

FILE NOTATIONS

Entered in NID File

Entered On S R Sheet _____

Location Map Pinned _____

Card Indexed

I W R for State or Fee Land _____

Checked by Chief _____

Copy NID to Field Office _____

Approval Letter _____

Disapproval Letter _____

COMPLETION DATA:

Date Well Completed 12-1-77

Location Inspected _____

OW _____ WW _____ TA _____

Bond released _____

GW _____ OS _____ PA

State of Fee Land _____

LOGS FILED

Driller's Log

Electric Logs (No.)

E _____ I _____ E-I _____ GR _____ GR-N _____ Micro _____

Lat _____ Mi-L _____ Sonic _____ Others _____

Sup
11-7-90

Mobil Oil Corporation

THREE GREENWAY PLAZA EAST - SUITE 500
HOUSTON, TEXAS 77045

November 11, 1976

United States Geological Survey (6)
Salt Lake City District
8426 Federal Bldg.
125 South State Street
Salt Lake City, Utah 84111

Attn: Mr. E. W. Gwynn

7.01 DRILLING APPLICATION
MOBIL OIL CORPORATION'S
MC CORMICK FEDERAL C, WELL #1
WILDCAT FIELD
GRAND COUNTY, UTAH

Gentlemen:

Mobil Oil Corporation respectfully requests authority to drill the subject well. Six copies of the following items are submitted in support of this request:

1. Form 9-331-C, Application to Drill
2. Diagrammatic sketches and written description of blowout preventer program (attachment to Form 9-331-C)
3. Detailed description of mud program (attachment to Form 9-331-C)
4. List of approximate formational tops and proposed logging program
5. Certified well location plat
6. Multi-point surface use plan which includes:

Plat "A" - Vicinity plat
Plat "B" - Facilities plat
Plat "C" - Cross section of roads
Plat "D" - Well site layout

November 11, 1976

Should additional information be required, please advise.

Yours very truly,



J. A. Morris

ADBond:to

Attachments

REGULATORY ENGINEERING SUPERVISOR

cc: State of Utah (2 sets of attach.)

Department of Natural Resources

Division of Oil & Gas Conservation

1588 West Temple

Salt Lake City, Utah

STATE OF UTAH
DIVISION OF OIL, GAS, AND MINING

** FILE NOTATIONS **

Date: Nov. 17-
Operator: Mobil Oil Corp.
Well No. McCormick Fed "C" #1
Location: Sec. 11 T. 24S R. 20E, County: Grand

File Prepared Entered on N.I.D.
Card Indexed Completion Sheet

Checked By:

Administrative Assistant: [Signature]

Remarks: Outside Spaced Areas - Sub
No other wells in Section
Petroleum Engineer: [Signature]

Plz include
form letter

Remarks:

Director: [Signature]

Remarks:

Include Within Approval Letter:

Bond Required Survey Plat Required
Order No. _____ Surface Casing Change
to _____

Rule C-3(c), Topographical 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

Mobil Oil Corporation

THREE GREENWAY PLAZA EAST - SUITE 800
HOUSTON, TEXAS 77046

November 11, 1976

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



Attn: Mr. Cleon Feight

7.01 DRILLING APPLICATION
MOBIL OIL CORPORATION'S
MC CORMICK FEDERAL C, WELL #1
WILDCAT FIELD
GRAND COUNTY, UTAH

Gentlemen:

Attached are two complete sets of application to drill the subject well. This application is being filed simultaneously with the United States Geological Survey. Your approval is respectfully requested.

Yours very truly,

A handwritten signature in cursive script that reads "J. A. Morris".

J. A. Morris
Regulatory Engineering
Supervisor

ADBond:to
Attachments

cc: U.S.G.S. - Salt Lake City (w/o attach.)

Mobil Oil Corporation

THREE GREENWAY PLAZA EAST - SUITE 800
HOUSTON, TEXAS 77046

November 16, 1976

7

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

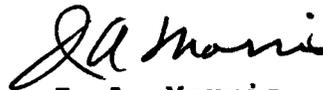
Attn: Mr. Cleon Feight

7.01 AMENDED FORM 9-331-C
MOBIL OIL CORPORATION'S
MC CORMICK FEDERAL C, WELL #1
WILDCAT FIELD
GRAND COUNTY, UTAH

Gentlemen:

Attached are two amended copies of Form 9-331-C. These forms replace those sent to you under cover letter dated November 11, 1976.

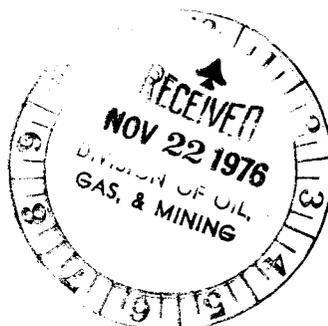
Yours very truly,



J. A. Morris
Regulatory Engineering
Supervisor

ADBond:to
Attachments

cc: U.S.G.S. - Salt Lake City (w/o attach.)



Mobil Oil Corporation

THREE GREENWAY PLAZA EAST - SUITE 800
HOUSTON, TEXAS 77048

November 16, 1976

United States Geological Survey (6)
Salt Lake City District
8426 Federal Bldg.
125 South State Street
Salt Lake City, Utah 84111



Attn: Mr. E. W. Gwynn

7.01 AMENDED FORM 9-331-C
MOBIL OIL CORPORATION'S
MC CORMICK FEDERAL C, WELL #1
WILDCAT FIELD
GRAND COUNTY, UTAH

Gentlemen:

Attached are six amended copies of Form 9-331-C. These forms replace those sent to you under cover letter dated November 11, 1976.

Yours very truly,

J. A. Morris
Regulatory Engineering
Supervisor

ADBond:to
Attachments

✓ cc: State of Utah (2 sets of attach.)
Department of Natural Resources
Division of Oil & Gas Conservation
1588 West Temple
Salt Lake City, Utah

**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

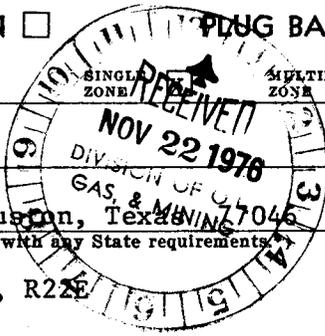
b. TYPE OF WELL
 OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
 Mobil Oil Corporation

3. ADDRESS OF OPERATOR
 3 Greenway Plaza East, Ste. 800, Houston, Texas 77045

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)
 At surface
 1830' FEL & 1980' FNL Sec. 11, T21S, R22E
 At proposed prod. zone
 Same as Surface

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*



5. LEASE DESIGNATION AND SERIAL NO.
 U-11244

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
 McCormick Federal C

9. WELL NO.
 1

10. FIELD AND POOL, OR WILDCAT
 Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 Sec. 11, T21S, R22E
 Salt Lake Meridian

12. COUNTY OR PARISH 13. STATE
 Grand Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1980'

16. NO. OF ACRES IN LEASE 1926.52

17. NO. OF ACRES ASSIGNED TO THIS WELL 40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 18,000'

19. PROPOSED DEPTH 18,000'

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 4709' - Ground

22. APPROX. DATE WORK WILL START*
 As Soon As Possible

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
26"	20"	94# - H-40	0 - 350'	(1) Circulate
17 1/2"	13-3/8"	61# - S-80	0 - 3950'	(2) Circulate
		68# - S-80	3950 - 5400'	
12 1/4"	10-3/4"	51# - S-95	0 - 5450'	(3) Circulate to 5400 ft.
		55.5# - S-95	5450 - 11500'	
		60.7# - S-95	11500 - 14100'	
9 1/2"	7-5/8"	39# - N-80	13900 - 15150'	(4) Circulate over top of liner
	(Liner)	39# - S-95	15150 - 16400'	

CEMENTING PROGRAM

- (1) Class H cement with CaCl₂ & 1/4# Florcede/sx.
- (2) Site weight slurry (12.4#/gal.) and tail in with Class C Neat
- (3) Lite weight slurry and tail in with Class H with retarder
- (4) Class H cement with retarder

(MUD PROGRAM & BLOWOUT PREVENTER PROGRAM ATTACHED)

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 A. D. Bond TITLE Regulatory Engineering Coordinator DATE 11-16-76

(This space for Federal or State office use)

PERMIT NO. 43-019-30327 APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

November 24, 1976

Mobil Oil Corporation
3 Greenway Plaza East
Suite 800
Houston, Texas 77046

Re: Well No. McCormick Fed. "C" #1
Sec. 11, T. 21 S, R. 22 E,
Grand County, Utah

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:

PATRICK L. DRISCOLL - Chief Petroleum Engineer
HOME: 582-7247
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.

The API number assigned to this well is 43-019-30328.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

CLEON B. FEIGHT
Director

JSW
cc: U.S. Geological Survey

Mobil Oil Corporation

P.O. BOX 633
MIDLAND, TEXAS 79701



December 9, 1976

United States Geological Survey
Salt Lake City District
8426 Federal Bldg.
125 South State Street
Salt Lake City, Utah 84111

Attn: Mr. E. W. Gwynn

7.01
AMENDMENT TO SURFACE USE
PLAN TO INCLUDE GAS FUEL LINE
McCORMICK FEDERAL "C" WELL #1
WILDCAT FIELD
GRAND COUNTY, UTAH

Gentlemen:

Attached are six copies of Topographic Map "B" revised to show subject gas fuel line to be utilized as fuel gas for the drilling rig. This 2" steel line will be laid on the surface and connects to Northwest Pipeline's 6" surface gas residue line.

The pipeline has been staked and the route as shown on the map was inspected by USGS and BLM Representatives during the on-site

Mobil Oil Corporation

THREE GREENWAY PLAZA EAST - SUITE 800
HOUSTON, TEXAS 77046

December 7, 1976



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

7.01
MOBIL OIL CORPORATION'S
MC CORMICK FEDERAL "C", WELL #1
WILDCAT FIELD
GRAND COUNTY, UTAH

Gentlemen:

Reference is made to your letter dated November 30, 1976, requesting additional information concerning pressure well control/resource protection data. This information is outlined below in accordance with the new 10-point drilling program.

1. The geological name of the surface formation is Mancos.
2. Estimated tops of other important geological formations are:

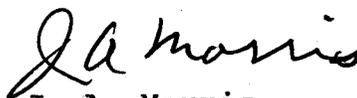
*Dakota - 1,800'	*Cutler - 3,900'
*Morrison - 2,050'	*Paradox - 14,100'
Entrada - 2,700'	*Leadville - 16,100'
Navajo - 3,200'	*Devonian - 16,700'
Chinle - 3,700'	Cambrian - 17,400'

3. The estimated depths at which anticipated water, oil, gas or other mineral-bearing formations are expected to be encountered:
 - a. All the above formations except the Mancos could carry water, oil and gas.
 - b. Those marked with asterisk (*) are the most probable oil and gas zones.
 - c. There are several shallow oil and gas fields (1000' to 2000' depth) in the near vicinity. No water production is reported from these zones in the Petroleum Information Report.

December 7, 1976

- d. Water tests are rare, as indicated by a review of completion tickets in a six to nine mile radius of the proposed drill site.
4. New pipe will be used to drill this well; the grade, size and weight-per-foot is shown on Form 9-331-C, previously submitted.
5. The blow-out preventer program is identified in the permit application by diagrammatic sketches and written description.
6. The type and characteristics of the drilling mud proposed are identified in the previously submitted permit application. A sufficient quantity of mud and chemicals will be maintained at the well site to meet anticipated normal conditions, recognizing the time required to replenish supplies from local warehouses.
7. The auxiliary equipment to be used will include: (1) kelly cock; (2) monitoring equipment of the mud system, including a pit level indicator and a gas detector (logging unit); and (3) a sub with a full opening valve. We do not believe we will have need for a float at the bit on this unit.
8. The testing, logging and casing programs are identified in the application.
9. No abnormal pressures, temperatures, or hazardous gases are expected to be encountered; however, prudent drilling operations will be exercised to guard against such hazards.
10. It is anticipated that all necessary approvals will be obtained in order that drilling operations can commence by December 20, 1976. The duration of operations is expected to last 300 days.

Yours very truly,



J. A. Morris

Regulatory Engineering Supervisor

ADBond:to

cc: State of Utah
Department of Natural Resources
Division of Oil & Gas Conservation
1588 West Temple
Salt Lake City, Utah

**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
 Mobil Oil Corporation

3. ADDRESS OF OPERATOR
 3 Greenway Plaza East, Ste. 800, Houston, Texas

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)
 At surface
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 At proposed prod. zone
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19. PROPOSED DEPTH 18,000'

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 4709' - Ground

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 As Soon As Possible

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17 1/2"	13-3/8"	61# - S-80	0 - 3950'	(2) Circulate
		68# - S-80	3950 - 5400'	
12 1/4"	10-3/4"	51# - S-95	0 - 5450'	(3) Circulate to 5400 ft.
		55.5# - S-95	5450 - 11500'	
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9 1/2"	7-5/8"	39# - N-80	13900 - 15150'	(4) Circulate over top of liner
	(Liner)	39# - S-95	15150 - 16400'	

CEMENTING PROGRAM

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- (3) Lite weight slurry and tail in with Class H with retarder
- (4) Class H cement with retarder

(MUD PROGRAM & BLOWOUT PREVENTER PROGRAM ATTACHED)

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24. SIGNED A. D. Bond TITLE Regulatory Engineering Coordinator DATE 11-16-76

(This space for Federal or State office use)

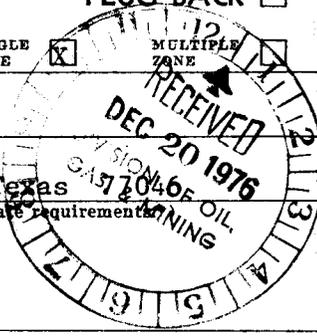
PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY (ORIG. SGD.) W. P. MARTENS TITLE ACTING DISTRICT ENGINEER DATE DEC 17 1976

CONDITIONS OF APPROVAL, IF ANY:

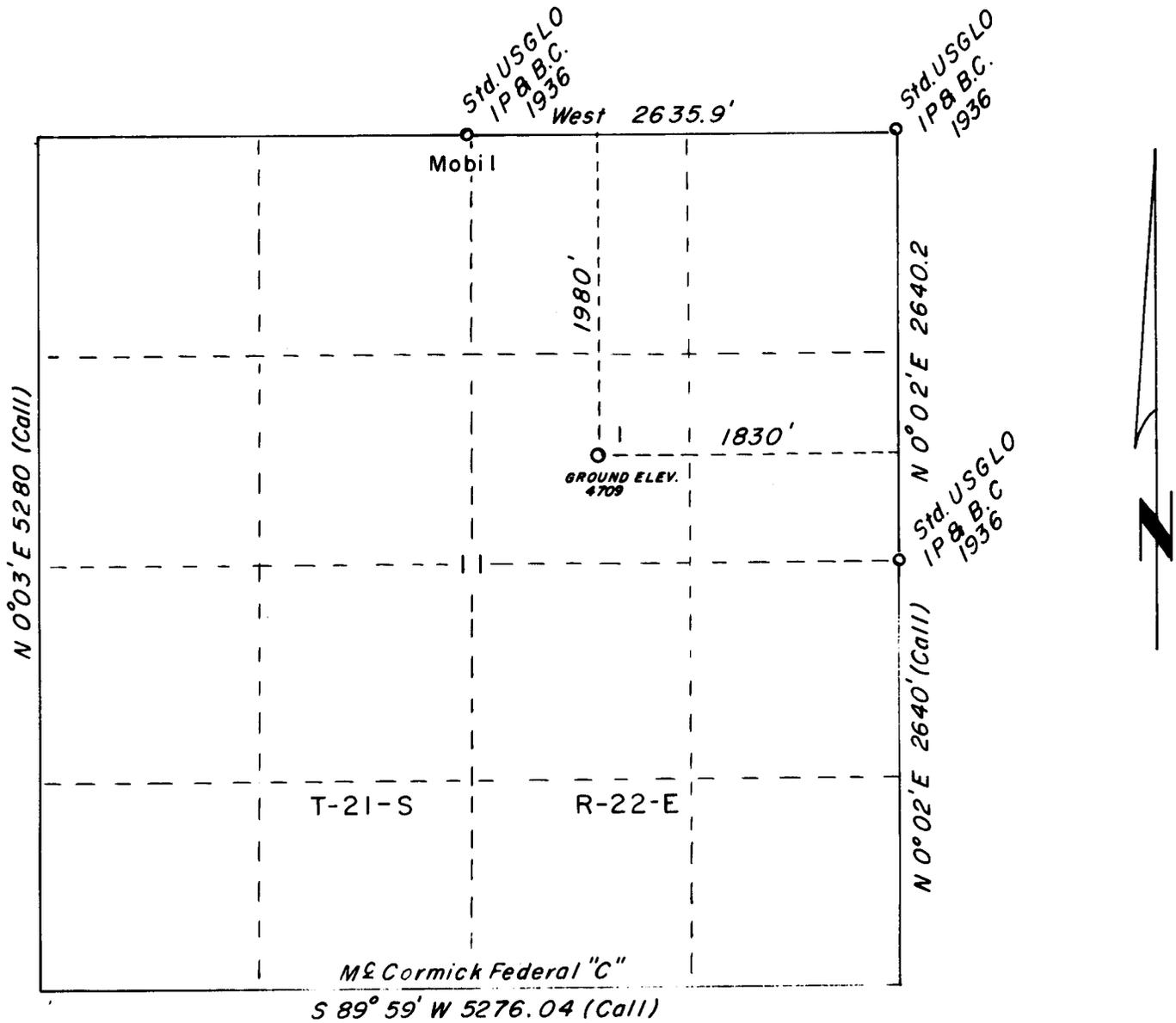
Approval Notice - Div. of Oil, Gas & Mining - Utah

*See Instructions On Reverse Side



THIS DRAWING AND ALL INFORMATION THEREON IS THE PROPERTY OF MOBIL OIL CORPORATION AND SHALL NOT BE COPIED OR USED EXCEPT FOR THE

PURPOSE FOR WHICH IT IS EXPRESSLY FURNISHED. THE DRAWING AND ANY COPIES THEREON (PARTIAL OR COMPLETE) SHALL BE RETURNED TO THE OWNER ON DEMAND.



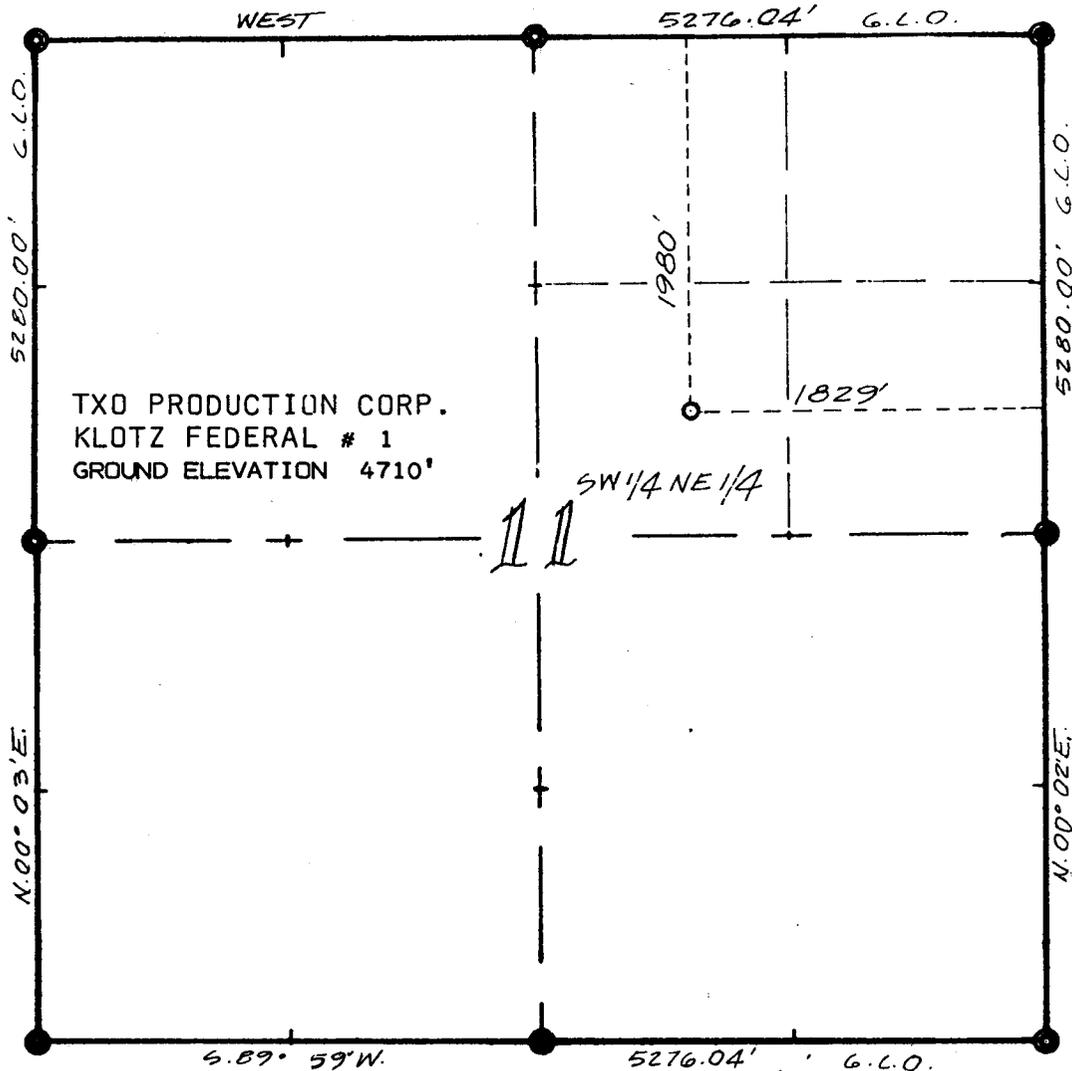
I, Curtis A. Callaway, P.E. & L.S., do hereby certify that this plat truly and correctly represents an actual Survey made on the ground under my supervision, and that all objects natural and artificial are shown as they exist on the ground this 11 day of November, 1976



NO.	DATE	BY
M & Cormick Federal "C" Well # 1 SEC. 11, T 21 S, R 22 E SALT LAKE MERIDAN GRAND COUNTY, UTAH		
Mobil Oil Corporation Houston E & P Division		
DRAWN J.V.N.	SCALE 1"=1000'	DWG. NO.
CHECKED GAG	DATE 11/3/76	A

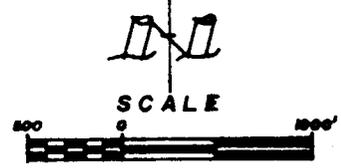
SEC. 11, T. 21 S., R. 22 E. OF THE S.L.M.

PLAT # 1
LOCATION PLAT



TXO PRODUCTION CORP.
KLOTZ FEDERAL # 1
GROUND ELEVATION 4710'

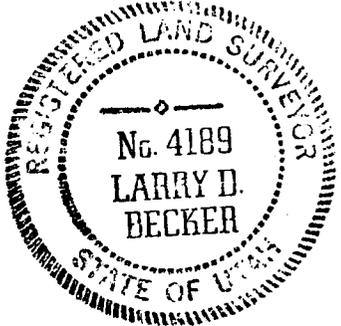
SW 1/4 NE 1/4



- LEGEND**
- STANDARD LOCATION OF G.L.O. CORNERS.
 - G.L.O. CORNERS FOUND.
 - WELL LOCATION STAKED.
- REFERENCE DOCUMENTS**
- 1921 GLO PLAT
 - SEGO CANYON, UTAH QUADRANGLE, USGS

BEARINGS ARE BASED ON THE GLO BEARING GIVEN BETWEEN THE NE COR AND THE E. 1/4 COR.

THIS WELL LOCATION PLAT WAS PREPARED FOR TXO PRODUCTION CORP.
 AS REQUESTED BY PAUL URBAN, TO LOCATE THE
KLOTZ FEDERAL # 1, 1980' F.N.L. & 1829' F.E.L.,
 IN THE SW 1/4 NE 1/4, OF SECTION 11, T. 21 S., R. 22 E. OF THE S.L.M.
GRAND COUNTY, UTAH



SURVEYOR'S CERTIFICATE

I, LARRY D. BECKER A REGISTERED LAND SURVEYOR
 IN THE STATE OF UTAH DO HEREBY CERTIFY THAT THIS
 SURVEY WAS MADE UNDER MY DIRECT SUPERVISION AND
 THAT THIS PLAT REPRESENTS SAID SURVEY.

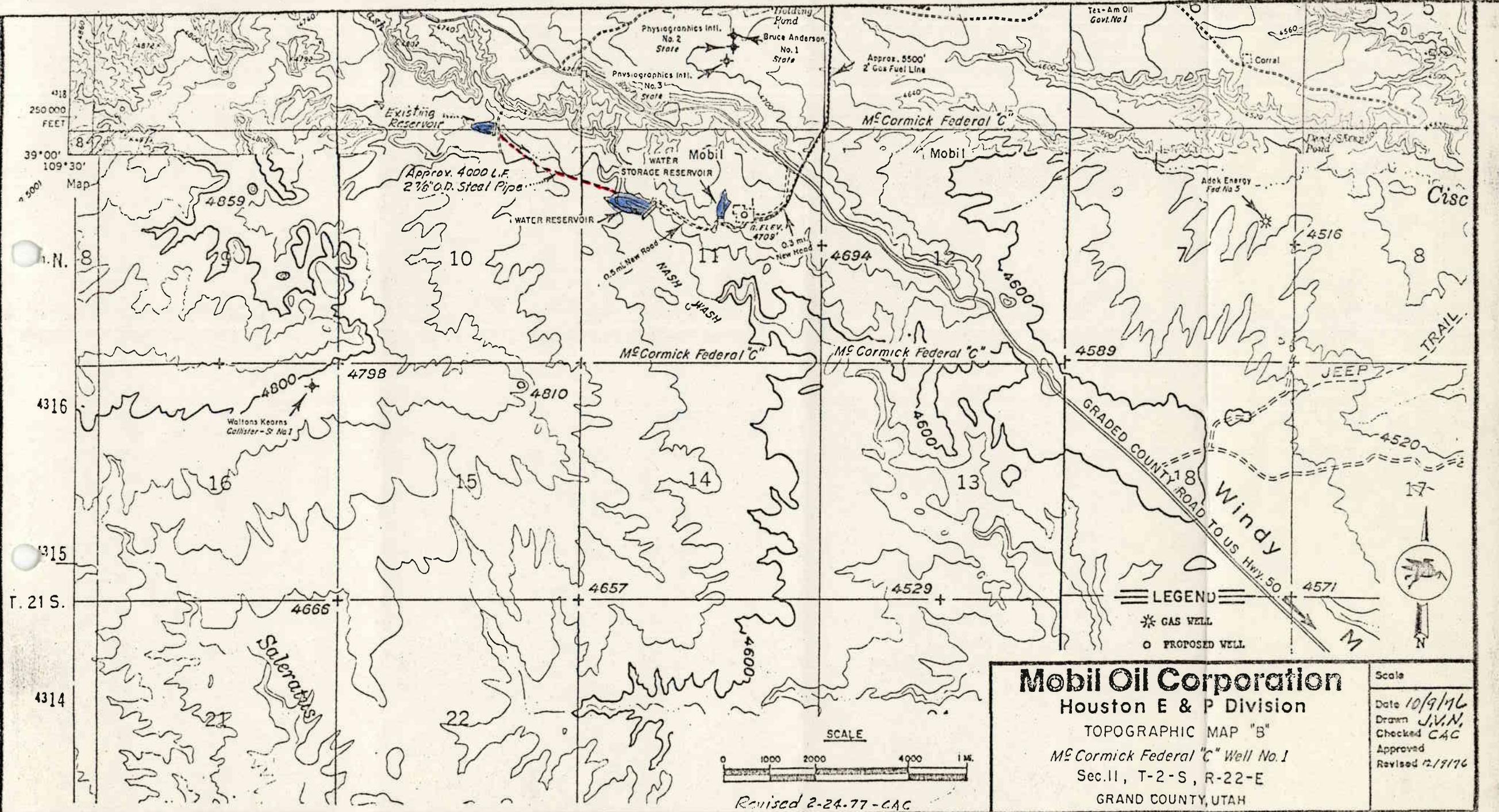
Larry D. Becker
 UTAH L.S. NO. 4189

SURVEYED	9-21
DRAWN	10-21
CHECKED	10-21

ENERGY
SURVEYS &
ENGINEERING CORP.

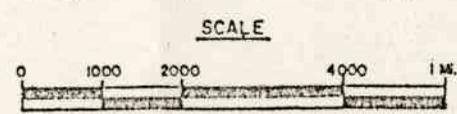
Exhibit 2
Survey Plat

SCALE	1" = 1000'
JOB NO.	
SHEET	OF



LEGEND

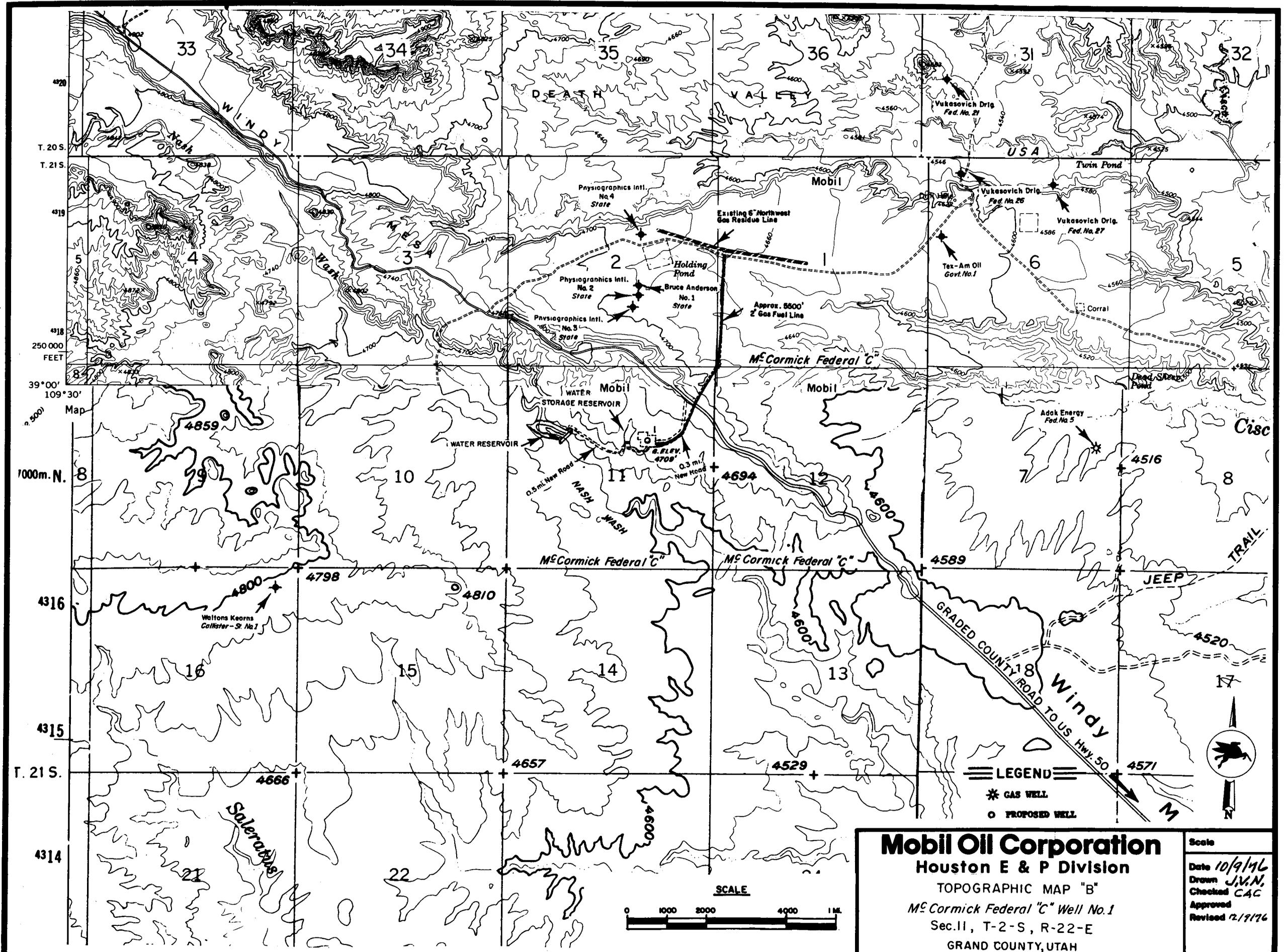
- * GAS WELL
- PROPOSED WELL



Revised 2-24-77-CAC

Mobil Oil Corporation
 Houston E & P Division
 TOPOGRAPHIC MAP "B"
 McCormick Federal "C" Well No. 1
 Sec. 11, T-2-S, R-22-E
 GRAND COUNTY, UTAH

Scale
 Date 10/9/76
 Drawn J.V.N.
 Checked CAC
 Approved
 Revised 12/17/76

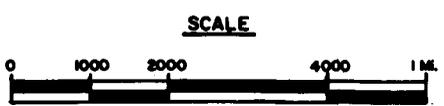


LEGEND
 * GAS WELL
 ○ PROPOSED WELL

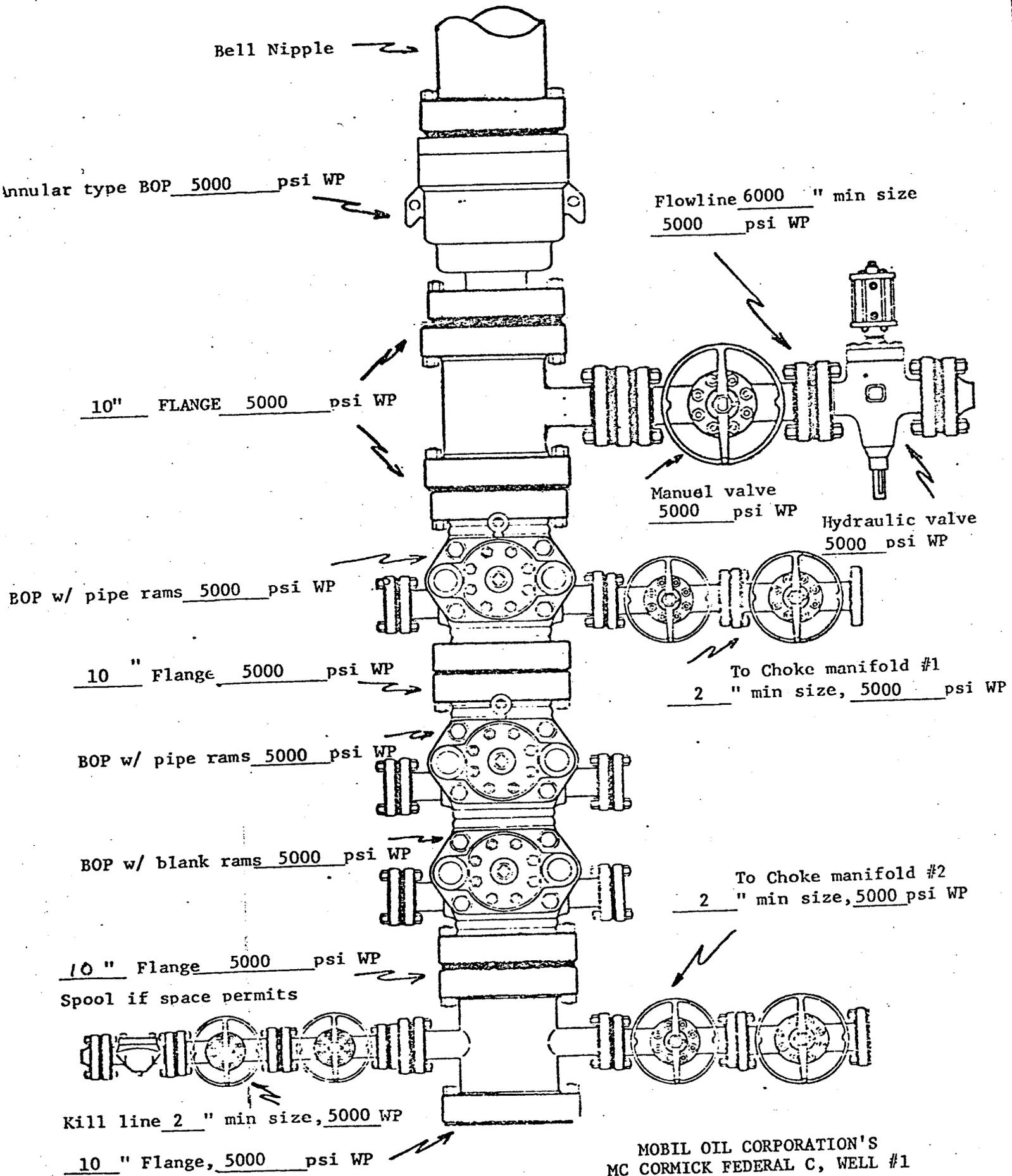


Mobil Oil Corporation
 Houston E & P Division
 TOPOGRAPHIC MAP "B"
 M^cCormick Federal "C" Well No.1
 Sec.11, T-2-S, R-22-E
 GRAND COUNTY, UTAH

