DC'S - RIH W/OPEN-ENDED DP. (13.1 PPG/YIELD=1.69). LAYED 1ST PLUG FROM 8,600'-8,800' W/70 SKS OF LITE. LAYED 2ND PLUG FROM 6,700'-6,800' W/60 SKS OF LITE. LAYED 3RD PLUG FROM 5,150'-5,350' W/180 SKS OF LITE. AT 0600 HRS, POH & L/D DP TO SET 4TH PLUG. PRESENT OPERATION L/D DP.

11-15-79 9,026' MADE 0' IN NUGGET FORMATION. PBSD NOW 1,350'. MW 9.2, VIS 58. SET PLUG @ 2,200' TO 2,400' W/200 SKS OF LITE CMT. SET PLUG @ 1,350' TO 1,550' W/125 SKS OF LIET CMT. FIN L/D DP. BEGAN TEARING DOWN RIG. PRESENT OPERATION R/D.

11-16-79 9,026' MADE 0' IN NUGGET FORMATION. PBSD @ 1,350'. MW 9.2, VIS 58. BETWEEN PLUGS. CONT'. TEARING DOWN RIG. RIG RELEASED @ 11:59 PM, 11-15-79. (BROKE OUT TEST LINE & GAS BUSTER, SHOULD PULL WTR WELL FRI OR SAT, & BEGIN FENCING RESERVE PIT AFTER MOVING MUD TANKS). PRESENT OPERATION R/D.

11-9-79 8,997' MADE 23' IN NUGGET FORMATION. MW 9.1, VIS 59, WL 9.0, PH 10.0, PV 22, YP 10, 5/11 GALS, 5.2% SOLIDS, 6,000 PPM CHLORIDE, 80 CALCIUM. PMP PRESS 2,100, GPM 302, ANNULAR VELOCITY 132/268. BIT NO 33, 8-3/4, SEC, H-100, JETS 10-10-10. DEPTH IN 8,959', OUT 8,997'; MADE 38' IN 27-1/2 HRS' 1.38 FT/HR. OPER CIRC. RPM 70, WT ON BIT 20-25,000. TOTAL BHA 456.43. BGC 1 UNIT WHILE DRLG. NO GAS FROM SHORT TRIP - PULLED 15 STDS, HOLE WAS OK - NO FILL ON BTM. TOP OF NUGGET @ 8,920'. NOW CIRC & COND HOLE PRIOR TO POH TO RUN OH LOGS. PRESENT OPERATION CIRC PRIOR TO LOGGING.

11-10-79 8,997' MADE 0' IN NUGGET FORMATION. MW 9.2, VIS 57, WL 8.4, PH 10, PV 22, YP 12, 5/9 GALS, 5.6% SOLIDS, 8,000 PPM CHLORIDE, 100 CALCIUM. PMP PRESS 2,100, GPM 302, ANNULAR VELOCITY 133/268. BIT NO 33, 8-3/4, SEC, H-100, JETS 10-10-10. DEPTH IN 8,959', OUT 8,997'; MADE 38' IN 27-1/2 HRS; 1.38 FT/HR; CONDITION 7-2-1/8. OPER LOGGING. DEV DEPTH 8,997' INC 15°. TOTAL BHA 456.13. TRIP F/LOGS W/1 MOTOR (CLUTCH OUT OF #3). R/U SCHLUMBERGER. 1,503' LOGGER'S SURFACE CSG SHOE. 8,986' LOGGER'S TD. 8,996' SLM - NO CORRECTION. 8,888' TOP OF NUGGET. 1ST RUN 0 DUAL LATERAL LOG - GR. 2ND RUN - SONIC W/GR - CALIPER DID NOT WORK. 3RD RUN - CNL-NEUTRON DENSITY - CALIPER OK. DIPMETER NOW BEING RUN, TO BE FOLLOWED BY DIL. PRESENT OPERATION LOGGING.

11-11-79 8,997' MADE 0' IN NUGGET FORMATION. MW 9.1, VIS 58, WL 8.0, PH 10, PV 17, YP 11, 3/9 GALS, 5.6% SOLIDS, 8,000 PPM CHLORIDE, 100 CALCIUM. DRILLING ASSEMBLY AS FOLLOWS:

<u>COMPONENT</u>	<u>LENGTH</u>	<u>O.D.</u>	<u>I.D.</u>
DRILL STEM TEST TOOL			
DRILL COLLARS			

TOTAL BHA 429.02. LOGGED DIPMETER W/FRACTURE ON 4TH RUN. FINAL LOGGING RUN SP-DIL. PRESENT OPERATION TRIP IN HOLE.

11-9-79 8,997' MADE 23' IN NUGGET FORMATION. MW 9.1, VIS 59; WL 9.0, PH 10.0, PV 22, YP 10, 5/11 GALS, 5.2% SOLIDS, 6,000 PPM CHLORIDE, 80 CALCIUM. PMP PRESS 2,100, GPM 302, ANNULAR VELOCITY 132/268. BIT NO 33, 8-3/4, SEC, H-100, JETS 10-10-10. DEPTH IN 8,959', OUT 8,997'; MADE 38' IN 27-1/2 HRS' 1.38 FT/HR. OPER CIRC. RPM 70; WT ON BIT 20-25,000. TOTAL BHA 456.43. BGG 1 UNIT WHILE DRLG. NO GAS FROM SHORT TRIP - PULLED 15 STDS, HOLE WAS OK - NO FILL ON BTM. TOP OF NUGGET @ 8,920'. NOW CIRC & COND HOLE PRIOR TO POH TO RUN OH LOGS. PRESENT OPERATION CIRC PRIOR TO LOGGING.

11-7-79 8,948' MADE 29' IN NUGGET OR GYP SPRINGS FORMATION. MW 9.2, VIS 45, WL 8.4, PH 10.5, PV 16, YP 8, 3/8 GALS, 5.6% SOLIDS, 8,000 PPM CHLORIDE, 60 CALCIUM. PMP PRESS 1,475, GPM 238, ANNULAR VELOCITY 213/104. BIT NO 32, 8-3/4, SMITH, F5, JETS 10-10-10. DEPTH IN 8,919'; MADE 29' IN 7-3/4 HRS; 3.75 FT/HR. OPER DRLG. RPM 75, WT ON BIT 20,000. DEV DEPTH 8,939' INC 15-1/4°. DRILLING ASSEMBLY AS FOLLOWS:

<u>COMPONENT</u>	<u>LENGTH</u>	<u>O.D.</u>	<u>I.D.</u>
BIT	.85	8-3/4	
JUNK SUB	4.95	5-1/2, 6-7/8	2-1/4
NB STAB.	5.07	7, 8-3/4	2-3/4
IBS	4.58	8-3/4	2-3/4
PONY DC	5.66	6-7/8	2-1/2
IBS	4.67	8-3/4	2-13/16
IBS	4.72	8-3/4	2-3/4
1 DC	31.00	7	2-5/16
IBS	4.71	8-3/4	2-13/16
SHOCK SUB	7.30	6-3/8	2-1/16
1 DC	30.58	7	2-3/16
IBS	4.69	8-3/4	2-1/4
8 DC'S	249.90	7	2-1/4
DOT JARS	33.56	6-1/4	2-1/4
3 DC'S	93.37	7	2-1/4
KEYSEAT WIPER	6.81	7-3/4	2-1/4

TOTAL BHA 492.42. M/U & RIH W/8" OD MAGNET W/CUT-UP SHOE. WORK OVER JUNK. POH W/JUNK BASKET & MAGNET - REC'D 3 BIT CONES, BEARINGS, TEETH, & 3/4 CUP OF MISC JUNK - BEARINGS, TEETH, & MISC JUNK OUT OF JUNK SUB. GAUGED STABILIZERS, L/D SHOCK SUB, RIH W/BIT #32. RAN JUNK BASKET & NEW SHOCK SUB. HAD 15' OF FILL ON BTM - WASHED TO BTM - ATTEMPT TO GET REST OF JUNK INTO BASKET. PRESENT OPERATION DRLG.

11-8-79 8,974' MADE 26' IN NUGGET FORMATION. MW 9.1, VIS 47, WL 8.3, PH 10.5, PV 18, YP 8, 4/8 GALS, 5.2% SOLIDS, 10,000 PPM CHLORIDE, 80 CALCIUM. PMP PRESS 1,600, GPM 248, ANNULAR VELOCITY 112/220. BIT NO 32, 8-3/4, SMITH, F5, JETS 10-10-10. DEPTH IN 8,919', OUT 8,959'; MADE 40' IN 14-1/4 HRS; 2.8 FT/HR; CONDITION 7-2-IN. OPER DULL. BIT NO 33, 8-3/4, SEC, H-100, JETS 10-10-10. DEPTH IN 8,959'; MADE 15' IN 10 HRS; 1.5 FT/HR. OPER DRLG. RPM 70, WT ON BIT 20,000. DEV DEPTH 8,959' INC 15-1/4°. DRILLING ASSEMBLY AS FOLLOWS:

<u>COMPONENT</u>	<u>LENGTH</u>	<u>O.D.</u>	<u>I.D.</u>
BIT	.85	8-3/4	
NB STUB	5.10	8-3/4, 7	2-1/4
IBS	4.56	8-3/4, 7	2-3/4
PONY DC	5.60	7	2-7/8
IBS	4.71	8-3/4, 6-3/4	2-5/8
IBS	4.67	8-3/4, 7	2-3/4
1 DC	31.07	7	2-5/8
IBS	4.70	8-3/4, 7	2-3/4
SHOCK SUB	7.30	6-1/2	2-7/8
IBS	4.70	8-3/4, 7	2-3/4
8 DC'S	248.59	7	2-3/8
DOT JARS	34.10	6-1/4	2-1/4
3 DC'S	93.37	7	2-1/4
KEYSEAT WIPER	6.81	6	2-1/4

TOTAL BHA 456.43. 73.56' STABILIZED BHA. @ 8,959' TRIP GAS 72 UNITS, BCG 1 UNIT WHILE DRLG. (REC'D ON A FEW BEARINGS & INSERTS FROM JUNK BASKET). DRLG AHEAD W/NO PROBLEMS. PRESENT OPERATION DRLG.