Scale
 Date 10/9/76
 Drawn J.V.N.
 Checked CAC
 Approved
 Revised 12/1/76



PROPOSED BOP STACK
 10-3/4" CASING



MOBIL OIL CORPORATION'S
 MC CORMICK FEDERAL C, WELL #1
 WILDCAT FIELD
 GRAND COUNTY, UTAH

PROPOSED BOP STACK
13-3/8" CASING

Bell Nipple

Flowline to shale shaker

Annular type BOP 3 000 psi WP

12"-3000 psi WP Flange

BOP w/ pipe rams 3 000 psi WP

BOP w/ blank rams 3 000 psi WP

12"-3000 psi WP Flange

Spool if space permits

Kill Line

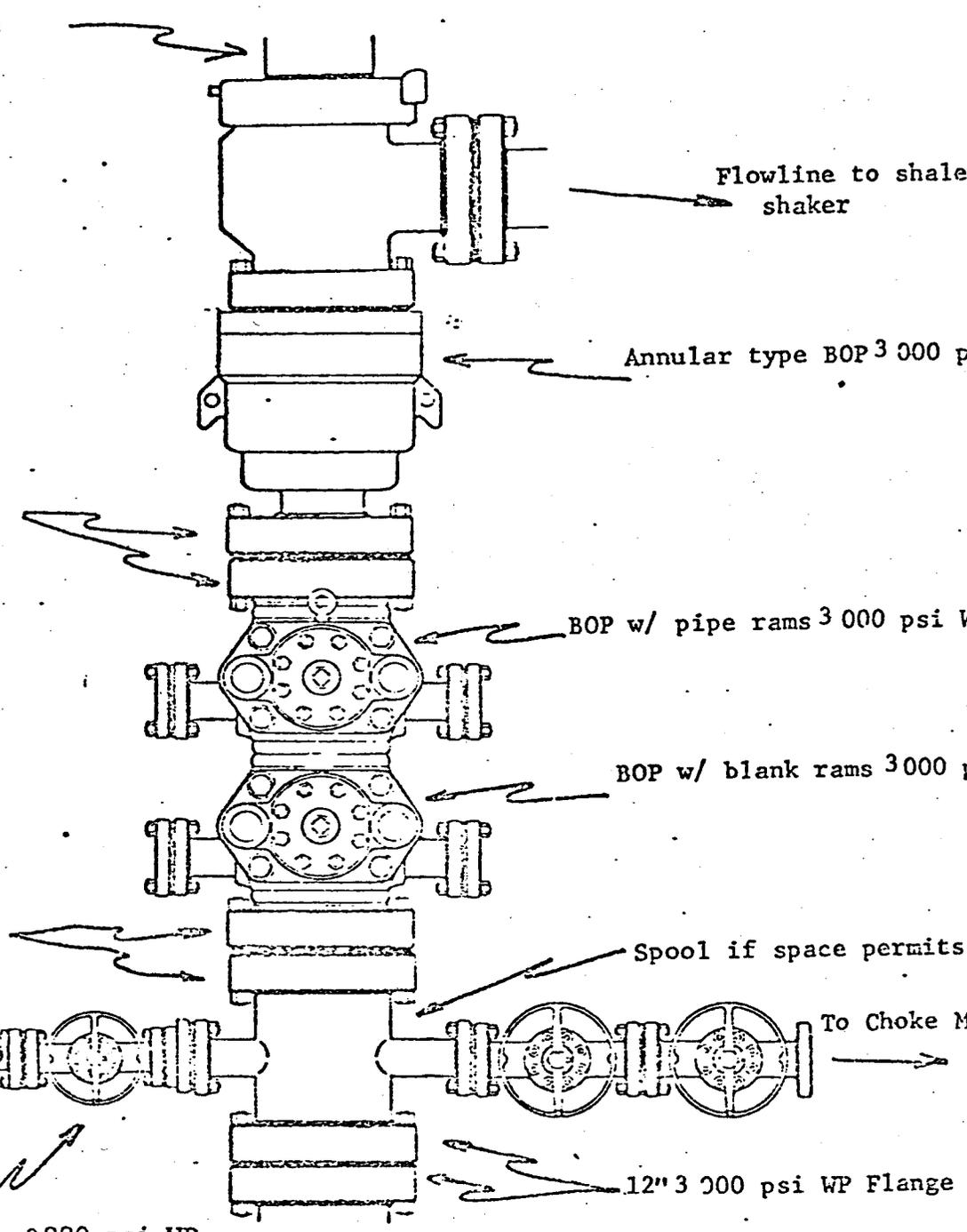
To Choke Manifo

Check Valve

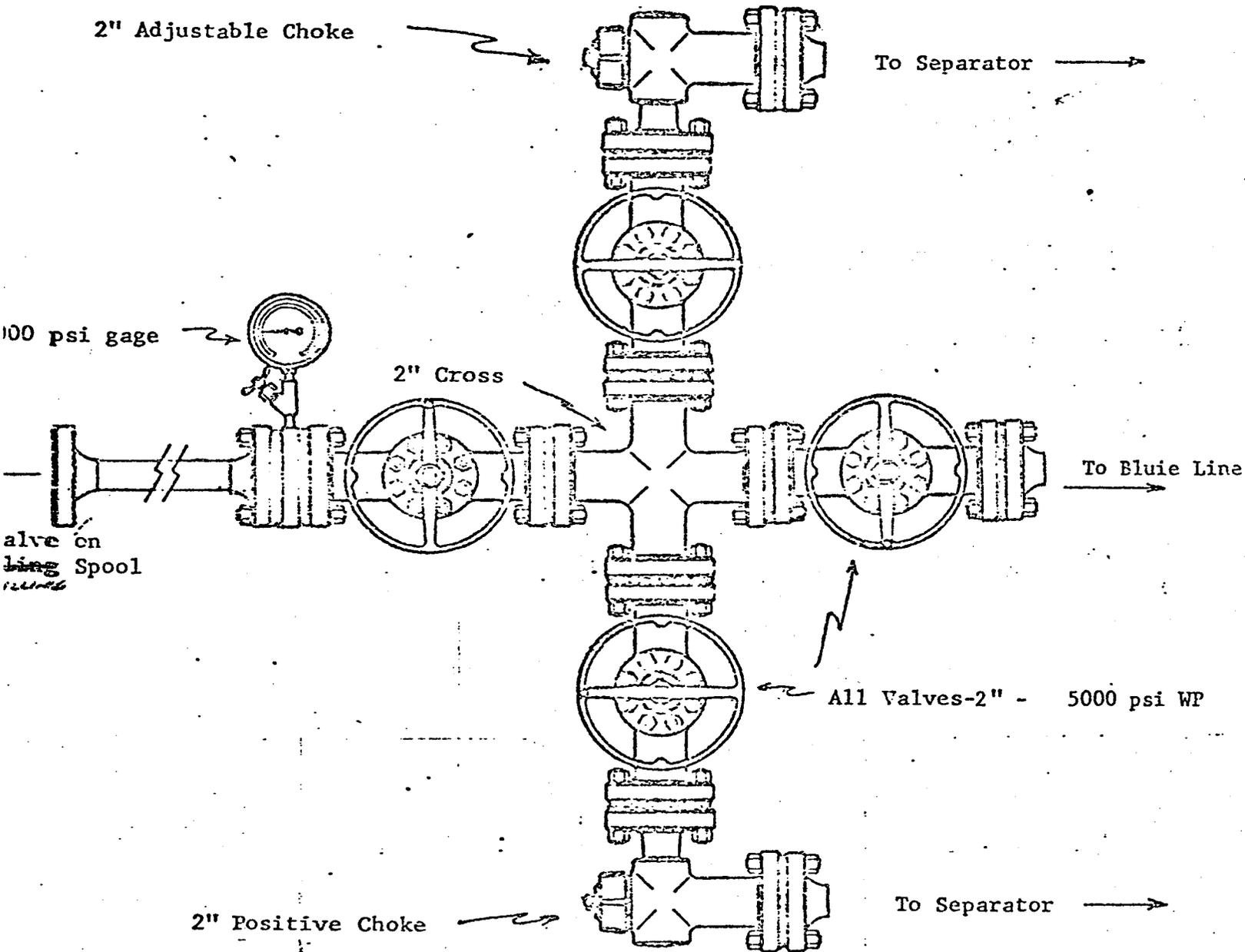
12" 3 000 psi WP Flange

All valves 3000 psi WP

MOBIL OIL CORPORATION'S
MC CORMICK FEDERAL C, WELL #1
WILDCAT FIELD
GRAND COUNTY, UTAH



PROPOSED CHOKE MANIFOLD
(MINIMUM REQUIREMENTS)
10-3/4" CASING STRING



MOBIL OIL CORPORATION'S
MC CORMICK FEDERAL C, WELL #1
WILDCAT FIELD
GRAND COUNTY, UTAH

PROPOSED MUD PROGRAM
 MOBIL OIL CORPORATION'S
 MC CORMICK FEDERAL C WELL #1
 WILDCAT FIELD
 GRAND COUNTY, UTAH

	<u>Type Mud</u>	<u>Weight</u>	<u>Viscosity</u>	<u>PH</u>	<u>Water Loss</u>
0' - 350'	Spud				
350' - 5400'	Fr. wtr. w/gel & LCM	8.8 - 9.5	30 - 40	9+	NC
5400' - 14100'	Fr. wtr. benex, min. solids	8.8 - 9.5	30 - 50	9+	NC
14100' - 16400'	Sat. br. w/salt gel as required	10 - 11	30 - 50	9+	NC
16400' - T.D.	Fr. wtr.	9 - 10	30 - 40	9+	NC

PROPOSED BLOWOUT PREVENTER PROGRAM FOR
MOBIL OIL CORPORATION'S
MC CORMICK FEDERAL C, WELL #1
WILDCAT FIELD
GRAND COUNTY, UTAH

<u>Casing String</u>	<u>Equip. Size & API Series</u>		<u>No. & Type</u>	<u>Test Press PSI</u>
Surface	20	600	1-hydril or rotating head	1000
13-3/8	12	900	1-hydril 2-cameron or equiv.	3000
10-3/4	10	1500	1-hydril 3-cameron or equiv.	5000

MOBIL OIL CORPORATION'S
MC CORMICK FEDERAL C, WELL #1
GRAND COUNTY, UTAH

APPROXIMATE FORMATIONAL TOPS
& PROPOSED WIRELINE LOGGING PROGRAM

Formational Tops:

Mancos	-	Surface
Morrison	-	2,900
San Rafael	-	3,200
Chinle	-	4,500
Cutler	-	5,400
Pennsylvanian	-	12,400
Paradox	-	14,100
Mississippi-Leadville	-	16,000+
TOTAL DEPTH	-	18,000

Logging Program:

Gr.-Acoustic	-	Surface - Total Depth
I&S	-	Surface - 14,100
Dual LL	-	14,100 - Total Depth
CNL-FDC	-	As determined by Geologist when total depth reached
Nelocity Survey	-	Surface - Total Depth
Dipmeter	-	5400 - Total Depth

Mobil

Amendment to Surface Use
Plan to Include Gas Fuel Line
McCormick Federal "C" Well #1
Wildcat Field - Grand County, Utah

Page 2

inspection on December 8, 1976. This is to amend the surface use plan for subject well.

Yours very truly,

C. A. Callaway for

J. A. Morris
Regulatory Engineering
Supervisor

CACallaway/tb
Attachment

cc: State of Utah - 2
Department of Natural Resources
Division of Oil & Gas Conservation
1588 West Temple
Salt Lake City, Utah 84111

Surface Use Plan

Page 3

Septic tanks at the trailer houses and two portable chemical toilets will be cleaned periodically and that sewage hauled to Moab for disposal.

8. ANCILLARY FACILITIES

No ancillary facilities are planned for this location at this time.

9. WELL SITE LAYOUT (See Plat "D")

The BLM Area Resource Manager will be notified prior to actual construction of the well site as shown on the attached plans. Since the native material is relatively impervious, the reserve pit will not be lined. All pits will be fenced with a sheep proof fence.

10. PLANS FOR RESTORATION OF THE SURFACE

When all drilling and production activities have been completed, the location site and access roads will be reshaped to the original contour. The reserve pit and trash pit shall be filled and shaped to the original contour after pits have dried sufficiently to permit equipment operation. After restoration activities have been completed, the location site and access road shall be reseeded with a seed mixture and soil additives as recommended by the BLM Representative. Restoration activities shall begin within 90 days after drilling and production activities cease and completed within 30 days from that date. The Lessee further covenants and agrees that all of said clean up and restoration activities shall be done and performed in a diligent and most workman like manner and in strict conformity with this Surface Use Plan.

11. OTHER INFORMATION

The general area is semi-desert land of rolling hills broken by numerous small washes draining into Nash Wash, which is an intermittent stream flowing southeasterly into the Colorado River. The small intermittent streams provide the only water in the area. This water is very alkaline with 1836 mg/liter sulfates and 1460 mg/liter total hardness, not fit for human consumption, but is used for stock and sheep. The well site is located on a gentle southwest slope about 300' east of a 60' deep wash draining southerly. General drainage in the area is to the southeast. At about 200' south of the location the terrain slopes abruptly to an area of gentle slope to Nash Wash.

MOBIL OIL CORPORATION

SURFACE USE PLAN

MCCORMICK FEDERAL "C" WELL #1

Section 11, T-21S, R-22E
Salt Lake Meridian
Grand County, Utah

1. EXISTING ROADS (See Attached Topographic Map "A")

An existing 20' wide gravel surfaced county road will be utilized to reach the new access road to the location. This road leaves U.S. Highway No. 50 at a point about 3.8 miles west of Cisco, Utah and about 5.3 miles from the proposed new road to the location, and presently serves the Cunningham Ranch Headquarters (located in Sec. 16, T-20S, R-21E). The road has a gentle slope (1-2%) for the entire 5.3 miles except for about 1500' of 6-8% grade at a point about 4 miles from Highway 50.

2. PLANNED ACCESS ROADS (See Attached Topographic Map "B" & Cross Section Plat "C")

The proposed access road to the location will be a crowned 18' wide surface with a borrow ditch (12' minimum depth) on each side, and is 0.3 miles long from the existing county road to the location. Leaving the county road the access road slopes about 8% for the first 0.1 miles and the remainder is on a gentle slope to the proposed location. Turn-outs of 50' radius will be constructed at county road exit and at the location entry.

To service the proposed water supply reservoir & transfer pump, an access road 15' wide with 12" borrow ditches on each side is proposed. This road will exit the location near the southeast corner of the well pad, descend the hill for about 800' of side cut on a 10% grade; thence across the earthen dam at the water supply storage reservoir (just west of the location) on an 8% slope; thence on a gentle slope (2-4%) to the water reservoir for a total length of about 0.5 miles.

Native material (sandy clay and alluvial material) will be graded, watered and compacted for most of the road surface; and gravel surfacing material will be hauled only at the steeper grades (7% to 10%). This road gravel (approximately 800 c.y.) will be hauled from the area excavated for the water reservoir on Nash Wash. Only nominal cuts and fills will be required. The area of these roads is void of any timber, contains sparse grass, sparse sage and greasewood underbrush, sandy clay soil, and can be described as rolling desert land with numerous small washes draining southeasterly into Nash Wash.

The area crossed by the roads is presently utilized for sheep and cattle grazing.

3. LOCATION OF EXISTING WELLS

See Topographic Map "B" for all known wells within a radius of 2 miles from the location.

4. LOCATION OF TANK BATTERIES, PRODUCTION FACILITIES, AND PRODUCTION GATHERING AND SERVICE LINES

No production facilities exist within a one mile radius of the proposed location at this time. When and if production is established, detailed plans of the proposed facilities will be submitted for approvals.

5. LOCATION AND TYPE OF WATER SUPPLY

Water for drilling purposes will be obtained from a proposed reservoir to be constructed on Nash Wash at a point about 0.4 miles west of the location. A centrifugal pump will be installed at this reservoir and the water will be pumped through a 3" steel buried pipe line routed along side the access road to the location. For storage at the location, an earthen dam reservoir will be built on an existing wash about 300' west of the location. (See Topographic Map "B"). These reservoirs will be built as permanent structures with spillways at each earthen dam, and will remain as stock reservoirs when drilling operations cease.

Should the above reservoir fail to provide sufficient water, the additional water required will be hauled about 15 miles from the Colorado River at a point about 2 1/2 miles north of Dewey, Utah. (See Topographic Map "A").

6. SOURCE OF CONSTRUCTION MATERIALS

Surfacing material will be required only at the steeper grades (7%-10%); and the approximate 800 c.y. of gravel required will be obtained from the reservoir excavation on Nash Wash.

7. METHODS OF HANDLING WASTE DISPOSAL

All garbage and trash shall be burned when possible. That portion that cannot be burned will be accumulated and stored in a trash pit fenced with small mesh wire as shown on the Well Site Layout Plat "D". After drilling operations cease, the well site will be cleaned and all garbage and trash collected and buried with a minimum of 4' of cover.

The nearest potable water in the area is at the Cunningham Ranch located about 9 miles northwest of the location at the foot of the Book Cliffs. The Cunningham Ranch water source is a spring located on top of the Book Cliffs.

The soil is a deep heavy sandy to gravelly clay which is alkaline in nature. No timber is found in the area and scant under-brush of shadscale, greasewood, and white sage brush is present. A native grass is very sparse. There are scant wildlife present in the area consisting of deer, coyote, rabbit, and a variety of small ground squirrels, snakes, and lizards.

Most of the surface in the area is Federally owned with grazing leases to William Cunningham and J. Golden Bear. The poor grazing land is sparsely grazed by cattle (Cunningham) and sheep (Golden Bear).

The nearest occupied dwelling is located about 9 miles northwest at the Cunningham Ranch Headquarters. There are no known archeological, historical or cultural sites in the area.

12. LESSEE'S OR OPERATOR'S REPRESENTATIVE

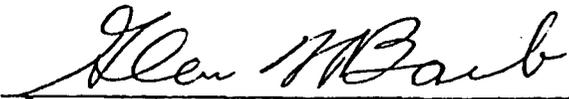
Glen W. Barb
Mobil Oil Corporation
P. O. Box 633
Midland, TX 79701 - Office Phone 915-684-8211

13. CERTIFICATION

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

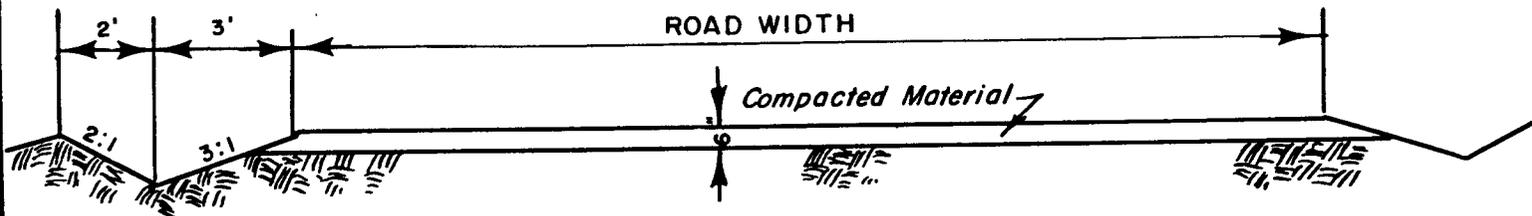
CACallaway/tb

November 10, 1976
DATE

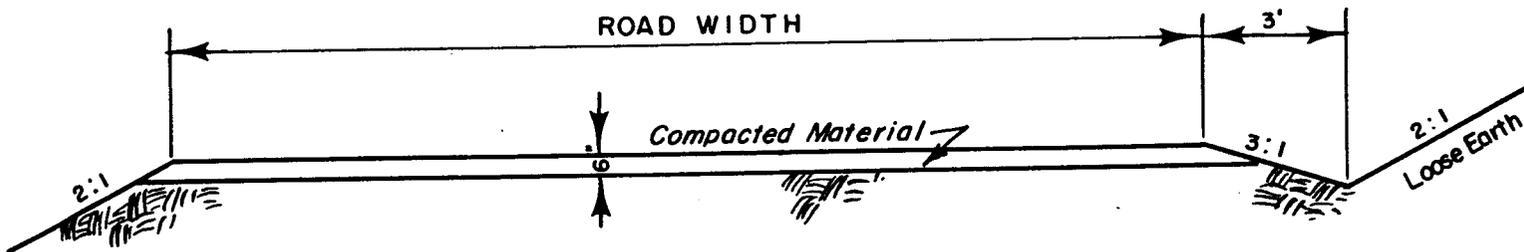

Glen W. Barb - Operations Supt.

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TYPICAL FLAT LAND SECTION



TYPICAL SIDE HILL SECTION

NO.	DATE	BY	
PLAT "C" ACCESS ROADS TYPICAL CROSS SECTION			
Mobil Oil Corporation Houston E & P Division			
DRAWN J.V.N.		SCALE 1" = 4'-0"	DWG. NO.
CHECKED CA		DATE 11-11-76	A

CONDITIONS OF APPROVAL FOR NOTICE TO DRILL

Company Mobil Oil Corporation Location Sec. 11-21S-22E
Well No. McCormick Federal "C" #1 Lease No. U-11244

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

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

1. There shall be no material deviation from the proposed drilling and/or workover program as approved. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 30 CFR 221.22. Any changes in operations must have prior approval of this office. Pressure tests are required before drilling out from under all casing strings set and cemented in place. Blowout preventer controls must be installed prior to drilling the surface casing plug and will remain in use until the final casing string is run. Preventers will be inspected and operated at least daily to insure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs. All BOP pressure tests must be recorded on the daily drilling report.
2. All shows of fresh water and minerals will be reported and protected. A sample will be taken of any water flows and furnished this office for analysis. All oil and gas shows will be adequately tested for commercial possibilities, reported, and protected.
3. No location will be made or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of this office. In the event abandonment of the hole is desired, a verbal request may be approved by this office but must be timely followed with a confirmation request in writing using the "Sundry Notice" (form 9-331). If a well is suspended or abandoned, all pits will be fenced until they are backfilled.
4. The spud date will be reported to the District Engineer within 48 hours and Form 9-329, "Monthly Report of Operations" will

be filed starting with the month in which operations began unless otherwise approved in writing by the district engineer.

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

If the drilling operation results in a dry hole, form 9-331 is also to be filed at the time that all surface restoration work has been completed and the location is considered ready for inspection.

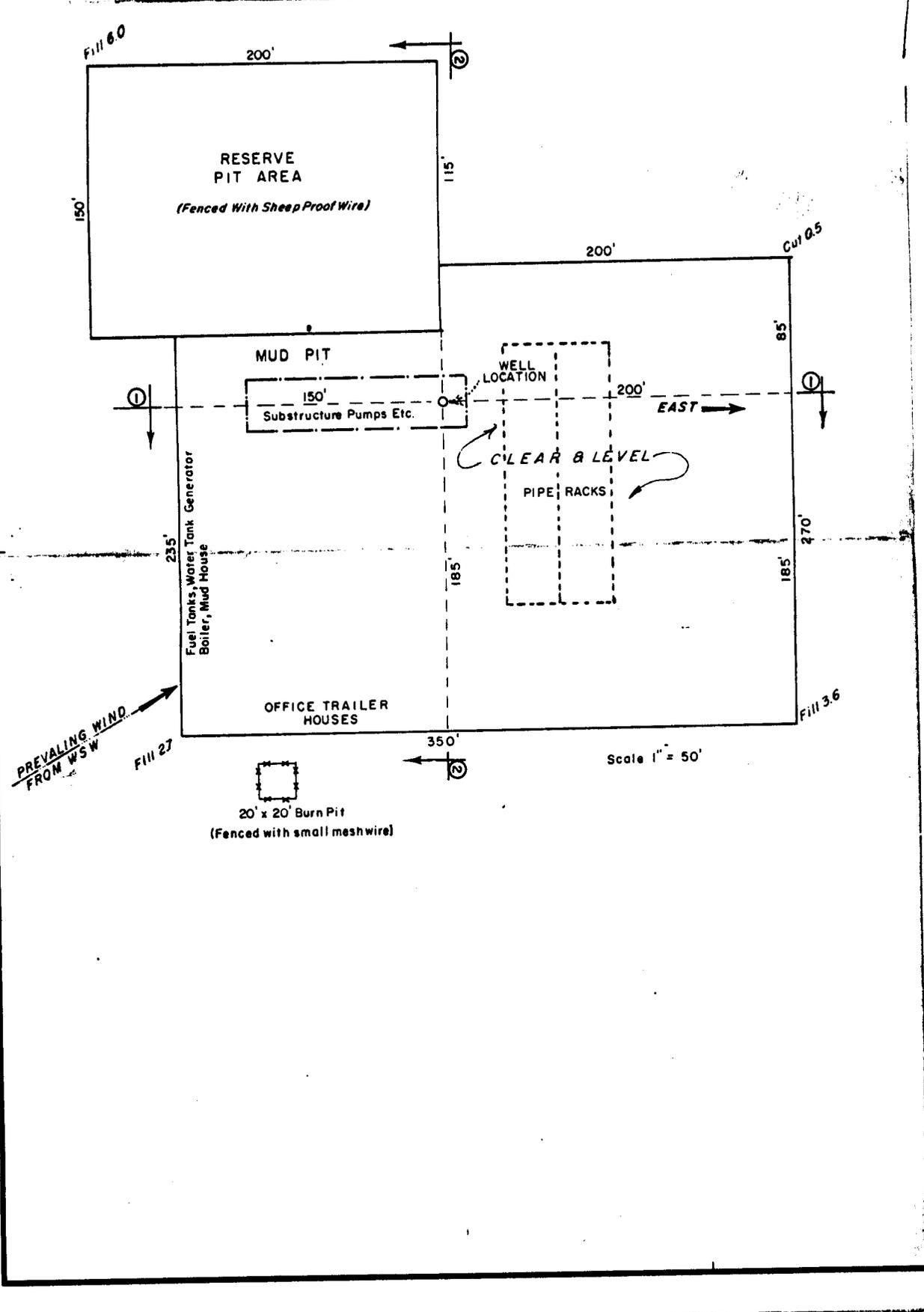
5. "Well Completion and Recompletion Report and Log" (form 9-330) will be submitted not later than 15 days after completion of the well or after completion of operations being performed, in accordance with 30 CFR 221.59. Two copies of all logs run, core descriptions, core analyses, well-test data, geologic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

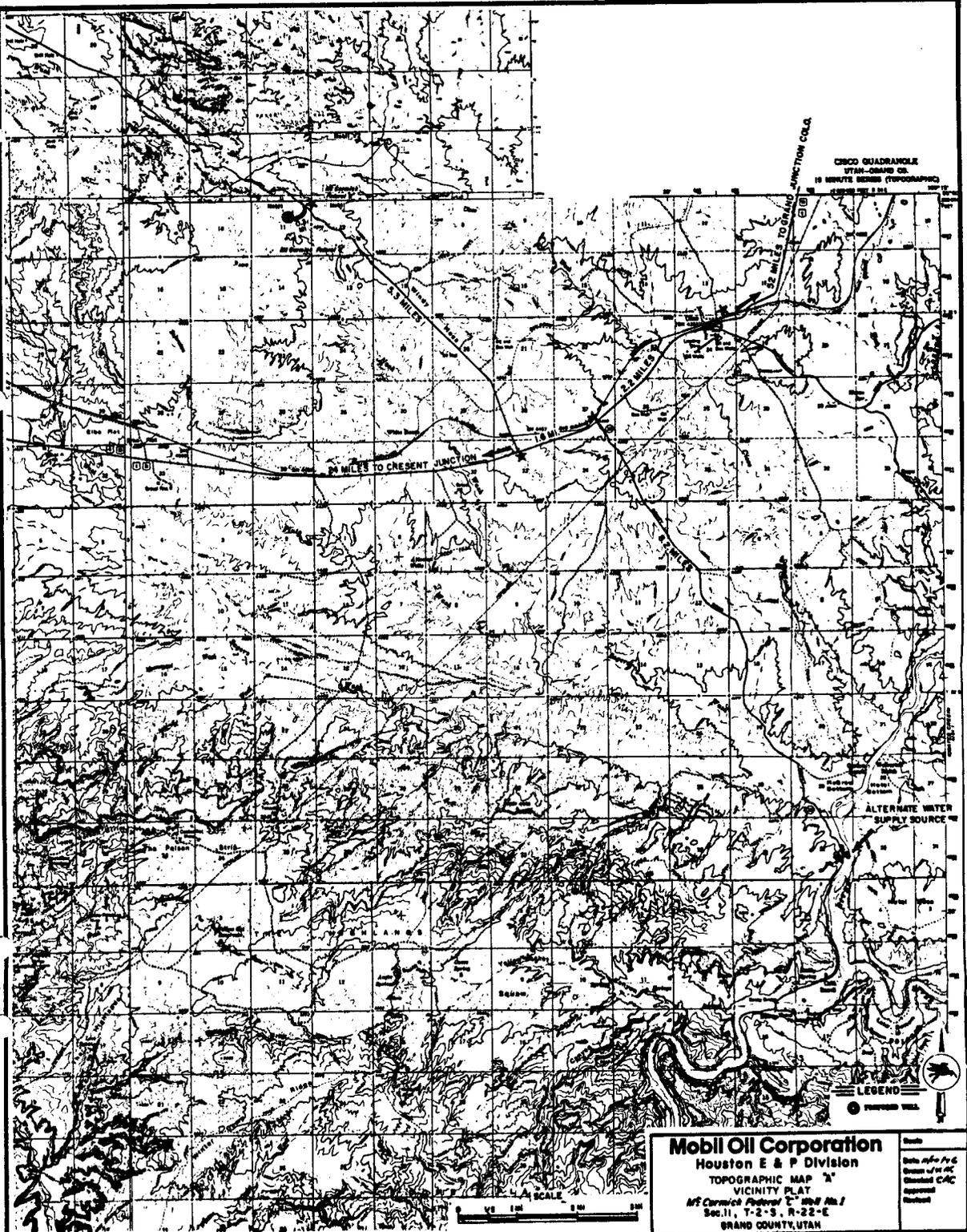
6. Other: _____
_____ (a) Strict compliance with Surface Use Plan and Supplemental Stipulations;
_____ (b) Strict compliance with the Well Control Program; and
_____ (c) Compliance with NTL-2B - Section VII (attached).
7. The U. S. Geological Survey district office address is:

~~8440 Federal Building, Salt Lake City, Utah 84138~~
Phone ~~(801) 524-5650~~
Dist. Engr. ~~Edgar W. Gynn~~ Home Phone ~~(801) 532-7042~~
Asst. Engr. ~~Willis P. Martens~~ Home Phone ~~(801) 466-2780~~

8. The BLM contact man is: _____
Phone _____ (Home) _____ (Office)

9. Significant surface values (are)(are not) involved at this location. Accordingly, this office (must)(need not) be promptly notified as soon as field operations begin.

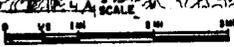




CISCO QUADRANGLE
UTAH-GRAND CO.
1:50,000 SERIES (TOPOGRAPHIC)
1950 (REV. 5-51)

ALTERNATE WATER
SUPPLY SOURCE

LEGEND



Mobil Oil Corporation
 Houston E & P Division
 TOPOGRAPHIC MAP "A"
 VICINITY PLAT
 NE Corner Federal "E" Well No. 1
 Sec. 11, T-2-S, R-22-E
 GRAND COUNTY, UTAH

Date: 10-2-56
 Drawn by: J.M.M.
 Checked: C.A.C.
 Approved: [Signature]
 Method: [Signature]

U.S. GEOLOGICAL SURVEY, CONSERVATION DIVISION

FROM: DISTRICT GEOLOGIST, SALT LAKE CITY, UTAH

TO: DISTRICT ENGINEER, SALT LAKE CITY, UTAH

Well	Location	Lease No.
MOBIL OIL CORPORATION #1	1830' FEL AND 1980' FNL SEC. 11 T. 21 S, R. 22 E, S. 4 M. C. BRAND Co. UTAH GE E1 4709'	U-11244
<p>1. Stratigraphy and Potential Oil and Gas Horizons. Alluvium may overlie Mancos shale at this location. Cabern Exploration Corporation #1 (4910') in section 6, same township, reported the following tops: Dakota 2339', ... 2406', Salt Wash 2705', Entrada 3098'.</p> <p>2. Fresh Water Sands. The surface depth at this well is 18,000 feet - well below local tops. Beside water may occur in anomalous sand lenses in the Mancos. The Dakota Fm. probably contains saline water in this area.</p> <p>3. Other Mineral Bearing Formations. (Coal, Oil Shale, Potash, Etc.)</p> <p>Land is considered valuable prospectively for coal. Mancos coals are probably marginal in this area.</p> <p>4. Possible Lost Circulation Zones. Unknown</p> <p>5. Other Horizons Which May Need Special Mud, Casing, or Cementing Programs. Protect any fresh water aquifers encountered.</p> <p>6. Possible Abnormal Pressure Zones and Temperature Gradients. Unknown</p> <p>7. Competency of Beds at Proposed Casing Setting Points. Alluvium if present and weathered shale will be cased off.</p> <p>8. Additional Logs or Samples Needed. None</p> <p>9. References and Remarks Outside of KGS.</p>		
Date: 12/7/76		Signed: REG

DOGAM

Amendment to Surface Use Plan
to Revise the Source of Water
Supply - McCormick Federal
"C" Well #1 Wildcat Field
Grand County, Utah

Page 2

This revision was discussed with Dan Magley, BLM Representative
(Magley - Callaway telephone conversation 2-23-77), and BLM
approval was received.

Yours very truly,

J. A. Morris for

J. A. Morris
Regulatory Engineering
Supervisor

CACallaway/mb
Attachment

cc: USGS - 6
State of Utah - 2
Department of Natural Resources
Division of Oil & Gas Conservation
1588 West Temple
Salt Lake City, Utah 84111

Mobil Oil Corporation

THREE GREENWAY PLAZA EAST - SUITE 800
HOUSTON, TEXAS 77046

February 10, 1977

United States Geological Survey
Salt Lake City District
8426 Federal Bldg.
125 South State Street
Salt Lake City, Utah 84111



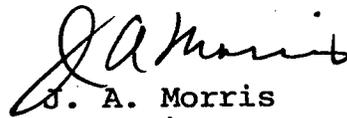
Attn: Mr. E. W. Gynn

7.01
CONFIDENTIAL INFORMATION
MOBIL OIL CORPORATION'S
MC CORMICK-FEDERAL C, WELL #1
WILDCAT FIELD
GRAND COUNTY, UTAH

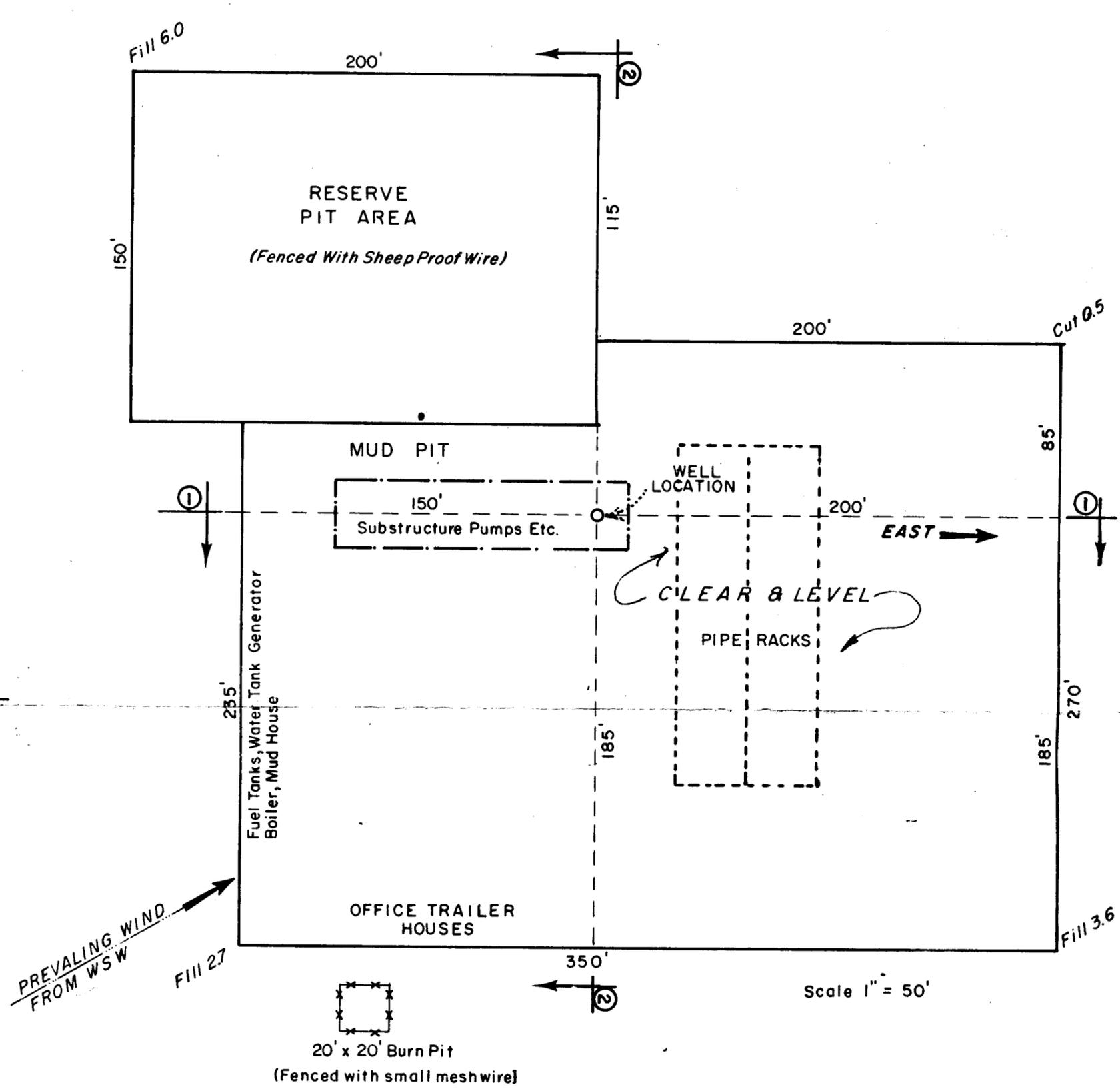
Gentlemen:

Mobil Oil Corporation respectfully requests that we not be required to release information of a confidential nature for a period of 90 days after drilling operations have ceased on the subject well. This would include logging, coring and testing information.