- 11-3-79 8,765' MADE 75' IN GYP SPRINGS FORMATION. MW 9.2, VIS 50, WL 7.5, PH 10.5, PV 17, YP 11, 4/9 GALS, 5.2% SOLIDS, 12,000 PPM CHLORIDE, 80 CALCIUM. PMP PRESS 1,400, GPM 238, ANNULAR VELOCITY 213/104. BIT NO 31, 8-3/4, SEC, S84F, JETS 10-10-10. DEPTH IN 8,547'; MADE 218' IN 59-3/4 HRS; 3.65 FT/HR. OPER DRLG. RPM 75, WT ON BIT 15-25,000. DEV DEPTH 8,718' INC 14-3/4°, DEPTH 8,748' INC 14-3/4°. TOTAL BHA 487.47. CLEAN #2 & #3 MUD PITS. CHANGED 2 LINERS & HEADS DURING SURV. TOP OF GYP SPRINGS @ APPROX 8,700'. ROP DECR @ 8,745' - 8,750' (FROM 21 MIN/FT TO 40-50 MIN/FT). INCREASED WT TO 25,000# @ 8,764' & ROP INCR TO 21 MIN/FT W/NO CHANGE ON TORQUE. TRACE TO 1 UNIT BGG - METHANE - DRLG AHEAD, NO PROBLEMS. PRESENT OPERATION DRLG.
- 11-4-79 8,829' MADE 64' IN GYP SPRINGS FORMATION. MW 9.2, VIS 46, WL 7.6, PH 10.5, PV 17, YP 12, 4/9 GALS, 5.2% SOLIDS, 12,000 PPM CHLORIDE, 80 CALCIUM. PMP PRESS 1,400, GPM 238, ANNULAR VELOCITY 213/104. BIT NO 31, 8-3/4, SEC, S84F, JETS 10-10-10. DEPTH IN 8,547'; MADE 282' IN 79-1/2 HRS; 3.54 FT/HR. OPER DRLG. RPM 75, WT ON BIT 25-30,000. DEV DEPTH 8,780' INC 14-3/4°, DEPTH 8,812' INC 15°. TOTAL BHA 487.47. (REC'D 7,500 GALS FROM JOHNSON FUEL LINERS (RED HORSE @ 0530 HRS, 11-4-79). MADE 30 STD SHORT TRIP - HOLE OK. RIH & WASH 30' TO BTM & 30' OF FILL. BGG - 1 UNIT METHANE. PRESENT OPERATION DRLG.
- 11-5-79 8,918' MADE 89' IN GYP SPRINGS FORMATION. MW 9.2, VIS 45, WL 7.2, PH 10.5, PV 18, YP 12, 5/9 GALS, 5.2% SOLIDS, 12,000 PPM CHLORIDE, 100 CALCIUM. PMP PRESS 1,450, GPM 238, ANNULAR VELOCITY 213/104. BIT NO 31, 8-3/4, SEC, S84F, JETS 10-10-10. DEPTH IN 8,547'; MADE 371' IN 93-1/2 HRS; 3.97 FT/HR. OPER DRLG & CIRC. RPM 75, WT ON BIT 25,000. DEV DEPTH 8,844' INC 15°, DEPTH 8,875' INC 15°, DEPTH 8,907' INC 15°. TOTAL BHA 487.47. CIRC SAMPLE UP 4 HRS @ 8,857' (GYP SPRINGS). CIRC SAMPLE UP @ 8,918' - NOT TO SURFACE YET. BGG - TRACE TO 1 UNIT. PRESENT OPERATION CIRC FOR SAMPLES.
- 11-6-79 8,919' MADE 1' IN GYP SPRINGS FORMATION. MW 9.2, VIS 46, WL 8, PH 10.5, PV 18, YP 12, 5/9 GALS, 5.6% SOLIDS, 10,000 PPM CHLORIDE, 60 CALCIUM. PMP PRESS 1,450, GPM 238, ANNULAR VELOCITY 213/104. BIT NO 31, 8-3/4, SEC, S84F, JETS 10-10-10. DEPTH IN 8,547', OUT 8,919'; MADE 372' IN 94-1/2 HRS; 3.93 FT/HR; CONDITION 8-8--. OPER LOST 3 CONES. RPM 75, WT ON BIT 22,000. TOTAL BHA 487.47. CIRC UP SAMPLE (1 HR) - STILL IN GYP SPRINGS. DRLD AHEAD - BIT BEGAN TORQUING - MIX & CIRC VISCOUS SWEEP. BEGAN POH - TIGHT @ 7,107' - MIX & CIRC VISCOUS SWEEP, WORKED THRU TIGHT SPOT OK AFTER SWEEP - FIN POH. HAD LOST 3 CONES OFF BIT. WAITING ON MAGNET (4 HRS). PRESENT OPERATION FISHING.

10-18-79 8,134' MADE 14' IN TWIN CREEK FORMATION. MW 9.4, VIS 43, WL 9.1, PH 10.5, PV 14, YP 16, 4/8 GALS, 6.0% SOLIDS, 36,000 PPM CHLORIDE, 40 CALCIUM. PMP PRESS 2,000, GPM 360, ANNULAR VELOCITY 157/320. BIT NO 27, 8-3/4, SEC, S84F, JETS 10-10-9. DEPTH IN 7,621', OUT 8,134'; MADE 513' IN 124-1/2 HRS; 4.12 FT/HR; CONDITION 3-3-IN. BIT NO 28, 8-3/4, REED, FP51, JETS 11-11-11. DEPTH IN 8,134'; BEGIN DRLG @ 0600 HRS. RPM 60, WT ON BIT 10-15,000. DEV DEPTH 8,134' INC 14-3/4°. DRILLING ASSEMBLY AS FOLLOWS:

<u>COMPONENT</u>	<u>LENGTH</u>	<u>O.D.</u>	<u>I.D.</u>
BIT	.85	8-3/4	
NB (WRAP AROUND)	5.10	7	2-3/4
IBS	4.56	7	2-3/4
PONY DC	5.60	7	2-7/8
IBS	4.71	6-3/4	2-5/8
IBS	4.67	7	2-3/4
1 DC	31.05	7	2-5/8
IBS	4.70	7	2-3/4
S/S	7.30	6-1/2	2-7/8
IBS	4.70	7	2-3/4
8 DC'S	248.59	7	2-3/8
JARS	34.10	6-1/4	2-1/4
4 DC'S	124.90	7	2-3/8

TOTAL BHA 480.83. 6-1/2 HRS CHECK BHA, 3 HR CHANGE BHA (L/D 5 DC'S). 2 DC'S CRACKED (1 PM - 1 BOX). 1 DC BENT. 1 IBS CRACKED (BOX). WASH & REAM 120' TO BOTTOM. 1-1/2 HR WASH & REAM - HOLE OK ON TRIP - REAM TO BTM FOR SAFETY. SPR - 44 SPM @ 700 PSI. BACK GROUND GAS 1-1/2 UNITS, NO TRIP GAS. RIG REPAIR (PUMP) 1 HR. TOTAL MONTH 3-3/4 HRS. PRESENT OPERATION DRLG.

10-19-79 8,184' MADE 50' IN TWIN CREEK FORMATION. MW 9.4, VIS 39, WL 8.8, PH 10.5, PV 12, YP 15, 3/6 GALS, 6.0% SOLIDS, 3,600 PPM CHLORIDE, 40 CALCIUM. PMP PRESS 1,500, GPM 285, ANNULAR VELOCITY 124/254. BIT NO 28, 8-3/4, REED, FP51, JETS 11-11-11. DEPTH IN 8,134', OUT 8,184'; MADE 50' IN 23 HRS; 2.17 FT/HR; CONDITION TRIP. RPM 90, WT ON BIT 15-20,000. TOTAL BHA 480.83. BACK GROUND GAS 2 UNITS. POH - ROP SLOWED TO 1 FPH. PRESENT OPERATION TRIP.

- 10-11-79 7,621' MADE 77' IN TWIN CREEK FORMATION. MW 9.4, VIS 38, WL 8.5, PH 11, PV 16, YP 8, 6/9 GALS, 8.2% SOLIDS, 34,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,400#, GPM 359, ANNULAR VELOCITY 320/157. BIT NO 26, 8-3/4, REED, FP51, JETS 11-11-11. DEPTH IN 7,314'; MADE 307' IN 77-1/2 HRS; 4 FT/HR. OPER DRLG. RPM 80, WT ON BIT 20-25,000. DEV DEPTH 7,550', INC 12-3/4°, DEPTH 7,610' INC 13°. TOTAL BHA 647.43. BG GAS 1 UNIT. SENT TELEDRIFT TO DYNA-DRILL IN CASPER. PRESENT OPERATION DRLG.
- 10-12-79 7,650' MADE 29' IN TWIN CREEK FORMATION. MW 9.4, VIS 40, WL 8, PH 11, PV 20, YP 10, 5/10 GALS, 8.3% SOLIDS, 50,000 PPM CHLORIDE, TR CALCIUM. PM PRESS 2,500, GPM 341, ANNULAR VELOCITY 302/148. BIT NO 26, 8-3/4, REED, FP51, JETS 11-11-11. DEPTH IN 7,314', OUT 7,621'; MADE 307' IN 77-1/2 HRS; 4 FT/HR; CONDITION 3-2-1. BIT NO 27, 8-3/4, SEC, S84F, JETS 10-10-9. DEPTH IN 7,621'; MADE 29' IN 11 HRS; 2.5 FT/HR. OPER DRLG. RPM 75, WT ON BIT 25-30,000. DEV DEPTH 7,621' INC 12-1/4°. TOTAL BHA 647.43. BACK GROUND GAS 2 UNITS, TRIP GAS 5 UNITS, 152 PPM METHANE. WHILE TRIPPING OUT OF HOLE, HAD TIGHT SPOT @ 2,410, WORK PIPE LOOSE. WASH & REAM 43' TO BOTTOM. RIG REP 1. PRESENT OPERATION DRLG.
- 10-13-79 7,735' MADE 85' IN TWIN CREEK FORMATION. MW 9.1, VIS 40, WL 8, PH 11, PV 20, YP 20, 5/10 GALS, 5.6% SOLIDS, 39,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,200, GPM 290, ANNULAR VELOCITY 258/126. BIT NO 27, 8-3/4, SEC, S84F, JETS 10-10-9. DEPTH IN 7,621'; MADE 114' IN 32-3/4 HRS; 3.5 FT/HR. OPER DRLG. RPM 76, WT ON BIT 20,000. DEV DEPTH 7,666' INC 12-3/4°, DEPTH 7,701' INC 13-3/4°, DEPTH 7,731' INC 13-3/4°. TOTAL BHA 647.43. BACK GROUND GAS 2 UNITS, 170 PPM METHANE. PRESENT OPERATION DRLG.
- 10-14-79 7,820' MADE 85' IN TWIN CREEK FORMATION. MW 9.1, VIS 38, WL 7.8, PH 11.5, PV 20, YP 14, 5/9 GALS, 5.6% SOLIDS, 32,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,200, GPM 290, ANNULAR VELOCITY 258/126. BIT NO 27, 8-3/4, SEC, S84F, JETS 10-10-9. DEPTH IN 7,621'; MADE 199' IN 55-1/4 HRS; 3.5 FT/HR. OPER DRLG. RPM 75, WT ON BIT 20,000. DEV DEPTH 7,769' INC 13-1/4°, DEPTH 7,796' INC 13-3/4°. TOTAL BHA 647.43. BACK GROUND GAS 2 UNITS, 152 PPM METHANE. INCREASED COST ON DAILY DRLG IS FOR CORROSION CONTROL \$9,754 AVER. \$181/DAY. DRLG AHEAD. PRESENT OPERATION DRLG.
- 10-15-79 7,923' MADE 103' IN TWIN CREEK FORMATION. MW 9.1, VIS 39, WL 7.6, PH 11, PV 18, YP 12, 5/8 GALS, 5.6% SOLIDS, 33,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,200, GPM 290, ANNULAR VELOCITY 258/126. BIT NO 27, 8-3/4, SEC, S84F, JETS 10-10-9. DEPTH IN 7,621'; MADE 302' IN 75-3/4 HRS; 4 FT/HR. OPER DRLG. RPM 75, WT ON BIT 15-20,000. DEV DEPTH 7,827' INC 13-3/4°, DEPTH 7,858' INC 13-3/4°, DEPTH 7,890' INC 13-3/4°, DEPTH 7,922' INC 13-3/4°. TOTAL BHA 647.43. BACK GROUND GAS 1 UNIT, 152 PPM METHANE. PRESENT OPERATION DRLG.
- 10-16-79 8,021' MADE 98' IN TWIN CREEK FORMATION. MW 9.1, VIS 40, WL 8, PH 11, PV 16, YP 12, 5/8 GALS, 5.6% SOLIDS, 39,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,200, GPM 290, ANNULAR VELOCITY 258/126. BIT NO 27, 8-3/4, SEC, S84F, JETS 10-10-9. DEPTH IN 7,621'; MADE 400' IN 97-1/2 HRS; 4 FT/HR. OPER DRLG. RPM 75, WT ON BIT 15-20,000. DEV DEPTH 7,952' INC 14°, DEPTH 7,985' INC 14-3/4°, DEPTH 8,019' INC 14-1/4°. TOTAL BHA 647.43. BACK GROUND GAS 1.5 UNITS, 190 PPM METHANE. REED TOOL CO. GAVE CREDIT ON BIT #24, 8-3/4, REED, FP51. PRESENT OPERATION DRLG.
- 10-17-79 8,120' MADE 99' IN TWIN CREEK FORMATION. MW 9.3, VIS 40, WL 8.4, PH 11.0, PV 14, YP 16, 3/6 GALS, 6.0% SOLIDS, 40,000 PPM CHLORIDE, 40 CALCIUM. PMP PRESS 2,300, GPM 290, ANNULAR VELOCITY 124/254. BIT NO 27, 8-3/4, SEC, S84F, JETS 10-10-9. DEPTH IN 7,621'; MADE 499' IN 119 HRS; 4.2 FT/HR. OPER DRLG. RPM 75, WT ON BIT 15-20,000. DEV DEPTH 8,052' INC 14°, DEPTH 8,082' INC 14-1/2°, DEPTH 8,114' INC 14-3/4°. TOTAL BHA 647.43. BACK GROUND GAS 1.5 UNITS. SLOW PUMP 44 SPM, 700 PSI. PRESENT OPERATION DRLG.