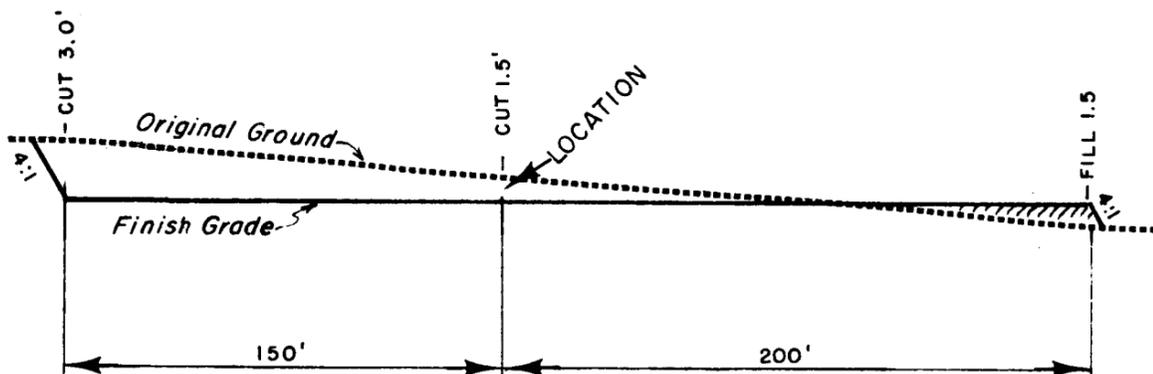
Yours very truly,


J. A. Morris
Supervisor,
Regulatory Engineering

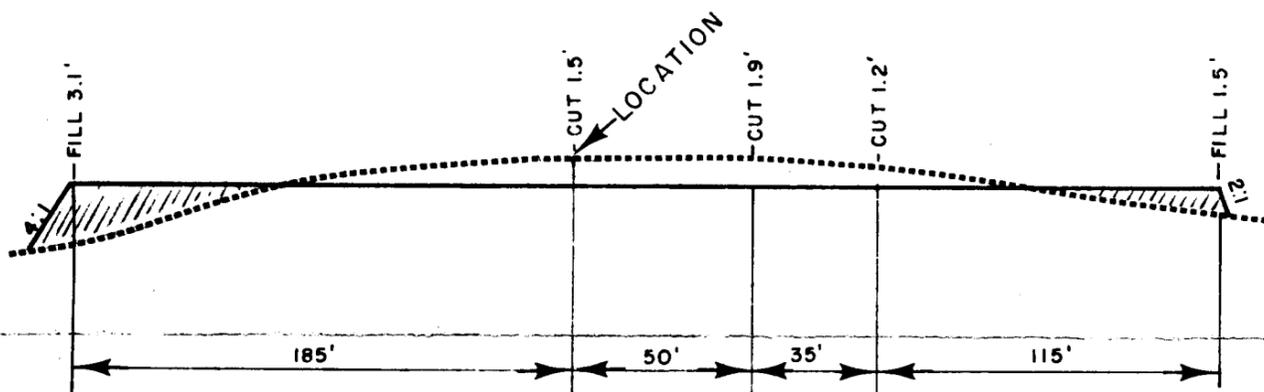
ADBond:to
cc: State of Utah
Dept. of Natural Resources
Division of Oil & Gas
1588 West Temple
Salt Lake City, Utah



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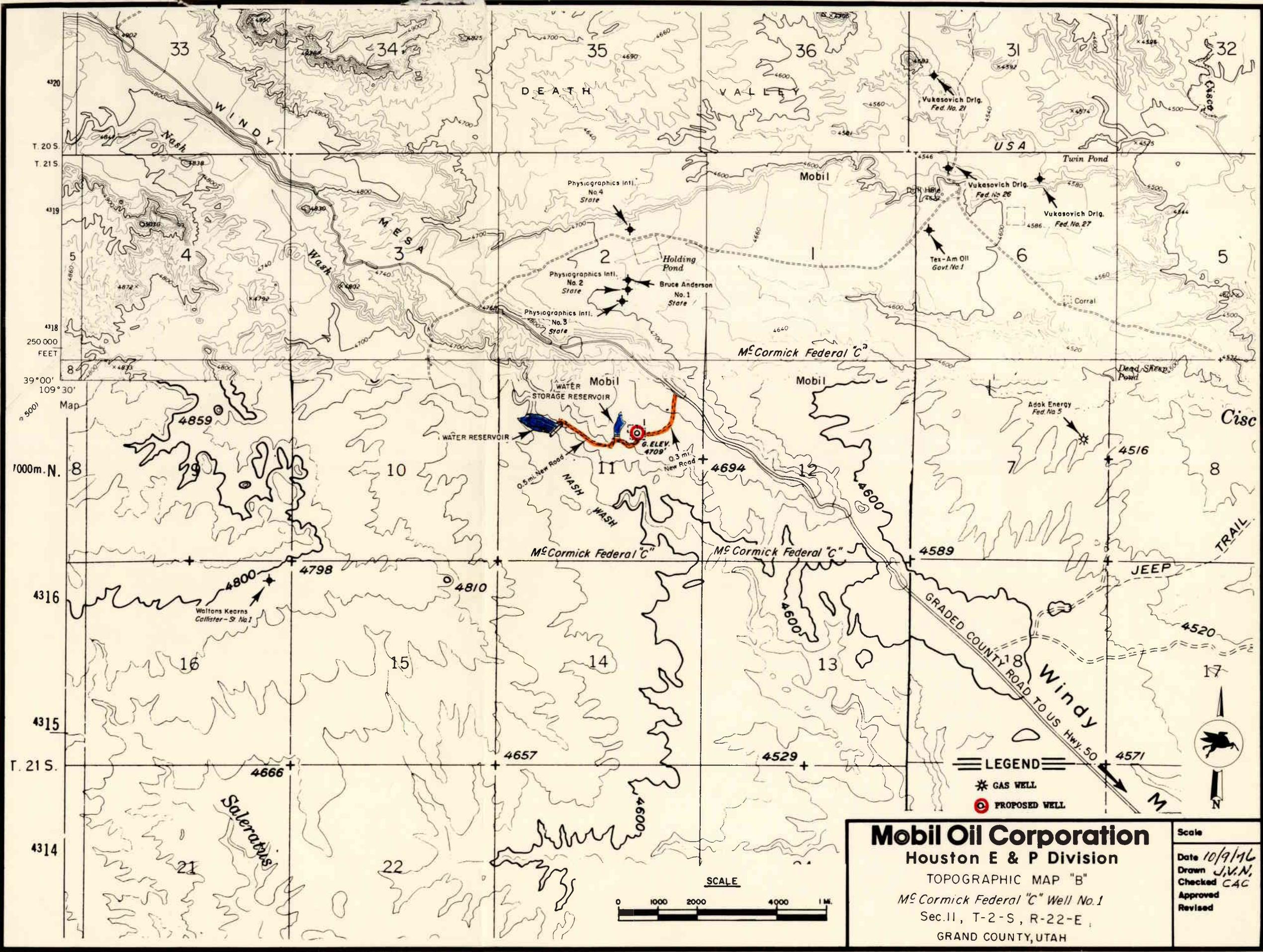
SECTION ① - ①



SECTION ② - ②

Horiz. 1"=60'
Vert. 1"=10'

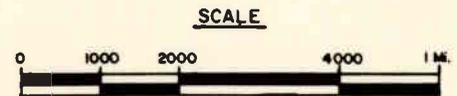
NO.	DATE	BY	DESCRIPTION	CH'K'D	CERT.	APP'D
ISSUE						
Mobil Oil Corporation Houston E & P Division						
PLAT "D" WELL SITE LAYOUT MC Cormick Federal Well No. 1						
GRAND COUNTY				UTAH		
DRAWN BY J.V.N.		CHECKED BY JAC		SCALE As Noted		
DATE STARTED		DATE COMPLETED		11-11-76		
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNLESS CERTIFIED AND DATED				CERTIFIED DATE		
APPROVALS				ISSUE NO.		
DWG. NO.						



LEGEND
 * GAS WELL
 (Red Circle) PROPOSED WELL

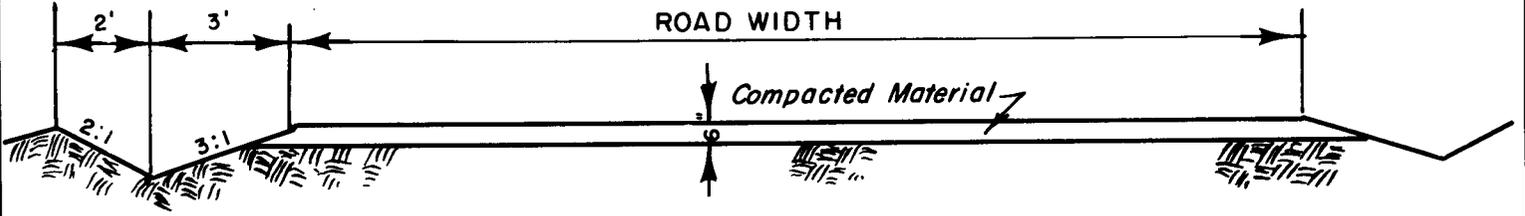
Mobil Oil Corporation
 Houston E & P Division
 TOPOGRAPHIC MAP "B"
 M^cCormick Federal "C" Well No.1
 Sec.11, T-2-S, R-22-E,
 GRAND COUNTY,UTAH

Scale
 Date 10/9/76
 Drawn J.V.N.
 Checked CAC
 Approved
 Revised

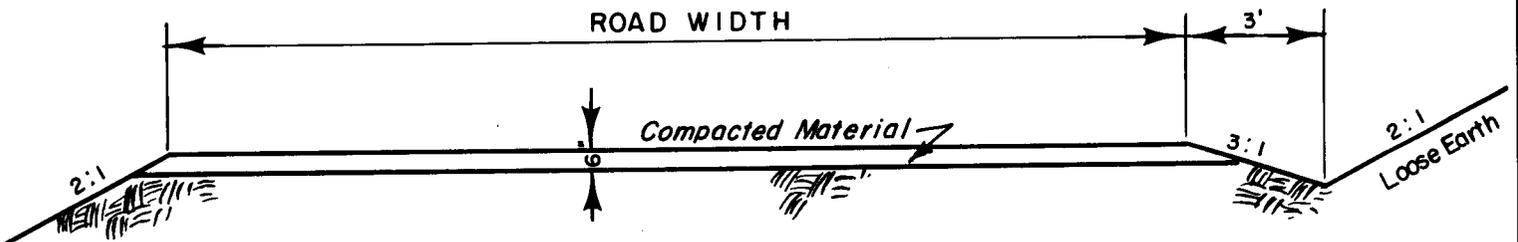


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TYPICAL FLAT LAND SECTION



TYPICAL SIDE HILL SECTION

NO.	DATE	BY
PLAT "C" ACCESS ROADS TYPICAL CROSS SECTION		
Mobil Oil Corporation Houston E & P Division		
DRAWN J.V.N.	SCALE 1" = 4'-0"	DWG. NO.
CHECKED C.A.	DATE 11-11-76	A

Mobil Oil Corporation

THREE GREENWAY PLAZA EAST - SUITE 800
HOUSTON, TEXAS 77046

February 10, 1977

United States Geological Survey
Salt Lake City District
8426 Federal Bldg.
125 South State Street
Salt Lake City, Utah 84111

Attn: Mr. E. W. Gynn



7.01
CONFIDENTIAL INFORMATION
MOBIL OIL CORPORATION'S
MC CORMICK-FEDERAL C, WELL #1
WILDCAT FIELD
GRAND COUNTY, UTAH

Gentlemen:

Mobil Oil Corporation respectfully requests that we not be required to release information of a confidential nature for a period of 90 days after drilling operations have ceased on the subject well. This would include logging, coring and testing information.

Yours very truly,


J. A. Morris
Supervisor,
Regulatory Engineering

ADBond:to
cc: State of Utah
Dept. of Natural Resources
Division of Oil & Gas
1588 West Temple
Salt Lake City, Utah

12-8-76.

SUMMARY OF ENVIRONMENTAL IMPACT EVALUATION

338

ATTACHMENT 2-A

Mobil Oil Corp

1 SW NE
Sec 11-21s-22R

U-11244
Grand County Utah

BLM - Naeqly
USGS - ALEXANDER
mobil - Calloway

- ENHANCES
- NO IMPACT
- MINOR IMPACT
- MAJOR IMPACT

	Construction	Pollution	Drilling Production	Transport Operations	Accidents	Others
	Roads, bridges, airports Transmission lines, pipelines Dams & impoundments Others (pump stations, compressor stations, etc.)	Burning, noise, junk disposal Liquid effluent discharge Subsurface disposal Others (toxic gases, noxious gas, etc.)	Well drilling Fluid removal (Prod. wells, facilities) Secondary Recovery Noise or obstruction of scenic views Mineral processing (ext. facilities) Others	Trucks Pipelines Others	Spills and leaks Operational failure	
Land Use						
Forestry	NA					
Grazing	0	/	/	/	/	/
Wilderness	NA					
Agriculture	NA					
Residential-Commercial	NA					
Mineral Extraction	NA					
Recreation	0	/	/	/	/	/
Scenic Views	0	/	/	/	/	/
Parks, Reserves, Monuments	NA					
Historical Sites	NA					
Unique Physical Features	NA					
Flora & Fauna						
Birds	✓	/	/	/	/	/
Land Animals	✓	/	/	/	/	/
Fish	NA					
Endangered Species	NONE KNOWN					
Trees, Grass, Etc.	✓	/	/	/	/	/
Phy. Charact.						
Surface Water	NA					
Underground Water	?					
Air Quality	✓	/	/	/	/	/
Erosion	✓	/	/	/	/	/
Other						
Effect On Local Economy	0	0	0	0		
Safety & Health	✓	/	/	/	/	/
Others	Big: Files cc: Dolan - Utah Reg Denver BLM - Head w/operations					

Lease U-1-44

Well No. & Location # 1 Sec 11 - 21s - 23E

Grand County Utah.

ENVIRONMENTAL IMPACT ANALYSIS - ATTACHMENT 2-B

1. Proposed Action

Mobil Oil Corp -

PROPOSES TO DRILL AN OIL AND

GAS TEST WELL WITH ROTARY TOOLS TO ABOUT 18,000 FT. TD, 2) TO CONSTRUCT A

DRILL PAD 350 FT. X 275 FT. AND A RESERVE PIT 150 FT. X 200 FT.

3) TO CONSTRUCT 18 FT. X 0.3 MILES ACCESS ROAD AND UPGRADE FT.

X FROM AN EXISTING AND IMPROVED ROAD. To Construct

a water reservoir on Nash Wash west of location. an earthen dam 15' high & 100' wide. To lay a surface gas line to existing

2. Location and Natural Setting (existing environmental situation)

Transmission line to supply rig fuel. (no surface damage required.)

SEE ITEM # 11 of Surface use plans

3. Effects on Environment by Proposed Action (potential impact)

1) EXHAUST EMISSIONS FROM THE DRILLING RIG POWER UNITS AND SUPPORT TRAFFIC ENGINES WOULD ADD MINOR POLLUTION TO THE ATMOSPHERE IN THE LOCAL VICINITY.

2) MINOR INDUCED AND ACCELERATED EROSION POTENTIAL DUE TO SURFACE DISTURBANCE AND SUPPORT TRAFFIC USE.

3) MINOR VISUAL IMPACTS FOR A SHORT TERM DUE TO OPERATIONAL EQUIPMENT AND SURFACE DISTURBANCE.

4) TEMPORARY DISTURBANCE OF WILDLIFE AND LIVESTOCK.

5) MINOR DISTRACTION FROM AESTHETICS FOR SHORT TERM.

6)

4. Alternatives 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.

2) DENY THE PROPOSED PERMIT AND SUGGEST AN ALTERNATE LOCATION TO MINIMIZE ENVIRONMENTAL IMPACTS.

3) *No nearby locations could be found that would justify this action.*

5. Adverse Environmental Effects Which Cannot Be Avoided

1) MINOR AIR POLLUTION DUE TO EXHAUST EMISSIONS FROM RIG ENGINES AND SUPPORT TRAFFIC ENGINES.

2) MINOR INDUCED AND ACCELERATED EROSION POTENTIAL DUE TO SURFACE DISTURBANCE AND SUPPORT TRAFFIC USE.

3) MINOR AND TEMPORARY DISTURBANCE OF WILDLIFE.

4) TEMPORARY DISTURBANCE OF LIVESTOCK.

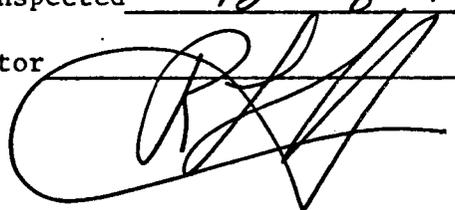
5) MINOR AND SHORT-TERM VISUAL IMPACTS.

6)

6. Determination

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

Date Inspected 12-8-76.

Inspector 



U.S. Geological Survey,
Conservation Division
Salt Lake City District
Salt Lake City, Utah

12-17-76

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE
LEASE NUMBER
UNIT

LESSEE'S MONTHLY REPORT OF OPERATIONS

State UTAH County GRAND Field WILDCAT

The following is a correct report of operations and production (including drilling and producing wells) for the month of FEBRUARY, 1977,

Agent's address 3 GREENWAY PLAZA EAST Company MOBIL OIL CORPORATION
SUITE 800, HOUSTON, TX 77046 Signed J A Morris 3/2/77

Phone 713-626 8800 Agent's title REGUL. ENGRG. SUPERV.

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DAYS PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
SW NE SEC. 11	21S	22E	C1		MC CORMICK	FEDERAL		C No. 1		DRILLING @ 3568' ON 2-28-77
INITIAL REPORT										

CONFIDENTIAL

NOTE.—There were 0 runs or sales of oil; 0 M cu. ft. of gas sold;

0 runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

Confidential

Mobil Oil Corporation

P. O. BOX 633
MIDLAND, TEXAS 79701

9

February 24, 1977

United States Geological Survey
Salt Lake City District
8426 Federal Building
125 South State Street
Salt Lake City, Utah 84111

Area Resource Manager
Bureau of Land Management
P. O. Box 970
Moab, Utah 84532

Attn: Mr. E. W. Gwynn



7.01
AMENDMENT TO SURFACE USE
PLAN TO REVISE THE SOURCE
OF WATER SUPPLY - MCCORMICK
FEDERAL "C" WELL #1
WILDCAT FIELD
GRAND COUNTY, UTAH

Gentlemen:

Attached is Topographic Map "B" revised to show a 2 7/8" O.D. steel pipeline from an existing water reservoir to be utilized for drilling water at subject well. The reservoir excavated by Mobil on Nash Wash failed to produce sufficient drilling water, necessitating this revision to the surface use plan.

Amendment to Surface Use Plan
to Revise the Source of Water
Supply - McCormick Federal
"C" Well #1 Wildcat Field
Grand County, Utah

Page 2

This revision was discussed with Dan Magley, BLM Representative
(Magley - Callaway telephone conversation 2-23-77), and BLM
approval was received.

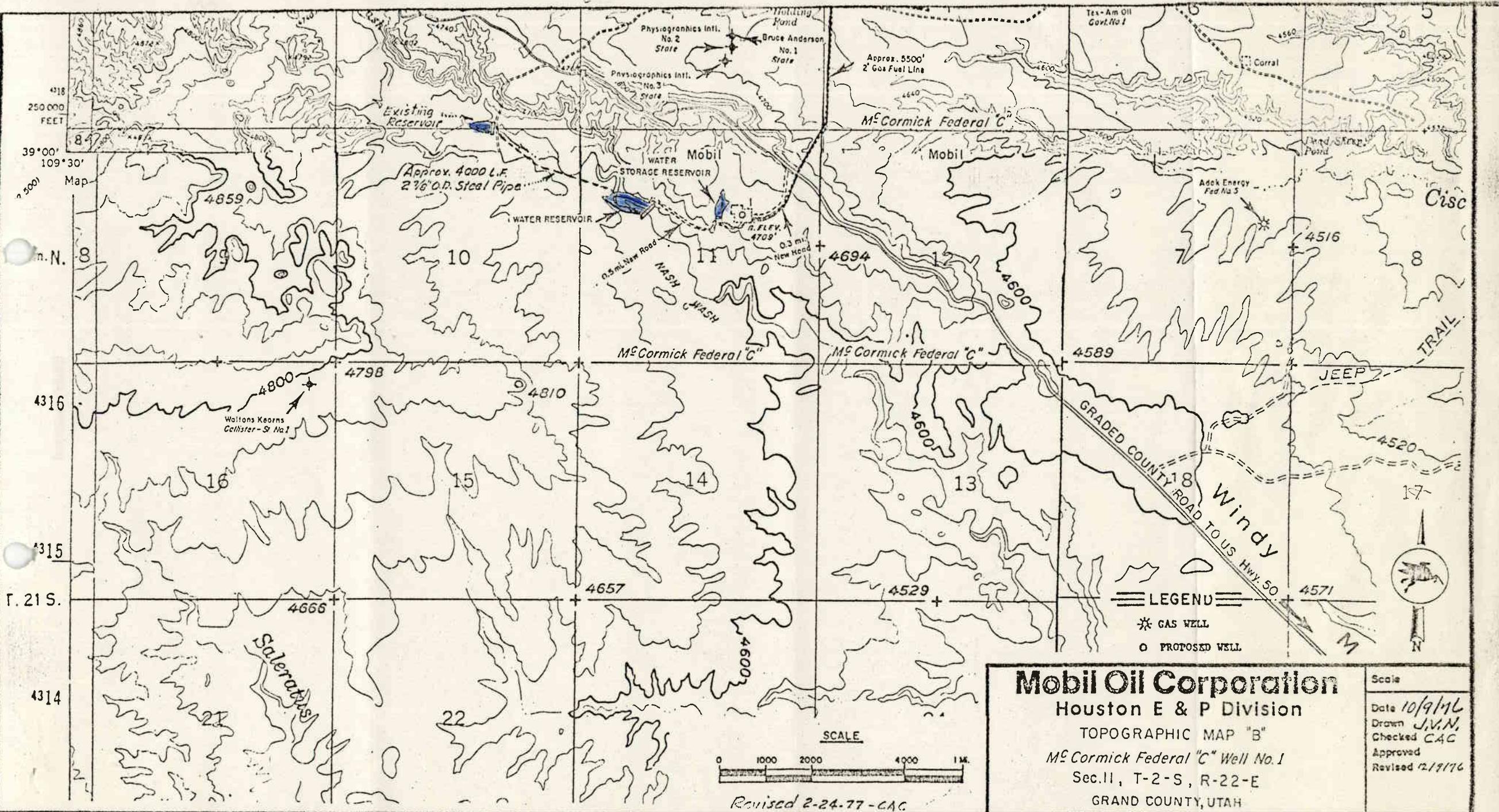
Yours very truly,

Handwritten signature of C.A. Callaway in cursive script, followed by the word "for" in a smaller, less distinct script.

J. A. Morris
Regulatory Engineering
Supervisor

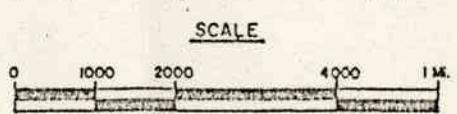
CACallaway/mb
Attachment

cc: USGS - 6
State of Utah - 2
Department of Natural Resources
Division of Oil & Gas Conservation
1588 West Temple
Salt Lake City, Utah 84111



4318
250 000
FEET
39° 00'
109° 30'
Map
N. 8
N. 8
4316
4315
T. 21 S.
4314

LEGEND
* GAS WELL
O PROPOSED WELL



Revised 2-24-77-CAG

Mobil Oil Corporation
Houston E & P Division
TOPOGRAPHIC MAP "B"
M^c Cormick Federal "C" Well No. 1
Sec. 11, T-2-S, R-22-E
GRAND COUNTY, UTAH

Scale
Date 10/9/76
Drawn J.V.N.
Checked CAG
Approved
Revised 12/9/76

Reg. File

March 2, 1977

United States Geological Survey
 Salt Lake City District
 8440 Federal Building
 125 South State Street
 Salt Lake City, Utah 84138

CONFIDENTIAL

7.01

FEBRUARY REPORT OF OPERATIONS
 MC CORMICK-FEDERAL C #1
 WILDCAT FIELD
 GRAND COUNTY, UTAH

Gentlemen:

Attached is the initial Monthly Report of Operations, Form 9-329 for the subject well which was spudded at 9:30 p.m., February 2, 1977, effective with our February 3, 1977 drilling report. Twenty-inch casing was set at 383' and cement circulated to the surface. On February 28, 1977, we were drilling at 3568' with a 17-1/2" bit, mud 9.2-55-8.

Yours very truly,

J. A. Morris
 Supervisor
 Regulatory Engineering

JAM:to
 Attachment

bcc: A. J. Alcott (w/copy of Conditions of Approval & Report)
 G. W. Barb " " " "
 D. E. Dewey " " " "
 B. E. Weihrich
 Central File

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE _____
LEASE NUMBER _____
UNIT _____

LESSEE'S MONTHLY REPORT OF OPERATIONS

State UTAH County GRAND Field WILDCAT

The following is a correct report of operations and production (including drilling and producing wells) for the month of MARCH, 1977,

Agent's address 3 GREENWAY PLAZA EAST Company MOBIL OIL CORPORATION

SUITE 800, HOUSTON, TX 77046 Signed J. A. Morris

Phone 713-626-8800 Agent's title REGULATORY ENGINEERING SUPERVISOR

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DAYS PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
SW NE SEC. 11	21S	22E	C1	Mc	CORMICK	FEDERAL	LEASE			DRILLING @ 7190' ON 3/31/77, 12 1/4" HOLE, MUD 8.6-33-18.4
NOTE: 13 3/8" CASING SET @ 4122'.										

CONFIDENTIAL

NOTE.—There were _____ runs or sales of oil; _____ M cu. ft. of gas sold;

_____ runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

April 4, 1977

United States Geological Survey
Salt Lake City District
8440 Federal Building
125 South State Street
Salt Lake City, Utah 84138

Attn: Mr. E. W. Guynn

7.01
MARCH REPORT OF OPERATIONS
MC CORMICK-FEDERAL C #1
WILDCAT FIELD
GRAND COUNTY, UTAH

Dear Mr. Guynn:

Attached is the March, 1977 Monthly Report of Operations, Form 9-329 for the subject well.

Yours very truly,

J. A. Morris
Regulatory Engineering Supervisor

JAM:to
Attachment

bcc: A. J. Alcott
G. W. Barb
D. E. Dewey
B. E. Weihrich/Central File

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-11244

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL GAS WELL OTHER Drilling

2. NAME OF OPERATOR
Mobil Oil Corporation

3. ADDRESS OF OPERATOR
Three Greenway Plaza East, Suite 800, Houston, TX 77046

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
1830' FNL & 1980' FSL, Sec.11, T21S, R22E

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

McCormick Federal C

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR B.L. AND SURVEY OR AREA

Sec. 11, T21S, R22E, Salt Lake Meridian

12. COUNTY OR PARISH 13. STATE

Grand

Utah

14. PERMIT NO. 15. ELEVATIONS (Show whether DP, RT, CR, etc.)
4709 GR

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF	<input type="checkbox"/>	PULL OR ALTER CASING	<input checked="" type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	MULTIPLE COMPLETE	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	ABANDON*	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	CHANGE PLANS	<input checked="" type="checkbox"/>
(Other)	<input type="checkbox"/>		

SUBSEQUENT REPORT OF:

WATER SHUT-OFF	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
FRACTURE TREATMENT	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
SHOOTING OR ACIDIZING	<input type="checkbox"/>	ABANDONMENT*	<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.)*

Propose 13 3/8 casing to 5400'

Set 10-3/4 casing @ 17,000' and circulate cement to 16,000' -

Originally 10-3/4 was to be set @ 14,100' and circulate cement to 5400'.

The change is requested so that more pipe can be salvaged in case of a dry hole.

RECEIVED			
REGULATORY ENGINEERING			
MAY 10 1977			
ADB		WBS	
JEE		JHS	
JAM			

Distribution: G.W. Barb
A.J. Alcott
J.A. Morris
D.E. Dewey

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

SIGNED Camille TITLE Authorized Agent DATE 4-29-77

(This space for Federal or State Office use)

APPROVED BY E.W. Seymour TITLE DISTRICT ENGINEER DATE MAY 30 1977

CONDITIONS OF APPROVAL, IF ANY:

Paradox Form. must be isolated w/ Abandonment

*See Instructions on Reverse Side

Qpr

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE
LEASE NUMBER
UNIT

LESSEE'S MONTHLY REPORT OF OPERATIONS

State Utah County Grand Field Wildcat

The following is a correct report of operations and production (including drilling and producing wells) for the month of April, 1977,

Agent's address 3 Greenway Plaza East Company Mobil Oil Corporation
Suite 800, Houston, Texas 77046 Signed J. A. Morris

Phone 713/626-8800 Agent's title REGULATORY ENGINEERING SUPERVISOR

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DAYS PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
SW NE Sec. 11	215	22E	C1		McCormick Federal Lease					Drilling at 10,338 on 4/30/77 12 1/2' Hole, Mud 8.6-34-20
NOTE:	Cored 9061-66, no recovery Run Schlumberger logs & Velocity Survey - TD 9360									

CONFIDENTIAL

NOTE.—There were 0 runs or sales of oil; 0 M cu. ft. of gas sold;

..... runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

May 2, 1977

United States Geological Survey
Salt Lake City District
8440 Federal Building
125 South State Street
Salt Lake City, Utah 84138

Attn: Mr. E. W. Guynn

7.01 APRIL REPORT OF OPERATIONS
MC CORMICK-FEDERAL C #1
WILDCAT FIELD
GRAND COUNTY, UTAH

Dear Mr. Guynn:

Attached is the April, 1977 Monthly Report of Operations, Form 9-329 for the subject well.

Yours very truly,



J. A. Morris
Regulatory Engineering Supervisor

JAM:to
Attachment

bcc: A. J. Alcott
G. W. Barb
D. E. Dewey
B. E. Weihrich/Central File

June 7, 1977

United States Geological Survey
Salt Lake City District
8440 Federal Building
125 South State Street
Salt Lake City, Utah 84138

Attn: Mr. E. W. Guynn

7.01 MAY REPORT OF OPERATIONS
MC CORMICK-FEDERAL C #1
WILDCAT FIELD
GRAND COUNTY, UTAH

Dear Mr. Guynn:

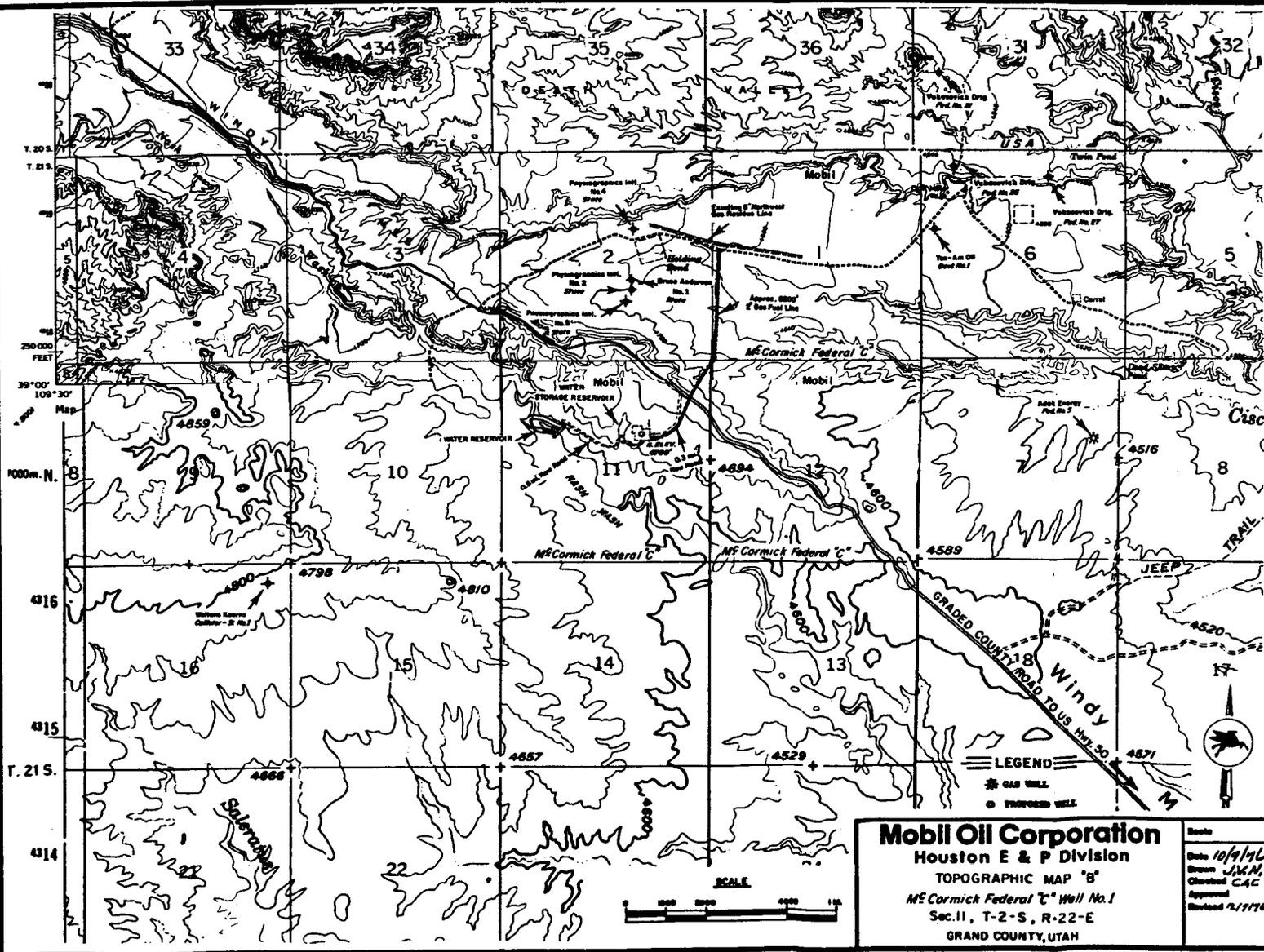
Attached is the May, 1977 Monthly Report of Operations, Form 9-329 for the subject well.

Yours very truly,

J. A. Morris
Regulatory Engineering
Supervisor

JAM:to
Attachment

bcc: A. J. Alcott
G. W. Barb
D. E. Dewey
B. E. Weihrich/Cent. File



Mobil Oil Corporation
 Houston E & P Division
 TOPOGRAPHIC MAP "B"
 McCormick Federal "C" Well No. 1
 Sec. 11, T-2-S, R-22-E
 GRAND COUNTY, UTAH

Scale
Date 10/9/46
Drawn J.M.M.
Checked C.A.C.
Approved
Revised 2/1946

LEGEND
 * GAS WELL
 ○ PROPOSED WELL



Orig To: B. E. Wainrich
Copy: Regulatory



CALVIN L. RAMPTON
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

GUY N. CARDON
Chairman

CLEON B. FEIGHT
Director

CHARLES R. HENDERSON
ROBERT R. NORMAN
I. DANIEL STEWART
HYRUM L. LEE

June 14, 1977

CONFIDENTIAL

Mr. J. A. Morris
Supervisor, Regulatory Engineering
Mobil Oil Corporation
Three Greenway Plaza East-Suite 800
Houston, Texas 77046

Re: McCormick-Federal C-1
A. P. I. No. 43-019-30328
Sec. 11, T. 21 S., R. 22 E.
Grand County, Utah

Dear Mr. Morris:

A recent check of the file on this well indicates that you apparently have overlooked Rule C-22; A-1 of the State of Utah. This particular rule states:

"Where the well is in the process of being drilled, said report must be made for each calendar month, beginning with the month in which drilling operations were initiated and must be filed on or before the sixteenth (16) day of the succeeding month."

It would be appreciated if the drilling report is brought up to date, and that subsequent reports be filed in the manner proscribed.

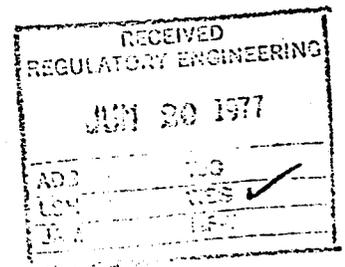
This information will be kept confidential as requested.

Very truly yours,

Patrick L. Driscoll
PATRICK L. DRISCOLL
CHIEF PETROLEUM ENGINEER

cc: U.S. Geological Survey

PLD/ksw





CALVIN L. RAMPTON
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

GUY N. CARDON
Chairman

CLEON B. FEIGHT
Director

CHARLES R. HENDERSON
ROBERT R. NORMAN
I. DANIEL STEWART
HYRUM L. LEE

June 14, 1977

Mr. J. A. Morris
Supervisor, Regulatory Engineering
Mobil Oil Corporation
Three Greenway Plaza East-Suite 800
Houston, Texas 77046

Re: McCormick-Federal C-1
A. P. I. No. 43-019-30328
Sec. 11, T. 21 S., R. 22 E.
Grand County, Utah

Dear Mr. Morris:

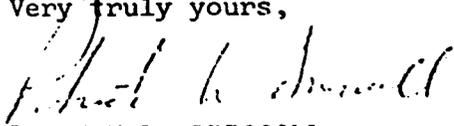
A recent check of the file on this well indicates that you apparently have overlooked Rule C-22; A-1 of the State of Utah. This particular rule states:

"Where the well is in the process of being drilled, said report must be made for each calendar month, beginning with the month in which drilling operations were initiated and must be filed on or before the sixteenth (16) day of the succeeding month."

It would be appreciated if the drilling report is brought up to date, and that subsequent reports be filed in the manner proscribed.

This information will be kept confidential as requested.

Very truly yours,


PATRICK L. DRISCOLL
CHIEF PETROLEUM ENGINEER

cc: U.S. Geological Survey

PLD/ksw

Mobil Oil Corporation

THREE GREENWAY PLAZA EAST - SUITE 800
HOUSTON, TEXAS 77046

June 21, 1977

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

CONFIDENTIAL

Attn: Patrick L. Driscoll

Re: McCormick-Federal C-1
A.P.I. No. 43-019-30328
Sec. 11, T. 21 S., R. 22 E.
Grand County, Utah

Dear Mr. Driscoll:

Attached are copies of the Monthly Report of Operations that Mobil has been furnishing the USGS. Please accept our apologies for overlooking filing this report with your office.

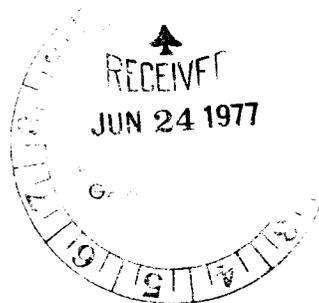
Yours very truly,

A. S. Bond

Jov

J. A. Morris
Regulatory Engineering Supervisor

ADBond:to
Attachments



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE _____
LEASE NUMBER _____
UNIT _____

LESSEE'S MONTHLY REPORT OF OPERATIONS

State Utah County Grand Field Wildcat

The following is a correct report of operations and production (including drilling and producing wells) for the month of May, 1977,

Agent's address 3 Greenway Plaza East Company Mobil Oil Corporation
Suite 800, Houston, Texas 77046

Phone 713/626-8800 Signed J. A. Morris
Agent's title REGULATORY ENGINEERING SUPERVISOR

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DAYS PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
SW NE Sec. 11	215	22 E	C1		McCormick Federal Lease					Drilling at 13,756 on 5/31/77 12 1/2" Hole, Mud 8.6-34-26

CONFIDENTIAL



NOTE.—There were 0 runs or sales of oil; 0 M cu. ft. of gas sold;

_____ runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE
LEASE NUMBER
UNIT

LESSEE'S MONTHLY REPORT OF OPERATIONS

State Utah County Grand Field Wildcat

The following is a correct report of operations and production (including drilling and producing wells) for the month of June, 1977,

Agent's address 3 Greenway Plaza East Company Mobil Oil Corporation
Suite 800, Houston, Texas 77046

Phone 713/626-8800 Signed J. A. Morris Agent's title REGULATORY ENGINEERING SUPERVISOR

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DAYS PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
SW NE Sec. 11	215	22 E	C1		McCormick Federal Lease					Drilling at 15,733' on 6/30/77, 12 1/2" Hole, Mud 8.7-36-24.4

CONFIDENTIAL



NOTE.—There were 0 runs or sales of oil; 0 M cu. ft. of gas sold;

0 runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

July 15, 1977

Memo to File

Confidential.....

Re: Mobil Oil Company
McCormack Fed. #1
Sec. 11, T. 21 S., R. 22 E.
Grand County

This deep well is being drilled by Brinkerhoff Drilling Company's Rig #53. At the time of the visit on July 13, 1977, total depth was 16,326 feet. Preparations were being made to run an intermediate string of 10 3/4 inch casing.

The rig was given a safety inspection and it was found to have improved considerably since the inspection in February. It is now considered to be above average relative to safety features.



PATRICK L. DRISCOLL
CHIEF PETROLEUM ENGINEER

PLD/src

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE _____
LEASE NUMBER _____
UNIT _____

LESSEE'S MONTHLY REPORT OF OPERATIONS

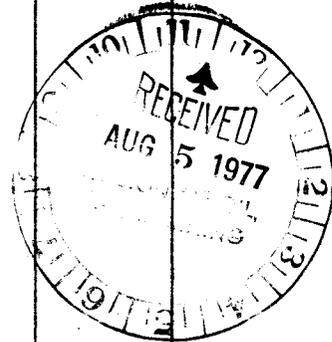
State Utah County Grand Field Wildcat

The following is a correct report of operations and production (including drilling and producing wells) for the month of July, 1977,

Agent's address 3 Greenway Plaza East Company Mobil Oil Corporation
Suite 800, Houston, Texas 77046

Phone 713/626-8800 Signed J. A. Morris
Agent's title REGULATORY ENGINEERING SUPERVISOR

SEC. AND ¼ OF ¼	TWP.	RANGE	WELL NO.	DAYS PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
SW NE Sec. 11	21S	22E	C1		McCormick Federal Lease					Drilling at 17,137' on 7/31/77, 9½" Hole, Mud 8.7-36-22 Set 10-¾" casing at 16,326' with 640 sx cement.



NOTE.—There were 0 runs or sales of oil; 0 M cu. ft. of gas sold;
0 runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE _____
LEASE NUMBER _____
USER _____

P

MONTHLY REPORT OF OPERATIONS

State Utah County Grand Field Wildcat

The following is a correct report of operations and production (including drilling and producing wells) for the month of August, 1977,

Agent's address 3 Greenway Plaza East Company Mobil Oil Corporation
Suite 800, Houston, Texas 77046 Signed J.A. Morris

Phone 713/626-8800 Agent's title REGULATORY ENGINEERING SUPERVISOR

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL No.	Days Produced	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS of GASOLINE Recovered	BARRELS OF WATER (U.S. Gallons, or state)	REMARKS (If drilling, depth, hole size, casing size, and results of test for modulus and content of gas)
SW NE Sec. 11	21S	22E	C1		McCormick Federal Lease					Drilled to 17462 in 9 1/2" hole with 10-3/4" casing at 16,326". Lost drill collars in hole. Fished unsuccessfully. On 8/31/77 attempting to set whip stock and drill past fish.

NOTE.—There were 0 runs or sales of oil; 0 M cu. ft. of gas sold; _____ runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE _____
LEASE NUMBER _____
UNIT _____

LESSEE'S MONTHLY REPORT OF OPERATIONS

State Utah County Grand Field Wildcat

The following is a correct report of operations and production (including drilling and producing wells) for the month of September, 19 77,

Agent's address 3 Greenway Plaza East Company Mobil Oil Corporation
Suite 800 Houston, Texas Signed [Signature] 10/4/77

Phone 713/626-8800 Agent's title Regulatory Engineering Sup.

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DAYS PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, describe; if shut down, cause; date and result of test for gasoline content of gas)
SWNE Sec. 11	21S	22E	C1							10-3/4" casing at 16,326'. Top of fish at 16,805'. On 9/30/77 drilling granite wash @ 16,972' in 9-1/2" sidetracked hole. Mud 8.6-38-22.4

NOTE.—There were 0 runs or sales of oil; 0 M cu. ft. of gas sold; _____ runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE _____
LEASE NUMBER _____
UNIT _____

Confidential

LESSEE'S MONTHLY REPORT OF OPERATIONS

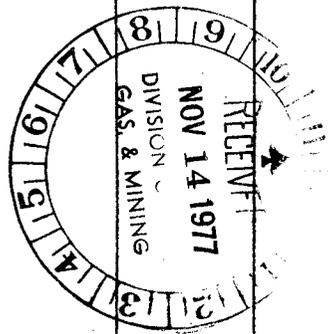
State Utah County Grand Field Undesignated

The following is a correct report of operations and production (including drilling and producing wells) for the month of October, 1977.

Agent's address 3 Greenway Plaza-E, Suite 800 Company Mobil Oil Corporation
Houston, Texas 77046

Phone 713/626-8800 Signed JL Morris
Agent's title Regulatory Engr. Supervisor

Sec. and 1/4 of 1/4	TWP.	RANGE	WELL No.	DAYS Produced	BARRELS OF OIL	GRAVITY	Cu. Ft. of GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
SW NE Sec. 11	21S	22E	<u>C1</u>		McCormick Federal Lease					10/31/77 10-3/4" Casing @ 16,326'. @ 18,126' Fishing & testing Drill Pipe. Mud 8.7-41-17



Note.—There were 0 runs or sales of oil; 0 M cu. ft. of gas sold; _____ runs or sales of gasoline during the month. (Write "no" where applicable.)

Note.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

CIRCULATE TO:

DIRECTOR ----- *W*
PETROLEUM ENGINEER ----- *W*
MINE COORDINATOR ----- *W*
ADMINISTRATIVE ASSISTANT ----- *W*
ALL ----- *W*
RETURN TO Kathy Wells
FOR FILING

November 28, 1977

Memo To File:

Re: Mobil Oil Corporation
McCormick Federal C-#1
Sec. 11, T. 21S, R. 22E,
Grand County, Utah

CONFIDENTIAL

Verbal permission was given to Mobil Oil Co. on November 25, 1977 to plug and abandon this well. Total depth is in excess of 19,000'.

The plugging program is somewhat complex and the final plugging will be dependent upon the various amounts of pipe recovered. Therefore, it will not be incorporated into this memo.

PATRICK L. DRISCOLL
CHIEF PETROLEUM ENGINEER

PLD/ko

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 GEOLOGICAL SURVEY

Form 9-329-1 Rev. Feb 76
 OMB 42-RO356

MONTHLY REPORT
 OF
 OPERATIONS
 (Continued)

Lease No. _____
 Communitization Agreement No. _____
 Field Name Wildcat
 Lease Name McCormick Federal "C"
 Participating Area _____
 County Grand State Utah
 Operator Mobil Oil Corporation

Amended Report

Page 2 of 2

The following is a continuation of the report of operations and production (including status of all unplugged wells) for the month of November, 19 77

(See Reverse of Form 9-329 for Instructions)

Well No.	Sec & 1/4 of 1/4	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
<u>11/30:</u>	Spotted	75 sk	plug	8750-8650,	150 sk	plug	4130-4000,	75 sk	plug 400-300.
<u>12/1:</u>	Remove	13 3/8	csg	head,	spot	plug	in	surface,	install
	11 am.	12/1/77.	Clean	up	location.	<u>Final Report.</u>			marker, rig released

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. oil well gas well other **DRILLING**

2. NAME OF OPERATOR
MOBIL OIL CORPORATION

3. ADDRESS OF OPERATOR **3 GREENWAY PLAZA EAST
HOUSTON, TX 77046**

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: **1830' FEL & 1980' FNL**
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

5. LEASE **U11244
McCORMICK FEDERAL**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
MCCORMICK FEDERAL C

9. WELL NO.
1

10. FIELD OR WILDCAT NAME
WILDCAT

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
**SEC. 11 T21S R22E
SALT LAKE MERIDIAN**

12. COUNTY OR PARISH | 13. STATE
GRAND | UTAH

14. API NO.
43-019-30328

15. ELEVATIONS. (SHOW DF, KDB, AND WD)
4709GR

REQUEST FOR APPROVAL TO: SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

PULL OR ALTER CASING

MULTIPLE COMPLETE

CHANGE ZONES

ABANDON*

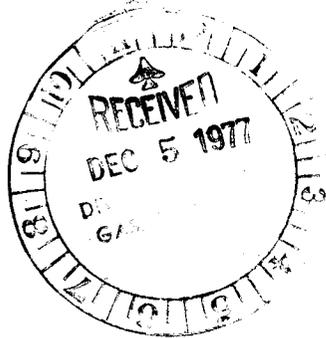
(other) **AMEND PERMIT DEPTH**

CONFIDENTIAL

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

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

ORIGINAL PERMIT DEPTH = 18000'
REQUESTED PERMIT DEPTH = 21000'



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

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

SIGNED *J. A. Morris* TITLE _____ DATE 11/21/77

(This space for Federal or State office use)
APPROVED BY *E. L. ...* TITLE **DISTRICT ENGINEER** DATE **DEC 02 1977**

CONDITIONS OF APPROVAL IF ANY:
*** No prior approval**

File
*See Instructions on Reverse Side
cc: Utah O.G. & M. SLC

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. oil well gas well other Drilling

2. NAME OF OPERATOR
Mobil Oil Corporation

3. ADDRESS OF OPERATOR 77046
3 Greenway Plaza-E, Suite 800, Houston, TX

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1830' FEL & 1980' FNL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

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

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

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.)*

4. Spot cement plug from top of casing stub up 100' into open hole.
5. Spot cement plug from 4130' to 4000'.
6. Spot cement plug from 400' to 300'.
7. Spot cement plug from 10' to surface, installing 4" riser in cement at least 6' below ground level and extending 4' above ground.
8. Remove and dispose of all trash from location.
9. Fold and recontour pit area. Fence if necessary to dry out. Location can then be reconditioned after plugging.

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

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

SIGNED J.A. Morris TITLE Reg. Engr. Sup. DATE November 29, 1977

APPROVED BY E.A. Morris (This space for Federal or State office use) TITLE DISTRICT ENGINEER DATE 11/28/77

CONDITIONS OF APPROVAL, IF ANY:

5. LEASE U11244
McCormick Federal

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
McCormick Federal C

9. WELL NO.
1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 11 T21S R22E
Salt Lake Meridian

12. COUNTY OR PARISH Grand 13. STATE Utah

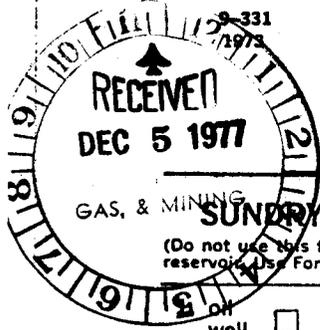
14. API NO.
43-019-30328

15. ELEVATIONS (SHOW DF, KDB, AND WD)
4709 GR

CONFIDENTIAL

(NOTE: Report results of multiple completion or zone change on Form 9-330.)





UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

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 Form 9-331-C for such proposals.)

Oil well gas well other Drilling

2. NAME OF OPERATOR Mobil Oil Corporation
3. ADDRESS OF OPERATOR 77046 3 Greenway Plaza-E, Suite 800, Houston, TX
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.) AT SURFACE: 1830' FEL & 1980' FNL AT TOP PROD. INTERVAL: AT TOTAL DEPTH:

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

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

5. LEASE U11244 McCormick Federal
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME McCormick Federal C
9. WELL NO. 1
10. FIELD OR WILDCAT NAME Wildcat
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 11 T21S R22E Salt Lake Meridian
12. COUNTY OR PARISH Grand 13. STATE Utah
14. API NO. 43-019-30328
15. ELEVATIONS (SHOW DF, KDB, AND WD) 4709GR

CONFIDENTIAL

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

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

TD 19302
20" casing @ 383' cemented to surface
13-3/8" casing @ 4122' cemented to surface
10-3/4" casing @ 16,326' cemented to 11,400' per McCullough temperature survey.
Mud in hole 8.7-50-16

There is cement plug in 10-3/4" casing and hole from 16,379 to 16,240. It is requested that approval be given to plug the well as follows:

- 1. Spot cement plug from 16,240' to 16,000'.
2. Spot cement plug from 11,600' to 11,400'.
3. Cut 10-3/4" casing at 8750' and attempt to recover. If unable to pull casing cut at 8500' and/or at other locations up the hole until casing recovered.

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

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

SIGNED J. A. Morris TITLE Reg. Engr. Sup. DATE November 29, 1977

J. A. Morris (This space for Federal or State office use)

APPROVED BY See Page 2 TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

File

*See Instructions on Reverse Side

cc: Pat Priscott, UTAH O.G. & M. SLC

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. oil well gas well other Drilling (P & A)

2. NAME OF OPERATOR
Mobil Oil Corporation

3. ADDRESS OF OPERATOR 77046
3 Greenway Plaza E, Suite 800, Houston, TX

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1830' FEL & 1980' FNL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

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

REQUEST FOR APPROVAL TO:

- TEST WATER SHUT-OFF
- FRACTURE TREAT
- SHOOT OR ACIDIZE
- REPAIR WELL
- PULL OR ALTER CASING
- MULTIPLE COMPLETE
- CHANGE ZONES
- ABANDON*
- (other)

SUBSEQUENT REPORT OF:



CONFIDENTIAL

NOTE: Report results of multiple completion or zone change on Form 9-330.)

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

TD 19302
 20" casing @ 383' cemented to surface
 13-3/8" casing @ 4122' cemented to surface
 10-3/4" casing @ 16,326' cemented to 11,400' per McCullough temperature survey.
 Mud in hole 8.7-50-16 (Cmt plug in 10-3/4 csg & OH 16240-16379')

11/27/77 - 12/1/77:

- Plug #1: 100 sx Class G + 35% silica flour 16242-16379'
Cmt & recovered 10-3/4" csg @ 8750'.
- Plug #2: 80 sx Class G + 35% silica flour 16000-16242'
- Plug #3: 70 sx Class G 11,400-11,600'
- Plug #4: 75 sx Class G 8650-8750'
- Plug #5: 150 sx Class G 300-400'

(over)

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

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

SIGNED Virginia Howard TITLE Authorized Agent DATE 12/2/77

(This space for Federal or State office use)

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

Location to be reconditioned in accordance w/surface use plan & reported when complete.

Instructions

General: This form is designed for submitting proposals to perform certain well operations; and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law 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.

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 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

GPO : 1976 O - 214-149

17. (con't)

Plug #6: 10' plug in top of Csg. Installed 4" pipe marker 6' below surface to 4' above surface.

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

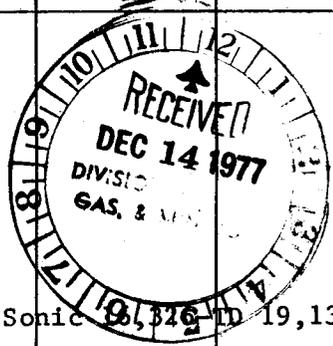
Lease No. U-11244
 Communitization Agreement No. _____
 Field Name Wildcat
 Lease Name McCormick Federal "C"
 Participating Area _____
 County Grand State Utah
 Operator Mobil Oil Corporation
 Amended Report

The following is a correct report of operations and production (including status of all unplugged wells) for the month of November, 19 77

(See Reverse of Form for Instructions)

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

Well No.	Sec. & 1/4 of 1/4	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
1	Sec 11 SW/NE	21S	22E	DRG					11/30/77: P & A operations in progress.
11/1-7: Fishing and milling on junk									
11/7-20: Drilling 9 1/2" hole.									
11/20-21: TD 19,130' Ran velocity survey, GR - Sonic 19,126' TD 19,130'									
11/23-25: TD 19,287', ran GR Density, Dip Meter. Cut & rec. 15' cores 19,287-302'. Spotted 100x.									
11/26: Ran drl pipe to 16,379, spotted 100 sk Class G cmt plug. Top of cmt 16,240, PBTD.									
11/28: Cut 10 3/4" csg @ 8750', LD 204 jts.									
11/29: Installed BOP's. Spotted 80 sk G cmt plug 16,242-16,000. Spotted 70 sk G cmt plug 11,600-11,400'.									



*If none, so state.

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

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

Authorized Signature: Virginia Howard Address: 3 Greenway Plaza East, Suite 800,
 Title: Authorized Agent Page 1 of 2 Houston, TX
 77046

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

API #43-019-30328
SUBMIT IN DUPL.

(See instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL GAS WELL DRY Other _____
 b. TYPE OF COMPLETION: NEW WELL WORK OVER DEEP-EN PLUG BACK DIFF. LESVR. Other P & A

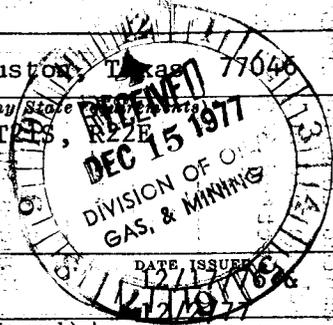
2. NAME OF OPERATOR
Mobil Oil Corporation

3. ADDRESS OF OPERATOR
Three Greenway Plaza East, Suite 800, Houston, Texas 77046

4. LOCATION OF WELL (Report location clearly and in accordance with any State or Federal laws, regulations, or orders)
At surface 1830' FEL & 1980' FNL, Sec. 11, T21S, R22E, Salt Lake Meridian

At top prod. interval reported below
At total depth

CONFIDENTIAL



5. LEASE DESIGNATION AND SERIAL NO.
U-11244
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME
McCormick Federal "C"
9. WELL NO.
#1
10. FIELD AND POOL, OR WILDCAT
Wildcat
11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
Sec 11, T21S, R22E, Salt Lake Meridian
12. COUNTY OR PARISH
Grand
13. STATE
Utah

15. DATE SPUDDED 2/3/77 16. DATE T.D. REACHED 11/24/77 17. DATE COMPL. (Ready to prod.) 12/1/77 18. ELEVATIONS (DF, REB, RT, GR, ETC.)* 4709' - GR/4734' RT 19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD 19302' 21. PLUG, BACK T.D., MD & TVD 16240* 22. IF MULTIPLE COMPL., HOW MANY* - 23. INTERVALS DRILLED BY ROTARY TOOLS 0-19,302' CABLE TOOLS

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

25. WAS DIRECTIONAL SURVEY MADE
No

26. TYPE ELECTRIC AND OTHER LOGS RUN
Velocity Survey; GR - Sonic; Density; Dipmeter
27. WAS WELL CORED
Yes

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

CASINO SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
20"	94#	383'	26"	900 sx + 2% CaCl ₂ (Circ.)	
13-3/8"	61#/68#	4,122'	17 1/2"	2100 sx (circ.)	
10-3/4"	51#/55#/60.7#	16,326'	12 1/4"	640 sx cmt. (Top @ 11,400')	8750'

29. LINER RECORD

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

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

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

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.
DEPTH INTERVAL (MD) AMOUNT AND KIND OF MATERIAL USED
See reverse for sidetrack operations.

33. No Test PRODUCTION

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

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

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

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) _____ TEST WITNESSED BY _____

35. LIST OF ATTACHMENTS
Electric logs not received as of 12/12/77; will be forwarded on receipt.

36. I hereby certify that the foregoing, and attached information is complete and correct as determined from all available records
SIGNED Virginia Steward TITLE Authorized Agent DATE 12/12/77

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

*Before P & A operations.

INSTRUCTIONS

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

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

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

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

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool. **Item 33:** Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

#32. Drld to 17462'; lost 8 drl Collars in hole. TOF @ 16867'. Attempted to side track hole. Spotted. 150 sx cmt w/DP @ 16805'. Drld cmt 16665 - top of fish; fell back in old hole. Spotted 300 sx cmt w/DP @ 16867'. Drld cmt 16360 - 16,563 & fell back in old hole. Spotted 300 sx cmt w/DP @ 16780'; drld cmt 14929 w/Dyna drill unit. Hole sidetracked @ 16,500'.

FORMATION	TOP		DESCRIPTION, CONTENTS, ETC.	BOTTOM		GEOLOGIC MARKERS	
	TOP	BOTTOM		NAME	MEAS. DEPTH	TOP	TRUM VERT. DEPTH
Buckhorn	1643	1662	Sandstone, water - wet			Mancos Sh	Surface
Buckhorn	1675	1690	" "			Dakota	1579
Morrison	1700	1730	" "			Buckhorn	1643
Salt Wash	2031	2086	" "			Morrison	1690
Entrada	2331	2692	" "			Salt Wash	2086
			Cored 15' interval 19287 - 19302,			Summerville	2132
			recovered 15'. (Not analyzed.)			Entrada	2331
			No DST's.			Carmel	2692
						Wingate	3001
						Chinle	3342
						Cutler	3494

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
Re-enter DRILL DEEPEN PLUG BACK

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

2. NAME OF OPERATOR
TXO Production Corp. Attn: Paul Urban

3. ADDRESS OF OPERATOR
1800 Lincoln Center Building, Denver, CO 80264

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface
1980' FNL, 1829' FEL, Section 11-T21S-R22E
At proposed prod. zone

SWNE

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
Approximately 9 miles NW of Cisco, Utah.

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
1829'

16. NO. OF ACRES IN LEASE
360

17. NO. OF ACRES ASSIGNED TO THIS WELL
160

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

19. PROPOSED DEPTH
2400'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
4710'

22. APPROX. DATE WORK WILL START*
February 1, 1983

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT

TXO Production Corp. proposes to re-enter an existing plugged and abandoned well, the Mobil 1 McCormick Federal "C". Two plugs inside of the 13 3/8", 61#, S-80 casing will be drilled out. These plugs are located at the surface and at approximately 300 to 400 feet below the surface. After these plugs are drilled out, the hole will be cleaned and circulated to 2400 feet, the casing will be perforated and the well will be tested. A plug located at approximately 4000 feet below the surface will not be drilled out.

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 12-31-82
BY: *[Signature]*

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 *R. Bruce Wright for R.E. Dashner* TITLE District Drilling Engineer DATE December 14, 1982
Ronald E. Dashner

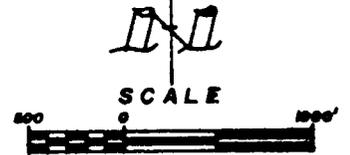
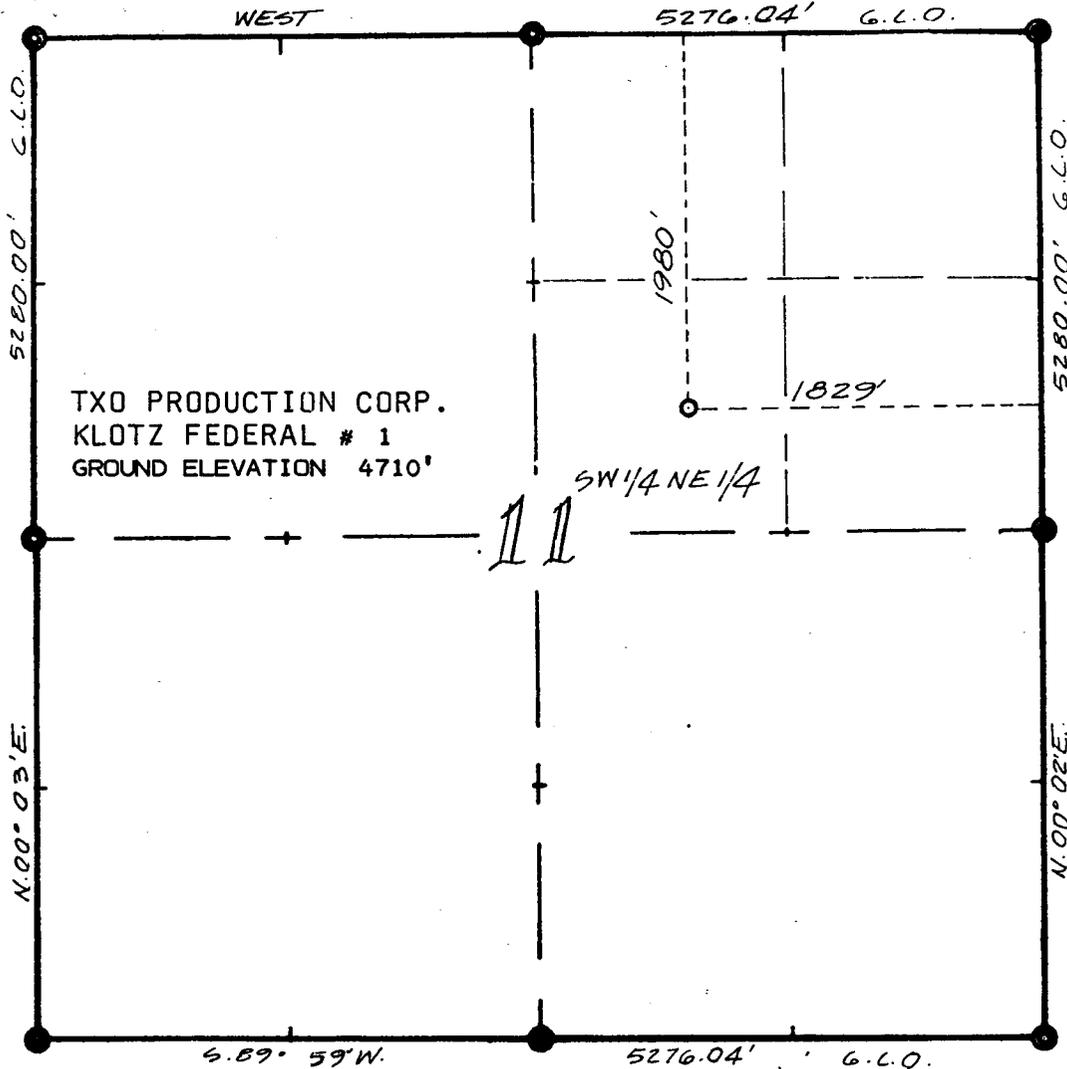
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

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

SEC. 11, T. 21 S., R. 22 E. OF THE S.L.M.

PLAT # 1
LOCATION PLAT



- LEGEND**
- STANDARD LOCATION OF GLO CORNERS.
 - GLO CORNERS FOUND.
 - WELL LOCATION STAKED.
- REFERENCE DOCUMENTS**
- 1921 GLO PLAT
 - SEGO CANYON, UTAH QUADRANGLE, USGS

BEARINGS ARE BASED ON THE GLO BEARING GIVEN BETWEEN THE NE COR AND THE E. 1/4 COR.

THIS WELL LOCATION PLAT WAS PREPARED FOR TXO PRODUCTION CORP.
 AS REQUESTED BY PAUL URBAN, TO LOCATE THE
KLOTZ FEDERAL # 1, 1980' F.N.L. & 1829' F.E.L.,
 IN THE SW 1/4 NE 1/4, OF SECTION 11, T. 21 S., R. 22 E. OF THE S.L.M.
GRAND COUNTY, UTAH.



SURVEYOR'S CERTIFICATE

I, LARRY D. BECKER A REGISTERED LAND SURVEYOR
 IN THE STATE OF UTAH DO HEREBY CERTIFY THAT THIS
 SURVEY WAS MADE UNDER MY DIRECT SUPERVISION AND
 THAT THIS PLAT REPRESENTS SAID SURVEY.

Larry D. Becker
 UTAH L.S. NO. 4189

SURVEYED	9-21	ENERGY SURVEYS & ENGINEERING CORP.	Exhibit 2 Survey Plat	SCALE 1" = 1000'
DRAWN	10-21			JOB NO.
CHECKED	10-21			SHEET

9-331 C ADDENDUM
Klotz Federal #1
Section 11-T21S-R22E
Grand County, Utah

1. SURFACE FORMATION: Mancos

2. ESTIMATED FORMATION TOPS:

Dakota Silt	1480'
Buckhorn	1675'
Morrison	1690'
Entrada	2330'
Total Depth	2400'

3. ESTIMATED DEPTH AT WHICH OIL, GAS, WATER OR OTHER MINERAL BEARING ZONES ARE EXPECTED TO BE ENCOUNTERED:

Expected Gas Zones:	Dakota	1480'
	Morrison	1690'
	Entrada	2330'

Expected Oil Zones:	Dakota	1480'
	Morrison	1690'

Water may be encountered in the Morrison formation.

4. CASING PROGRAM AS PER FORM 9-331 C.

5. PRESSURE CONTROL EQUIPMENT:

A. After surface casing is set, a double ram-type blowout preventer with blind rams and pipe rams, with minimum working pressure of 2000 psi (greater than the anticipated bottomhole pressure of 1100 psi), will be installed. See Exhibit 1.

B. A choke control, fill and kill lines with minimum working pressure of 2000 psi will be installed.

C. The equipment in A and B will be pressure-tested to 2000 psi before drilling surface pipe cement, and the blowout preventer will be tested for operations daily and during trips.

6. MUD PROGRAM:

0'-TD Use 3% KCl mud at 8.4#/gal., vis. 28-32 sec. API.

7. AUXILIARY EQUIPMENT:

A. A sub with full opening valve will be kept on the derrick floor to stab into DP when kelly is not in use.

8. CORING, LOGGING, TESTING PROGRAM:

- A. No coring is anticipated.
- B. GR from surface to TD.
- C. No DST's are planned.

9. ABNORMAL CONDITIONS:

- A. No abnormal pressures or temperatures are expected.
- B. No hazardous gases such as H₂S are expected.

10. ANTICIPATED STARTING DATES:

Start location	February 1, 1983
Spud date	February 5, 1983
Complete drilling	February 8, 1983
Completed, ready for pipeline	February 11, 1983

11. Productive zones will be perforated, tested and treated as necessary. Gas will be flared during testing. The extent of treatment of a zone (acidizing and/or fracing) can only be determined after the zone has been tested. A completion program will be furnished after drilling and logging.

Requested lease plat
as per telecom with
Paul Urbair 12-28-82

[Signature]

Rec'd 12-30-82

[Signature]

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

MINERALS MANAGEMENT SERVICE
RECEIVED

Dec 28 1982

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
Re-enter DRILL DEEPEN PLUG BACK

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

2. NAME OF OPERATOR
TXO Production Corp. Attn: Paul Urban

3. ADDRESS OF OPERATOR
1800 Lincoln Center Building, Denver, CO 80264

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
At surface
1980' FNL, 1829' FEL, Section 11-T21S-R22E
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
Approximately 9 miles NW of Cisco, Utah.

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1829'

16. NO. OF ACRES IN LEASE 360

17. NO. OF ACRES ASSIGNED TO THIS WELL 160

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

19. PROPOSED DEPTH 2400'

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 4710'

22. APPROX. DATE WORK WILL START* February 1, 1983

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT

RECEIVED
JAN 26 1983

DIVISION OF OIL, GAS & MINING

TXO Production Corp. proposes to re-enter an existing plugged and abandoned well, the Mobil 1 McCormick Federal "C". Two plugs inside of the 13 3/8", 61#, S-80 casing will be drilled out. These plugs are located at the surface and at approximately 300 to 400 feet below the surface. After these plugs are drilled out, the hole will be cleaned and circulated to 2400 feet, the casing will be perforated and the well will be tested. A plug located at approximately 4000 feet below the surface will not be drilled out.

In 1977 Mobil Oil Corporation received plugging instructions to place a plug across the shoe of the 13 3/8" casing from 4000' to 4130'. Prior to perforating, the operator should tag this plug with drill pipe to assure the integrity of the plug.

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. SIGNER R. Bruce Wright for R.E. Dashner TITLE District Drilling Engineer DATE December 14, 1982
Ronald E. Dashner

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY W.P. Mautner TITLE E. W. Guynn DATE JAN 25 1983
District Oil & Gas Supervisor

CONDITIONS OF APPROVAL, IF ANY:

NOTICE OF APPROVAL

CONDITIONS OF APPROVAL ATTACHED TO OPERATOR'S COPY

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

State O & G

SEED MIXTURE

<u>Species</u>		<u>Rate</u> <u>lbs/acre</u>
<u>Grasses</u>		
Hilaria jamesii	Galleta (Curlygrass)	2
Oryzopsis hymenoides	Indian ricegrass	2
<u>Forbs</u>		
Helianthus annuus	Common sunflower (Kansas sunflower)	.5
Sphaeralcea coccinea	Scarlet globemallow	.5
<u>Shrubs</u>		
Atriplex canescens	Fourwing saltbush (White greasewood)	1
Eurotia lanata	Winterfat (Whitesage)	<u>1</u>
	Total	7

ADDITIONAL STIPULATIONS FOR PRODUCTION FACILITIES

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

- (1) The oil and gas measurement facilities must be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy are to be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. Please provide this office with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports are to be submitted to the Salt Lake City District Oil and Gas Supervisor. Royalty payments will be made on all production volume as determined by the meter measurements or the tank measurements. All measurement facilities must conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.
- (2) Gas meter runs for each well will be located within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and 500 feet downstream of the meter run or any production facilities. Meter runs must be housed and/or fenced.
- (3) All disturbed areas not required for operations will be rehabilitated.
- (4) All produced liquids must be contained including the dehydrator vent/condensate line effluent. All production pits must be fenced.
- (5) The well activity, the well status and the date the well is placed on production must be reported on Lessee's Monthly Report of Operations, Form 9-329.
- (6) All off-lease storage, off-lease measurement, or commingling on lease or off-lease must have written approval.
- (7) All product lines entering and leaving hydrocarbon storage tanks must be locked/sealed.
- (8) You are reminded of the requirements for handling, storing, or disposing of water produced from oil and gas wells under NTL-2B.
- (9) All materials, trash, junk, debris, etc. not required for production must be removed from the well site and production facility site at the completion of these operations.
- (10) A copy of the Gas Sales Contract will be provided to this office and the Royalty Accounting Department as directed.
- (11) Construction and maintenance for surface use approved under this plan should be in accordance with the surface use standards as set forth in the BLM/GS Oil and Gas Brochure entitled, "Surface Operating Standards for Oil and Gas Exploration and Development." This includes, but is not limited to, such items as road construction and maintenance, handling of top soil and rehabilitation.
- (12) "Sundry Notice and Reports on Wells" (form 9-331) will be filed for all changes of plans and other operations in accordance with 30 CFR 221.58. Emergency approval may be obtained verbally, but such approval does not waive the written report requirement. Any additional construction, reconstruction, or alternations of facilities, including roads, gathering lines, batteries, measurement facilities, etc., will require the filing of a suitable plan and prior approval by the survey.

TXO PRODUCTION CORP.
MULTIPOINT SURFACE USE AND OPERATIONS PLAN

DATE: December 17, 1982

WELL NAME: Klotz Federal #1

LOCATION: 1980' FNL, 1829' FEL, Section 11-T21S-R22E, Grand County, Utah.

FEDERAL OIL & GAS LEASE NO.: U-47184

1. EXISTING ROADS

- A. Proposed well site as staked. Refer to Exhibit 2. The well has been staked 1980' FNL and 1829' FEL in Section 11-T21S-R22E.
- B. Route and distance from nearest town or locatable reference point to where proposed access route leaves existing road: From Cisco, Utah, proceed southwest on the Cisco Loop Road for 3.7 miles on the Cunningham Ranch Road. Turn right and proceed northwest for 5.4 miles on this improved gravel road. (The Cunningham Ranch Road passes under I-70.) Take the left fork and proceed west along an unimproved trail for 0.7 mile to the location of the Klotz Federal #1.
- C. Access route to location color coded in red and labeled. Refer to Exhibit 3.
- D. For development well, all existing roads within one mile color coded in yellow. Refer to Exhibit 4.
- E. Plans for improvement and maintenance of existing roads: The last 0.7 mile of road will require upgrading. This stretch of road will be widened to 18 feet and will be crowned and ditched to facilitate drainage. During wet periods, some maintenance may be necessary to allow passage by drillings rigs and well servicing vehicles. Dry periods may necessitate watering the road to control dust.

2. PLANNED ACCESS ROAD

Show all necessary roads to be constructed or reconstructed: Since the access route utilizes existing roads, no new access road will be required.

3. LOCATION OF EXISTING WELLS

Exhibit 6 is a one-mile radius locating and identifying the following:

- A. Water Wells-None
- B. Abandoned Wells-Mobil 2 McCormick Fed. C, Sec. 11-T21S-R22E
Mobil 1 McCormick Fed. C, Sec. 11-T21S-R22E
Supron 1 Mobil, Sec. 11-T21S-R22E
- C. Temporarily Abandoned Wells-None
- D. Disposal Wells-None
- E. Drilling Wells-None

- F. Producing Wells-None
- G. Shut-in Wells-None
- H. Injection Wells-None
- I. Monitoring or Observation Wells for Other Reasons-None

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

- A. Exhibit 5 is a one-mile radius locating the following existing facilities owned by the lessee/operator:
 - 1. Tank Batteries-None
 - 2. Production Facilities-None
 - 3. Oil Gathering Lines-None
 - 4. Gas Gathering Lines-None
 - 5. Injection Lines-None
 - 6. Disposal Lines-None
- B. If new facilities are contemplated in the event of production, show:
 - 1. Proposed location and attendant lines in relation to the well pad. Refer to Exhibit 6.
 - 2. Dimensions of facilities: Refer to Exhibit 6.
 - 3. The production facilities will include a produced water pit, a pumping unit, a heater-treater and two 300 bbl. storage tanks. These facilities will be painted either a dark green or light tan in accordance with BLM-specified colors. The facilities will be located as shown on Exhibit 6. The pit will be located in cut, will contain all water production, and will be built in accordance with NTL-2B specifications. All connection work will be done by an oil field service company using standard oil field materials.
 - 4. Protective devices and measures to protect livestock and wild-life: The water production pit will be fenced with four strand barbed wire to protect livestock and wildlife.