10-27-79 8,547' MADE 0' IN TWIN CREEK FORMATION. MW 9.3, VIS 64, WL 5, PH 10.5, PV 25, YP 25, 5/9 GALS, 5.6% SOLIDS, 28,000 PPM CHLORIDE, 80 CALCIUM, 1% OIL, 0% LCM. PMP PRESS 350, GPM 276, ANNULAR VELOCITY 550/247/121. BIT NO 29, 8-3/4, SMITH, F-2, JETS 10-10-10. DEPTH IN 8,184', OUT 8,547'; MADE 363' IN 80-3/4 HRS; 4.49 FT/HR; CONDITION STUCK. RPM 48, WT ON BIT 10,000. DRILLING ASSEMBLY AS FOLLOWS:

<u>COMPONENT</u>	<u>LENGTH</u>	<u>O.D.</u>	<u>I.D.</u>
ROT. SHOE	2.79	8-1/8 X 8-1/2	7-1/4
6 JTS WP	186.24	8-1/8	7-1/4
TOP SUB	1.78	6 X 8-1/8	2-3/4
BUMP. SUB	5.92	6	2
BOWEN OIL JARS	6.82	6	2
X - OVER	1.65	6-3/4	2-1/4
8 SPIRAL DC'S	240.39	6-3/4	2-1/4
X - OVER	1.31	6-1/2	2-1/2

TOTAL BHA 447.08. RAN FREE PT W/MCCULLOUGH - FP @ TOP OF DC'S @ 2,483' WLM. BACKED OFF @ 2,421' WLM, LEAVING X - OVER SUB ON TOP OF FISH. L/D BAD JARS - P/U 8-1/2" OD FLAT BTM SHOE W/3 WTR COURSES, 8-1/8" X 7-1/4" WASH PIPE, BOWEN-LEBUS WASH PIPE SPEAR IN 2ND JT OF WP FROM BTM (SAFETY JT BELOW SPEAR). TAGGED TOF @ 2,420' DP MEAS. WASH CUTTINGS & CIRC FROM 2,420' TO 2,485'. MILL SHOE STOPPED CUTTING. CIRC HOLE CLEAN. NOW POH TO CHANGE SHOE TO SCALLOPED SHOE. VERY FEW CUTTINGS IN RETURNS. NO TROUBLE GETTING OVER TOF. PRESENT OPERATION FISHING.

10-28-79 8,547' MADE 0' IN TWIN CREEK FORMATION. MW 9.3, VIS 64, WL 5, PH 10.5, PV 25, YP 25, 5/9 GALS, 5.6% SOLIDS, 28,000 PPM CHLORIDE, 80 CALCIUM, 1% OIL. PMP PRESS 350, GPM 276, ANNULAR VELOCITY 550/247/120. BIT NO 29, 8-3/4, SMITH, F2, JETS 10-10-10. DEPTH IN 8,184', OUT 8,547'; MADE 363' IN 80-3/4 HRS; 4.49 FT/HR; CONDITION 1-1-IN. RPM 48, WT ON BIT 10,000. FISHING BHA SAME AS 10-27-79. 25 HRS DUE TO TIME CHANGE FROM DAYLIGHT SAVINGS TO STD TIME. FIN POH W/FLAT BTM MILL SHOE, RIH W/SCALLOP MILL SHOE. WASH OVER FISH FROM 2,481' TO 2,489' - FISH FREE. POH & RECOVERED ALL FISH - HAD NO DAMAGE TO BHA. L/D FISHING TOOLS, WP, ETC. RIH W/BIT ON SLICK BHA @ 0600 HRS TO COND HOLE. PRESENT OPERATION TRIP.

10-29-79 8,547' MADE 0' IN TWIN CREEK FORMATION. MW 9.2, VIS 68, WL 5, PH 10.5, PV 32, YP 12, 5/9 GALS, 5.4% SOLIDS, 21,000 PPM CHLORIDE, 100 CALCIUM, TR OIL. PMP PRESS 1,700, GPM 302, ANNULAR VELOCITY 267/131. BIT NO 30, 8-3/4, SMITH, V2HJ, JETS 11-11-11. DEPTH IN 8,547', WASH & REAM. RPM 60, WT ON BIT 0-10,000. DRILLING ASSEMBLY AS FOLLOWS:

<u>COMPONENT</u>	<u>LENGTH</u>	<u>O.D.</u>	<u>I.D.</u>
BIT (BOTTOM HOLE)	.85	8-3/4	
1 DC	31.50	7	2-1/4
9 DC'S	279.40	7	2-1/4
DOT JARS	34.10	6-1/4	2-1/4
4 DC'S	124.80	7	2-1/4
KEY SEAT WIPER	6.81	7	2-1/4

TOTAL BHA 470.65. FIN L/D FISHING TOOLS. RIH W/BIT #30. TAGGED BRIDGE @ 2,985' - WASH & REAM TO 3,035'. WASH W/O REAMING TO 4,100'. BIT PLUGGED. POH & UNPLUGGED BIT & DC (8' OF BLACK SHALE IN DC). RIH TO 4,100', WASH & REAM TO 4,885' (TIGHT HOLE FROM 2,400' TO 3,000'). AT 0600 HRS WASHING & REAMING HOLE. PRESENT OPERATION WASH & REAM.

10-30-79 8,547' MADE 0' IN TWIN CREEK FORMATION. MW 9.5, VIS 68, WL 5.4, PH 10, PV 33, YP 12, 4/9 GALS, 6.2% SOLIDS, 20,000 PPM CHLORIDE, 80 CALCIUM, TR OIL. PMP PRESS 1,700, GPM 286, ANNULAR VELOCITY 256/123. BIT NO 30, 8-3/4, SMITH, V2HJ, JETS 11-11-11. DEPTH IN 8,547'; WASH & REAM. RPM 50, WT ON BIT 0-10,000. TOTAL BHA 470.65. WASHED & REAM FROM 4,885' TO 8,547', W/BRIDGES FROM 5,700' TO 8,457', APPROX 90' OF FILL ON BTM. AFTER CIRC 8 HRS, ATTEMPT SHORT TRIP - HOLE TIGHT, SLOUGHING SHALE. RIH TO T.D. & CIRC TO COND HOLE. (USING VISCOUS SWEEPS TO CLEAN HOLE). PRESENT OPERATION CIRC & COND.

10-31-79 8,547' MADE 0' IN TWIN CREEK FORMATION. MW 9.3, VIS 63, WL 5.3, PH 10.5, PV 32, YP 12, 4/9 GALS, 5.6% SOLIDS, 21,000 PPM CHLORIDE, 100 CALCIUM, TR OIL. PMP PRESS 2,000, GPM 275, ANNULAR VELOCITY 245/120. BIT NO 30, 8-3/4, SMITH, V2HJ, JETS 11-11-11. DEPTH IN 8,547'. OPER GOOD. BIT NO 31, 8-3/4, SEC, S84F, JETS 10-10-10. DEPTH IN 8,547'. RPM 75, WT ON BIT 0-10. DRILLING ASSEMBLY AS FOLLOWS:

<u>COMPONENT</u>	<u>LENGTH</u>	<u>O.D.</u>	<u>I.D.</u>
BIT	.85	8-3/4	
NEAR BIT	5.07	7	2-3/4
IBS	4.58	8-3/4	2-3/4
SH DC	5.66	6-7/8	2-1/2
IBS	4.67	8-3/4	2-13/16
IBS	4.72	6-15/16	2-3/4
DC	31.00	7	2-5/8
IBS	4.71	8-3/4	2-13/16
S SUB	7.30	6-3/8	2-1/16
DC	30.58	7	2-3/16
IBS	4.69	6-7/8	2-1/4
8 DC'S	249.90	7	2-1/4
JARS	33.56	6-1/4	2-1/4
3 DC'S	93.37	7	2-1/4
KEY SEAT WIPER	6.81	6	2-1/4

TOTAL BHA 478.47. CIRC & COND HOLE. L/D & PICKUP BHA. P/U 2 NEW IBS STABILIZERS, NEW D.O.T. DRLG JARS. RIH TIGHT @ 8,409', WASH & REAM TO 8,469', FINDING FILL FROM 8,469' TO 8,547' (78'). PRESENT OPERATION CIRC & REAM.

11-1-79 8,618' MADE 71' IN TWIN CREEK FORMATION. MW 9.3, VIS 55, WL 6.5, PH 10.5, PV 26, YP 12, 4/9 GALS, 5.6% SOLIDS, 18,000 PPM CHLORIDE, 160 CALCIUM. PMP PRESS 1,950, GPM 275, ANNULAR VELOCITY 245/120. BIT NO 31, 8-3/4, SEC, S84F, JETS 10-10-10. DEPTH IN 8,547'; MADE 71' IN 18-1/2 HRS; 3.83 FT/HR. RPM 75, WT ON BIT 10-15,000. DEV DEPTH 8,556' INC 15°, DEPTH 8,587' INC 15°, DEPTH 8,618' INC 15°. WASH & REAMED FILL FROM 8,469' TO 8,547' - 78' OF FILL IN 2-1/2 HRS. DRLG AHEAD W/NO PROBLEMS. PRESENT OPERATION DRLG.

11-2-79 8,690' MADE 72' IN TWIN CREEK FORMATION. MW 9.2, VIS 49, WL 8.1, PH 10.5, PV 24, YP 10, 3/7 GALS, 5.2% SOLIDS, 17,000 PPM CHLORIDE, 80 CALCIUM. PMP PRESS 1,500, GPM 238, ANNULAR VELOCITY 213/104. BIT NO 31, 8-3/4, SEC, S84F, JETS 10-10-10. DEPTH IN 8,547'; MADE 143' IN 38-3/4 HRS; 3.7 FT/HR. RPM 75, WT ON BIT 10-15,000. DEV DEPTH 8,650' INC 14-3/4°, DEPTH 8,684' INC 15°. TOTAL BHA 487.47. CLEAN #1 MUD PIT UNDER SHAKER. RECEIVED 7,500 GALS FUEL - DOWN 1/2 HR W/AIR IN FUEL LINE. BGG - TRACE TO 1 UNIT METHANE. DRLG 100% LIMESTONE. PRESENT OPERATION DRLG.