5. LOCATION AND TYPE OF WATER SUPPLY

- A. Location and type of water supply: Water will be obtained from West Salt Wash in Colorado.
- B. Method of transporting water: The water will be hauled in trucks by a certified water hauler, along the routes shown in green on Exhibit 3.
- C. If water well is to be drilled, so state: No water well is contemplated.

6. SOURCES OF CONSTRUCTION MATERIALS

- A. Show information either on map or by written description: It is anticipated that cuts on location will furnish sufficient quantities of

materials to construct a level location. Prior to constructing location, vegetation will be stripped and this material will be stockpiled along the south side of the pad. Approximately 10" of topsoil will be stockpiled on the south side of the pad for later use during rehabilitation on the disturbed areas. Additional material, if needed, will be purchased from the dirt contractor.

- B. Identify it from Federal or Indian Land: The affected land is federal and under the management of the Bureau of Land Management.
- C. Describe where materials such as sand, gravel, stone and soil material are to be obtained and used: Materials other than that supplied by cuts on location should not be required to construct the pad and road. Approximately 4660 cubic yards of material will be derived from cuts on location and approximately 1990 cubic yards of fill is needed. Refer to Exhibit 7a.
- D. Show any needed access roads crossing Federal or Indian Lands: The access road will cross BLM administered lands in Section 11-T21S-R22E. Refer to Exhibit 4.

7. METHODS OF HANDLING WASTE DISPOSAL

- A. Cuttings will be contained and disposed of in a tank.
- B. Drilling fluids will be contained and disposed of in a tank. While drilling with air or gas, a dust arresting system will be installed on the blow line.
- C. Produced fracing fluids will be directed to a tank.
- D. Sewage: A portable chemical toilet will be on location during operations.
- E. Garbage and other trash will be placed in a trash bin and removed to a sanitary landfill upon completion.
- F. Protective Devices: The flare pit (if necessary) will be fenced with four strands of barbed wire and flagged to protect animals.
- G. Statement regarding proper cleanup when rig moves out. When the rig moves out, all trash and refuse will be removed from the location and hauled to a sanitary landfill.

8. ANCILLARY FACILITIES

Identify all proposed camps and airstrips on a map as to their location, area required and construction methods: None planned.

9. WELL SITE LAYOUT ATTACHMENT AND PROPOSED RIG LAYOUT

- A. Cross section of drill pad with cuts and fills: Refer to Exhibit 7b.
- B. Location of mud tank, reserve pit, trash bin, pipe racks and other facilities: Refer to Exhibit 7a.
- C. Rig orientation, parking area: Refer to Exhibit 7a.

10. PLANS FOR RESTORATION OF SURFACE

- A. Backfilling, levelling, contouring, and waste disposal: Upon completion of the well, the site will be cleared of all debris and the mouse and rat holes filled. Disturbed areas of the pad not needed for production facilities will be graded to an appearance consistent with the natural contours. These areas will then be covered with topsoil, disked and reseeded with a seed mixture recommended by BLM. If the well is not commercially productive, the entire pad will be reclaimed as described above.

In the event the well is not commercially productive, that portion of the access road requested by BLM to be rehabilitated will be covered with topsoil, disked and reseeded with a BLM-recommended seed mixture. Shrubby plants removed during road construction will be scattered randomly along the road to provide a natural appearance, control erosion and enhance seed production.

- B. If any oil is in the pit, it will be removed or overhead flagging will be installed.
- C. Timetable for commencement and completion of rehabilitation operations: Rehabilitation will commence when drilling operations are completed, approximately February 11, 1983, and will be completed within approximately one year.

11. OTHER INFORMATION

General description of:

- A. Topography, soil characteristics, geologic features, flora, fauna: The location is on a gradual south facing slope. The soil in the area consists of a silty loam. Vegetation accounts for approximately 60 percent of the ground cover and is comprised of big sagebrush, Russian thistle and native grasses. Fauna in the area include deer, small mammals and several bird species. No endangered species are known to occur in the area.

- B. Other surface-use activities and surface ownership of all involved lands: The affected land is federally owned. The primary land uses in the area are oil and gas production and ranching.
- C. Proximity of water, occupied dwellings, archeological, historical or cultural sites: The Colorado River is approximately 10 miles east of the location. An archeological survey has been performed and the results forwarded to the Moab office of the BLM.

12. LESSEE'S OR OPERATOR'S REPRESENTATIVES

Include the name, address and phone number of the lessee's or operator's field representative who is responsible for assuring compliance with the approved surface use and operations plan.

Ronald E. Dashner
District Drilling Engineer
TXO Production Corp.
1800 Lincoln Center Building
1660 Lincoln Street
Denver, Colorado 80264
(303) 861-4246 - Business
(303) 690-5658 - Residence

Comments regarding the content of this plan or arrangements for an on-site inspection should be directed to:

Paul Urban
Environmental Scientist
TXO Production Corp.
1800 Lincoln Center Building
1660 Lincoln Street
Denver, Colorado 80264
(303) 861-4246 - Business
(303) 429-2908 - Residence

13. CERTIFICATES

The following statement is to be included in the plan and must be signed by the lessee's or operator's field representative who is identified in Item No. 12 of the plan.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access roads; that I am familiar with the conditions which presently exist; and 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 TXO Production Corp. and its contractors, subcontractors in conformity with this plan and the terms and conditions under which it is approved.

DATE: December 14, 1982

R. Bruce Wright for R.E. Dashner
Ronald E. Dashner
District Drilling Engineer

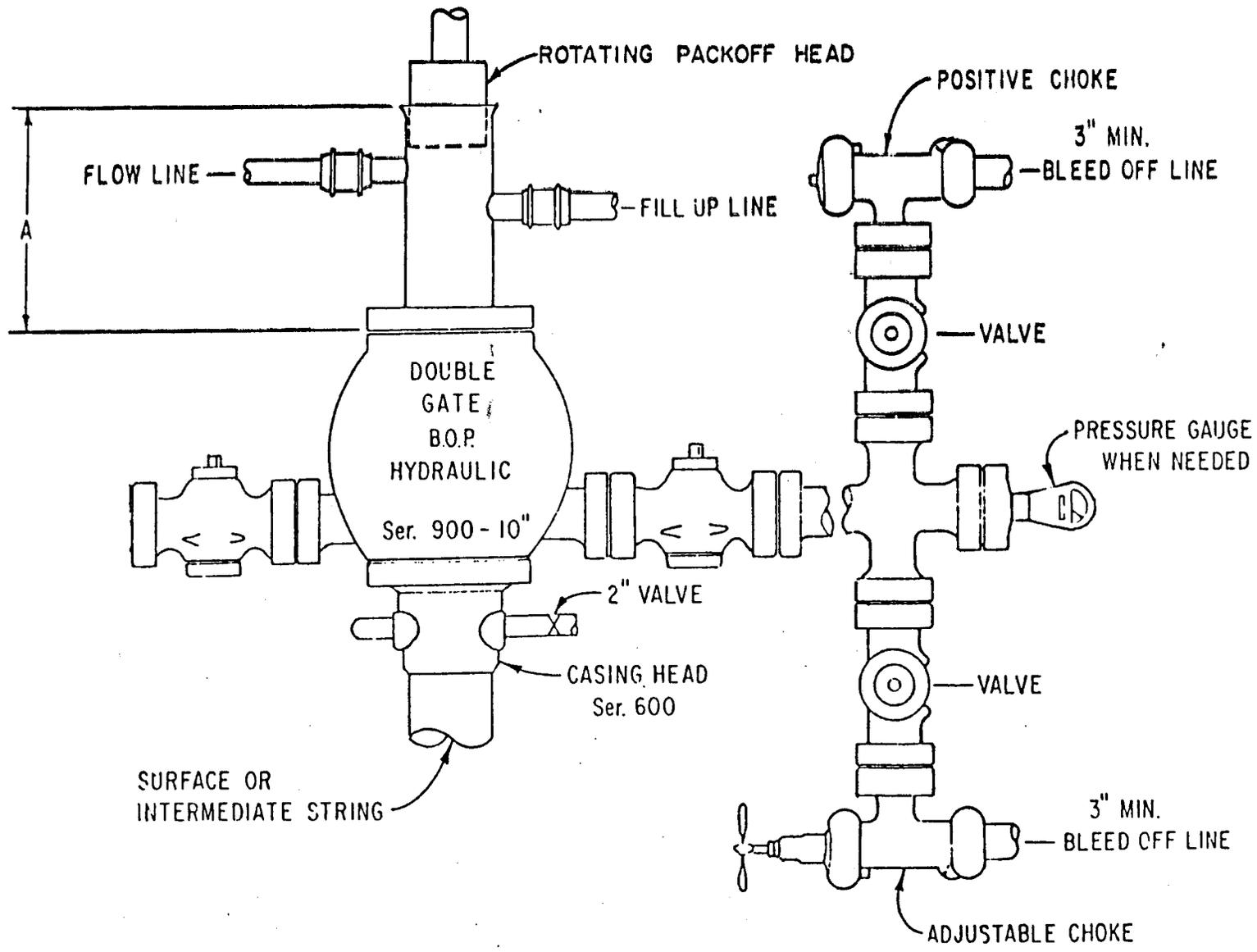
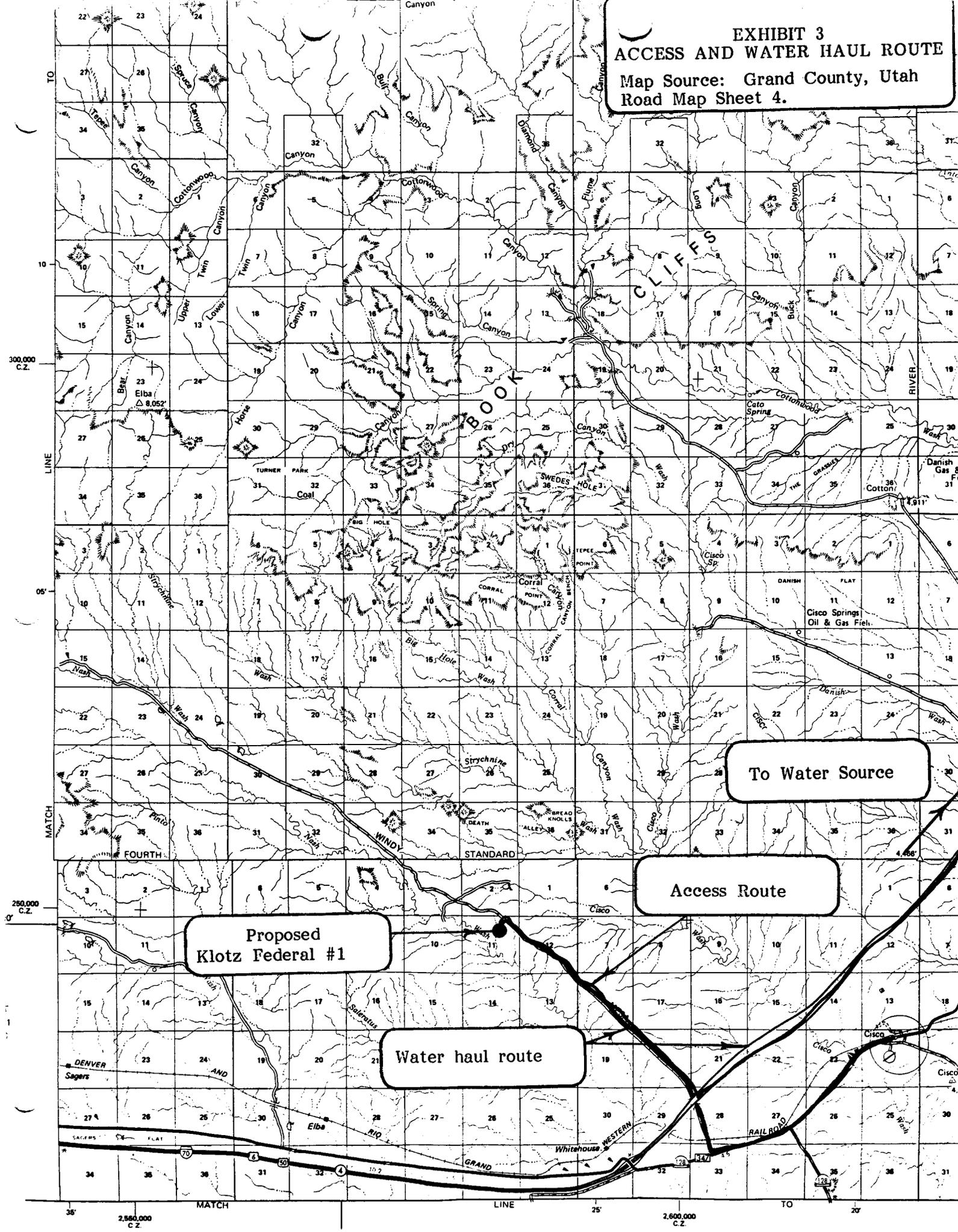


EXHIBIT I
 BLOWOUT PREVENTER DIAGRAM

EXHIBIT 3
ACCESS AND WATER HAUL ROUTE
Map Source: Grand County, Utah
Road Map Sheet 4.

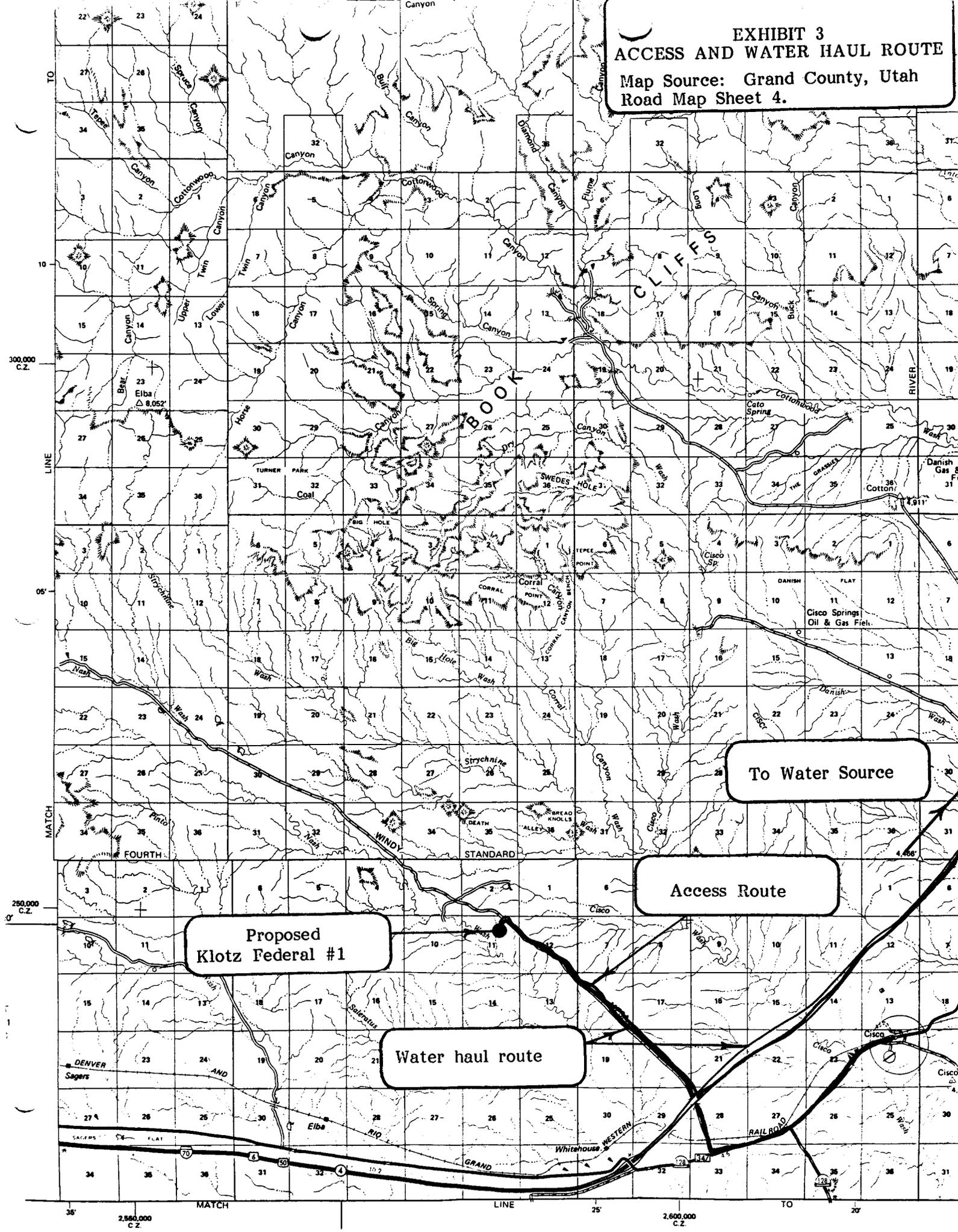
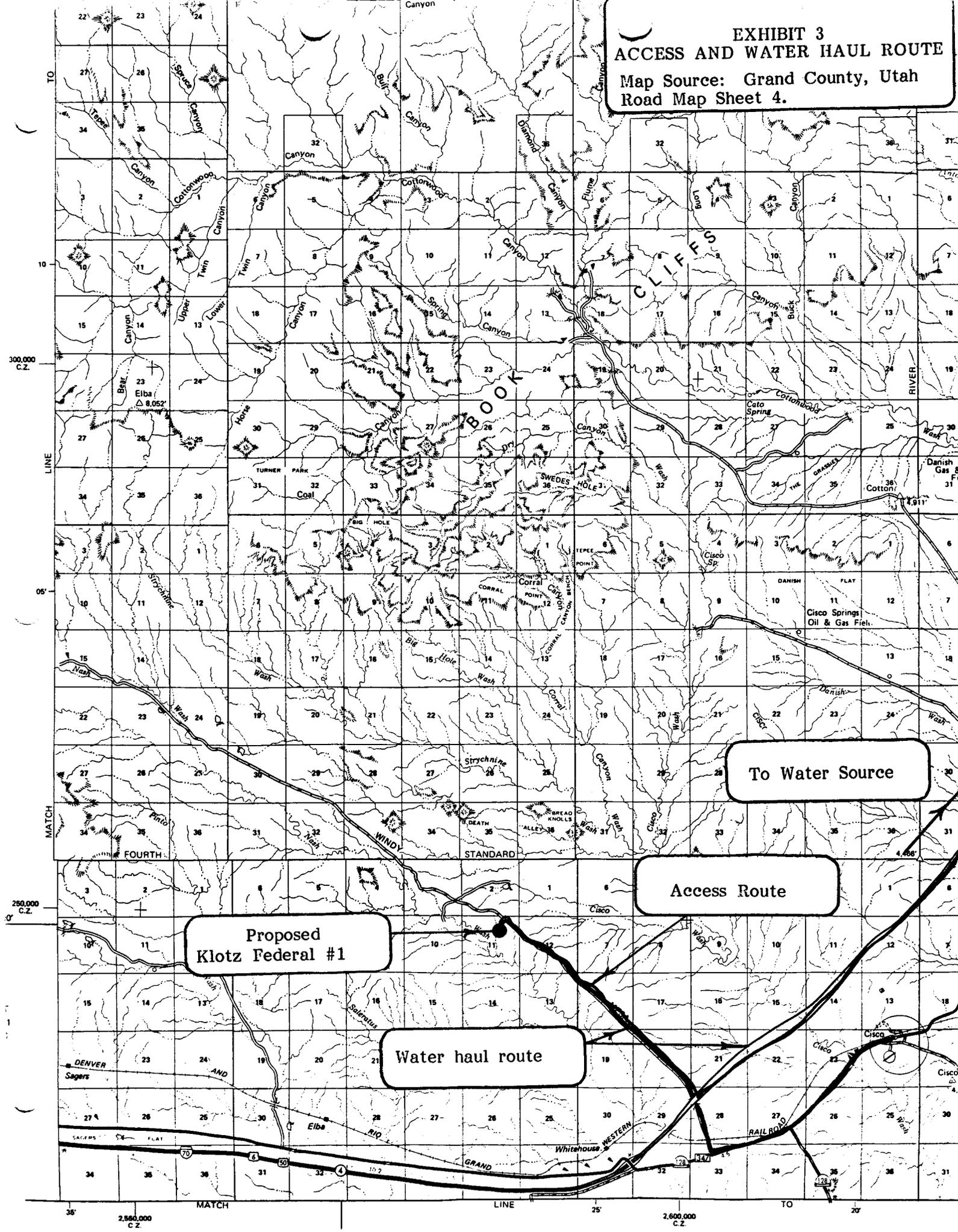


Proposed
Klotz Federal #1

Water haul route

Access Route

To Water Source



Existing Road

Proposed
Klotz Federal #1

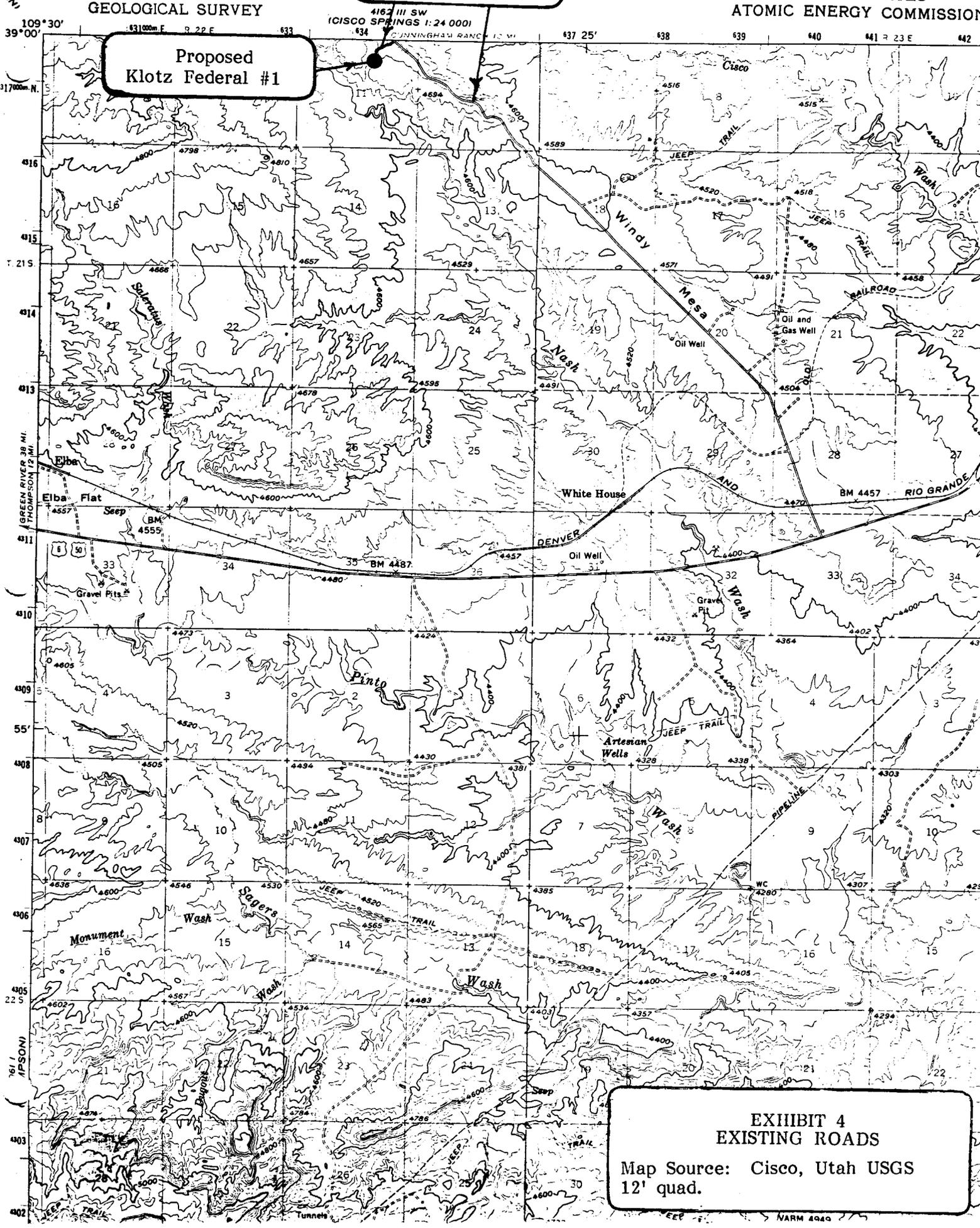
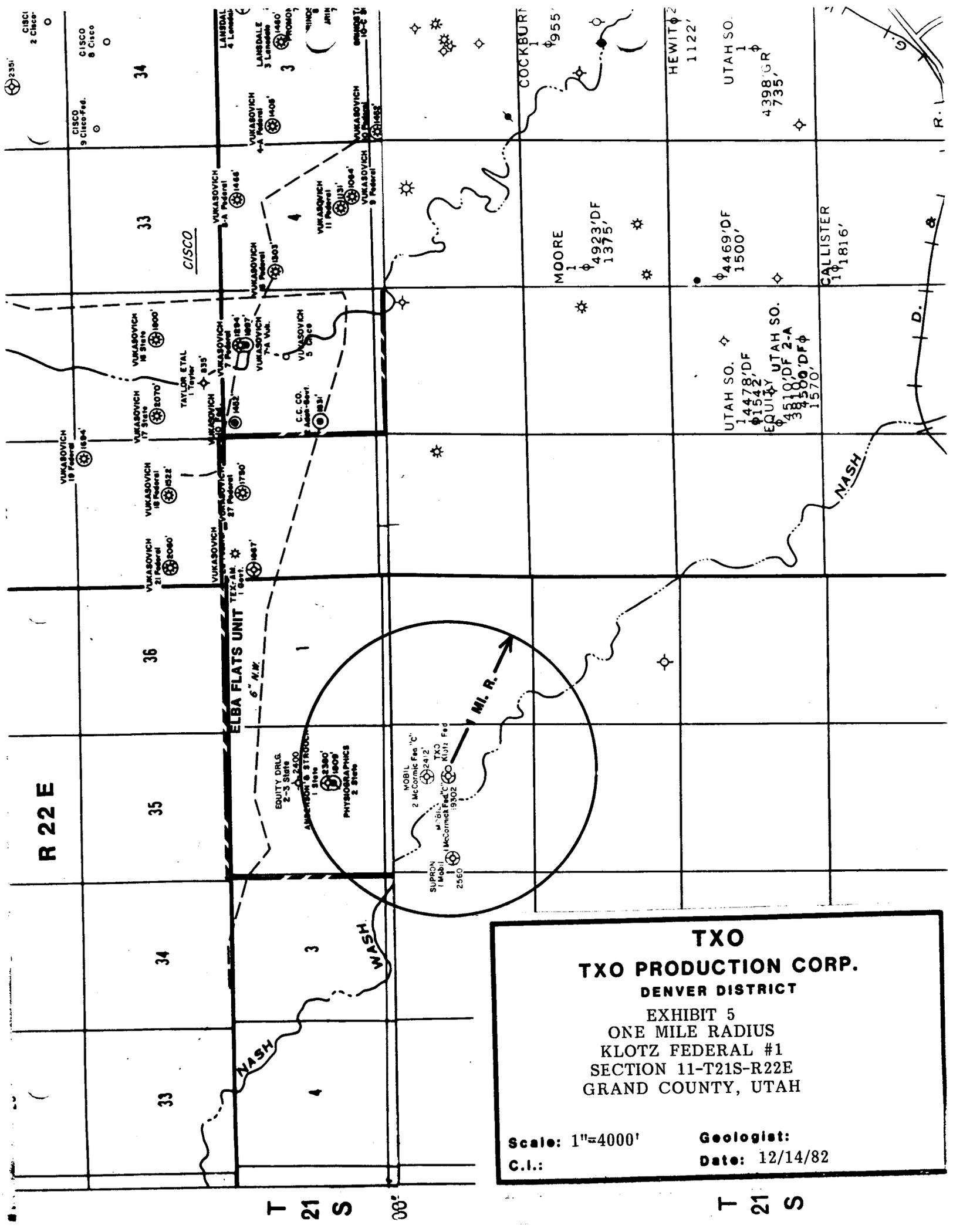


EXHIBIT 4
EXISTING ROADS
Map Source: Cisco, Utah USGS
12' quad.



R 22 E

33 34 35 36

WASH
WASH
WASH

ELBA FLATS UNIT
6" N.W.

EQUITY DRILS
2-3 State
2400
AMERICAN & STROUD
1 State
2390
PHYSIOGRAPHICS
2 State
1909

SUPRON
1 Mobil
2560

MOBIL
2 McCormick Fea "C"
2412
TXO
Klotz Fed
McCormick Fea "C"
9302

MI. R.

TXO
TXO PRODUCTION CORP.
 DENVER DISTRICT
 EXHIBIT 5
 ONE MILE RADIUS
 KLOTZ FEDERAL #1
 SECTION 11-T21S-R22E
 GRAND COUNTY, UTAH

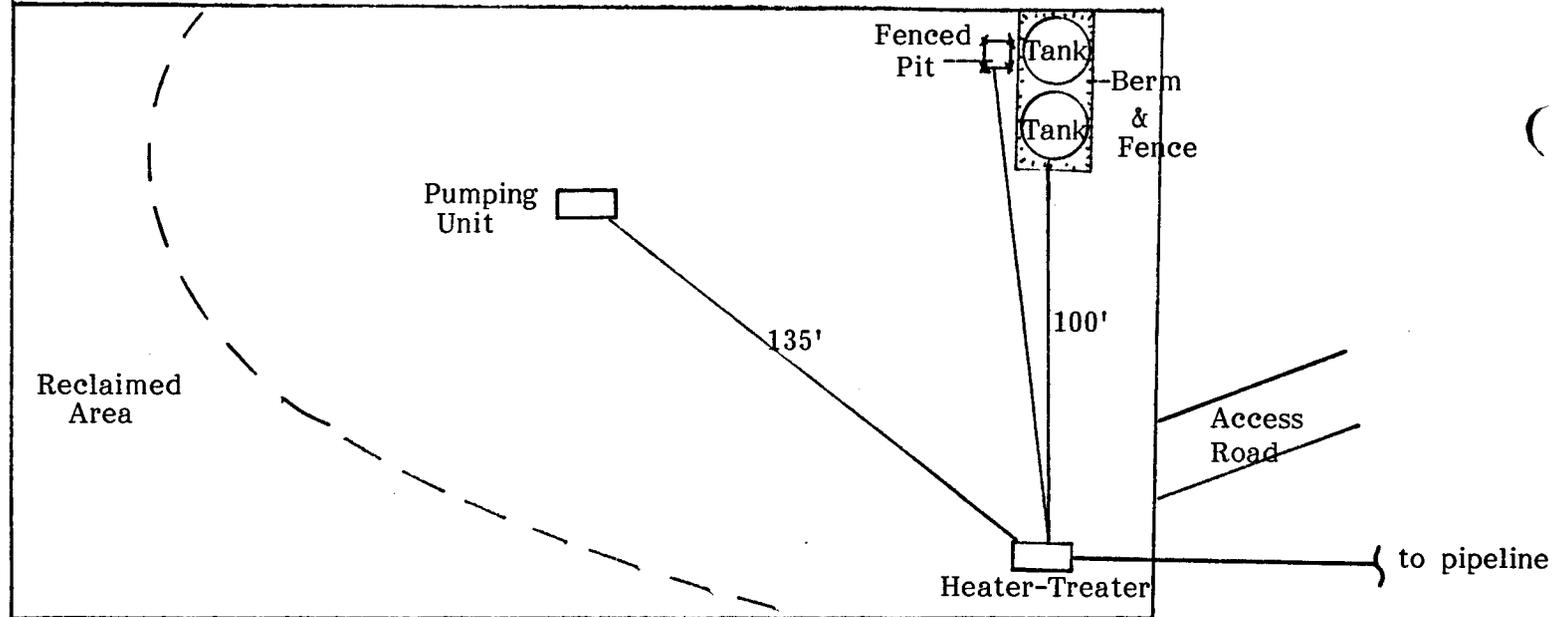
Scale: 1"=4000'
 C.I.:
 Geologist:
 Date: 12/14/82

T 21 S 00'

T 21 S

EXHIBIT 6
PRODUCTION FACILITIES

Scale 1"=50'

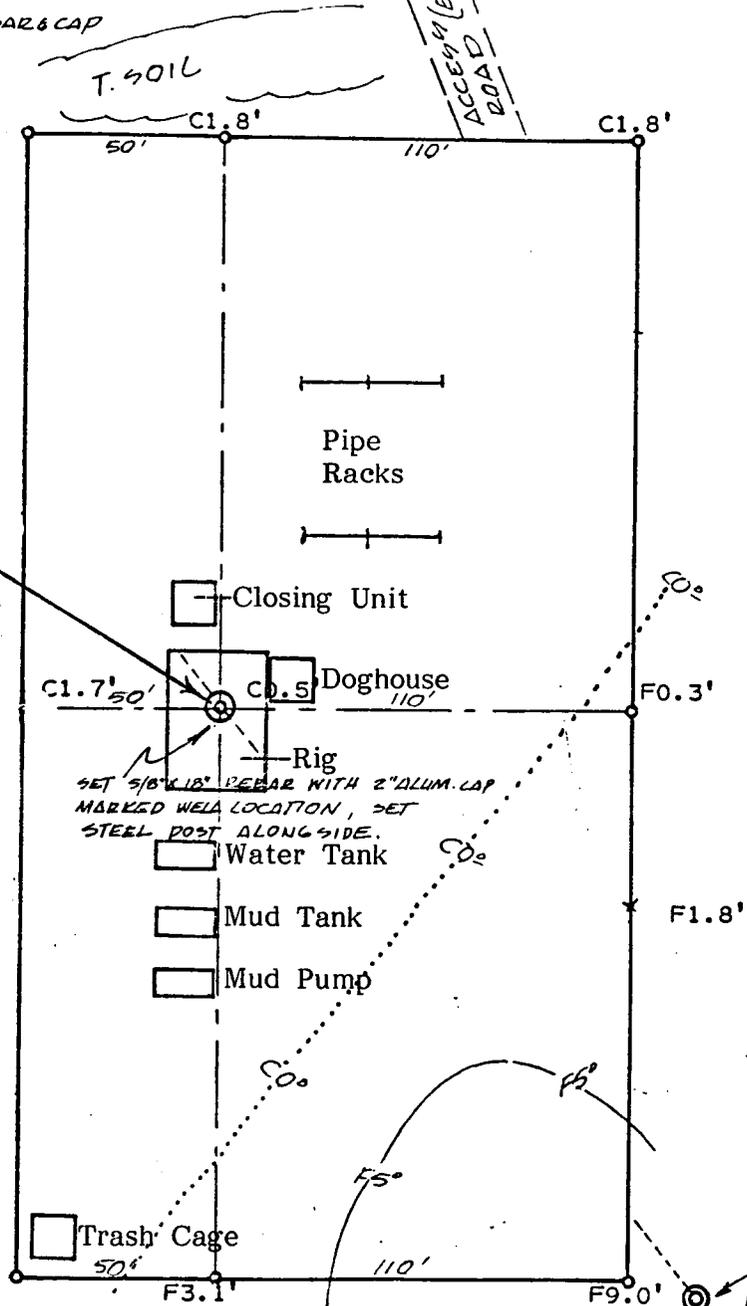


- 1) Tanks will be 12' diameter and 20' high, will hold 400 bbls, and will be surrounded by a berm or fence.
- 2) If well produces water in quantities greater than 5 bbls per day, a lined pit or tank will be used for storage. If the quantity is less than 5 bbls per day, an unlined pit will be used. Water storage facilities will be surrounded by a fence.
- 3) All pipelines will be coated, wrapped, and then buried.
- 4) The heater-treater will be ASME coded.

EXHIBIT # 7A
PIT & PAD LAYOUT

REF. PT. 200' NORTH SET 5/8" REBAR & CAP
WITH STEEL POST ALONGSIDE.
C1.2 TO PAD GRADE.

DRY HOLE MARKER
MOBIL OIL CORP.
MCCORMICK FED. C#7



REF. PT. 200' SOUTH SET
5/8" REBAR & CAP WITH STEEL POST
ALONGSIDE. F11.6 TO PAD GRADE.

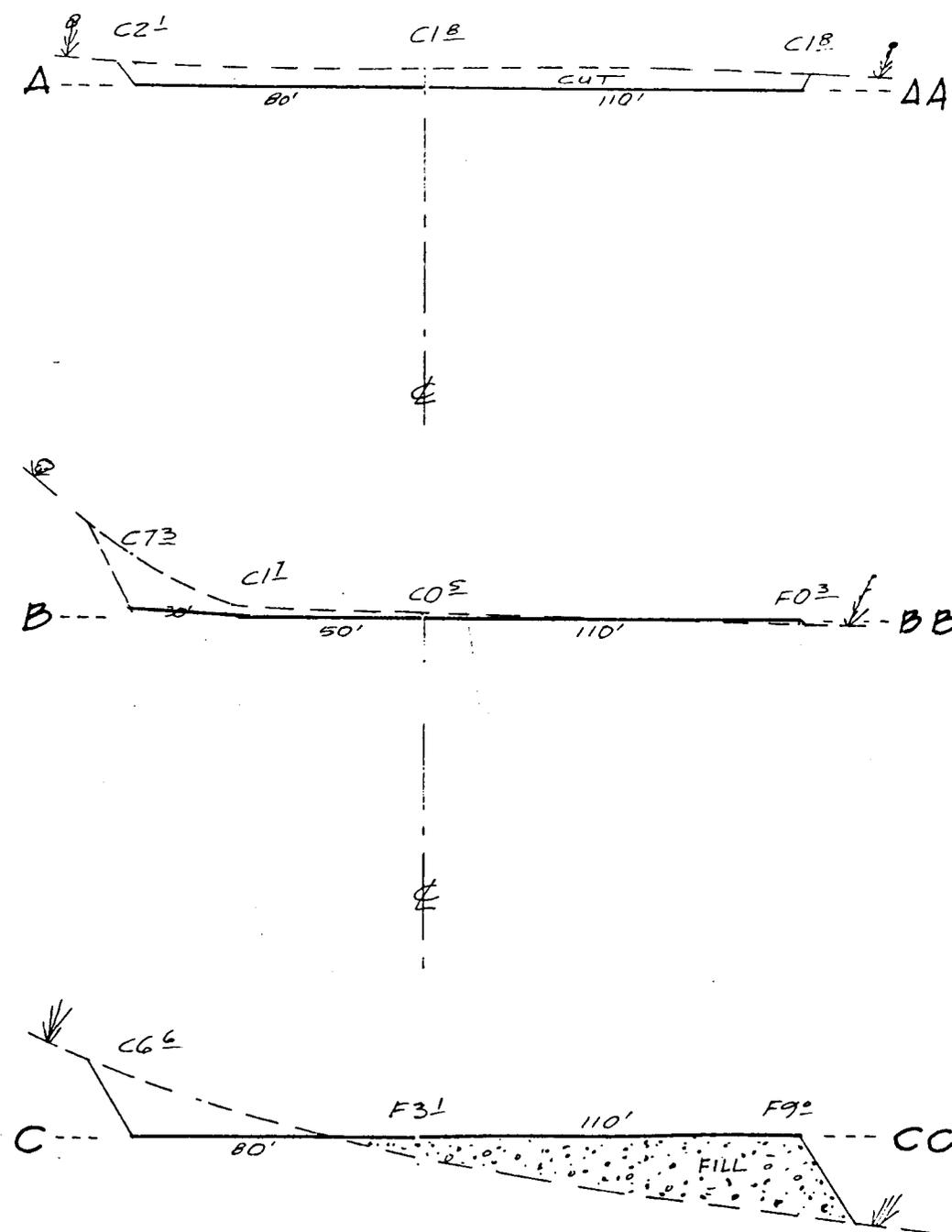
ESTIMATED QUANTITIES			
ITEM	PIT	PAD	TOTAL
CUT	2270	2390	4660
FILL	0	1990	1990
T.SOIL	330	1170	2100
EXCESS			570 CY.

TXO PRODUCTION CORP.
KLOTZ FEDERAL # 1
GRAND COUNTY, UTAH

PREPARED BY
ENERGY SURVEYS & ENGR. CORP.

Exhibit 7a
Pit and Pad Lay-out

CROSS-SECTIONS OF THE
KLOTZ FEDERAL # 1
PROPOSED WELL LOCATION



SCALE
1" = 50' HORIZ.
1" = 20' VERT.

TXO PRODUCTION CORP.
KLOTZ FEDERAL # 1

Exhibit 7b
Cross Sections

TXO

TXO PRODUCTION CORP.

1800 LINCOLN CENTER BUILDING
DENVER, COLORADO 80264

TELEPHONE (303) 861-4246

December 28, 1982

Mr. Norm Stout
State of Utah
Division of Oil, Gas, & Mining
4241 State Office Building
Salt Lake City, Utah 84114

Re: Klotz Federal #1
Grand County, Utah

Dear Mr. Stout:

Pursuant to our telephone conversation of this date I have enclosed a copy of the survey plat for the above-referenced well showing the lease boundaries.

If you have any questions, please contact me at this office.

Very truly yours,

TXO PRODUCTION CORP.



Paul Urban
Environmental Scientist

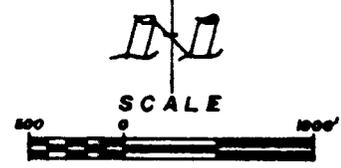
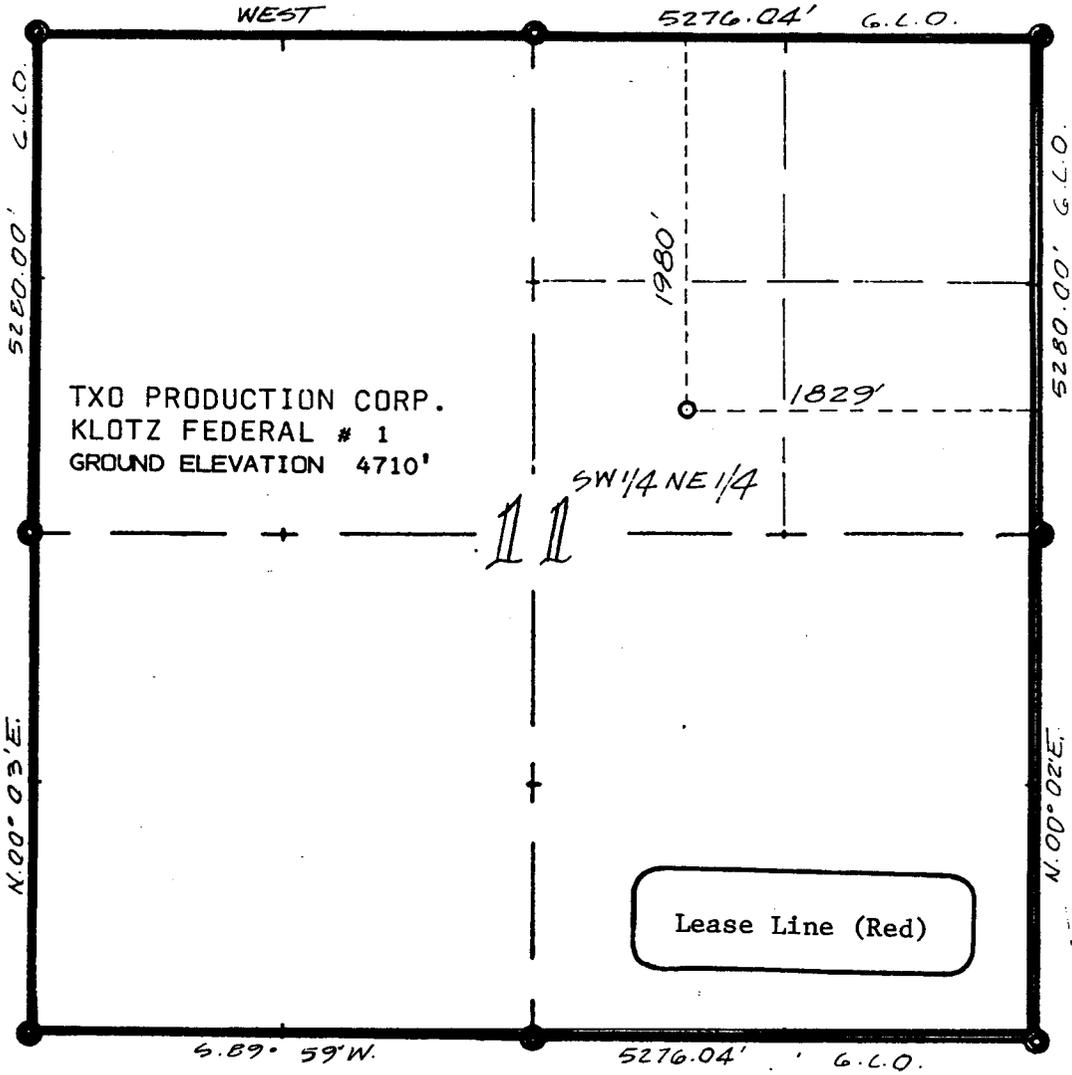
PU/JY

Enclosures/as stated



SEC. 11, T. 21 S., R. 22 E. OF THE S.L.M.

PLAT # 1
LOCATION PLAT



- LEGEND**
- STANDARD LOCATION OF G.L.O. CORNERS.
 - G.L.O. CORNERS FOUND.
 - WELL LOCATION STAKED.
- REFERENCE DOCUMENTS**
- 1921 G.L.O. PLAT
 - SEGO CANYON, UTAH QUADRANGLE, USGS

BEARINGS ARE BASED ON THE GLO BEARING GIVEN BETWEEN THE NE COR AND THE E. 1/4 COR.

THIS WELL LOCATION PLAT WAS PREPARED FOR TXO PRODUCTION CORP.
AS REQUESTED BY PAUL URBAN, **TO LOCATE THE**
KLOTZ FEDERAL # 1, **1980' FN. L. & 1829' FE. L.,**
IN THE SW 1/4 NE 1/4, **OF SECTION** 11, **T. 21 S., R. 22 E. OF THE S.L.M.**
GRAND **COUNTY,** UTAH



SURVEYOR'S CERTIFICATE

I, **LARRY D. BECKER** A REGISTERED LAND SURVEYOR
 IN THE STATE OF UTAH DO HEREBY CERTIFY THAT THIS
 SURVEY WAS MADE UNDER MY DIRECT SUPERVISION AND
 THAT THIS PLAT REPRESENTS SAID SURVEY.

Larry D. Becker
 UTAH L.S. NO. 4189

SURVEYED	9-21	ENERGY SURVEYS & ENGINEERING CORP.	Exhibit 2 Survey Plat	SCALE 1" = 1000'
DRAWN	10-21			APP. NO.
CHECKED	10-21			SHEET

TXO

TXO PRODUCTION CORP.

1800 LINCOLN CENTER BUILDING
DENVER, COLORADO 80264

TELEPHONE (303) 861-4246

December 20, 1982

Mr. Norm Stout
State of Utah
Division of Oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84114

Re: Klotz Federal #1
Section 11-T21S-R22E
Grand County, Utah

Dear Mr. Stout:

Enclosed please find one copy of the above-referenced APD/MSUOP for your review and approval.

If you have any questions, please contact me at this office.

Very truly yours,

TXO PRODUCTION CORP.



Paul Urban
Environmental Scientist

PU/BS
Enclosure/as stated

RECEIVED
DEC 22 1982

DIVISION OF
OIL, GAS & MINING

A SUBSIDIARY OF **TEXAS**
OIL & GAS CORP.

OPERATOR TXO Production Corp DATE 12-23-82

WELL NAME Klotz Fed. #1

SEC SW NE 11 T 215 R 22E COUNTY Grand

43-019-~~31021~~³⁰³²⁸
API NUMBER

FED
TYPE OF LEASE

POSTING CHECK OFF:

<input type="checkbox"/>	INDEX	<input checked="" type="checkbox"/>	HL	<input checked="" type="checkbox"/>
<input type="checkbox"/>	NID	<input checked="" type="checkbox"/>	PI	<input type="checkbox"/>
<input type="checkbox"/>	MAP	<input checked="" type="checkbox"/>		<input type="checkbox"/>

PROCESSING COMMENTS:

NO OIL WELLS WITHIN 400' OF GAS WELLS
WITHIN 1370' - NEEDS LEASE PLAT OR
< 3500' depth

RE ENTRY - NEW OPERATOR - NEW NAME - ~~NEW API~~, BUT
LEAVE AUDIT TRAIL WITH THE OLD WELL

APPROVAL LETTER:

SPACING: A-3 _____ UNIT c-3-a 102-1613 9-26-79
 CAUSE NO. & DATE

c-3-b c-3-c

SPECIAL LANGUAGE:

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

AUTHENTICATE LEASE AND OPERATOR INFORMATION

VERIFY ADEQUATE AND PROPER BONDING *FED*

AUTHENTICATE IF SITE IS IN A NAMED FIELD, ETC.

APPLY SPACING CONSIDERATION

ORDER 102-1602

UNIT _____

c-3-b

c-3-c

OUTSTANDING OR OVERDUE REPORTS FOR OTHER WELLS OF THE OPERATOR.

IF POTASH DESIGNATED AREA, SPECIAL LANGUAGE ON APPROVAL LETTER

December 31, 1982

TXO Production Corporation
Attn: Paul Urban
1800 Lincoln Center Building
Denver, Colorado 80264

RE: Well No. Klotz Federal #1
SWNE Sec. 11, T.21S, R.22E
Grand County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to oil/gas well is hereby granted in accordance with the Order issued in Cause No. 102-16B dated September 26, 1979.

Such approval is administratively considered to be a change of operator, change of well name, and re-entry of the McCormick Federal "C" #1 formerly operated by Mobil Oil. The same API number is in effect.

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

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

OR

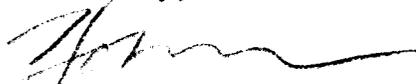
CLEON B. FBIGHT - Director
Office: 533-5771
Home: 466-4455

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 43-019-30328.

Sincerely,



Norman C. Stout
Administrative Assistant

NCS/as
cc: MMS
Enclosure

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. oil well gas well other DRY

2. NAME OF OPERATOR
TXO PRODUCTION CORP.

3. ADDRESS OF OPERATOR
1800 Lincoln Center Building, Denver, Co. 80264

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1980' FNL & 1829' FEL
AT TOP PROD. INTERVAL: same as above
AT TOTAL DEPTH: same as above

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

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

5. LEASE
U-47184

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Klotz Federal

9. WELL NO.
#1

10. FIELD OR WILDCAT NAME
Cisco Wash

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 11, T21S-R22E

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

14. API NO.
43-019-30328

15. ELEVATIONS (SHOW DF, KDB, AND WD)
4710' GL

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

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

The above well was re-entered, perforated, tested and found to be uneconomical. The well was plugged and abandoned (as per Mr. Assad Raffoul on 3/7/83) with the following plugs: 2400-2100', 1700-1500', 25 sxs @ surf. The location was cleaned, dry-hole marker was installed, and re-habilitation will be done as per the APD as soon as conditions permit.

TIGHT HOLE

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

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

SIGNED Bruce Wight TITLE Petroleum Engineer DATE March 7, 1983

(This space for Federal or State office use)

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

WELL NAME:	Klotz Federal #1	PTD:	2400'
AREA:	Cisco	ELEVATIONS:	4710' GL, 4732' KB
LOCATION:	Section 11, T21S-R22E	CONTRACTOR:	NL Well
COUNTY:	Grand	AFE NUMBER:	830795
STATE:	Utah	LSE NUMBER:	94493
FOOTAGE:	1980' FNL & 1829' FEL	TXO WI:	75%

APCOT-FINADEL JOINT VENTURE
 American Petrofina, Inc.
 P. O. Box 2159
 Dallas, Tx 75221
 Attn: James H. Henderson

- 02/15/83 Clean location. Build pit, installed deadmen. MIRUCT & spot equipment. NU BOP. RU circ equip. Unload 2-7/8" DP & DCs (four 6-1/4" & one 8"). PU power swivel. RU rotary tongs. SDFN. DW: 10,975. CW: 10,975.
- 02/16/83 PU 12-1/4" bit & 8" DC. Tag cmt @ ground level. Drl cmt to 20'. PU & TIH w/ four 6-1/4" DC's & 2-7/8" DP. Tag cmt plug @ + 300'. Began drlg cmt & gravel. Drld to 352'. PU 1 jt off btm. SDFN. Prep to cont drlg cmt this AM. DW: 3275. CW: 14,975.
- 02/17/83 Drld out cmt from 352-410' KB. TIH to 1710' KB. Tagged up. PU power swivel. Drld stringers to 1800'. TIH to 1830'. Began circ out heavy drlg mud. Drained lines. SDFN. DW: 2675. CW: 16,925.
- 02/18/83 4060' PBTB, TIH w/ DP from 1800-3000'. Stopped every 200' to circ out heavy drlg mud. TIH & tag PBTB @ 4060' KB. Press test csg & plug to 1000# for 15 min. Held OK. TOOH to 2400' KB, laying dn DP. Spotted 200 bbls 3% KCL. TOOH. LD DP. Drained lines. SDFN. DW: 3475. CW: 20,400.
- 02/19/83 4060' PBTB, LD four 6" DCs & one 8" DC. RU Dresser Atlas. Run CBL-VDL-GR from 2500-1500'. Press csg to 1000# & rerun logs. Cmt bond appeared to be improved w/ press from 50% to 80% over zones of interest. RD Dresser. TIH w/ 2-7/8" tbg & SSN to 1500'. Swab FL dn to 1200'. TOOH w/ tbg. RU Dresser. TIH w/ 4" gun to perf @ 2330-2350'. Total 21 holes, .43" dia. RD Dresser. PU Baker full bore 13-3/8" pkr, SSN, 2-7/8" tbg. Set pkr @ 2234'. PT annulus to 800#. OK. Bled press dn on annulus to 0#. Swab test 2 runs. Rec 5 BF. FFL 2000'. IFL 1200'. Left well open to tank. SDFN. DW: 30,875. CW: 51,275.
- 02/20/83 4060' PBTB, TIH w/ swb to tag FL @ 1700'. Made 6 swab runs. (Last 2 runs dry.) FFL @ 2234'. IFL 1700'. Rec 5 BF. RU Smith. Press annulus to 100#. Acidize w/ 1000 gal 7-1/2% HCL MSR acid. Flush to perfs. Mx press 2000#. Av press 1500#. Mx rate 2 BPM. Av rate 2 BPM. ISDP 700#, 5 min 0#. Good steady brk dn 2000-700#. RD Smith. RU swab. Made 14 swab runs. IFL 0'. FFL 1600'. Rec 60 bbls acid wtr. No sign of gas or oil. BLTR 0. LOTPON. SDFN. DW: 4150. CW: 55,425.
- 02/21/83 4060' PBTB, SDFS. DW: 0. CW: 55,425.
- 02/22/83 4060' PBTB, IFL @ surf. Made 56 swab runs. Rec 201 BF. FFL 1600'. Final entry rate 18 BWP. No show of oil or gas. SDFN. DW: 2150. CW: 57,575.
- 02/23/83 4060' PBTB, well dead this AM. RU Dyna-Jet to run tracer survey. Tracer showed fluid entering perfs @ 2330-2350'. Fluid channeled behind pipe to 2360' and then entered fm. RD Dyna-Jet. SDFN. DW: 3700. CW: 61,275.
- 02/24/83 4060' PBTB, well dead this AM. Unseat pkr @ 2234'. Spot 150 bbls 3% KCL dn csg. RU swab. Swab FL dn to 1000' KB. RD swab. TOOH w/ 2-7/8" tbg & pkr. RU Dyna-Jet. RIH w/ 4" decentralized csg gun. Perf @ 2086-2110', 2119-30', w/ 1 JSPF. Total 20 holes, .43" dia. RD

WELL NAME: Klotz Federal #1
 AREA: Cisco
 LOCATION: Section 11, T21S-R22E
 COUNTY: Grand
 STATE: Utah
 FOOTAGE: 1980' FNL & 1829' FEL

PTD: 2400'
 ELEVATIONS: 4710' GL, 4732' KB
 CONTRACTOR: NL Well
 AFE NUMBER: 830795
 LSE NUMBER: 94493
 TXO WI: 75%

02/24/83 Dyna-Jet. No reaction from perfs. PU Baker RBP & pkr. TIH & set RBP @ 2180' KB. PU 10' & set pkr. PT to 2800#. OK. Reset pkr @ 2040'. PT annulus to 800#. OK. Bled annulus dn to 50#. RU swab. IFL 1900'. Swab 4 runs. Rec 1.5 bbls. Left well open. SDFN. No shows. DW: 10,400. CW: 71,675.

02/25/83 4060' PBTB, well dead this AM. RU swab. IFL @ 200' KB. Swabbed FL to 1500'. Made 11 runs. Rec 23 BW. Fluid appears to be entering wellbore @ 6 BPH. Rel pkr. TIH & set pkr @ 2115'. Swabbed lower perfs. Swabbed FL dn to 1800'. Made 7 runs, rec 14 BW. Fluid appears to be entering wellbore @ 4 BPH. No shows of gas or oil. LOTPON. DW: 3000. CW: 74,675.

	TWO ZONES COMBINED		BOTTOM ZONE	
	1st	2nd	3rd	4th
s.g.	1.005	1.005	1.005	1.001
Cl-	2500	2500	2500	2000
Hardness	2500	2500	2500	2400
Rw	.280 @ 75F	.250 @ 75F	.200 @ 75F	.241 @ 75F
ph	6.5	6.5	6.5	6.5
total dissolved solids	25,000	24,000	25,000	24,000

Very slight traces of oil in #1 and #2. No traces of oil in #3 and #4.

02/26/83 2115' PBTB, well dead. IFL @ 125'. Made 8 swab runs, rec 14.5 BF. FFL @ 1725'. Fluid entering @ 3 BPH. No shows. Unset pkr. TIH & PU RBP @ 2180'. POOH & RBP @ 2115'. POOH & set pkr @ 2040'. PT pkr to 800#. Pkr held. RU swab. IFL @ 50'. Made 14 swab runs. Rec 17 BF. FFL @ 1800'. Fluid entering wellbore @ 1 BPH. No shows. LOTPON. DW: 3000. CW: 77,585.

	2119-2130'		2086-2110'	
	TWO ZONES COMBINED		BOTTOM ZONE	
	1st	2nd	3rd	4th
s.g.	1.01	1.005	1.015	1.020
Cl-	2000	2000	7500	7500
Hardness	2400	2400	3000	3000
Rw	.241 @ 75F	.480 @ 75F	.450 @ 75F	1.30 @ 75F
ph	6.5	6.5	6.0	6.5
total dissolved solids	24,000	25,000	30,000	25,800

No traces of oil in any samples.

02/27/83 1750' PBTB, well dead. IFL @ 200'. Made 8 swab runs. Rec 14.5 BF. FFL @ 1800'. Fluid entering wellbore @ 2 BPH. No shows. Unset pkr. TIH, tag RBP @ 2115'. TOOH to 1750'. Attempt to get off RBP. Backed off of pkr. Attempt to screw back into pkr. Couldn't. TOOH. PU 3-21/32" grapple w/ short catch OS. TIH, tag pkr @ 1740'. Catch pkr. Set BP @ 1750' KB. Test BP to 800#, held OK. TOOH. LD pkr & fishing tools. TIH w/ SSN & tbg to 1700'. RU swab. SDFN. DW: 3550. CW: 81,135.

02/28/83 1750' PBTB, SDFS. DW: 0. CW: 81,135.

WELL NAME: Klotz Federal #1 PTD: 2400'
 AREA: Cisco ELEVATIONS: 4710' GL, 4732' KB
 LOCATION: Section 11, T21S-R22E CONTRACTOR: NL Well
 COUNTY: Grand AFE NUMBER: 830795
 STATE: Utah LSE NUMBER: 94493
 FOOTAGE: 1980' FNL & 1829' FEL TXO WI: 75%

02/28/83 1750' PBTB, swabbed FL dn to 1000'. TOOH. RU Dyna-Jet. Correlate perfs & perfd w/ 4" gun from 1644-52', 1658-60', 1678-88' w/ 1 shot/ft. Total of 23 holes, .43" dia. RD Dyna-Jet. No reaction after perfs. PU 13-3/8" pkr, SSN, & TIH. Set pkr @ 1620'. Well began unloading fluid. After 20 min had 5-10' flare, making heavy slugs of wtr. After 2 hrs had 10-15' flare, making medium slugs of wtr. Est 3-5 BWPB. LOTPON. Wtr analysis 2/28/83: s.g. 1.005, ph 6.8, Cl⁻ 3700, Rw .730 @ 75F, TDS 15000. DW: 4600. CW: 85,735.

03/01/83 1750' PBTB, swabbed FL dn to 1000'. TOOH. RU Dyna-Jet. Correlate perfs & perfd w/ 4" gun from 1644-52', 1658-60', 1678-88' w/ 1 shot/ft. Total of 23 holes, .43" dia. RD Dyna-Jet. No reaction after perfs. PU 13-3/8" pkr, SSN, & TIH. Set pkr @ 1620'. Well began unloading fluid. After 20 min had 5-10' flare, making heavy slugs of wtr. After 2 hrs had 10-15' flare, making medium slugs of wtr. Est 3-5 BWPB. LOTPON. Wtr analysis 2/28/83: s.g. 1.005, ph 6.8, Cl⁻ 3700, Rw .730 @ 75F, TDS 15000. DW: 4600. CW: 85,735.

03/02/83 1668' PBTB, well flowing to pit w/ medium slugs of wtr & 10' flare. Estimate 160 BW in 16 hrs, making \pm 10 BPH. Unset pkr. TIH & set @ 1668'. RU swab, IFL @ 450'. Made 9 swab runs, rec 30 BF. Fluid entering \pm 12 BPH. No gas. CP rose to 20#. Unset pkr, TIH & tag RBP @ 1750'. Rel RBP & TOOH. Set RBP @ 1668'. TOOH & set pkr @ 1615'. RU swab. IFL @ 300'. Made 59 swab runs. Rec \pm 90 BF. Well blowing stronger after each run. Well KO @ 4:30 PM, unloading fluid steady & 10' flare. Well flowing to pit w/ heavy slugs of wtr. LOTPON. DW: 2800. CW: 88,535.

03/03/83 1668' PBTB, well flowing to pit w/ slugs of wtr. Had 5-10' flare. RU swab. Tag gas cut FL @ surf. Made 28 swab runs. Rec 65 BF. Fluid entering @ \pm 16 BPH. Gas rate not increasing. FFL @ 900'. RU swab. IFL @ 600'. Made 43 swab runs. Rec 91 BF. Fluid entering @ \pm BPH. Well making very little gas. FFL @ 900'. LOTPON. DW: 2400. CW: 90,935.

	1st 1644-88'	2nd 1678-88'	3rd 1658-60'
s.g.	1.008	1.008	1.008
Cl ⁻	4000	4000	4000
Rw	.750 @ 75F	.750 @ 75F	.750 @ 75F
ph	6.8	6.8	6.8
total dissolved solids	20,000	20,000	20,000

03/04/83 1815' PBTB, well dead. SICP 200#. RU swab, IFL @ 500'. Made 1 swab run, rec 4 BF. FFL @ 900'. No gas. Unset pkr. TIH to tag RBP @ 1668'. Rel RBP & TOOH & set RBP @ 1655'. TOOH & set pkr @ 1615'. RU swab. IFL @ 250'. Made 39 swab runs. Rec 91 BF. FFL @ 900'. Fluid entering @ \pm 15 BPH. Had 5-10' flare of gas after each run. Flare did not increase during day. Unset pkr, TIH & tag RBP @ 1655'. Rel RBP & TIH & set RBP @ 1815'. Set pkr & test RBP to 500#, held OK. TOOH & set pkr @ 1555'. Test pkr to 500#, held OK. RU swab. IFL @ 500'. Made 4 swab runs. Rec \pm 8 BF. FFL @ 1200'. SIFN. DW: 3500. CW: 94,435.

03/05/83 1655' PBTB, SITP 575#, SICP 0#. RU GO & ran diff temp survey. Ran static base log, blew well dn. Ran 2nd log, identical to base log. RD GO. RU swab, IFL @ 100', made 9 runs, rec 20 BF. FFL @ 1000'. RD swab. RU GO. Ran temp survey, only change was an indication of warming through perfs @ 1678-88'. LD temp tool. PU tracer tool. Ran base GR from 1810-1580'. Injected tracer material @ 1630'. Log indicated perfs @ 1644-52' took fluid easily. Tracer material didn't go up or dn hole. Injected tracer material @ 1655', tracer

WELL NAME:	Klotz Federal #1	PTD:	2400'
AREA:	Cisco	ELEVATIONS:	4710' GL, 4732' KB
LOCATION:	Section 11, T21S-R22E	CONTRACTOR:	NL Well
COUNTY:	Grand	AFE NUMBER:	830795
STATE:	Utah	LSE NUMBER:	94493
FOOTAGE:	1980' FNL & 1829' FEL	TXO WI:	75%

03/05/83 material slower moving. Went into perfs @ 1658-60', fluid appeared to
 cont. dissipate & go downhole but not uphole. Injected tracer material @
 1670', fluid moving slowly, went into perfs @ 1678-88', didn't go
 uphole or downhole. Checked all perfs again w/ tracer survey & got
 same results. RD GO. Unset pkr @ 1555'. TIH & tag RBP @ 1815'. Rel
 RBP & POOH to 1655'. Set RBP @ 1655'. TOOH to 1615' & set pkr. RU
 swab. IFL @ 300'. Made 21 swab runs. Rec 123 BF. Slight show of
 gas. FFL @ 800'. SI for weekend. DW: 7000. CW: 101,435.

03/06/83 1815' PBTB, SDFS. DW: 0. CW: 101,435.

03/07/83 1815' PBTB, SDFS. DW: 0. CW: 101,435.

03/08/83 Surface PBTB, SITP 0#, SICP 0#. IFL @ 100'. Made 11 runs, rec 58
 BF. FFL @ 625'. Very little show of gas. RD swab. Unset pkr. TIH,
 latched onto RBP @ 1655'. Rel RBP & TOOH. TIH open-ended w/ tbg &
 spotted plugs as follows: 2400'-2100', 1700'-1500', 25 sx @ surface.
 Cut off wellhead, installed dry-hole marker. RR @ 6:00 P.M. on
3/7/83. Well P&A'd on 3/7/83. FINAL REPORT!!! DW: 16,900. CW:
 118,335.

GRAND JUNCTION
245-2906

HUGHES TOOL COMPANY

Date 8-7-83
 Company TXO
 Well No. Holls Fed #1
 Service Ticket No. Klots 705454
 Formation _____
 County Grand
 State UT
 BJ Service Foreman Lynn Davis
 Company Representative Wes Sutton
 REMARKS: PTA

WELL DATA
 Hole Size: 13 3/8 Depth: 2400
 Casing Size: 2 7/8 Wt. 6.5 Depth 2400
 Dlg. Fluid Type KCL 4.0 Wt. 5.3
 Stage Collars: _____
 Contractor: NL Acme

CEMENT DATA

NO. SACKS	YIELD Cu. Ft./Sx.	CEMENT MIX	CUFF	VOLUME BBLs.	WT
400	1.111	G-2% KCL	456	81	15

Volume of Displacement 11 Bbl.
 Cement Circulated No Bbls
 Circulation During Job? yes

Trucks Used 1415-2783-1312-6495-17037

TIME	RATE BPM	VOLUME BBL	PRESSURE		Job Detail
			TUBING	CASING	
12:30					Arrived Loc Rigged up Safety meeting
			1 st		Plug 2400-2100
2:00		5		50	H ₂ O
2:03		45			Slurry (255k Cement)
2:30		11			H ₂ O
			2 nd		Plug 1700-1500
2:50	2	5			H ₂ O
2:53	2	30			Slurry (150sk Cement)
3:05	3	7 1/2			H ₂ O
			3 rd		Plug 255k Surface Plug
3:47		10			H ₂ O to Lead Hole
3:57					Slurry (255k Cement)
					Wash BOP Clean

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

SUBMIT IN DUPLICATE

(See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

7

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

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

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

2. NAME OF OPERATOR
TXO Production Corp.

3. ADDRESS OF OPERATOR
1800 Lincoln Center Building, Denver, Colorado 80264

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface 1980' FNL & 1829' FEL, Section 11, T21S-R22E
At top prod. interval reported below same as above
At total depth same as above

14. PERMIT NO. 43-019-30328 DATE ISSUED 1/25/83

5. LEASE DESIGNATION AND SERIAL NO.
U-47184

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Klotz Federal

9. WELL NO.
#1

10. FIELD AND POOL, OR WILDCAT
Cisco Wash

11. SEC., T. R., M., OR BLOCK AND SURVEY OR AREA
Section 11, T21S-R22E

12. COUNTY OR PARISH Grand 13. STATE Utah

15. DATE SPUDED 2/15/83 16. DATE T.D. REACHED 2/16/83 17. DATE COMPL. (Ready to prod.) N/A 18. ELEVATIONS (DF, R&B, RT, GR, ETC.)* 4732' KB 19. ELEV. CASINGHEAD 4710'

20. TOTAL DEPTH, MD & TVD N/A 21. PLUG, BACK T.D., MD & TVD 4060' 22. IF MULTIPLE COMPL., HOW MANY* -- 23. INTERVALS DRILLED BY → ROTARY TOOLS _____ CABLE TOOLS _____

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

25. WAS DIRECTIONAL SURVEY MADE
No

26. TYPE ELECTRIC AND OTHER LOGS RUN
Cement Bond Log, GR-CCL RTL DTL FFT mill

27. WAS WELL CORED
No

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
<u>13-3/8"</u>	<u>61#</u>	<u>4060'</u>	<u>17-1/2"</u>	<u>N/A</u>	<u>None</u>

29. LINER RECORD

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

30. TUBING RECORD

SIZE	DEPTH SET (MD)

31. PERFORATION RECORD (Interval, size and number)

2330-2350', 0.43" dia, 21 holes
2086-2110', 0.43" dia, 25 holes
2119-2130', 0.43" dia, 12 holes
1678-1688', 0.43" dia, 11 holes
1658-1660', 0.43" dia, 3 holes
1644-1652', 0.43" dia, 9 holes

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
<u>2330-2350'</u>	<u>1000 gal 7-1/2% HCL</u>

33. PRODUCTION

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

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

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) _____ TEST WITNESSED BY _____

35. LIST OF ATTACHMENTS
Well History, Cementing Report

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

SIGNED R. Bruce Wright TITLE Petroleum Engineer DATE 3/7/83

TIGHT HOLE

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

TXO

TXO PRODUCTION CORP.

1800 LINCOLN CENTER BUILDING

DENVER, COLORADO 80264

TELEPHONE (303) 861-4246

March 8, 1983

DIVISION OF OIL, GAS, & MINING
4241 State Office Building
Salt Lake City, Utah 84114

Attn: Mr. Cleon B. Feight
Director

RE: KLOTZ FEDERAL #1
Section 11, T21S-R22E
Grand County, Utah

Dear Mr. Feight:

Please find enclosed two (2) copies of Form 9-330, "Well Completion or Recompletion Report and Log", and Form 9-331, "Sundry Notices and Reports on Wells", for the above referenced well. Also find enclosed copies of the well history and cementing report.

If there are any further requirements concerning this well, please contact me at this office.

Sincerely,

TXO PRODUCTION CORP.

R. Bruce Wright

R. Bruce Wright
Petroleum Engineer

RBW/dek
encls.

RECEIVED
MAR 14 1983

DIVISION OF
OIL, GAS & MINING

*LOGS WILL BE FORWARDED BY THE LOGGING COMPANY.

A SUBSIDIARY OF TEXAS
OIL & GAS CORP.



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple H. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

January 31, 1984

TXO Production Corporation
1660 Lincoln #1800
Denver CO 80264

RE: Well No. Klotz Fed. #1
API #43-019-31328
1980' FNL, 1829' FEL SW/NE
Sec. 11, T. 21S, R. 22E.
Grand County, Utah

Gentlemen:

According to our records, a "Well Completion Report" filed with this office March 7, 1983 on the above referred to well, indicates the following electric logs were run: CBL and GR-CCL. As of today's date, this office has not received these logs.

Rule C-5, General Rules and Regulations and Rules of Practice and Procedure, requires that a well log shall be filed with the Commission together with a copy of the electric and radioactivity logs.

We will be happy to acknowledge receipt of your response to this notice if you will include an extra copy of the transmittal letter with a place for our signature, and a self addressed envelope for the return. Such acknowledgment should avoid unnecessary mailing of a second notice from our agency.

Your prompt attention to the above will be greatly appreciated.

Respectfully,

Claudia Jones
Well Records Specialist

CJ/cj



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dianne R. Nielson, Ph.D., Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

January 10, 1985

TXO Production Corporation
1660 Lincoln, Suite 1800
Denver, Colorado 80264

2nd NOTICE

Gentlemen:

Re: Well No. Klotz Fed. #1 - Sec. 11, T. 21S., R. 22E.
Grand County, Utah - API #43-019-30328

A letter requesting that you send in the electric logs for the above referred to well was sent from our office on January 31, 1984. A copy of this letter is enclosed. The requested logs on the re-entry have not yet been received as requested.

Please take care of this matter as soon as possible, but not later than February 10, 1985.

Respectfully,

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

Norman C. Stout
Administrative Assistant

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

0017S/9

TXO

TXO PRODUCTION CORP.

1800 LINCOLN CENTER BUILDING
DENVER, COLORADO 80264

TELEPHONE (303) 861-4246

file
RECEIVED
JAN 23 1985

January 24, 1985

DIVISION OF
OIL, GAS & MINING

STATE OF UTAH
Natural Resources
Oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84114

Attn: Mr. Norman C. Stout
Administrative Asst.

RE: KLOTZ FEDERAL #1
Section 11, T21S-R22E
Grand County, Utah
API #43-019-30328

Dear Mr. Stout:

Pursuant to your letter dated January 10, 1985,
enclosed please find the requested electric logs for the
above referenced well.

Sincerely,

TXO PRODUCTION CORP.

Diedre Erin Evans

Diedre Erin Evans
Engineering Secretary

DEE
encl.

BEST COPY
AVAILABLE

*
*
*

-----SCHLUMBERGER-----
-----SCHLUMBERGER-----

SCHLUMBERGER DIRECTIONAL SURVEY

43-019-30328

MOBIL OIL CORPORATION

MCCORMICK FEDERAL C#1

WILDCAT

GRAND COUNTY, UTAH

RUN NO. 1 16336 - 19262

NOVEMBER 24, 1977

START OF SURVEY IS CASING AT 16336 FT.

TANGENTIAL METHOD

REFERENCE JOB 3677.