10-23-79 8,547' MADE 98' IN TWIN CREEK FORMATION. MW 9.3, VIS 40, WL 8.1, PH 10.5, PV 10, YP 26, 2/4 GALS, 5.6% SOLIDS, 28,000 PPM CHLORIDE, 80 CALCIUM. PMP PRESS 1,900, GPM 285, ANNULAR VELOCITY 124/254. BIT NO 29, 8-3/4, SMITH, F2, JETS 10-10-10. DEPTH IN 8,184' MADE 363' IN 80-3/4 HRS; 4.49 FT/HR. OPER SURV. RPM 80, WT ON BIT 20,000. DEV DEPTH 8,482' INC 14-3/4°, DEPTH 8,547' INC 15°. TOTAL BHA 480.83. BGG 2 UNITS. NO PROBLEMS. PRESENT OPERATION SURVEY.

10-24-79 8,547' MADE 0' IN TWIN CREEK FORMATION. MW 9.4, VIS 46, WL 7.9, PH 10.5, PV 10, YP 28, 4/6 GALS, 5.6% SOLIDS, 29,000 PPM CHLORIDE, 80 CALCIUM. NO PMP PRESS. BIT NO 29, 8-3/4, SMITH, F2, JETS 10-10-10. DEPTH IN 8,184', OUT 8,547'; MADE 363' IN 80-3/4 HRS; 4.49 FT/HR. OPER STUCK. NO RPM. TOTAL BHA 480.83. START POH FOR NEW BIT. HOLE TIGHT @ 6,385'. CIRC & PMPD OUT 11 JTS - HOLE FREED UP. CON'T POH TO 2,907'. HOLE TIGHT & STUCK PIPE. COULD GET NO ACTION W/JARS. SPOTTED 42 BBL DIESEL W/135 GAL "PIPE - LAX" & DISPL. W/21 BBL OF MUD. R/U BOWEN SURFACE JARS (ACME). JARRING ON STUCK PIPE & MOVING "PIPE - LAX" 30 STKS (2-1/2 BBL) EVERY 30 MIN. MCCULLOUGH ETA LOCATION @ 0800 HRS W/BACK OFF & FREEPOINT. PRESENT OPERATION WORKING STUCK PIPE.

10-25-79 8,547' MADE 0' IN TWIN CREEK FORMATION. MW 9.4, VIS 46, WL 8.2, PH 10.5, PV 12, YP 31, 5/8 GALS, 5.6% SOLIDS, 29,000 PPM CHLORIDE, 80 CALCIUM 1% OIL, 0% LCM. PMP PRESS 1,950, GPM 307, ANNULAR VELOCITY 134/274. BIT NO 29, 8-3/4, SMITH, F2, JETS 10-10-10. DEPTH IN 8,184', OUT 8,547'; MADE 363' IN 80-3/4 HRS; 4.49 FT/HR. DEV DEPTH 8,545' INC 14-3/4°. FISHING STRING ASSEMBLY AS FOLLOWS:

<u>COMPONENT</u>	<u>LENGTH</u>	<u>O.D.</u>	<u>I.D.</u>
SCREW-IN SUB	1.05	6	2-1/4
BUMPER SUB (36" STK)	5.92	6	2
BOWEN JARS	6.82	6	2
X - OVER SUB	1.65	6-3/4	2-1/4
8 SPIRAL DC'S	141.39	6-3/4	2-1/4
X - OVER SUB	1.60	6-3/4	2-1/4
ACC JARS	9.96	6	2
X - OVER SUB	1.57	6	2-1/2

TOTAL FISHING ASSEMBLY 269.96. BIT @ 2,907' - TOP OF FISH @ 2,365' (DRILL PIPE MEAS). L/D SURFACE JARS, R/U MCCULLOUGH & RUN FREE PT. INDICATOR, STUCK @ 2,483' @ TOP OF DC'S BY WIRELINE MEAS. (2,426' DPM). FISHED TOTCO SURVEY FROM DP, BACKED OFF DP @ 2,411' WLM (2,365' DPM) & LEFT 2 JTS DP ON TOP OF BHA. POH W/25 STD + 2 SINGLES, L/D 10 JTS OF BENT DP (BY SURF JARS). M/U FISHING STRING. RIH. CIRC & SCREWED INTO FISH. UNABLE TO CIRC AFTER SCREWING INTO FISH. JAR 1 HR & REGAINED CIRC. JARRED ON FISH ANOTHER 2 HRS WHILE CIRC. JARRING 130,000# OVER PULL. MIXING MUD SWEEP OF ASBESTOS, GEL, & CRUSTIC. RETURNS - LOTS OF BLACK SHALE. PRESENT OPERATION FISHING.

10-26-79 8,547' MADE 0' IN TWIN CREEK FORMATION. MW 9.2, VIS 65, WL 5.2, PH 10.5, 5.2% SOLIDS, 27,000 PPM CHLORIDE, 80 CALCIUM, 1% OIL, 0% LCM. PMP PRESS 2,900, GPM 276, ANNULAR VELOCITY 247/121. BIT NO 29, 8-3/4, SMITH, F2, JETS 10-10-10. DEPTH IN 8,184', OUT 8,547'; MADE 363' IN 80-3/4 HRS; 4.49 FT/HR. TOTAL BHA 269.96. SAME FISH & SAME FISHING STRING AS 10-25-79. WORKED PIPE & JARRED ON FISH UNTIL 1100 HRS, 10-25-79. JARS QUIT WORKING. CIRC & COND MUD - INCREASED VISCOSITY & LOWER WATER LOSS FROM 8.2 TO 5.2. RECOVERED LOTS OF BLACK SHALE - HOLE SLOUGHING IN. PRESENTLY RIGGING UP TO BACK-OFF. PRESENT OPERATION FISHING.

10-18-79 8,134' MADE 14' IN TWIN CREEK FORMATION. MW 9.4, VIS 43, WL 9.1, PH 10.5, PV 14, YP 16, 4/8 GALS, 6.0% SOLIDS, 36,000 PPM CHLORIDE, 40 CALCIUM. PMP PRESS 2,000, GPM 360, ANNULAR VELOCITY 157/320. BIT NO 27, 8-3/4, SEC, S84F, JETS 10-10-9. DEPTH IN 7,621', OUT 8,134'; MADE 513' IN 124-1/2 HRS; 4.12 FT/HR; CONDITION 3-3-IN. BIT NO 28, 8-3/4, REED, FP51, JETS 11-11-11. DEPTH IN 8,134'; BEGIN DRLG @ 0600 HTS. RPM 60, WT ON BIT 10-15,000. DEV DEPTH 8,134' INC 14-3/4°. DRILLING ASSEMBLY AS FOLLOWS:

<u>COMPONENT</u>	<u>LENGTH</u>	<u>O.D.</u>	<u>I.D.</u>
BIT	.85	8-3/4	
NB (WRAP AROUND)	5.10	7	2-3/4
IBS	4.56	7	2-3/4
PONY DC	5.60	7	2-7/8
IBS	4.71	6-3/4	2-5/8
IBS	4.67	7	2-3/4
1 DC	31.05	7	2-5/8
IBS	4.70	7	2-3/4
S/S	7.30	6-1/2	2-7/8
IBS	4.70	7	2-3/4
8 DC'S	248.59	7	2-3/8
JARS	34.10	6-1/4	2-1/4
4 DC'S	124.90	7	2-3/8

TOTAL BHA 480.83. 6-1/2 HRS CHECK BHA, 3 HR CHANGE BHA (L/D 5 DC'S). 2 DC'S CRACKED (1 PM - 1 BOX). 1 DC BENT. 1 IBS CRACKED (BOX). WASH & REAM 120' TO BOTTOM. 1-1/2 HR WASH & REAM - HOLE OK ON TRIP - REAM TO BTM FOR SAFETY. SPR - 44 SPM @ 700 PSI. BACK GROUND GAS 1-1/2 UNITS, NO TRIP GAS. RIG REPAIR (PUMP) 1 HR. TOTAL MONTH 3-3/4 HRS. PRESENT OPERATION DRLG.

10-19-79 8,184' MADE 50' IN TWIN CREEK FORMATION. MW 9.4, VIS 39, WL 8.8, PH 10.5, PV 12, YP 15, 3/6 GALS, 6.0% SOLIDS, 3,600 PPM CHLORIDE, 40 CALCIUM. PMP PRESS 1,500, GPM 285, ANNULAR VELOCITY 124/254. BIT NO 28, 8-3/4, REED, FP51, JETS 11-11-11. DEPTH IN 8,134', OUT 8,184'; MADE 50' IN 23 HRS; 2.17 FT/HR; CONDITION TRIP. RPM 90, WT ON BIT 15-20,000. TOTAL BHA 480.83. BACK GROUND GAS 2 UNITS. POH - ROP SLOWED TO 1 FPH. PRESENT OPERATION TRIP.

10-20-79 8,236' MADE 52' IN TWIN CREEK FORMATION. MW 9.4, VIS 42, WL 8.4, PH 10.5, PV 14, YP 15, 3/6 GALS, 6.0% SOLIDS, 31,000 PPM CHLORIDE, 200 CALCIUM. PMP PRESS 1,850, GPM 285, ANNULAR VELOCITY 124/254. BIT NO 28, 8-3/4, REED, FP51, JETS 11-11-11. DEPTH IN 8,134', OUT 8,184'; MADE 50' IN 23 HRS; 2.17 FT/HR; CONDITION 1-1-IN. BIT NO 29, 8-3/4, SMITH, F2, JETS 10-10-10. DEPTH IN 8,184'; MADE 52' IN 13-1/2 HRS; 3.85 FT/HR. OPER DRLG. RPM 80, WT ON BIT 20,000. DEV DEPTH 8,198' INC 14-1/2°, DEPTH 8,230' INC 14-1/2°. TOTAL BHA 480.83. BGG 1 UNIT, TRIP GAS 6 UNITS. SPR - 44 SPM @ 700 PSI. DRLG AHEAD W/NO PROBLEMS. PRESENT OPERATION DRLG.

10-21-79 8,346' MADE 110' IN TWIN CREEK FORMATION. MW 9.4, VIS 42, WL 8.5, PH 10.5, PV 12, YP 26, 3/6 GALS, 6.0% SOLIDS, 29,000 PPM CHLORIDE, 160 CALCIUM. PMP PRESS 1,850, GPM 285, ANNULAR VELOCITY 124/254. BIT NO 29, 8-3/4, SMITH, F2, JETS 10-10-10. DEPTH IN 8,184'; MADE 162' IN 35-1/4 HRS; 4.59 FT/HR. OPER DRLG. RPM 80, WT ON BIT 20,000. DEV DEPTH 8,255' MIS-RUN, DEPTH 8,285' INC 14-3/4°, DEPTH 8,324' INC 14-3/4°. TOTAL BHA 480.83. BGG 1 UNIT. DRLG AHEAD NO PROBLEMS. PRESENT OPERATION DRLG.

10-22-79 8,449' MADE 103' IN TWIN CREEK FORMATION. MW 9.4, VIS 42, WL 8.0, PH 11.0, PV 10, YP 26, 2/4 GALS, 6.0% SOLIDS, 30,000 PPM CHLORIDE, 80 CALCIUM. PMP PRESS 1,900, GPM 285, ANNULAR VELOCITY 124/254. BIT NO 29, 8-3/4, SMITH, F2, JETS 10-10-10. DEPTH IN 8,184'; MADE 265' IN 57-3/4 HRS; 4.58 FT/HR. OPER DRLG. RPM 80, WT ON BIT 20,000. DEV DEPTH 8,358' INC 14-3/4°, DEPTH 8,422' INC 14-3/4°. TOTAL BHA 480.83. BGG 2 UNITS. SP RATE 41 SPM - 525 PSI. DRLG AHEAD NO PROBLEMS. PRESENT OPERATION DRLG.