* DEPTH	* DEVIATION	* AZIMUTH	* TRUE	* CO-ORDINATES	* COURSE
* FEET	* DEGREES	* DEGREES	* VERTICAL	* + NORTH * + EAST	* LENGTH
			* DEPTH	* - SOUTH * - WEST	* FEET
			* FEET		
* 16336.0	* 11.2	* 308.0	* 16336.0	* 0.0 * 0.0	* 0.0
* 16340.0	* 11.3	* 1.4	* 16339.9	* 0.8 * 0.1	* 0.8
* 16350.0	* 11.4	* 5.0	* 16349.7	* 2.8 * 0.2	* 2.8
* 16360.0	* 11.9	* 1.0	* 16359.5	* 4.8 * 0.3	* 4.8
* 16370.0	* 11.9	* 360.0	* 16369.3	* 6.9 * 0.3	* 6.9
* 16380.0	* 12.0	* 359.0	* 16379.1	* 9.0 * 0.2	* 9.0
* 16390.0	* 12.1	* 1.0	* 16388.9	* 11.1 * 0.3	* 11.1
* 16400.0	* 12.1	* 2.0	* 16398.6	* 13.2 * 0.4	* 13.2
* 16410.0	* 12.2	* 7.0	* 16408.4	* 15.2 * 0.6	* 15.3
* 16420.0	* 12.6	* 7.0	* 16418.2	* 17.4 * 0.9	* 17.4
* 16430.0	* 12.3	* 357.0	* 16427.9	* 19.5 * 0.8	* 19.6
* 16440.0	* 12.4	* 9.0	* 16437.7	* 21.7 * 1.1	* 21.7
* 16450.0	* 12.4	* 10.0	* 16447.5	* 23.8 * 1.5	* 23.8
* 16460.0	* 12.2	* 0.0	* 16457.2	* 25.9 * 1.5	* 25.9
* 16470.0	* 12.3	* 5.0	* 16467.0	* 28.0 * 1.7	* 28.1
* 16480.0	* 12.3	* 2.0	* 16476.8	* 30.1 * 1.7	* 30.2
* 16490.0	* 12.1	* 5.0	* 16486.6	* 32.2 * 1.9	* 32.3
* 16500.0	* 11.8	* 30.0	* 16496.3	* 34.0 * 2.9	* 34.1
* 16510.0	* 11.6	* 353.0	* 16506.1	* 36.0 * 2.7	* 36.1
* 16520.0	* 11.4	* 360.0	* 16515.9	* 38.0 * 2.7	* 38.1
* 16530.0	* 10.9	* 3.0	* 16525.8	* 39.9 * 2.8	* 40.0
* 16540.0	* 10.8	* 0.0	* 16535.6	* 41.7 * 2.8	* 41.8
* 16550.0	* 10.6	* 5.0	* 16545.4	* 43.6 * 3.0	* 43.7
* 16560.0	* 10.0	* 354.0	* 16555.3	* 45.3 * 2.8	* 45.4
* 16570.0	* 9.5	* 335.0	* 16565.1	* 46.8 * 2.1	* 46.8
* 16580.0	* 9.2	* 331.0	* 16575.0	* 48.2 * 1.3	* 48.2
* 16590.0	* 9.2	* 333.0	* 16584.9	* 49.6 * 0.6	* 49.6
* 16600.0	* 9.2	* 329.0	* 16594.7	* 51.0 * -0.3	* 51.0
* 16610.0	* 8.7	* 325.0	* 16604.6	* 52.2 * -1.1	* 52.2
* 16620.0	* 8.5	* 327.0	* 16614.5	* 53.5 * -1.9	* 53.5
* 16630.0	* 8.2	* 326.0	* 16624.4	* 54.6 * -2.7	* 54.7
* 16640.0	* 7.6	* 322.0	* 16634.3	* 55.7 * -3.5	* 55.8
* 16650.0	* 6.5	* 318.0	* 16644.3	* 56.5 * -4.3	* 56.7
* 16660.0	* 5.8	* 317.0	* 16654.2	* 57.3 * -5.0	* 57.5
* 16670.0	* 5.2	* 316.0	* 16664.2	* 57.9 * -5.6	* 58.2
* 16680.0	* 4.6	* 299.0	* 16674.1	* 58.3 * -6.3	* 58.6
* 16690.0	* 4.3	* 294.0	* 16684.1	* 58.6 * -7.0	* 59.0
* 16700.0	* 4.0	* 291.0	* 16694.1	* 58.9 * -7.7	* 59.4
* 16710.0	* 3.9	* 279.0	* 16704.1	* 59.0 * -8.3	* 59.6
* 16720.0	* 3.8	* 273.0	* 16714.0	* 59.0 * -9.0	* 59.7
* 16730.0	* 3.7	* 268.0	* 16724.0	* 59.0 * -9.6	* 59.8
* 16740.0	* 3.9	* 266.0	* 16734.0	* 58.9 * -10.3	* 59.8
* 16750.0	* 4.0	* 266.0	* 16744.0	* 58.9 * -11.0	* 59.9
* 16760.0	* 4.1	* 264.0	* 16753.9	* 58.8 * -11.7	* 60.0
* 16770.0	* 4.3	* 261.0	* 16763.9	* 58.7 * -12.5	* 60.0
* 16780.0	* 4.4	* 261.0	* 16773.9	* 58.6 * -13.2	* 60.0

* DEPTH	* DEVIATION	* AZIMUTH	* TRUE VERTICAL	* CO-ORDINATES		* COURSE
* FEET	* DEGREES	* DEGREES	* DEPTH	* + NORTH	* + EAST	* LENGTH
			* FEET	* - SOUTH	* - WEST	* FEET
* 16790.0	* 4.6	* 261.0	* 16783.9	* 58.4	* -14.0	* 60.1
* 16800.0	* 4.6	* 260.0	* 16793.8	* 58.3	* -14.8	* 60.2
* 16810.0	* 4.6	* 259.0	* 16803.8	* 58.2	* -15.6	* 60.2
* 16820.0	* 4.6	* 259.0	* 16813.8	* 58.0	* -16.4	* 60.3
* 16830.0	* 4.4	* 261.0	* 16823.7	* 57.9	* -17.1	* 60.4
* 16840.0	* 4.5	* 263.0	* 16833.7	* 57.8	* -17.9	* 60.5
* 16850.0	* 4.6	* 260.0	* 16843.7	* 57.6	* -18.7	* 60.6
* 16860.0	* 4.6	* 256.0	* 16853.6	* 57.6	* -19.5	* 60.6
* 16870.0	* 4.5	* 267.0	* 16863.6	* 57.5	* -20.3	* 61.0
* 16880.0	* 4.5	* 269.0	* 16873.6	* 57.5	* -21.1	* 61.3
* 16890.0	* 4.7	* 269.0	* 16883.5	* 57.5	* -21.9	* 61.5
* 16900.0	* 4.8	* 269.0	* 16893.5	* 57.5	* -22.7	* 61.8
* 16910.0	* 4.7	* 270.0	* 16903.5	* 57.5	* -23.5	* 62.1
* 16920.0	* 4.9	* 274.0	* 16913.4	* 57.6	* -24.4	* 62.5
* 16930.0	* 5.2	* 273.0	* 16923.4	* 57.6	* -25.3	* 62.9
* 16940.0	* 5.2	* 274.0	* 16933.4	* 57.7	* -26.2	* 63.3
* 16950.0	* 5.2	* 273.0	* 16943.3	* 57.7	* -27.1	* 63.8
* 16960.0	* 5.2	* 274.0	* 16953.3	* 57.8	* -28.0	* 64.2
* 16970.0	* 5.5	* 279.0	* 16963.2	* 57.9	* -29.0	* 64.8
* 16980.0	* 5.6	* 280.0	* 16973.2	* 58.1	* -29.9	* 65.4
* 16990.0	* 5.7	* 283.0	* 16983.1	* 58.3	* -30.9	* 66.0
* 17000.0	* 6.0	* 290.0	* 16993.1	* 58.7	* -31.9	* 66.8
* 17010.0	* 6.0	* 289.0	* 17003.0	* 59.0	* -32.9	* 67.6
* 17020.0	* 6.3	* 295.0	* 17013.0	* 59.5	* -33.9	* 68.4
* 17030.0	* 7.0	* 301.0	* 17022.9	* 60.1	* -34.9	* 69.5
* 17040.0	* 7.7	* 304.0	* 17032.8	* 60.9	* -36.0	* 70.7
* 17050.0	* 8.0	* 308.0	* 17042.7	* 61.7	* -37.1	* 72.0
* 17060.0	* 8.2	* 309.0	* 17052.6	* 62.6	* -38.2	* 73.4
* 17070.0	* 8.5	* 311.0	* 17062.5	* 63.6	* -39.3	* 74.8
* 17080.0	* 8.8	* 317.0	* 17072.4	* 64.7	* -40.4	* 76.3
* 17090.0	* 9.1	* 319.0	* 17082.2	* 65.9	* -41.4	* 77.8
* 17100.0	* 9.1	* 312.0	* 17092.1	* 67.0	* -42.6	* 79.4
* 17110.0	* 9.0	* 310.0	* 17102.0	* 68.0	* -43.8	* 80.8
* 17120.0	* 8.9	* 315.0	* 17111.9	* 69.1	* -44.9	* 82.4
* 17130.0	* 9.0	* 313.0	* 17121.7	* 70.1	* -46.0	* 83.9
* 17140.0	* 9.2	* 314.0	* 17131.6	* 71.2	* -47.2	* 85.4
* 17150.0	* 9.2	* 322.0	* 17141.5	* 72.5	* -48.2	* 87.0
* 17160.0	* 9.2	* 321.0	* 17151.4	* 73.7	* -49.2	* 88.6
* 17170.0	* 9.3	* 318.0	* 17161.2	* 74.9	* -50.2	* 90.2
* 17180.0	* 9.2	* 317.0	* 17171.1	* 76.1	* -51.3	* 91.8
* 17190.0	* 9.2	* 318.0	* 17181.0	* 77.3	* -52.4	* 93.4
* 17200.0	* 9.2	* 324.0	* 17190.8	* 78.6	* -53.3	* 95.0
* 17210.0	* 9.3	* 330.0	* 17200.7	* 80.0	* -54.1	* 96.6
* 17220.0	* 9.5	* 330.0	* 17210.6	* 81.4	* -55.0	* 98.2
* 17230.0	* 9.4	* 328.0	* 17220.4	* 82.8	* -55.8	* 99.9
* 17240.0	* 9.3	* 325.0	* 17230.3	* 84.1	* -56.8	* 101.5

* DEPTH	* DEVIATION	* AZIMUTH	* TRUE	* CO-ORDINATES	* COURSE
* FEET	* DEGREES	* DEGREES	* VERTICAL	* + NORTH * + EAST * - SOUTH * - WEST	* LENGTH
			* FEET		* FEET
* 17250.0	* 9.2	* 327.0	* 17240.2	* 85.5 * -57.6	* 103.1
* 17260.0	* 9.2	* 326.0	* 17250.1	* 86.8 * -58.5	* 104.7
* 17270.0	* 9.2	* 334.0	* 17259.9	* 88.2 * -59.2	* 106.3
* 17280.0	* 9.4	* 320.0	* 17269.8	* 89.5 * -60.3	* 107.9
* 17290.0	* 9.4	* 319.0	* 17279.7	* 90.7 * -61.4	* 109.5
* 17300.0	* 9.5	* 318.0	* 17289.5	* 91.9 * -62.5	* 111.2
* 17310.0	* 9.6	* 328.0	* 17299.4	* 93.4 * -63.3	* 112.8
* 17320.0	* 9.6	* 332.0	* 17309.2	* 94.8 * -64.1	* 114.5
* 17330.0	* 9.6	* 338.0	* 17319.1	* 96.4 * -64.7	* 116.1
* 17340.0	* 9.6	* 340.0	* 17329.0	* 97.9 * -65.3	* 117.7
* 17350.0	* 9.8	* 335.0	* 17338.8	* 99.5 * -66.0	* 119.4
* 17360.0	* 10.0	* 336.0	* 17348.7	* 101.1 * -66.7	* 121.1
* 17370.0	* 10.3	* 338.0	* 17358.5	* 102.7 * -67.4	* 122.9
* 17380.0	* 10.4	* 344.0	* 17368.3	* 104.5 * -67.9	* 124.6
* 17390.0	* 10.2	* 344.0	* 17378.2	* 106.2 * -68.4	* 126.3
* 17400.0	* 10.4	* 338.0	* 17388.0	* 107.8 * -69.1	* 128.1
* 17410.0	* 10.3	* 349.0	* 17397.9	* 109.6 * -69.4	* 129.7
* 17420.0	* 10.1	* 344.0	* 17407.7	* 111.3 * -69.9	* 131.4
* 17430.0	* 10.0	* 352.0	* 17417.5	* 113.0 * -70.1	* 133.0
* 17440.0	* 10.3	* 360.0	* 17427.4	* 114.8 * -70.1	* 134.5
* 17450.0	* 10.4	* 1.0	* 17437.2	* 116.6 * -70.1	* 136.1
* 17460.0	* 10.7	* 0.0	* 17447.0	* 118.5 * -70.1	* 137.6
* 17470.0	* 10.7	* 10.0	* 17456.9	* 120.3 * -69.8	* 139.1
* 17480.0	* 10.6	* 8.0	* 17466.7	* 122.1 * -69.5	* 140.5
* 17490.0	* 10.8	* 9.0	* 17476.5	* 124.0 * -69.2	* 142.0
* 17500.0	* 11.3	* 8.0	* 17486.3	* 125.9 * -69.0	* 143.5
* 17510.0	* 11.6	* 3.0	* 17496.1	* 127.9 * -68.9	* 145.3
* 17520.0	* 11.6	* 9.0	* 17505.9	* 129.9 * -68.5	* 146.9
* 17530.0	* 12.0	* 12.0	* 17515.7	* 131.9 * -68.1	* 148.5
* 17540.0	* 12.4	* 11.0	* 17525.5	* 134.0 * -67.7	* 150.2
* 17550.0	* 12.4	* 14.0	* 17535.2	* 136.1 * -67.2	* 151.8
* 17560.0	* 12.6	* 16.0	* 17545.0	* 138.2 * -66.6	* 153.4
* 17570.0	* 12.9	* 21.0	* 17554.7	* 140.3 * -65.8	* 155.0
* 17580.0	* 12.7	* 17.0	* 17564.5	* 142.4 * -65.1	* 156.6
* 17590.0	* 12.6	* 20.0	* 17574.3	* 144.4 * -64.4	* 158.2
* 17600.0	* 12.4	* 17.0	* 17584.0	* 146.5 * -63.8	* 159.8
* 17610.0	* 12.4	* 8.0	* 17593.8	* 148.6 * -63.5	* 161.6
* 17620.0	* 12.4	* 18.0	* 17603.6	* 150.7 * -62.8	* 163.2
* 17630.0	* 12.4	* 26.0	* 17613.3	* 152.6 * -61.9	* 164.7
* 17640.0	* 12.4	* 18.0	* 17623.1	* 154.6 * -61.2	* 166.3
* 17650.0	* 12.4	* 24.0	* 17632.9	* 156.6 * -60.3	* 167.8
* 17660.0	* 12.4	* 26.0	* 17642.6	* 158.5 * -59.4	* 169.3
* 17670.0	* 12.3	* 23.0	* 17652.4	* 160.5 * -58.6	* 170.8
* 17680.0	* 12.3	* 27.0	* 17662.2	* 162.4 * -57.6	* 172.3
* 17690.0	* 12.4	* 20.0	* 17671.9	* 164.4 * -56.9	* 174.0
* 17700.0	* 12.4	* 22.0	* 17681.7	* 166.4 * -56.0	* 175.6

* DEPTH	* DEVIATION	* AZIMUTH	* TRUE	* CO-ORDINATES	* COURSE
* FEET	* DEGREES	* DEGREES	* VERTICAL	* NORTH	* EAST
			* DEPTH	* SOUTH	* WEST
			* FEET		* FEET
* 17710.0	* 12.2	* 26.0	* 17691.5	* 168.3	* -55.1
* 17720.0	* 12.3	* 27.0	* 17701.2	* 170.2	* -54.2
* 17730.0	* 12.2	* 23.0	* 17711.0	* 172.1	* -53.3
* 17740.0	* 12.2	* 30.0	* 17720.8	* 174.0	* -52.3
* 17750.0	* 12.2	* 29.0	* 17730.6	* 175.8	* -51.2
* 17760.0	* 12.2	* 28.0	* 17740.3	* 177.7	* -50.3
* 17770.0	* 12.2	* 26.0	* 17750.1	* 179.6	* -49.3
* 17780.0	* 12.3	* 28.0	* 17759.9	* 181.5	* -48.3
* 17790.0	* 12.4	* 25.0	* 17769.7	* 183.4	* -47.4
* 17800.0	* 12.4	* 28.0	* 17779.4	* 185.3	* -46.4
* 17810.0	* 12.4	* 28.0	* 17789.2	* 187.2	* -45.4
* 17820.0	* 12.4	* 29.0	* 17799.0	* 189.1	* -44.4
* 17830.0	* 12.4	* 24.0	* 17808.7	* 191.0	* -43.5
* 17840.0	* 12.4	* 26.0	* 17818.5	* 193.0	* -42.5
* 17850.0	* 12.2	* 25.0	* 17828.3	* 194.9	* -41.7
* 17860.0	* 12.2	* 26.0	* 17838.0	* 196.8	* -40.7
* 17870.0	* 12.0	* 21.0	* 17847.8	* 198.7	* -40.0
* 17880.0	* 11.7	* 23.0	* 17857.6	* 200.6	* -39.2
* 17890.0	* 11.6	* 26.0	* 17867.4	* 202.4	* -38.3
* 17900.0	* 11.7	* 22.0	* 17877.2	* 204.3	* -37.6
* 17910.0	* 12.0	* 26.0	* 17887.0	* 206.2	* -36.6
* 17920.0	* 11.6	* 21.0	* 17896.8	* 208.0	* -35.9
* 17930.0	* 11.6	* 18.0	* 17906.6	* 209.9	* -35.3
* 17940.0	* 11.6	* 23.0	* 17916.4	* 211.8	* -34.5
* 17950.0	* 11.7	* 20.0	* 17926.2	* 213.7	* -33.8
* 17960.0	* 11.7	* 10.0	* 17935.9	* 215.7	* -33.5
* 17970.0	* 12.0	* 20.0	* 17945.7	* 217.7	* -32.8
* 17980.0	* 12.1	* 17.0	* 17955.5	* 219.7	* -32.1
* 17990.0	* 12.0	* 18.0	* 17965.3	* 221.6	* -31.5
* 18000.0	* 12.0	* 19.0	* 17975.1	* 223.6	* -30.8
* 18010.0	* 12.0	* 19.0	* 17984.9	* 225.6	* -30.1
* 18020.0	* 11.8	* 18.0	* 17994.6	* 227.5	* -29.5
* 18030.0	* 11.7	* 23.0	* 18004.4	* 229.4	* -28.7
* 18040.0	* 11.9	* 7.0	* 18014.2	* 231.4	* -28.5
* 18050.0	* 11.6	* 3.0	* 18024.0	* 233.4	* -28.4
* 18060.0	* 11.6	* 15.0	* 18033.8	* 235.4	* -27.8
* 18070.0	* 11.6	* 11.0	* 18043.6	* 237.4	* -27.5
* 18080.0	* 11.6	* 8.0	* 18053.4	* 239.3	* -27.2
* 18090.0	* 11.5	* 4.0	* 18063.2	* 241.3	* -27.0
* 18100.0	* 11.5	* 14.0	* 18073.0	* 243.3	* -26.6
* 18110.0	* 11.4	* 0.0	* 18082.8	* 245.2	* -26.6
* 18120.0	* 11.5	* 12.0	* 18092.6	* 247.2	* -26.1
* 18130.0	* 11.6	* 18.0	* 18102.4	* 249.1	* -25.5
* 18140.0	* 11.4	* 21.0	* 18112.2	* 250.9	* -24.8
* 18150.0	* 11.6	* 11.0	* 18122.0	* 252.9	* -24.4
* 18160.0	* 11.4	* 18.0	* 18131.8	* 254.8	* -23.8

* DEPTH	* DEVIATION	* AZIMUTH	* TRUE	* CO-ORDINATES		* COURSE	
* FEET	* DEGREES	* DEGREES	* VERTICAL	* + NORTH	* + EAST	* LENGTH	*
*	*	*	* FEET	* - SOUTH	* - WEST	* FEET	*

* 18170.0	* 11.6	* 20.0	* 18141.6	* 256.7	* -23.1	* 257.7	*
* 18180.0	* 11.6	* 13.0	* 18151.4	* 258.7	* -22.7	* 259.6	*
* 18190.0	* 11.6	* 10.0	* 18161.2	* 260.6	* -22.3	* 261.6	*
* 18200.0	* 11.9	* 10.0	* 18171.0	* 262.7	* -22.0	* 263.5	*
* 18210.0	* 12.2	* 21.0	* 18180.7	* 264.6	* -21.2	* 265.5	*
* 18220.0	* 12.4	* 6.0	* 18190.5	* 266.8	* -21.0	* 267.6	*
* 18230.0	* 12.4	* 14.0	* 18200.3	* 268.9	* -20.5	* 269.6	*
* 18240.0	* 12.3	* 19.0	* 18210.0	* 270.9	* -19.8	* 271.6	*
* 18250.0	* 12.4	* 25.0	* 18219.8	* 272.8	* -18.9	* 273.5	*
* 18260.0	* 12.4	* 15.0	* 18229.6	* 274.9	* -18.3	* 275.5	*
* 18270.0	* 12.3	* 353.0	* 18239.4	* 277.0	* -18.6	* 277.6	*
* 18280.0	* 12.2	* 10.0	* 18249.1	* 279.1	* -18.2	* 279.7	*
* 18290.0	* 12.1	* 14.0	* 18258.9	* 281.1	* -17.7	* 281.7	*
* 18300.0	* 12.2	* 8.0	* 18268.7	* 283.2	* -17.4	* 283.7	*
* 18310.0	* 12.3	* 21.0	* 18278.4	* 285.2	* -16.6	* 285.7	*
* 18320.0	* 12.2	* 24.0	* 18288.2	* 287.1	* -15.8	* 287.6	*
* 18330.0	* 12.3	* 28.0	* 18298.0	* 289.0	* -14.8	* 289.4	*
* 18340.0	* 12.3	* 26.0	* 18307.8	* 290.9	* -13.9	* 291.3	*
* 18350.0	* 12.3	* 21.0	* 18317.5	* 292.9	* -13.1	* 293.2	*
* 18360.0	* 12.4	* 23.0	* 18327.3	* 294.9	* -12.2	* 295.1	*
* 18370.0	* 12.4	* 22.0	* 18337.1	* 296.9	* -11.4	* 297.1	*
* 18380.0	* 12.4	* 28.0	* 18346.8	* 298.8	* -10.4	* 299.0	*
* 18390.0	* 12.4	* 22.0	* 18356.6	* 300.8	* -9.6	* 300.9	*
* 18400.0	* 12.4	* 24.0	* 18366.4	* 302.7	* -8.8	* 302.9	*
* 18410.0	* 12.4	* 24.0	* 18376.1	* 304.7	* -7.9	* 304.8	*
* 18420.0	* 12.4	* 27.0	* 18385.9	* 306.6	* -6.9	* 306.7	*
* 18430.0	* 12.4	* 26.0	* 18395.7	* 308.5	* -6.0	* 308.6	*
* 18440.0	* 12.3	* 26.0	* 18405.4	* 310.5	* -5.0	* 310.5	*
* 18450.0	* 12.4	* 26.0	* 18415.2	* 312.4	* -4.1	* 312.4	*
* 18460.0	* 12.4	* 28.0	* 18425.0	* 314.3	* -3.1	* 314.3	*
* 18470.0	* 12.4	* 28.0	* 18434.7	* 316.2	* -2.1	* 316.2	*
* 18480.0	* 12.4	* 26.0	* 18444.5	* 318.1	* -1.1	* 318.1	*
* 18490.0	* 12.4	* 29.0	* 18454.3	* 320.0	* -0.1	* 320.0	*
* 18500.0	* 12.4	* 28.0	* 18464.0	* 321.9	* 0.9	* 321.9	*
* 18510.0	* 12.4	* 28.0	* 18473.8	* 323.8	* 1.9	* 323.8	*
* 18520.0	* 12.5	* 28.0	* 18483.6	* 325.7	* 2.9	* 325.7	*
* 18530.0	* 12.4	* 29.0	* 18493.3	* 327.6	* 4.0	* 327.6	*
* 18540.0	* 12.4	* 32.0	* 18503.1	* 329.4	* 5.1	* 329.4	*
* 18550.0	* 12.4	* 25.0	* 18512.9	* 331.3	* 6.0	* 331.4	*
* 18560.0	* 12.5	* 37.0	* 18522.6	* 333.1	* 7.3	* 333.1	*
* 18570.0	* 12.6	* 22.0	* 18532.4	* 335.1	* 8.1	* 335.2	*
* 18580.0	* 12.7	* 29.0	* 18542.1	* 337.0	* 9.2	* 337.1	*
* 18590.0	* 12.7	* 27.0	* 18551.9	* 339.0	* 10.2	* 339.1	*
* 18600.0	* 12.6	* 27.0	* 18561.7	* 340.9	* 11.2	* 341.1	*
* 18610.0	* 12.6	* 26.0	* 18571.4	* 342.9	* 12.2	* 343.1	*
* 18620.0	* 12.8	* 27.0	* 18581.2	* 344.8	* 13.2	* 345.1	*

* DEPTH	* DEVIATION	* AZIMUTH	* TRUE	* CO-ORDINATES	* COURSE
* FEET	* DEGREES	* DEGREES	* VERTICAL	* NORTH	* EAST
			* DEPTH	* SOUTH	* WEST
			* FEET		* LENGTH
					* FEET
* 18630.0	* 12.5	* 29.0	* 18590.9	* 346.7	* 14.2 * 347.0
* 18640.0	* 12.5	* 29.0	* 18600.7	* 348.6	* 15.3 * 349.0
* 18650.0	* 12.5	* 27.0	* 18610.5	* 350.6	* 16.2 * 350.9
* 18660.0	* 12.6	* 24.0	* 18620.2	* 352.5	* 17.1 * 353.0
* 18670.0	* 12.7	* 31.0	* 18630.0	* 354.4	* 18.3 * 354.9
* 18680.0	* 12.8	* 29.0	* 18639.7	* 356.4	* 19.3 * 356.9
* 18690.0	* 12.8	* 28.0	* 18649.5	* 358.3	* 20.4 * 358.9
* 18700.0	* 12.8	* 27.0	* 18659.2	* 360.3	* 21.4 * 360.9
* 18710.0	* 12.6	* 29.0	* 18669.0	* 362.2	* 22.4 * 362.9
* 18720.0	* 12.6	* 24.0	* 18678.7	* 364.2	* 23.3 * 364.9
* 18730.0	* 12.6	* 25.0	* 18688.5	* 366.2	* 24.2 * 367.0
* 18740.0	* 12.6	* 23.0	* 18698.3	* 368.2	* 25.1 * 369.0
* 18750.0	* 12.7	* 23.0	* 18708.0	* 370.2	* 26.0 * 371.1
* 18760.0	* 12.7	* 23.0	* 18717.8	* 372.2	* 26.8 * 373.2
* 18770.0	* 12.6	* 19.0	* 18727.5	* 374.3	* 27.5 * 375.3
* 18780.0	* 12.7	* 21.0	* 18737.3	* 376.3	* 28.3 * 377.4
* 18790.0	* 12.8	* 23.0	* 18747.0	* 378.4	* 29.2 * 379.5
* 18800.0	* 12.8	* 20.0	* 18756.8	* 380.5	* 29.9 * 381.6
* 18810.0	* 12.9	* 24.0	* 18766.5	* 382.5	* 30.8 * 383.8
* 18820.0	* 13.1	* 27.0	* 18776.3	* 384.5	* 31.9 * 385.8
* 18830.0	* 13.2	* 26.0	* 18786.0	* 386.6	* 32.9 * 388.0
* 18840.0	* 13.2	* 24.0	* 18795.8	* 388.7	* 33.8 * 390.1
* 18850.0	* 13.2	* 28.0	* 18805.5	* 390.7	* 34.9 * 392.2
* 18860.0	* 13.2	* 25.0	* 18815.2	* 392.8	* 35.8 * 394.4
* 18870.0	* 13.2	* 22.0	* 18825.0	* 394.9	* 36.7 * 396.6
* 18880.0	* 13.3	* 20.0	* 18834.7	* 397.0	* 37.5 * 398.8
* 18890.0	* 13.3	* 15.0	* 18844.4	* 399.3	* 38.1 * 401.1
* 18900.0	* 13.4	* 19.0	* 18854.1	* 401.4	* 38.8 * 403.3
* 18910.0	* 13.9	* 21.0	* 18863.9	* 403.7	* 39.7 * 405.6
* 18920.0	* 13.8	* 22.0	* 18873.6	* 405.9	* 40.6 * 407.9
* 18930.0	* 13.8	* 24.0	* 18883.3	* 408.1	* 41.6 * 410.2
* 18940.0	* 13.9	* 13.0	* 18893.0	* 410.4	* 42.1 * 412.6
* 18950.0	* 14.1	* 26.0	* 18902.7	* 412.6	* 43.2 * 414.9
* 18960.0	* 14.1	* 21.0	* 18912.4	* 414.9	* 44.0 * 417.2
* 18970.0	* 14.0	* 23.0	* 18922.1	* 417.1	* 45.0 * 419.5
* 18980.0	* 14.2	* 20.0	* 18931.8	* 419.4	* 45.8 * 421.9
* 18990.0	* 14.4	* 23.0	* 18941.5	* 421.7	* 46.8 * 424.3
* 19000.0	* 14.1	* 22.0	* 18951.2	* 424.0	* 47.7 * 426.6
* 19010.0	* 14.2	* 18.0	* 18960.9	* 426.3	* 48.5 * 429.0
* 19020.0	* 14.3	* 12.0	* 18970.6	* 428.7	* 49.0 * 431.5
* 19030.0	* 14.2	* 16.0	* 18980.2	* 431.1	* 49.7 * 433.9
* 19040.0	* 14.2	* 15.0	* 18989.9	* 433.4	* 50.3 * 436.3
* 19050.0	* 14.2	* 16.0	* 18999.6	* 435.8	* 51.0 * 438.8
* 19060.0	* 14.3	* 18.0	* 19009.3	* 438.1	* 51.7 * 441.2
* 19070.0	* 14.3	* 14.0	* 19019.0	* 440.5	* 52.3 * 443.6
* 19080.0	* 14.2	* 15.0	* 19028.7	* 442.9	* 53.0 * 446.1

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*           *           *           * TRUE           * CO-ORDINATES *           *
* DEPTH     * DEVIATION * AZIMUTH * VERTICAL ***** COURSE *
* FEET      * DEGREES  * DEGREES * DEPTH   * + NORTH * + EAST * LENGTH *
*           *           *           * FEET    * - SOUTH * - WEST * FEET   *
*****
* 19090.0 * 14.3 * 354.0 * 19038.4 * 445.4 * 52.7 * 448.5 *
* 19100.0 * 14.3 * 355.0 * 19048.1 * 447.8 * 52.5 * 450.9 *
* 19110.0 * 14.4 * 6.0 * 19057.8 * 450.3 * 52.8 * 453.4 *
* 19120.0 * 14.5 * 22.0 * 19067.5 * 452.6 * 53.7 * 455.8 *
* 19130.0 * 14.7 * 15.0 * 19077.1 * 455.1 * 54.3 * 458.3 *
* 19140.0 * 14.6 * 12.0 * 19086.8 * 457.5 * 54.9 * 460.8 *
* 19150.0 * 14.5 * 4.0 * 19096.5 * 460.0 * 55.0 * 463.3 *
* 19160.0 * 14.6 * 355.0 * 19106.2 * 462.6 * 54.8 * 465.8 *
* 19170.0 * 14.7 * 356.0 * 19115.8 * 465.1 * 54.6 * 468.3 *
* 19180.0 * 14.6 * 19.0 * 19125.5 * 467.5 * 55.5 * 470.7 *
* 19190.0 * 14.6 * 18.0 * 19135.2 * 469.9 * 56.2 * 473.2 *
* 19200.0 * 14.6 * 20.0 * 19144.9 * 472.2 * 57.1 * 475.7 *
* 19210.0 * 14.6 * 3.8 * 19154.5 * 474.6 * 58.0 * 478.1 *
* 19220.0 * 14.6 * 6.9 * 19164.2 * 477.0 * 58.8 * 480.6 *
* 19230.0 * 14.6 * 10.0 * 19173.9 * 479.3 * 59.7 * 483.0 *
* 19240.0 * 14.6 * 13.1 * 19183.6 * 481.7 * 60.6 * 485.5 *
* 19250.0 * 14.6 * 16.3 * 19193.3 * 484.1 * 61.4 * 488.0 *
* 19260.0 * 14.6 * 19.4 * 19202.9 * 486.4 * 62.3 * 490.4 *
* 19262.0 * 14.6 * 20.0 * 19204.9 * 486.9 * 62.5 * 490.9 *
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* BOTTOM HOLE LOCATION *
* * * * *
* COURSE LENGTH; 490.9 FEET *
* * * * *
* COURSE AZIMUTH; 7.3 DEGREES *
* * * * *
* MEASURED DEPTH; 19262.0 FEET *
* * * * *
* TRUE VERTICAL DEPTH; 19204.9 FEET *
* * * * *
* DISTANCE NORTH; 486.9 FEET *
* * * * *
* DISTANCE EAST; 62.5 FEET *
* * * * *
* TANGENTIAL METHOD *
* * * * *

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*
*

-----SCHLUMBERGER-----

DIPMETER
CLUSTER
CALCULATION
LISTING

MOBIL OIL CORPORATION

McCORMICK FEDERAL C#1

WILDCAT

GRAND , UTAH

RUN NO. ONE JOB NO. 3077

CORRELATION LENGTH 8 FT.

STEP LENGTH 4 FT.

SEARCH ANGLE 75 DEG. X1

1-DEC-77

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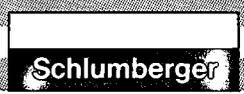
-----SCHLUMBERGER-----

DIPMETER
CLUSTER
CALCULATION
LISTING

MOBIL OIL CORPORATION
MCCORMICK FEDERAL CFI
WILDCAT
GRAND , UTAH
RUN NO. ONE JOB NO. 3677

CORRELATION LENGTH 8 FT.
STEP LENGTH 4 FT.
SEARCH ANGLE 75 DEG. X1

1-DEC-77



FORMATION		BOREHOLE				QUAL.		
DEPTH	DIP	DIP	DEV.	DEV.	DIAM	DIAM	BEST	INDEX
		AZI.		AZI.	1-3	2-4	#4	
* 16350.0			11.4	7	15.3	10.3		
* 16354.0			11.6	360	15.5	9.9		
* 16358.0			11.8	1	16.5	10.0		
* 16362.0			11.9	359	16.4	10.0		
* 16366.0			12.0	359	16.6	10.0		
* 16370.0			11.9	0	17.1	10.2		
* 16374.0			11.9	359	16.6	10.0		
* 16378.0			12.0	358	16.4	9.9		
* 16382.0			12.1	1	17.2	11.0		
* 16386.0			12.1	2	17.7	11.6		
* 16390.0			12.1	1	17.7	10.8		
* 16394.0			12.0	2	17.7	10.4		
* 16398.0			12.0	2	17.7	10.3		
* 16402.0			12.1	359	17.7	11.6		
* 16406.0			12.1	0	17.7	13.1		
* 16410.0			12.2	6	17.7	13.0		
* 16414.0			12.3	6	17.8	11.6		
* 16418.0			12.5	6	17.8	10.7		
* 16422.0			12.5	4	17.8	11.0		
* 16426.0			12.4	360	17.8	10.8		
* 16430.0			12.3	358	17.8	10.9		
* 16434.0			12.3	1	17.9	10.9		
* 16438.0			12.4	6	17.9	10.3		
* 16442.0			12.4	9	17.9	9.8		
* 16446.0			12.4	9	17.9	9.5		
* 16450.0			12.4	7	17.8	9.8		
* 16454.0			12.3	3	17.8	10.2		
* 16458.0			12.2	0	17.9	10.0		
* 16462.0			12.2	2	17.9	9.7		
* 16466.0			12.2	4	17.9	9.7		
* 16470.0			12.3	5	17.9	9.6		
* 16474.0			12.3	4	18.0	9.7		
* 16478.0	75.2	295	12.3	2	17.4	10.1	1	
* 16482.0			12.3	3	16.7	11.1		
* 16486.0			12.2	4	16.6	12.3		
* 16490.0			12.1	4	17.1	12.8		
* 16494.0			11.9	4	17.1	12.5		
* 16498.0			11.8	17	15.7	11.9		
* 16502.0			11.8	20	15.6	11.7		
* 16506.0			11.7	357	15.6	11.2		
* 16510.0			11.6	356	14.5	9.7		
* 16514.0			11.5	5	14.2	8.8		
* 16518.0			11.4	2	14.2	8.1		
* 16522.0			11.3	3	14.3	8.1		
* 16526.0			11.1	5	14.3	8.5		

* FORMATION *					* BOREHOLE		* QUAL. *		
----- INDEX *									
* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST	*	
* * *	* * *	AZI.	* * *	AZI.	1-3	2-4	* 2-4 *	* * *	

* 16530.0			10.9	2	14.3	8.6			*
* 16534.0			10.8	0	14.3	8.6			*
* 16538.0			10.8	1	14.3	8.3			*
* 16542.0			10.8	1	14.3	8.0			*
* 16546.0			10.7	1	14.3	7.6			*
* 16550.0			10.6	5	14.3	7.9			*
* 16554.0	81.0	208	10.4	4	13.2	9.1	1		*
* 16558.0			10.2	356	11.4	10.2			*
* 16562.0			9.9	354	11.3	10.2			*
* 16566.0			9.7	345	11.5	10.3			*
* 16570.0			9.4	335	11.7	10.6			*
* 16574.0			9.3	335	11.7	10.6			*
* 16578.0			9.2	333	11.7	10.6			*
* 16582.0	50.0	232	9.2	330	12.2	10.7	1		*
* 16586.0	51.6	229	9.2	330	12.6	10.7	1		*
* 16590.0			9.2	334	12.7	10.7			*
* 16594.0			9.2	334	12.3	10.9			*
* 16598.0			9.2	330	12.3	11.3			*
* 16602.0			9.1	329	13.0	12.0			*
* 16606.0			8.9	328	13.0	12.8			*
* 16610.0			8.8	326	12.1	12.9			*
* 16614.0			8.6	325	11.5	12.5			*
* 16618.0			8.5	327	11.2	12.6			*
* 16622.0			8.5	326	11.0	12.9			*
* 16626.0			8.4	326	11.1	13.0			*
* 16630.0			8.2	324	11.4	12.5			*
* 16634.0			7.9	322	11.8	12.2			*
* 16638.0			7.7	322	11.6	12.8			*
* 16642.0	80.1	225	7.3	321	10.8	12.9	1		*
* 16646.0			6.9	319	10.5	12.3			*
* 16650.0			6.5	318	10.4	12.0			*
* 16654.0			6.1	316	10.2	11.9			*
* 16658.0			5.9	317	10.1	12.2			*
* 16662.0			5.6	315	10.1	12.2			*
* 16666.0			5.3	313	10.1	11.7			*
* 16670.0	73.3	219	5.2	314	9.9	11.4	3		*
* 16674.0	71.9	223	5.0	310	9.8	11.4	3		*
* 16678.0	70.4	226	4.7	302	10.0	11.3	1		*
* 16682.0	71.0	201	4.5	299	10.0	10.8	1		*
* 16686.0	71.0	202	4.4	298	9.5	10.7	1		*
* 16690.0	79.6	198	4.3	295	9.4	10.8	1		*
* 16694.0			4.1	292	9.8	10.6			*
* 16698.0			4.0	292	10.1	10.4			*
* 16702.0			3.9	288	10.1	10.6			*
* 16706.0			3.9	285	10.2	10.8			*