- 10-11-79 7,621' MADE 77' IN TWIN CREEK FORMATION. MW 9.4, VIS 38, WL 8.5, PH 11, PV 16, YP 8, 6/9 GALS, 8.2% SOLIDS, 34,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,400#, GPM 359, ANNULAR VELOCITY 320/157. BIT NO 26, 8-3/4, REED, FP51, JETS 11-11-11. DEPTH IN 7,314'; MADE 307' IN 77-1/2 HRS; 4 FT/HR. OPER DRLG. RPM 80, WT ON BIT 20-25,000. DEV DEPTH 7,550', INC 12-3/4°, DEPTH 7,610' INC 13°. TOTAL BHA 647.43. BG GAS 1 UNIT. SENT TELEDRIFT TO DYNA-DRILL IN CASPER. PRESENT OPERATION DRLG.
- 10-12-79 7,650' MADE 29' IN TWIN CREEK FORMATION. MW 9.4, VIS 40, WL 8, PH 11, PV 20, YP 10, 5/10 GALS, 8.3% SOLIDS, 50,000 PPM CHLORIDE, TR CALCIUM. PM PRESS 2,500, GPM 341, ANNULAR VELOCITY 302/148. BIT NO 26, 8-3/4, REED, FP51, JETS 11-11-11. DEPTH IN 7,314', OUT 7,621'; MADE 307' IN 77-1/2 HRS; 4 FT/HR; CONDITION 3-2-I. BIT NO 27, 8-3/4, SEC, S84F, JETS 10-10-9. DEPTH IN 7,621'; MADE 29' IN 11 HRS; 2.5 FT/HR. OPER DRLG. RPM 75, WT ON BIT 25-30,000. DEV DEPTH 7,621' INC 12-1/4°. TOTAL BHA 647.43. BACK GROUND GAS 2 UNITS, TRIP GAS 5 UNITS, 152 PPM METHANE. WHILE TRIPPING OUT OF HOLE, HAD TIGHT SPOT @ 2,410, WORK PIPE LOOSE. WASH & REAM 43' TO BOTTOM. RIG REP 1. PRESENT OPERATION DRLG.

10-6-79 7,235' MADE 79' IN TWIN CREEK FORMATION. MW 9.7, VIS 40, WL 10, PH 10.5, PV 12, YP 16, 7/12 GALS, 9.4% SOLIDS, 95,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,500, GPM 336, ANNULAR VELOCITY 298/147. BIT NO 25, 8-3/4, STC, F2, JETS 10-10-10. DEPTH IN 7,087'; MADE 148' IN 53-1/4 HRS; 2.75 FT/HR. OPER DRLG. RPM 70, WT ON BIT 30,000. DEV DEPTH 7,157' INC 12-1/4°, DEPTH 7,188' INC 12°, DEPTH 7,220', INC 12-1/4°. TOTAL BHA 615.32. BACK GROUND GAS 4 UNITS, METHANE 266 PPM. CIRC SAMPLE @ 7,189' SHALE & SAND. CORRECTED BIT #25, F2, SMITH. WAS TURNING IN WRONG BIT. PRESENT OPERATION DRLG.

10-7-79 7,314' MADE 79' IN TWIN CREEK FORMATION. MW 9.7, VIS 40, WL 9, PH 10.5, PV 12, YP 12, 5/9 GALS, 9.4% SOLIDS, 80,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,500, GPM 336, ANNULAR VELOCITY 298/147. BIT NO 25, 8-3/4, STC, F2, JETS 10-10-10. DEPTH IN 7,087'; MADE 227' IN 72 HRS; 3 FT/HR. OPER DRLG. RPM 70, WT ON BIT 30,000. DEV DEPTH 7,252' INC 12-1/4°, DEPTH 7,283' INC 12-1/4°. TOTAL BHA 615.32. BACK GROUND GAS 2 UNITS, METHANE 28 PPM. PULLED 10 STANDS TO RE-PACK SWIVEL. PRESENT OPERATION DRLG.

10-8-79 7,357' MADE 43' IN TWIN CREEK FORMATION. MW 9.7, VIS 42, WL 10.5, PH 11, PV 10, YP 16, 6/10 GALS, 9.4% SOLIDS, 82,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,400, GPM 359, ANNULAR VELOCITY 320/157. BIT NO 25, 8-3/4, STC, F2, JETS 10-10-10. DEPTH IN 7,087', OUT 7,314'; MADE 227' IN 72 HRS; 3 FT/HR; CONDITION 3-3-I. BIT NO 26, 8-3/4, REED, FP51, JETS 11-11-11. DEPTH IN 7,314'; MADE 43' IN 12-3/4 HRS; 3-1/2 FT/HR. OPER DRLG. RPM 75, WT ON BIT 30-35,000. DEV DEPTH 7,314' INC 12-1/2°, DEPTH 7,327' INC 12-3/4°, DEPTH 7,355' INC 12°. DRILLING ASSEMBLY AS FOLLOWS:

<u>COMPONENT</u>	<u>LENGTH</u>	<u>O.D.</u>	<u>I.D.</u>
BIT	.85	8-3/4	
NEAR BIT	5.10	8-3/4	2-1/4
SHORT DC	10.68	7	2-1/4
I.B.S.	4.70	8-3/4	2-7/8
I.B.S.	4.90	8-3/4	2-1/4
SHOCK SUB	7.30	7	2-1/4
I.B.S.	4.13	8-3/4	2-1/4
1 DC	31.20	7	2-3/8
I.B.S.	4.74	8-3/4	2-11/16
1 DC	31.07	7	2-3/8
I.B.S.	4.74	8-3/4	2-11/16
13 DC'S	402.41	7	2-3/8
DRLG JARS	34.10	6-1/4	2-1/4
3 DC'S	93.55	7	2-3/8
KEYSEAT WIPER	6.85	7	2-1/4
X - 0 SUB	1.11	6-1/4	2

TOTAL BHA 647.43. TRIP TO CHANGE BIT. LAY DOWN TELEDRIFT, CHANGE NEAR BIT, UP SHORT DC TO REPLACE TELEDRIFT. UP DAILEY DRLG JARS. BACK GROUND GAS 2 UNITS, METHANE 171 PPM. DRLG AHEAD. PRESENT OPERATION DRLG.

10-9-79 7,454' MADE 97' IN TWIN CREEK FORMATION. MW 9.6, VIS 38, WL 8, PH 10.5, PV 12, YP 10, 5/9 GALS, 9.4% SOLIDS, 65,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,400, GPM 359, ANNULAR VELOCITY 320/157. BIT NO 26, 8-3/4, REED, FP51, JETS 11-11-11. DEPTH IN 7,314'; MADE 140' IN 34-1/2 HRS; 4 FT/HR. OPER DRLG. RPM 75, WT ON BIT 35,000. DEV DEPTH 7,388' INC 12-1/4°, DEPTH 7,421' INC 12-1/4°, DEPTH 7,453' INC 12-1/4°. TOTAL BHA 647.43. BACK GROUND GAS 4 UNITS, 152 PPM METHANE. DRLG AHEAD. PRESENT OPERATION DRLG.

10-10-79 7,544' MADE 90' IN TWIN CREEK FORMATION. MW 9.5, VIS 38, WL 8.4, PH 11, PV 16, YP 8, 5/9 GALS, 8.4% SOLIDS, 48,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,400, GPM 359, ANNULAR VELOCITY 320/157. BIT NO 26, 8-3/4, REED, FP51, JETS 11-11-11. DEPTH IN 7,314'; MADE 230' IN 56-1/4 HRS; 4 FT/HR. OPER DRLG. RPM 75, WT ON BIT 35,000. DEV DEPTH 7,487' INC 12-1/4°, DEPTH 7,517' INC 12-1/4°. TOTAL BHA 647.43. BACK GROUND GAS 2 UNITS, 190 PPM METHANE. PRESENT OPERATION DRLG.

- 9-27-79 6,549' MADE 63' IN PREUSS FORMATION. MW 10.1, VIS 35, WL 12.0, PH 10.5, PV 12, YP 12, 6/10 GALS, 13.4% SOLIDS, 165,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,000#, GPM 399, ANNULAR VELOCITY 174/356. BIT NO 20, 8-3/4, STC, F3, JETS 11-11-10. DEPTH IN 6,321, OUT 6,513; MADE 192' IN 32-1/4 HRS; 5.95 FT/HR; CONDITION 3-3-1/8. OPER HOLE IN PIPE. BIT NO 21, 8-3/4, REED, FP51, JETS 13-13-13. DEPTH IN 6,513'; MADE 36' IN 8-1/2 HRS; 4.2 FT/HR. OPER DRLG. RPM 60-80, WT ON BIT 25-40,000. DEV DEPTH 6,487' INC 7° TELE, DEPTH 6,549' INC 7° TELE, DEPTH 6,549' INC 7-1/4° TOTCO. TOTAL BHA 631.06. TRIP GAS, BACK GROUND GAS 2 UNITS. BIT #20 TRIP FOR HOLE IN D.P. 1ST JT TOP OF DC'S. HOLE IN SLIP AREA. BIT #21 TRIP FOR HOLE IN D.P. 10 STNDS FROM SURFACE. SLOW PUMP 57 STROKES 600 PSI. PRESENT OPERATION DRLG.
- 9-28-79 6,614' MADE 65' IN PREUSS FORMATION. MW 9.9, VIS 36, WL 14.0, PH 11.0, PV 10, YP 12, 5/10 GALS, 11.4% SOLIDS, 173,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,000#, GPM 399, ANNULAR VELOCITY 174/356. BIT NO 21, 8-3/4, REED, FP51, JETS 13-13-13. DEPTH IN 6,513', OUT 6,614'; MADE 101' IN 19-1/4 HRS; 5.24 FT/HR; CONDITION 2-2-1. RPM 70, WT ON BIT 45,000. DEV DEPTH 6,580' INC 7° TELE. TOTAL BHA 631.06. BACK GROUND GAS 2 UNITS TRIP FOR HOLE IN D.P. 2 JTS ABOVE DC'S. RIG UP ALLEN DC SERVICE TO INSPECT PIPE ON TRIP OUT. FOUND 27 JTS OF BAD D.P. SOME CRACKS, PULLED & STRETCHED IN SLIP AREA. PULLED WEAR RING TO TEST BOP'S. TEST BOP'S W/YELLOW JACKET TO 3,000 PSI OK. PRESENT OPERATION TEST BOP'S.
- 9-29-79 6,675' MADE 61' IN PREUSS FORMATION. MW 10.0, VIS 37, WL 12.0, PH 10.5, PV 12, YP 12, 6/10 GALS, 7.4% SOLIDS, 175,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,500, GPM 336, ANNULAR VELOCITY 147/298. BIT NO 22, 8-3/4, HTC, J33, JETS 10-10-10. DEPTH IN 6,614'; MADE 61' IN 10-1/2 HRS; 5.8 FT/HR. OPER DRLG. RPM 60, WT ON BIT 35,000. DEV DEPTH 6,647' INC 6-1/2° TELE, DEPTH 6,675' INC 8-1/2° WIRELINE. TOTAL BHA 631.06. BACK GROUND GAS 1 UNIT, TRIP GAS 6 UNITS. HYDRILL TESTED TO 1,500 PSI - OK. SAFETY VALVES TESTED TO 3,000 PSI - OK. KELLEY COCK LEAKED, WILL REPLACE. CHANGE OUT 28 JTS D.P., RAN 16 JTS 20# ON BOTTOM. PRESENT OPERATION DRLG.
- 9-30-79 6,803' MADE 128' IN PREUSS FORMATION. MW 10.0, VIS 37. PMP PRESS 2,500, GPM 336, ANNULAR VELOCITY 147/298. BIT NO 22, 8-3/4, HTC, J33, JETS 10-10-10. DEPTH IN 6,614'; MADE 189' IN 32-3/4 HRS; 5.7 FT/HR. OPER DRLG. RPM 60, WT ON BIT 35-40,000. DEV DEPTH 6,708' INC 8° TELE, DEPTH 6,767' INC 8° TELE, DEPTH 6,767' INC 8-1/4° WIRELINE. TOTAL BHA 631.06. 1 UNIT BACK GROUND GAS, SLOW PUMP 48 STROKES 700 PSI. PRESENT OPERATION DRLG.
- 10-1-79 6,900' MADE 97' IN TWIN CREEK FORMATION. MW 10.1, VIS 38, WL 12, PH 11.0, PV 12, YP 12, 5/10 GALS, 13.4% SOLIDS, 175,000 PPM CHLORIDE, TR CALCIUM. PMP PRES 2,400, GPM 336, ANNULAR VELOCITY 147/298. BIT NO 22, 8-3/4, HTC, J33, JETS 10-10-10. DEPTH IN 6,614', OUT 6,894'; MADE 280' IN 47 HRS; 5.9 FT/HR; CONDITION 5-4-1/8. OPER PLUG JETS. BIT NO 23, 8-3/4, HTC, J33, JETS 10-10-11. DEPTH 6,894'; MADE 6' IN 1-3/4 HRS; 3.4 FT/HR. OPER DRLG. RPM 60, WT ON BIT 45,000-30,000. DEV DEPTH 6,833' INC 8° TELE, DEPTH 6,892' INC 8-1/2° TELE, DEPTH 6,894' INC 9° TOTCO. TOTAL BHA 631.06. BACK GROUND GAS 5 UNITS, TRIP GAS 34 UNITS. BIT #22 PLUGGED W/ROCKS & IRON. RIG REPAIR ROTARY CHAIN 1/2 HR. PUMP 1/4 HR.
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|---------------|--------|--------|----------|
| D.P. CHECKED: | 23 JTS | 16.60# | E RED |
| | 26 JTS | 16.60# | E YELLOW |
| | 14 JTS | 16.60# | E BLUE |
| | 6 JTS | 20# | E RED |
| | 21 JTS | 20# | G YELLOW |
| | 2 JTS | 20# | G BLUE |
- PRESENT OPERATION DRLG.
- 10-2-79 7,015' MADE 115' IN TWIN CREEK FORMATION. MW 10.0, VIS 35, WL 14, PH 11.0, PV 10, YP 10, 5/10 GALS, 11.8% SOLIDS, 165,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,400, GPM 336, ANNULAR VELOCITY 147/298. BIT NO 23, 8-3/4, HTC, J33, JETS 10-10-11. DEPTH IN 6,894'; MADE 121' IN 23 HRS; 5.2 FT/HR. OPER DRLG. RPM 60, WT ON BIT 30,000-20,000. DEV DEPTH 6,925' INC 9-3/4° WIRELINE, DEPTH 6,958' INC 10-1/4° WIRELINE, DEPTH 6,983' INC 10-1/4° WIRELINE. TOTAL BHA 631.06. BACK GROUND GAS 2 UNITS. TWIN CREEK TOP 6,850'. PRESENT OPERATION DRLG.

10-3-79 7,087' MADE 72' IN TWIN CREEK FORMATION. MW 9.9, VIS 38, WL 14, PH 11, PV 12, YP 12, 5/9 GALS, 10.8% SOLIDS, 158,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,400, GPM 336, ANNULAR VELOCITY 147/298. BIT NO 23, 8-3/4, HTC, J33, JETS 10-10-11. DEPTH IN 6,894', OUT 7,082'; MADE 188' IN 34 HRS; 5.5 FT/HR; CONDITION 2-2-I. BIT NO 24, 8-3/4, REED, FP51, JETS 10-10-10. DEPTH IN 7,082'; MADE 5' IN 1-1/2 HRS; 3.3 FT/HR. OPER TRIP. RPM 60-80, WT ON BIT 15,000. DEV DEPTH 7,020' INC 10-1/2° WIRELINE, DEPTH 7,080' INC 11-3/4° WIRELINE. DRILLING ASSEMBLY AS FOLLOWS:

<u>COMPONENT</u>	<u>LENGTH</u>	<u>O.D.</u>	<u>I.D.</u>
BIT	.85	8-3/4	
NEAR BIT	4.78	7	2-7/8
NEAR BIT STAB	4.67	7	2-1/4
TELE	7.13	6-13/16	3-1/2
I.B.S.	4.70	7	2-7/8
I.B.S.	4.70	7	2-1/4
SHOCK SUB	7.30	6-1/2	2
I.B.S.	4.72	7	2-1/4
1 DC	31.20	7	2-3/8
I.B.S.	4.74	7	2-11/16
1 DC	31.07	7	2-3/8
I.B.S.	4.63	7	2-1/2
17 DC'S	529.96	7	2-3/8

TOTAL BHA 640.45. TRIP GAS 8 UNITS, SET WEAR RING. BACK GROUND GAS 1 UNIT. WORK ON PUMP 1 HR. TRIP FOR HOLE IN PIPE. #2 PUMP DOWN FOR REPAIRS. WASH & REAM 130' TO BOTTOM NO FILL. PRESENT OPERATION TRIP FOR HOLE IN PIPE.

10-4-79 7,110' MADE 23' IN TWIN CREEK FORMATION. MW 9.9, VIS 37, WL 12, PH 10.5, PV 12, YP 12, 6/10 GALS, 10.8% SOLIDS, 155,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,400, GPM 336, ANNULAR VELOCITY 298/147. BIT NO 24, 8-3/4, REED, FP51, JETS 10-10-10. DEPTH IN 7,082', OUT 7,087'; MADE 5' IN 1-1/2 HRS; 3.3 FT/HR; CONDITION GOOD. OPER PIN WASHED OUT. BIT NO 25, 8-3/4, REED, FP52, JETS 10-10-10. DEPTH IN 7,087'; MADE 23' IN 12 HRS; 1.9 FT/HR. OPER DRLG. RPM 60-70, WT ON BIT 12-15,000. DRILLING ASSEMBLY AS FOLLOWS:

<u>COMPONENT</u>	<u>LENGTH</u>	<u>O.D.</u>	<u>I.D.</u>
BIT	.85	8-3/4	
NEAR BIT REAMER	4.75	7	2-1/4
TELE	7.13	6-13/16	3-1/2
I.B.S.	4.70	7	2-7/8
I.B.S.	4.90	7	2-1/4
SHOCK SUB	7.30	7	2-1/4
I.B.S.	4.13	7	2-1/4
1 DC	31.20	7	2-3/8
I.B.S.	4.63	7	2-11/16
1 DC	31.07	7	2-3/8
I.B.S.	4.74	7	2-1/2
16 DC'S	498.96	7	2-3/8
KEY SEAT WIPER	6.85	7	2-1/4
X - 0 SUB	1.11	6-1/4	2

TOTAL BHA 615.32. TRIP FOR HOLE IN PIPE, WHILE TRIPPING PULLED INTO TIGHT HOLE @ 3,800'. WORK PIPE LOOSE. FOUND HOLE IN BIT PIN ON BIT #24. TRIP IN TO 3,800', WASH & REAM TIGHT HOLE. FINISH TRIP IN & DRLG AHEAD. TRIP GAS 4 UNITS, BACK GROUND GAS 3 UNITS, METHANE 380 PPM. PRESENT OPERATION DRLG.

10-5-79 7,156' MADE 46' IN TWIN CREEK FORMATION. MW 9.8, VIS 39, WL 12, PH 11, PV 12, YP 12, 5/9 GALS, 10.8% SOLIDS, 143,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,500, GPM 336, ANNULAR VELOCITY 298/147. BIT NO 25, 8-3/4, REED, FP52, JETS 10-10-10. DEPTH IN 7,087'; MADE 69' IN 33-3/4 HRS; 2 FT/HR. OPER DRLG. RPM 70, WT ON BIT 15,000. DEV DEPTH 7,117' INC 12-1/4°. TOTAL BHA 615.32. BACK GROUND GAS 2 UNITS. TRIP FOR HOLE IN D.P. FOUND HOLE 15 STNDS DOWN FROM SURFACE, SPLIT IN SLIP AREA. TRIP BACK IN DRLG AHEAD. BOP'S OK. WAITING ON CRANE TO SET #2 PUMP OUT FOR REPAIRS. PRESENT OPERATION DRLG.

9-22-79 6,056' MADE 8' IN PREUSS FORMATION. MW 9.9, VIS 37, WL 15.2, PH 11.0, PV 12, YP 10, 4/8 GALS, 10.9% SOLIDS, 184,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 1,600#, GPM 342, ANNULAR VELOCITY 152/301. BIT NO 17, 8-3/4, HTC, X16, JETS 12-12-12. DEPTH IN 6,006', OUT 6,056'; MADE 50' IN 17-1/4 HRS; 2.9 FT/HR; CONDITION 8-8-0. BIT NO 18, 8-3/4, SMT, F3, JETS 12-12-12. DEPTH IN 6,056'. OPER TRIP. RPM 65, WT ON BIT 25,000-30,000#. DEV DEPTH 6,056' INC 8° WIRELINE. TOTAL BHA 631.06'. TRIPPED OUT W/BIT #17, ALL THREE CONES OFF. ORDERED OUT MAGNET AND JUNK SUB, FISHED ALL THREE CONES IN 2 TRIPS, LAYED DOWN MAGNET AND JUNK SUB, TRIPPED IN W/BIT #18. PRESENT OPERATION TRIP IN BIT #18.

9-23-79 6,179' MADE 123' IN PREUSS FORMATION. MW 10.1, VIS 37, WL 13.0, PH 7.0, PV 10, YP 13, 5/10 GALS, 12.4% SOLIDS, 188,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 1,900#, GPM 390, ANNULAR VELOCITY 170/348. BIT NO 18, 8-3/4, SMT, F3, JETS 12-12-12. DEPTH IN 6,056', OUT 6,179'; MADE 123' IN 15.5 HRS; 7.9 FT/HR; CONDITION 4-2-1/8. OPER TRIP. RPM 60, WT ON BIT 25-30,000#. DEV DEPTH 6,056' INC 7-1/2°, DEPTH 6,109' INC 7-1/2°, DEPTH 6,139' INC 7°. TOTAL BHA 631.06'. BACK GROUND GAS 2 UNITS, TRIP GAS 22 UNITS. CIRCULATE SAMPLES 2-3/4 HRS: (6,089-6,097) NO SHOWS. RIG REPAIR - WORK ON PMPs. PRESENT OPERATION TRIPPING FOR HOLE IN PIPE.

9-24-79 6,254' MADE 75' IN PREUSS FORMATION. MW 10.2, VIS 38, WL 13.0, PH 11.5, PV 12, YP 14, 6/10 GALS, 13.8% SOLIDS, 180,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,400#, GPM 380, ANNULAR VELOCITY 165/328. BIT NO 19, 8-3/4, HTC, J-44, JETS 11-11-11. DEPTH IN 6,179'; MADE 75' IN 16 HRS, 4.7 FT/HR. OPER DRLG. RPM 60, WT ON BIT 30-35. DEV DEPTH 6,202' INC 6-1/2° TELE, DEPTH 6,202' INC 8° TOTCO, DEPTH 6,235' INC 7° TELE. TOTAL BHA 631.06'. HOLE IN DIP. 4 JTS ABOVE DRILL COLLARS. BACK GROUND GAS 3 UNITS, TRIP GAS 5 UNITS. BRIDGE @ 5,577'. WASH 6 STS & 4 JTS TO BOTTOM, WASH & REAM 50' TO BOTTOM. RIG REP 0 TOTAL 20. PRESENT OPERATION DRLG.

9-25-79 6,332' MADE 78' IN PREUSS FORMATION. MW 10.2, VIS 42, WL 14.0, PH 7.0 PV 12, YP 16, 6/14 GALS, 13.8% SOLIDS, 180,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,500#, GPM 369, ANNULAR VELOCITY 161/329. BIT NO 19, 8-3/4, HTC, J-44, JETS 11-11-11. DEPTH IN 6,179, OUT 6,321; MADE 142' IN 30 HRS; 4.7 FT/HR; CONDITION 3-2-I. BIT NO 20, 8-3/4, STC, F3, JETS 11-11-10. DEPTH IN 6,321; MADE 11' IN 3 HRS; 3.6 FT/HR. OPER DRLG. RPM 60, WT ON BIT 35-40,000. DEV DEPTH 6,296 INC 7-1/2° TELE, DEPTH 6,296' INC 8-1/4° TOTCO, DEPTH 6,328' INC 8° TELE. DRILLING ASSEMBLY AS FOLLOWS:

<u>COMPONENT</u>	<u>LENGTH</u>	<u>O.D.</u>	<u>I.D.</u>
BIT	.85	8-3/4	
NEAR BIT	4.67	7	2-1/4
TELEDRIFT	7.13	6-13/16	3-1/2
I.B.S.	4.70	7	2-1/4
SHOCK SUB	7.30	6-1/2	2
I.B.S.	4.72	7	2-1/2
1-DC	31.20	7	2-7/8
I.B.S.	4.74	7	2-11/16
1-DC	31.07	7	2-3/8
I.B.S.	4.72	7	2-7/8
17-DC'S	529.96	7	2-3/8

TOTAL BHA 631.06. TRIP GAS 44 UNITS, BACK GROUND GAS 2 UNITS. SLOW PUMP 55 SPM @ 700 PSI. PRESENT OPERATION DRLG.

9-26-79 6,486' MADE 154' IN PREUSS FORMATION. MW 10.0, VIS 37, WL 12.0, PH 11.5, PV 10, YP 14, 5/10 GALS, 11.4% SOLIDS, 168,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,500#, GPM 369, ANNULAR VELOCITY 161/329. RPM 60, WT ON BIT 35-40,000. DEV DEPTH 6,358' INC 8-1/4° TOTCO 7-1/2° TELE, DEPTH 6,424' INC 7-1/2° TELE, DEPTH 6,456' INC 6-1/2° TELE. TOTAL BHA 631.06. BACK GROUND GAS 2 UNITS. SLOW PUMP 53 SPM 700 PSI. PRESENT OPERATION DRLG.

9-27-79 6,549' MADE 63' IN PREUSS FORMATION. MW 10.1, VIS 35, WL 12.0, PH 10.5, PV 12, YP 12, 6/10 GALS, 13.4% SOLIDS, 165,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,000#, GPM 399, ANNULAR VELOCITY 174/356. BIT NO 20, 8-3/4, STC, F3, JETS 11-11-10. DEPTH IN 6,321, OUT 6,513; MADE 192' IN 32-1/4 HRS; 5.95 FT/HR; CONDITION 3-3-1/8. OPER HOLE IN PIPE. BIT NO 21, 8-3/4, REED, FP51, JETS 13-13-13. DEPTH IN 6,513'; MADE 36' IN 8-1/2 HRS; 4.2 FT/HR. OPER DRLG. RPM 60-80, WT ON BIT 25-40,000. DEV DEPTH 6,487' INC 7° TELE, DEPTH 6,549' INC 7° TELE, DEPTH 6,549' INC 7-1/4° TOTCO. TOTAL BHA 631.06. TRIP GAS, BACK GROUND GAS 2 UNITS. BIT #20 TRIP FOR HOLE IN D.P. 1ST JT TOP OF DC'S. HOLE IN SLIP AREA. BIT #21 TRIP FOR HOLE IN D.P. 10 STNDS FROM SURFACE. SLOW PUMP 57 STROKES 600 PSI. PRESENT OPERATION DRLG.

9-28-79 6,614' MADE 65' IN PREUSS FORMATION. MW 9.9, VIS 36, WL 14.0, PH 11.0, PV 10, YP 12, 5/10 GALS, 11.4% SOLIDS, 173,000 PPM CHLORIDE, TR CALCIUM. PMP PRESS 2,000#, GPM 399, ANNULAR VELOCITY 174/356. BIT NO 21, 8-3/4, REED, FP51, JETS 13-13-13. DEPTH IN 6,513', OUT 6,614'; MADE 101' IN 19-1/4 HRS; 5.24 FT/HR; CONDITION 2-2-I. RPM 70, WT ON BIT 45,000. DEV DEPTH 6,580' INC 7° TELE. TOTAL BHA 631.06. BACK GROUND GAS 2 UNITS TRIP FOR HOLE IN D.P. 2 JTS ABOVE DC'S. RIG UP ALLEN DC SERVICE TO INSPECT PIPE ON TRIP OUT. FOUND 27 JTS OF BAD D.P. SOME CRACKS, PULLED & STRETCHED IN SLIP AREA. PULLED WEAR RING TO TEST BOP'S. TEST BOP'S W/YELLOW JACKET TO 3,000 PSI OK. PRESENT OPERATION TEST BOP'S.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25465

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Mud Springs

9. WELL NO.

#1-8

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., E., M., OR BLEK. AND
SURVEY OR AREA

Sec. 8, T10N, R8E

12. COUNTY OR PARISH 13. STATE

Rich

Utah

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

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
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

783' FSL & 466' FEL

14. PERMIT NO. 15. ELEVATIONS (Show whether DF, RT, GR, etc.)
6,692' GL, 6,724' KB

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF
FRACTURE TREAT
SHOOT OR ACIDIZE
REPAIR WELL
(Other)

PULL OR ALTER CASING
MULTIPLE COMPLETE
ABANDON*
CHANGE PLANS

SUBSEQUENT REPORT OF:

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

REPAIRING WELL
ALTERING CASING
ABANDONMENT*

(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

See Attachment



From 9-29-79 To 10-5-79

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

SIGNED [Signature] TITLE Drilling Superintendent DATE 10-5-79

(This space for Federal or State office use)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

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6. LEASE DESIGNATION AND SERIAL NO.

U-25465

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Mud Springs

9. WELL NO.

#1-8

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 8, T10N, R8E

12. COUNTY OR PARISH 13. STATE

Rich

Utah

1. OIL WELL GAS WELL OTHER

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.*
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At surface

783' FSL & 466' FEL

14. PERMIT NO.

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

6,692' GL, 6,724' KB

16.

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

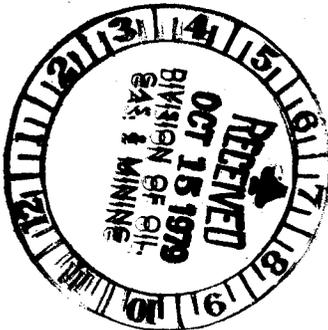
(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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PROGRESS REPORT

See Attachment

From 10-6-79 To 10-12-79



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

SIGNED

Hel. Smith

TITLE

Drilling Superintendent

DATE

October 12, 1979

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

Form approved.
Budget Bureau No. 42-R1424.

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

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
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
783' FSL & 466' FEL

14. PERMIT NO. _____ 15. ELEVATIONS (Show whether DF, RT, GR, etc.)
6,692' GL, 6,724' KB

5. LEASE DESIGNATION AND SERIAL NO.
U-25465

6. IF INDIAN, ALLOTTEE OR TRIBE NAME _____

7. UNIT AGREEMENT NAME _____

8. FARM OR LEASE NAME
Mud Springs

9. WELL NO.
#1-8

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 8, T10N, R8E

12. COUNTY OR PARISH 13. STATE
Rich Utah

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

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

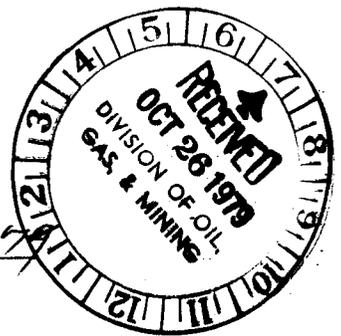
(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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

See Attachment

From 10-13-79 To 10-19-79



18. I hereby certify that the foregoing is true and correct
SIGNED W.A. Thomas TITLE Drilling Superintendent DATE 10-24-79

(This space for Federal or State office use)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25465

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Mud Springs

9. WELL NO.

#1-8

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 8, T10N, R8E

12. COUNTY OR PARISH

Rich

13. STATE

Utah

SUNDRY NOTICES AND REPORTS ON WELLS

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Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL GAS WELL OTHER

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

783' FSL & 466' FEL

14. PERMIT NO.

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

6,692' GL, 6,724' KB

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(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

See Attachment

From 10-20-79 To 10-26-79

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

SIGNED

A. Thomas

TITLE

Drilling Superintendent

DATE

10-29-79

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.
U-25465

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Mud Springs

9. WELL NO.
#1-8

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR ABNA
Sec. 8, T10N, R8E

12. COUNTY OR PARISH | 13. STATE
Rich | Utah

SUNDRY NOTICES AND REPORTS ON WELLS

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1. OIL WELL GAS WELL OTHER

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
783' FSL & 466' FEL

14. PERMIT NO. | 15. ELEVATIONS (Show whether DF, RT, GR, etc.)
6,692' GL, 6,724' 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 <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	

(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

See Attachment

From 10-27-79 To 11-2-79



18. I hereby certify that the foregoing is true and correct
SIGNED W.A. Thoma. TITLE Drilling Superintendent DATE 11-5-79

(This space for Federal or State office use)

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

**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

SUBMIT IN TRIPPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25465

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.)

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Mud Springs

9. WELL NO.

#1-8

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 8, T10N, R8E

1. OIL WELL GAS WELL OTHER

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

783' FSL & 466' FEL

14. PERMIT NO.

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

6,692' GL, 6,724' KB

12. COUNTY OR PARISH

Rich

13. STATE

Utah

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

FULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(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

See Attachment

From 11-3-79 To 11-9-79

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

SIGNED

A. Thoma

TITLE

Drilling Superintendent

DATE

11-9-79

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

DIVISION OF OIL, GAS AND MINING

PLUGGING PROGRAM

NAME OF COMPANY: Marathon Oil Company (Ken Thomas)

WELL NAME: Mud Springs #1-8

SECTION 8 SE SE TOWNSHIP 10N RANGE 8E COUNTY Rich

VERBAL APPROVAL GIVEN TO PLUG THE ABOVE REFERRED TO WELL IN THE FOLLOWING MANNER:

TOTAL DEPTH: 9026'

CASING PROGRAM:

13 3/8" @ 1505'
cemented to surface

FORMATION TOPS:

Nugget 8884'

PLUGS SET AS FOLLOWS:

- #1 8784' - 8984'
- #2 6600' - 6700'
- #3 5150' - 5350'
- #4 2200' - 2400'
- #5 1350' - 1550' (100' in and 100' out of surface casing)
- #6 50' surface plug and marker

DATE November 13, 1979

SIGNED Frank M. Hamner

cc: USGS

Frank M. Hamner

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25465

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Mud Springs

9. WELL NO.

#1-8

10. FIELD AND POOL, OR WILDCAT

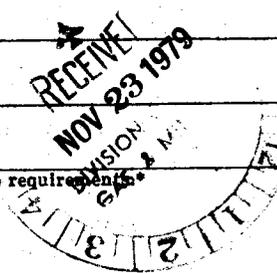
Wildcat

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

Sec. 8, T10N, R8E

12. COUNTY OR PARISH 13. STATE

Rich Utah



SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
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

783' FSL & 466' FEL

14. PERMIT NO. 15. ELEVATIONS (Show whether DF, RT, GR, etc.)
6,692' GL, 6,724' 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
FRACTURE TREAT
SHOOT OR ACIDIZE
REPAIR WELL
(Other)
PULL OR ALTER CASING
MULTIPLE COMPLETE
ABANDON*
CHANGE PLANS

WATER SHUT-OFF
FRACTURE TREATMENT
SHOOTING OR ACIDIZING
(Other)
REPAIRING WELL
ALTERING CASING
ABANDONMENT*

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

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

PROGRESS REPORT

See Attachment

From 11-10-79 To 11-11-79

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

SIGNED A. Thomas TITLE Drilling Superintendent DATE 11-16-79

(This space for Federal or State office use)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25465

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Mud Springs

9. WELL NO.

#1-8

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 8, T10N, R8E

12. COUNTY OR PARISH

Rich

13. STATE

Utah

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

1. OIL GAS OTHER
WELL 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

783' FSL & 466' FEL

14. PERMIT NO.

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

6,692' GL, 6,724' KB

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(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 perti-
nent to this work.)*

PROGRESS REPORT

See Attachment

From 11-17-79 To 11-20-79

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

SIGNED A. Thomas

TITLE Drilling Superintendent

DATE 11-21-79

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

DATE _____

11-17-79 9,026' MADE 0' IN NUGGET FORMATION. MW 9.2, VIS 58. HAVE R/D & MOVED ALL OF RIG EXCEPT 1/2 OF SUB-STRUCTURE. WILL SPOT SURFACE PLUG & SET DRY-HOLE MARKER TODAY. HAVE PULLED WTR WELL PMP. WILL P/U TELEPHONE LINE & BEGIN FENCING RESERVE PIT, MOVE TRAILER HOUSE, FILL BURN PIT & SEPTIC HOLES. PRESENT OPERATION R/D RIG & CLEANING UP LOCATION.

11-18-79 9,026' PRESENT OPERATION R/D RIG & CLEANING UP LOCATION.
11-19-79

11-20-79 9,926' MW 9.2, VIS 58, BETWEEN PLUGS. 83RD DRLG DAY. SPOTTED FINAL PLUG FROM 50' TO GROUND LEVEL AFTER CUTTING OFF 13-5/8" X 3,000 PSI WELLHEAD. SET DRY-HOLE MARKER. MOVING TRAILER HOUSE & P/U TELEPHONE LINE. TOTAL CUMULATIVE TO DATE: \$1,612,511. FINAL REPORT.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER		5. LEASE DESIGNATION AND SERIAL NO. U-25465	
2. NAME OF OPERATOR Marathon Oil Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
3. ADDRESS OF OPERATOR P.O. Box 2659, Casper, Wyoming 82602		7. UNIT AGREEMENT NAME	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 783' FSL & 466' FEL		8. FARM OR LEASE NAME Mud Springs	
14. PERMIT NO.		9. WELL NO. 1-8	
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 6,692' GL, 6,724' KB		10. FIELD AND POOL, OR WILDCAT Wildcat	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 8, T10N, R8E	
		12. COUNTY OR PARISH Rich	13. STATE Utah

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

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

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

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

Sir:

The above captioned well was plugged and abandoned 11-14-79 in the following manor:

- Plug #1 8,600'-8,800' w/70 sacks of lite cement.
- Plug #2 6,700'-6,800' w/60 sacks of lite cement.
- Plug #3 5,150'-5,350' w/180 sacks of lite cement.
- Plug #4 2,200'-2,400' w/200 sacks of lite cement.
- Plug #5 1,350'-1,550' w/125 sacks of lite cement.

A welded dry hole marker was placed and the welded information reads as follows:

U-25465
E½, SW¼, SW¼
Sec. 8, T10N, R8E
Marathon Oil Co.
Mud Springs #1-8
Rich Co., Utah

This marker was set in the surface cement plug from 50' to Ground Level.

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

SIGNED *W.A. Thomas* TITLE Drilling Superintendent DATE 12-3-79

(This space for Federal or State office use)

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

*See Instructions on Reverse Side



March 3, 1980

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

Re: Well No. Mud Springs 1-8
Sec. 8, T. 10N. R. 8E.
Rich County, Utah

Gentlemen:

This letter is to advise you that the Well Completion or Recompletion Report and Log for the above mentioned well is due and has not been filed with this office as required by our rules and regulations.

Please complete the enclosed Form OGC-3, in duplicate, and forward them to this office as soon as possible.

Thank you for your cooperation relative to the above.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING



JANICE TABISH
CLERK TYPIST

DAILY DRILLING REPORT

AREA Overthrust DATE November 13, 1979

OPERATOR Marathon NO. 1-8 WELL Mud Spring

COUNTY Rich STATE Utah LOCATION SE SE Sec. 8-10N-8E

MOC INTEREST 73.8316% UNIT ----- ELEVATION 6692 Gr. 6724 KB

PROJ. TD & FM 9500 Nugget CLASS. WC SPUD DATE 8-6-79

PB TD & FM -- BIT SIZE 8-3/4" MUD WT. 9.1

DEV. 15 @ 9026'

WL 9.1 WT. ON BIT 25,000 PUMP PRESS. 1600

PRESENT TD & FM 9026 (21') Nugget STATUS Prep to run velocity survey.

Sandstone, white, very fine grained, subrounded, subangular, tight, hard,
silicious; shale, dark gray, platy to blocky, firm, silicious; dolomite,
gray, blocky, hard, slightly calcareous. Last two probably cavings. Samples
very poor -- abundant cavings. BGG 1 unit. Trip gas @ 9023' 4 units.
Estimated cost to date: \$1,571,316. Drilled to T.D. Conditioned hole. TO
to run velocity survey. Survey truck rigging up.

LOG TOPS	K.B. 6724'
Stump	5267' (+1457)
Preuss	5633' (+1091)
Twin Creek	6838' (-114)
Watton Canyon)	7733' (-1009)
Boundary Ridge)	8128' (-1404)
Rich)	8188' (-1464)
Sliderock)	8554' (-1830)
Gypsum Spring)	8672' (-1948)
Nugget	8884' (-2160)

RECEIVED
MAR 17 1980

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER		5. LEASE DESIGNATION AND SERIAL NO. U-25465
2. NAME OF OPERATOR Marathon Oil Company		6. IF INDIAN, DISTRICT OR TRIBE NAME Dist. Engr. <i>RTZ</i> Acctg. Supr. _____
3. ADDRESS OF OPERATOR P.O. Box 2659, Casper, Wyoming 82602		7. UNIT AGREEMENT NAME Prod. Supt. <i>[Signature]</i> Prod. Supt. _____
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 783' FSL & 466' FEL		8. FARM OR LEASE NAME Prod. Engr. _____ Prod. Engr. _____
14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, CR, etc.) 6,692' GL, 6,724' KB	9. WELL NO. 1-8 Geologists File
		10. FIELD AND FOOT OR WILDCAT Wildcat
		11. SEC., T., E., M., OR BLK. AND SURVEY OR AREA Section 8, T10N, R8E
		12. COUNTY OR PARISH 13. STATE Rich Utah

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

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

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

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

Sir:

The above captioned well was plugged and abandoned 11-14-79 in the following manner:

- Plug #1 8,600'-8,800' w/70 sacks of lite cement.
- Plug #2 6,700'-6,800' w/60 sacks of lite cement.
- Plug #3 5,150'-5,350' w/180 sacks of lite cement.
- Plug #4 2,200'-2,400' w/200 sacks of lite cement.
- Plug #5 1,350'-1,550' w/125 sacks of lite cement.

A welded dry hole marker was placed and the welded information reads as follows:

U-25465
E $\frac{1}{2}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$
Sec. 8, T10N, R8E
Marathon Oil Co.
Mud Springs #1-8
Rich Co., Utah

RECEIVED
DEC 12 1979
CASPER DISTRICT
OPERATIONS

This marker was set in the surface cement plug from 50' to Ground Level.

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

SIGNED *W.A. Thomas* TITLE Drilling Superintendent

(This space for Federal or State office use)

APPROVED BY *[Signature]* TITLE ACTING DISTRICT ENGINEER
CONDITIONS OF APPROVAL, IF ANY: _____

REC-12-3-79

DEC 07 1979
MAR 17 1980

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

(See instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.6.

16

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL GAS WELL DRY Other Plugged&Abandoned

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

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 783' FSL & 466' FEL SE SE
At top prod. interval reported below
At total depth

14. PERMIT NO. 43-033-300211 DATE ISSUED

5. LEASE DESIGNATION AND SERIAL NO.

U-25465

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Mud Springs

9. WELL NO.

1-8

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 8, T10N, R8E

12. COUNTY OR PARISH
Rich

13. STATE
Utah

15. DATE SPUNDED
8-6-79

16. DATE T.D. REACHED
11-12-79

17. DATE COMPL. (Ready to prod.)
11-14-79 P+A

18. ELEVATIONS (DF, REB, RT, GR, ETC.)*
6692' GL, 6724' KB

19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD
9026'

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

22. IF MULTIPLE COMPL., HOW MANY*
None

23. INTERVALS DRILLED BY
Rotary

ROTARY TOOLS
0' to TD

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
None - Well plugged and abandoned

25. WAS DIRECTIONAL SURVEY MADE
No

26. TYPE ELECTRIC AND OTHER LOGS RUN
DLL-GR, Sonic w/GR, GNL-Neutron Density, Dipmeter w/Frac Finder

27. WAS WELL CORED
No

CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
<u>13-3/8"</u>	<u>54.4#</u>	<u>1505'</u>	<u>17-1/2"</u>	<u>1900 Sacks</u>	<u>None</u>
<u>No production casing run</u>					

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
		<u>None</u>		

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
	<u>None</u>	

31. PERFORATION RECORD (Interval, size and number)
None

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
	<u>None</u>

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)				
	<u>Dry Hole</u>	<u>Abandoned</u>				
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.
FLOW, TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
						<u>MAR 17 1980</u>

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)
None

TEST WITNESSED BY _____

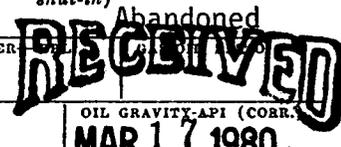
35. LIST OF ATTACHMENTS

DIVISION OF
OIL, GAS & MINING

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

SIGNED Blair Caddy TITLE District Operations Manager DATE 12-13-79

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



INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. **Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Stacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	GEOLOGIC MARKERS
Stump	5267'	5633'	Members of Twin Creek Formation	Stump	5267'
Preuss	5633'	6838'		Preuss	5633'
Twin Creek	6838'	7733'		Twin Creek	6838'
Watton Canyon	7733'	8128'		Watton Canyon	7733'
Boundary Ridge	8128'	8188'		Boundary Ridge	8128'
Rich	8188'	8554'		Rich	8188'
Sliderock	8554'	8672'		Sliderock	8554'
Gypsum Springs	8672'	8884'		Gypsum Springs	8672'
Nugget	8884'	9026' TD		Nugget	8884'

DECLASSIFIED