FORMATION			BOREHOLE				QUAD.	INDEX
DEPTH	DIP	DIP AZI.	DEV.	DEV. AZI.	DIAM 1-3	DIAM 2-4	BEST #	
* 16710.0			3.9	279	10.4	10.7		
* 16714.0			3.8	274	10.4	10.4		
* 16718.0			3.8	273	10.3	10.5		
* 16722.0			3.7	272	10.2	10.6		
* 16726.0			3.7	270	10.3	10.6		
* 16730.0			3.7	269	10.3	10.6		
* 16734.0			3.7	268	10.3	10.8		
* 16738.0			3.8	267	10.3	11.3		
* 16742.0			3.9	266	10.6	11.8		
* 16746.0			4.0	267	10.9	11.6		
* 16750.0			4.0	266	11.7	10.9		
* 16754.0			4.0	265	12.2	10.5		
* 16758.0			4.0	264	12.4	10.4		
* 16762.0	80.6	180	4.1	263	13.2	10.4	1	
* 16766.0			4.1	263	13.9	10.6		
* 16770.0			4.3	261	14.3	10.9		
* 16774.0	79.7	187	4.4	259	14.3	10.7	1	
* 16778.0			4.4	260	13.9	10.3		
* 16782.0			4.4	260	13.3	10.3		
* 16786.0			4.5	260	13.4	10.3		
* 16790.0	79.0	182	4.6	260	13.1	10.3	1	
* 16794.0			4.6	259	12.0	10.3		
* 16798.0			4.6	260	11.7	10.3		
* 16802.0			4.6	261	12.2	10.3		
* 16806.0	84.8	22	4.6	261	12.3	10.4	1	
* 16810.0			4.6	259	12.0	10.6		
* 16814.0			4.6	258	12.0	10.7		
* 16818.0			4.6	258	12.0	10.7		
* 16822.0			4.6	260	13.0	10.7		
* 16826.0			4.5	259	13.9	10.7		
* 16830.0	78.7	19	4.4	260	14.3	10.7	1	
* 16834.0	80.9	23	4.4	262	13.9	10.6	1	
* 16838.0			4.4	263	12.8	10.4		
* 16842.0			4.5	264	12.0	10.3		
* 16846.0			4.6	263	11.9	10.3		
* 16850.0			4.6	262	11.2	10.4		
* 16854.0			4.6	264	11.4	10.4		
* 16858.0			4.6	266	12.5	10.4		
* 16862.0			4.5	267	13.0	10.3		
* 16866.0			4.5	268	13.1	10.3		
* 16870.0			4.5	268	12.5	10.3		
* 16874.0			4.5	267	12.2	10.4		
* 16878.0			4.6	268	12.4	10.4		
* 16882.0			4.6	268	12.5	10.4		
* 16886.0			4.6	269	12.6	10.3		

* FORMATION *					* BOREHOLE			* QUAL. *	
----- INDEX *									
* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST		
* * *	* * *	AZI.	* * *	AZI.	1-3	2-4	* =4	* * *	

* 16890.0			4.7	268	12.2	10.2			*
* 16894.0			4.8	268	11.4	10.1			*
* 16898.0			4.8	268	11.2	10.0			*
* 16902.0			4.8	268	10.9	10.0			*
* 16906.0			4.7	267	10.6	10.0			*
* 16910.0			4.7	269	10.7	10.0			*
* 16914.0			4.8	272	11.1	10.0			*
* 16918.0			4.8	273	11.3	10.0			*
* 16922.0	70.8	260	4.9	274	11.0	10.0	3		*
* 16926.0			5.1	273	11.4	10.0			*
* 16930.0			5.2	273	11.5	10.0			*
* 16934.0			5.2	274	11.0	10.0			*
* 16938.0			5.2	274	10.9	9.9			*
* 16942.0			5.2	274	11.4	9.9			*
* 16946.0			5.2	273	11.9	10.0			*
* 16950.0			5.2	273	11.6	10.0			*
* 16954.0			5.2	274	12.0	10.0			*
* 16958.0			5.2	274	13.2	10.1			*
* 16962.0			5.3	276	13.4	10.1			*
* 16966.0			5.4	279	13.5	10.1			*
* 16970.0	48.9	155	5.5	281	12.9	10.0	1		*
* 16974.0	51.1	165	5.6	280	11.0	9.9	3		*
* 16978.0			5.6	279	11.3	10.1			*
* 16982.0			5.6	279	12.5	10.3			*
* 16986.0			5.6	279	14.1	10.4			*
* 16990.0			5.7	282	14.5	10.3			*
* 16994.0			5.9	287	14.1	10.1			*
* 16998.0			6.0	289	13.9	10.1			*
* 17002.0			6.0	291	14.0	10.2			*
* 17006.0			6.0	290	14.5	10.5			*
* 17010.0			6.0	289	14.6	11.3			*
* 17014.0			6.0	290	14.7	11.5			*
* 17018.0			6.2	293	15.0	11.0			*
* 17022.0			6.4	297	14.9	11.7			*
* 17026.0			6.7	299	14.9	11.4			*
* 17030.0			7.0	301	15.1	11.3			*
* 17034.0			7.3	303	15.1	11.3			*
* 17038.0			7.6	303	15.1	11.2			*
* 17042.0			7.5	303	15.0	10.7			*
* 17046.0			8.0	304	14.5	10.2			*
* 17050.0			8.0	307	14.0	10.0			*
* 17054.0			8.1	307	13.9	10.0			*
* 17058.0	44.0	78	8.1	308	14.3	10.0	3		*
* 17062.0			8.3	312	14.5	10.0			*
* 17066.0			8.4	313	14.4	10.0			*

* FORMATION *		* BOREHOLE *				* QUAL. *	
***** INDEX *****							
* DEPTH *	* DIP *	DIP	* DEV. *	DEV.	DIAM	DIAM	* BEST *
		AZI.		AZI.	1-3	2-4	* =4 *
* 17250.0			9.2	327	11.1	10.5	*
* 17254.0			9.2	329	11.1	10.5	*
* 17258.0			9.2	328	10.9	10.5	*
* 17262.0			9.2	323	11.1	10.4	*
* 17266.0			9.2	328	11.6	10.5	*
* 17270.0			9.2	331	11.5	10.4	*
* 17274.0			9.3	326	11.1	10.2	*
* 17278.0			9.4	322	10.9	10.2	*
* 17282.0			9.5	324	11.3	10.3	*
* 17286.0			9.5	325	11.6	10.4	*
* 17290.0			9.4	322	11.5	10.5	*
* 17294.0			9.4	321	11.5	10.7	*
* 17298.0			9.4	319	10.8	10.8	*
* 17302.0			9.5	320	10.3	10.8	*
* 17306.0			9.6	325	10.2	10.7	*
* 17310.0			9.6	328	10.3	10.6	*
* 17314.0			9.6	329	10.2	10.4	*
* 17318.0			9.6	331	10.2	10.5	*
* 17322.0	53.9	269	9.6	331	10.3	10.5	1 *
* 17326.0	49.4	264	9.6	332	10.3	10.8	3 *
* 17330.0	64.4	264	9.6	336	10.2	11.1	3 *
* 17334.0	62.9	271	9.6	337	10.3	11.7	3 *
* 17338.0			9.6	337	10.5	12.5	*
* 17342.0	55.6	266	9.6	338	10.8	12.7	1 *
* 17346.0			9.7	335	11.4	12.7	*
* 17350.0			9.8	336	12.0	13.3	*
* 17354.0			9.9	336	12.1	13.8	*
* 17358.0			10.0	335	11.8	13.6	*
* 17362.0			10.0	334	11.8	13.3	*
* 17366.0			10.1	333	11.3	13.6	*
* 17370.0			10.3	337	10.3	14.1	*
* 17374.0			10.4	339	9.8	15.0	*
* 17378.0			10.4	341	10.0	16.0	*
* 17382.0			10.3	345	10.2	16.5	*
* 17386.0			10.2	345	10.3	16.1	*
* 17390.0			10.2	343	10.3	15.4	*
* 17394.0			10.3	342	10.3	15.2	*
* 17398.0			10.4	340	10.1	15.2	*
* 17402.0	74.6	266	10.4	343	9.9	15.6	3 *
* 17406.0	50.4	131	10.4	348	9.7	15.9	1 *
* 17410.0			10.3	348	9.8	15.8	*
* 17414.0			10.2	347	10.4	15.4	*
* 17418.0			10.1	346	10.6	15.4	*
* 17422.0			10.1	348	10.3	16.0	*
* 17426.0			10.1	353	10.3	16.3	*

* FORMATION *					* BOREHOLE		* QUAL. *		

* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST	* INDEX *	
* * *	* * *	AZI.	* * *	AZI.	1-3	2-4	* =4	* * *	

* 17430.0			10.1	352	10.8	16.4			
* 17434.0			10.1	354	11.5	16.1			
* 17438.0			10.2	359	12.3	16.2			
* 17442.0			10.3	360	12.7	16.6			
* 17446.0			10.4	359	12.7	16.4			
* 17450.0			10.5	2	11.0	15.9			
* 17454.0			10.5	4	10.4	15.6			
* 17458.0	66.9	360	10.6	2	10.3	15.8	1		
* 17462.0			10.7	2	10.9	15.6			
* 17466.0	65.2	3	10.7	4	12.1	15.4	1		
* 17470.0			10.7	7	11.3	15.4			
* 17474.0			10.7	9	10.6	15.6			
* 17478.0			10.6	8	10.0	16.1			
* 17482.0			10.6	6	9.6	16.3			
* 17486.0			10.7	6	9.5	16.3			
* 17490.0			10.8	9	9.5	16.1			
* 17494.0			10.9	8	9.5	15.8			
* 17498.0			11.1	6	9.6	16.1			
* 17502.0			11.4	7	9.5	16.4			
* 17506.0			11.6	6	9.5	16.3			
* 17510.0			11.6	5	9.4	16.1			
* 17514.0			11.6	6	9.5	16.1			
* 17518.0			11.6	6	9.8	15.9			
* 17522.0	58.2	80	11.6	11	10.1	16.1	1		
* 17526.0	61.6	56	11.8	14	10.1	16.7	1		
* 17530.0			12.0	12	9.8	16.7			
* 17534.0	55.1	70	12.3	5	10.0	16.3	1		
* 17538.0			12.4	6	10.3	16.3			
* 17542.0	65.8	64	12.4	13	10.2	16.7	1		
* 17546.0	62.1	70	12.4	15	9.9	16.4	1		
* 17550.0			12.4	13	9.7	16.1			
* 17554.0			12.5	10	9.6	16.1			
* 17558.0	66.7	73	12.6	13	9.7	15.7	1		
* 17562.0			12.7	15	9.8	15.1			
* 17566.0			12.8	16	10.2	14.7			
* 17570.0			12.9	18	11.0	15.4			
* 17574.0			12.8	16	11.0	14.7			
* 17578.0			12.7	16	10.5	12.9			
* 17582.0			12.7	20	10.4	13.1			
* 17586.0			12.7	24	10.2	13.4			
* 17590.0			12.6	21	10.0	13.3			
* 17594.0			12.6	15	10.1	14.1			
* 17598.0			12.5	16	10.1	15.2			
* 17602.0			12.4	26	10.1	14.7			
* 17606.0	54.7	309	12.3	18	10.1	14.1	3		

* FORMATION *					* BOREHOLE *			* QUAL. *	
----------*-----*-----*-----*									
* DEPTH *	* DIP *	DIP	* DEV. *	DEV.	DIAM	DIAM	* BEST *	* INDEX *	
* * *	* * *	AZI.	* * *	AZI.	1-3	2-4	* * *	* * *	

* 17610.0	54.4	306		12.3	9	9.9	14.4	1	*
* 17614.0				12.4	10	10.2	13.5		*
* 17618.0				12.4	16	10.9	11.2		*
* 17622.0	61.0	47		12.4	17	11.3	10.2	1	*
* 17626.0	60.6	44		12.4	20	12.0	10.1	1	*
* 17630.0	55.4	319		12.4	23	12.4	10.1	1	*
* 17634.0				12.4	21	11.9	10.2		*
* 17638.0				12.4	19	11.4	10.2		*
* 17642.0				12.4	19	11.3	10.2		*
* 17646.0				12.5	21	11.4	10.2		*
* 17650.0				12.4	23	11.5	10.3		*
* 17654.0				12.4	25	11.4	10.2		*
* 17658.0				12.3	28	11.5	10.2		*
* 17662.0				12.3	31	11.7	10.2		*
* 17664.0				12.4	29	11.7	10.2		*
* 17668.0				12.3	26	11.7	10.2		*
* 17672.0				12.3	22	12.2	10.4		*
* 17676.0				12.4	23	12.7	10.5		*
* 17680.0				12.3	27	12.7	10.4		*
* 17684.0	36.5	42		12.3	27	12.2	10.6	3	*
* 17688.0	39.9	49		12.4	22	11.6	10.4	3	*
* 17692.0				12.4	19	11.4	10.3		*
* 17696.0				12.4	19	11.2	10.4		*
* 17700.0				12.4	20	11.1	10.3		*
* 17704.0				12.3	23	11.0	10.3		*
* 17708.0				12.2	25	11.0	10.4		*
* 17712.0				12.2	28	11.0	10.3		*
* 17716.0				12.2	29	10.9	10.2		*
* 17720.0	87.3	344		12.2	28	10.8	10.2	1	*
* 17724.0				12.2	24	10.9	10.3		*
* 17728.0	88.2	344		12.2	26	11.0	10.3	1	*
* 17732.0	87.7	344		12.2	22	10.9	10.2	1	*
* 17736.0				12.2	25	10.9	10.1		*
* 17740.0				12.2	30	10.9	10.2		*
* 17744.0				12.2	33	11.1	10.4		*
* 17748.0				12.2	31	11.2	10.4		*
* 17752.0				12.2	29	11.3	10.2		*
* 17756.0	88.2	346		12.2	28	11.4	10.0	1	*
* 17760.0				12.2	28	11.5	10.0		*
* 17764.0				12.2	27	11.5	10.1		*
* 17768.0				12.2	26	11.5	10.2		*
* 17772.0				12.3	27	11.6	10.3		*
* 17776.0				12.3	29	11.5	10.3		*
* 17780.0	37.9	10		12.3	28	11.5	10.3	3	*
* 17784.0				12.3	27	11.7	10.3		*

FORMATION			BOREHOLE				QUAL.
***** INDEX *****							
DEPTH	DIP	DIP	DEV.	DEV.	DIA#	DIA#	BEST
		AZI.		AZI.	1-3	2-4	# 5-4
* 17788.0			12.4	25	12.0	10.2	
* 17792.0			12.4	26	12.0	10.2	
* 17796.0			12.4	27	11.9	10.2	
* 17800.0	85.6	254	12.4	28	12.0	10.2	1
* 17804.0	89.4	60	12.4	28	12.1	10.1	1
* 17808.0	70.8	313	12.4	28	12.2	10.1	1
* 17812.0			12.4	27	12.3	10.1	
* 17816.0	69.8	319	12.4	27	12.5	10.1	1
* 17820.0			12.4	29	12.9	10.0	
* 17824.0	71.0	247	12.4	28	13.0	10.1	1
* 17828.0			12.4	25	12.7	10.3	
* 17832.0			12.4	24	12.5	10.4	
* 17836.0	66.7	320	12.4	24	12.5	10.3	1
* 17840.0			12.4	24	12.4	10.4	
* 17844.0			12.4	25	12.1	10.5	
* 17848.0			12.3	25	12.0	10.4	
* 17852.0			12.2	25	11.9	10.3	
* 17856.0	78.6	208	12.2	25	11.8	10.3	1
* 17860.0	79.1	210	12.1	26	11.7	10.2	1
* 17864.0			12.1	23	12.0	10.2	
* 17868.0			12.0	21	12.4	10.2	
* 17872.0			12.0	22	12.4	10.2	
* 17876.0			11.8	23	12.5	10.2	
* 17880.0			11.7	23	12.8	10.1	
* 17884.0			11.7	21	13.4	10.2	
* 17888.0			11.6	23	14.0	10.4	
* 17892.0	87.3	256	11.6	23	14.1	10.5	1
* 17896.0	86.9	256	11.6	20	14.0	10.2	1
* 17900.0			11.7	21	13.0	9.9	
* 17904.0	82.4	255	11.9	23	13.4	9.9	1
* 17908.0			12.0	25	13.1	9.9	
* 17912.0			11.9	25	13.2	9.9	
* 17916.0			11.8	22	13.2	9.9	
* 17920.0			11.7	20	13.1	10.0	
* 17924.0	68.4	68	11.6	20	13.1	9.9	1
* 17928.0	64.9	66	11.6	19	13.3	9.8	1
* 17932.0	82.1	160	11.6	21	13.3	9.7	1
* 17936.0	82.3	161	11.6	23	13.0	9.7	1
* 17940.0	84.5	78	11.6	23	12.8	9.8	1
* 17944.0			11.7	23	12.8	9.9	
* 17948.0			11.7	21	12.6	10.0	
* 17952.0			11.7	21	12.5	10.0	
* 17956.0			11.7	21	12.9	10.0	
* 17960.0	79.5	165	11.7	14	12.9	10.3	1
* 17964.0	78.2	172	11.9	11	12.8	10.7	1

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*****
*          * FORMATION *          * BOREHOLE *          * QUAL. *
*          *-----*          *-----*          * INDEX *
* DEPTH *  DIP   DIP   *  DEV.  DEV.  DIAM  DIAM * BEST *
*          *     AZI. *          *     AZI.  1-3  2-4 *  =4  *
*****
* 17968.0          *          * 12.0  18   12.3  11.5 *
* 17972.0          *          * 12.0  17   12.3  11.4 *
* 17976.0          *          * 12.0  16   12.3  10.5 *
* 17980.0          *          * 12.1  17   12.1  10.6 *
* 17984.0  88.2    201 *          * 12.1  19   11.7  11.2 * 1 *
* 17988.0          *          * 12.0  20   11.5  11.0 *
* 17992.0          *          * 12.0  18   11.4  10.5 *
* 17996.0          *          * 12.0  17   11.2  10.5 *
* 18000.0          *          * 12.0  17   11.0  10.6 *
* 18004.0          *          * 12.0  18   10.9  10.6 *
* 18008.0          *          * 12.0  19   10.8  10.5 *
* 18012.0          *          * 12.0  17   10.7  10.4 *
* 18016.0  82.5    281 *          * 11.9  16   10.8  10.5 * 1 *
* 18020.0          *          * 11.9  17   11.0  10.6 *
* 18024.0  71.2    281 *          * 11.8  18   10.9  11.3 * 1 *
* 18028.0          *          * 11.7  21   10.8  11.6 *
* 18032.0          *          * 11.7  19   11.0  10.8 *
* 18036.0  71.0    286 *          * 11.8  13   11.0  10.6 * 1 *
* 18040.0          *          * 11.8  7    10.7  10.9 *
* 18044.0          *          * 11.8  3    10.3  11.3 *
* 18048.0          *          * 11.7  2    10.3  11.5 *
* 18052.0  84.8    156 *          * 11.6  6    10.7  11.2 * 1 *
* 18056.0  88.1    154 *          * 11.6  14   11.3  10.8 * 3 *
* 18060.0  88.0    153 *          * 11.6  17   12.0  10.7 * 1 *
* 18064.0          *          * 11.6  15   12.8  10.8 *
* 18068.0          *          * 11.6  12   12.4  10.9 *
* 18072.0  85.8    143 *          * 11.6  13   11.5  11.0 * 1 *
* 18076.0          *          * 11.6  10   11.0  11.0 *
* 18080.0          *          * 11.6  5    10.8  11.0 *
* 18084.0          *          * 11.6  3    10.8  10.7 *
* 18088.0          *          * 11.5  3    11.2  10.5 *
* 18092.0          *          * 11.5  5    11.5  10.5 *
* 18096.0          *          * 11.5  8    11.3  10.6 *
* 18100.0          *          * 11.5  12   11.2  10.9 *
* 18104.0          *          * 11.5  13   11.1  11.1 *
* 18108.0          *          * 11.4  5    11.0  11.3 *
* 18112.0          *          * 11.3  2    10.9  11.6 *
* 18116.0          *          * 11.4  7    10.8  11.4 *
* 18120.0          *          * 11.5  13   11.0  11.2 *
* 18124.0          *          * 11.6  12   11.1  11.2 *
* 18128.0          *          * 11.6  14   10.9  11.3 *
* 18132.0          *          * 11.6  22   11.1  11.2 *
* 18136.0          *          * 11.5  25   11.6  11.1 *
* 18140.0          *          * 11.5  20   11.6  11.0 *
* 18144.0          *          * 11.5  13   11.1  11.1 *
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FORMATION		BOREHOLE		QUAL.			
DEPTH	DIP	DIP	DEV.	DEV.	DIAM	DIAM	INDEX
		AZI.		AZI.	1-3	2-4	=4
* 18148.0	58.4	300	11.5	9	11.0	11.1	1
* 18152.0	61.0	295	11.6	21	12.1	11.1	3
* 18156.0			11.5	26	12.8	11.0	
* 18160.0	58.6	103	11.5	22	13.2	11.2	3
* 18164.0	57.6	104	11.5	21	14.1	11.2	1
* 18168.0			11.5	20	14.7	11.2	
* 18172.0	76.1	269	11.6	19	13.4	11.2	1
* 18176.0			11.6	15	11.4	11.1	
* 18180.0			11.6	15	11.0	10.9	
* 18184.0			11.6	18	11.8	10.8	
* 18188.0			11.6	15	11.3	10.7	
* 18192.0			11.6	11	10.8	10.8	
* 18196.0			11.7	12	10.7	10.8	
* 18200.0			11.9	11	11.0	10.8	
* 18204.0	73.5	294	12.0	15	11.1	10.8	1
* 18208.0			12.1	20	11.2	11.4	
* 18212.0			12.2	18	11.3	11.4	
* 18216.0			12.3	9	11.1	10.6	
* 18220.0			12.4	7	10.9	10.6	
* 18224.0			12.4	11	10.7	10.8	
* 18228.0	77.5	296	12.4	13	10.4	11.0	1
* 18232.0	80.5	285	12.3	18	10.2	11.4	1
* 18236.0			12.3	21	10.2	11.3	
* 18240.0			12.3	19	10.2	11.2	
* 18244.0			12.4	20	10.2	11.3	
* 18248.0			12.4	23	10.2	11.3	
* 18252.0			12.4	22	10.2	11.2	
* 18256.0			12.4	19	10.2	11.2	
* 18260.0			12.4	13	10.1	11.3	
* 18264.0			12.4	3	10.1	11.3	
* 18268.0			12.4	355	10.2	11.1	
* 18272.0			12.3	354	10.3	10.9	
* 18276.0			12.2	1	10.4	10.6	
* 18280.0			12.2	11	10.7	10.4	
* 18284.0			12.1	15	10.9	10.3	
* 18288.0			12.1	15	11.0	10.3	
* 18292.0			12.1	10	11.0	10.3	
* 18296.0			12.1	3	10.7	10.4	
* 18300.0			12.2	6	10.2	10.7	
* 18304.0			12.2	17	10.1	10.8	
* 18308.0			12.3	19	10.3	11.2	
* 18312.0			12.3	20	10.3	11.2	
* 18316.0			12.3	22	10.3	10.9	
* 18320.0			12.3	24	10.4	10.9	
* 18324.0			12.3	24	10.3	10.9	

* FORMATION *					* BOREHOLE *			* QUAL. *	

* DEPTH *	* DIP *	DIP	* DEV. *	DEV.	DIAM	DIAM	* BEST *	INDEX	*
		AZI.		AZI.	1-3	2-4	≠4		

* 18328.0			12.4	26	10.3	10.9			*
* 18332.0			12.3	26	10.3	10.8			*
* 18336.0			12.3	25	10.2	10.7			*
* 18340.0			12.3	26	10.2	10.7			*
* 18344.0			12.3	25	10.2	10.8			*
* 18348.0			12.3	22	10.2	10.8			*
* 18352.0			12.3	22	10.2	11.0			*
* 18356.0			12.4	22	10.2	11.1			*
* 18360.0			12.4	23	10.3	11.2			*
* 18364.0			12.4	24	10.4	11.2			*
* 18368.0			12.4	22	10.3	10.9			*
* 18372.0			12.4	22	10.2	10.7			*
* 18376.0			12.4	25	10.2	10.6			*
* 18380.0			12.4	28	10.2	10.6			*
* 18384.0			12.4	25	10.3	10.7			*
* 18388.0			12.4	23	10.2	10.6			*
* 18392.0			12.4	23	10.2	10.5			*
* 18396.0			12.4	25	10.3	10.7			*
* 18400.0			12.4	25	10.4	10.8			*
* 18404.0			12.4	26	10.6	10.9			*
* 18408.0			12.4	25	10.6	11.0			*
* 18412.0			12.4	25	10.4	11.0			*
* 18416.0			12.4	26	10.3	11.0			*
* 18420.0	34.7	110	12.4	26	10.2	11.1	1		*
* 18424.0	34.4	110	12.4	25	10.3	11.1	1		*
* 18428.0			12.4	26	10.4	11.1			*
* 18432.0			12.4	25	10.3	11.2			*
* 18436.0			12.4	25	10.3	11.3			*
* 18440.0	73.6	106	12.4	25	10.3	11.3	1		*
* 18444.0	73.8	105	12.4	26	10.3	11.3	1		*
* 18448.0	69.4	116	12.4	26	10.2	11.5	1		*
* 18452.0			12.4	26	10.2	11.6			*
* 18456.0			12.4	27	10.2	11.6			*
* 18460.0			12.4	26	10.2	11.6			*
* 18464.0	74.2	114	12.4	27	10.2	11.5	1		*
* 18468.0	74.5	114	12.4	26	10.2	11.5	1		*
* 18472.0			12.4	28	10.1	11.6			*
* 18476.0	69.4	116	12.4	28	10.2	11.6	3		*
* 18480.0			12.4	27	10.2	11.8			*
* 18484.0			12.4	27	10.1	11.6			*
* 18488.0	48.7	34	12.4	27	10.1	11.6	1		*
* 18492.0	43.1	88	12.4	28	10.2	11.6	1		*
* 18496.0	44.6	87	12.4	26	10.3	11.4	1		*
* 18500.0			12.4	27	10.5	11.5			*
* 18504.0	51.7	33	12.4	28	10.5	11.9	1		*

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*          *   FORMATION          *           BOREHOLE           *   QUAL.   *
*          *-----*-----*-----*-----*-----*-----*-----*-----*
*   DEPTH  *   DIP   DIP   *   DEV.   DEV.   DIAM   DIAM   *   BEST   *
*          *          AZI. *          AZI.   1-3   2-4   *   =4   *
*****
* 18508.0  51.3   35      12.4   27     10.4   11.9   1   *
* 18512.0           12.4   32     10.3   11.7   *
* 18516.0           12.5   32     10.2   11.6   *
* 18520.0           12.5   28     10.2   11.6   *
* 18524.0           12.5   28     10.2   11.7   *
* 18528.0           12.4   28     10.1   11.8   *
* 18532.0           12.4   30     10.1   12.0   *
* 18536.0           12.4   31     10.1   12.0   *
* 18540.0           12.4   31     10.1   12.0   *
* 18544.0           12.4   30     10.1   12.1   *
* 18548.0           12.4   27     10.2   12.4   *
* 18552.0           12.4   26     10.2   12.5   *
* 18556.0           12.5   32     10.1   12.5   *
* 18560.0           12.5   34     10.2   12.5   *
* 18564.0           12.6   26     10.5   12.8   *
* 18568.0           12.6   22     10.8   13.6   *
* 18572.0  67.6   232     12.5   25     10.5   12.8   1   *
* 18576.0  80.6   236     12.6   28     10.1   11.6   1   *
* 18580.0           12.7   28     9.9    11.4   *
* 18584.0           12.8   28     9.9    11.2   *
* 18588.0           12.7   27     9.9    11.1   *
* 18592.0           12.7   28     9.8    11.0   *
* 18596.0           12.7   29     9.8    10.9   *
* 18600.0           12.6   27     9.9    10.7   *
* 18604.0           12.7   26     9.9    10.6   *
* 18608.0           12.7   26     9.8    10.5   *
* 18612.0  53.9   80      12.6   26     9.8    10.5   1   *
* 18616.0  61.9   80      12.6   25     9.7    10.5   1   *
* 18620.0           12.7   27     9.8    10.6   *
* 18624.0  63.0   88      12.6   28     9.9    10.6   1   *
* 18628.0           12.5   28     9.8    10.6   *
* 18632.0           12.5   29     9.7    10.5   *
* 18636.0           12.5   28     9.7    10.5   *
* 18640.0           12.5   29     9.9    10.6   *
* 18644.0           12.6   31     10.1   10.6   *
* 18648.0           12.5   29     10.0   10.7   *
* 18652.0           12.5   26     9.8    10.8   *
* 18656.0           12.6   25     9.9    10.9   *
* 18660.0           12.6   25     10.1   11.1   *
* 18664.0           12.6   27     10.0   11.1   *
* 18668.0           12.6   30     9.8    11.1   *
* 18672.0           12.7   30     9.7    11.1   *
* 18676.0           12.8   29     9.7    11.2   *
* 18680.0           12.8   29     9.7    11.2   *
* 18684.0           12.8   28     9.8    11.2   *
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*          * FORMATION *          * BOREHOLE *          * GUAL. *
*          *-----*          *-----*          * INDEX *
* DEPTH *  * DIP   *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
*          *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
*          *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
*****
* 18688.0  84.3  248  12.8  28  9.9  11.2  1 *
* 18692.0  19.5  82  12.7  28  9.8  11.3  3 *
* 18696.0  18.6  83  12.7  28  9.6  11.4  3 *
* 18700.0  *  *  *  12.7  28  9.6  11.5  *
* 18704.0  77.5  255  12.7  29  9.5  11.6  1 *
* 18708.0  84.3  252  12.7  29  9.5  11.8  3 *
* 18712.0  85.4  250  12.6  27  9.6  11.9  3 *
* 18716.0  84.6  253  12.6  25  9.6  12.1  1 *
* 18720.0  *  *  *  12.6  25  9.8  12.4  *
* 18724.0  *  *  *  12.6  25  10.0  12.6  *
* 18728.0  *  *  *  12.6  25  10.1  12.7  *
* 18732.0  *  *  *  12.6  25  10.1  12.8  *
* 18736.0  *  *  *  12.6  24  10.0  12.8  *
* 18740.0  *  *  *  12.6  23  10.2  12.8  *
* 18744.0  *  *  *  12.6  26  10.4  12.9  *
* 18748.0  *  *  *  12.6  26  10.4  12.8  *
* 18752.0  *  *  *  12.6  25  10.3  12.4  *
* 18756.0  *  *  *  12.6  26  10.2  12.1  *
* 18760.0  *  *  *  12.7  24  10.2  11.9  *
* 18764.0  *  *  *  12.7  22  10.1  11.7  *
* 18768.0  *  *  *  12.6  21  10.1  11.8  *
* 18772.0  *  *  *  12.6  16  10.2  11.5  *
* 18776.0  24.2  234  12.7  13  10.3  10.8  1 *
* 18780.0  26.8  229  12.7  19  10.5  10.5  1 *
* 18784.0  *  *  *  12.7  24  10.6  10.3  *
* 18788.0  *  *  *  12.8  23  10.5  10.2  *
* 18792.0  *  *  *  12.8  23  10.5  10.2  *
* 18796.0  *  *  *  12.8  23  10.7  10.3  *
* 18800.0  *  *  *  12.9  21  10.9  10.3  *
* 18804.0  *  *  *  12.9  22  11.1  10.3  *
* 18808.0  *  *  *  12.9  24  11.2  10.4  *
* 18812.0  *  *  *  12.9  25  11.3  10.3  *
* 18816.0  *  *  *  13.0  27  11.5  10.4  *
* 18820.0  82.0  175  13.1  26  11.5  10.4  3 *
* 18824.0  *  *  *  13.1  25  11.5  10.4  *
* 18828.0  *  *  *  13.2  26  11.5  10.3  *
* 18832.0  *  *  *  13.2  25  11.6  10.2  *
* 18836.0  *  *  *  13.2  24  11.6  10.1  *
* 18840.0  *  *  *  13.2  24  11.5  10.1  *
* 18844.0  *  *  *  13.2  25  11.5  10.1  *
* 18848.0  *  *  *  13.2  27  11.6  10.2  *
* 18852.0  *  *  *  13.2  26  11.7  10.2  *
* 18856.0  *  *  *  13.2  25  11.6  10.1  *
* 18860.0  *  *  *  13.2  25  11.5  10.2  *
* 18864.0  *  *  *  13.2  24  11.5  10.3  *
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* FORMATION *		* BOREHOLE *		* QUAL. *			
----- INDEX *							
* DEPTH *	* DIP *	DIP * AZI. *	* DEV. *	DEV. * AZI. *	DIAM * 1-3	DIAM * 2-4	* BEST * =4 *
* 18868.0			13.2	22	11.4	10.3	*
* 18872.0			13.2	21	11.2	10.3	*
* 18876.0			13.2	20	11.2	10.3	*
* 18880.0			13.3	20	11.1	10.3	*
* 18884.0			13.3	19	11.2	10.3	*
* 18888.0			13.3	16	11.3	10.5	*
* 18892.0			13.3	11	11.1	10.8	*
* 18896.0			13.4	12	10.6	11.2	*
* 18900.0			13.4	19	10.3	11.3	*
* 18904.0			13.5	21	10.3	11.4	*
* 18908.0			13.7	21	10.2	12.5	*
* 18912.0			13.8	22	10.3	13.2	*
* 18916.0			13.7	25	10.3	12.5	*
* 18920.0	71.2	304	13.8	24	10.2	11.8	1 *
* 18924.0			13.8	24	10.3	12.4	*
* 18928.0	70.2	305	13.8	26	10.3	13.0	1 *
* 18932.0			13.8	16	10.3	12.0	*
* 18936.0			13.8	8	10.6	11.4	*
* 18940.0			13.9	10	10.9	11.2	*
* 18944.0			14.0	18	11.5	10.5	*
* 18948.0			14.1	24	11.6	10.3	*
* 18952.0			14.0	26	11.5	10.3	*
* 18956.0			14.0	24	12.5	10.7	*
* 18960.0			14.1	19	13.3	11.1	*
* 18964.0	55.2	4	14.1	23	13.5	10.7	1 *
* 18968.0			14.1	26	13.7	10.5	*
* 18972.0	66.0	2	14.0	21	13.8	10.6	1 *
* 18976.0	64.8	358	14.1	19	14.0	10.6	1 *
* 18980.0	75.0	123	14.2	18	13.1	10.5	1 *
* 18984.0			14.3	19	12.5	10.3	*
* 18988.0	74.8	124	14.4	22	12.5	10.2	3 *
* 18992.0	82.8	123	14.4	17	12.6	10.1	1 *
* 18996.0	79.9	116	14.2	15	13.0	10.2	1 *
* 19000.0			14.1	21	13.4	10.2	*
* 19004.0	49.4	215	14.2	21	13.1	10.2	1 *
* 19008.0			14.2	18	12.5	10.1	*
* 19012.0			14.2	17	12.4	10.2	*
* 19016.0			14.4	14	12.7	10.3	*
* 19020.0	80.9	237	14.4	14	12.6	10.2	1 *
* 19024.0			14.2	17	12.3	10.1	*
* 19028.0	45.7	227	14.2	17	12.3	10.2	1 *
* 19032.0			14.2	16	12.2	10.1	*
* 19036.0			14.2	16	12.2	10.1	*
* 19040.0			14.2	16	12.0	10.2	*
* 19044.0			14.2	18	11.9	10.2	*

* * FORMATION * * BOREHOLE * * QUAL. * *

* *-----* *-----* * INDEX * *

* DEPTH * DIP DIP * DEV. DEV. DIAM DIAM * BEST * *

* * * AZI. * * AZI. 1-3 2-4 * =4 * *

* DEPTH *	* DIP *	DIP	* DEV. *	DEV.	DIAM	DIAM	* BEST *
* * *	* * *	AZI.	* * *	AZI.	1-3	2-4	* =4 * *
* 19048.0			14.2	18	12.1	10.3	*
* 19052.0			14.2	17	12.2	10.3	*
* 19056.0			14.3	18	11.9	10.4	*
* 19060.0	75.9	101	14.3	17	11.6	10.3	1 *
* 19064.0			14.4	16	11.5	10.3	*
* 19068.0			14.4	15	11.5	10.3	*
* 19072.0			14.3	15	11.4	10.3	*
* 19076.0	76.0	107	14.2	16	11.3	10.3	1 *
* 19080.0			14.2	15	11.2	10.3	*
* 19084.0			14.3	7	11.2	10.4	*
* 19088.0			14.3	358	11.2	10.4	*
* 19092.0			14.3	349	11.1	10.4	*
* 19096.0	85.7	4	14.3	349	10.8	10.6	1 *
* 19100.0			14.3	355	10.8	10.8	*
* 19104.0			14.3	357	10.8	10.9	*
* 19108.0			14.3	2	10.5	11.2	*
* 19112.0			14.4	9	10.6	11.2	*
* 19116.0			14.5	18	11.0	10.9	*
* 19120.0			14.5	21	11.3	11.2	*
* 19124.0			14.6	17	10.8	11.4	*
* 19128.0			14.7	15	10.4	11.4	*
* 19132.0			14.7	15	10.4	11.4	*
* 19136.0			14.6	15	10.4	11.3	*
* 19140.0			14.6	11	10.4	11.3	*
* 19144.0			14.5	7	10.3	11.2	*
* 19148.0			14.5	5	10.2	11.1	*
* 19152.0			14.5	2	10.2	11.2	*
* 19156.0			14.5	358	10.3	11.2	*
* 19160.0			14.6	356	10.3	11.4	*
* 19164.0			14.6	354	10.3	11.3	*
* 19168.0	55.3	319	14.6	354	10.3	11.1	3 *
* 19172.0	55.4	314	14.7	0	10.4	10.9	1 *
* 19176.0			14.7	9	10.6	10.8	*
* 19180.0	26.8	244	14.6	18	10.8	10.7	3 *
* 19184.0	26.7	246	14.6	21	11.2	10.6	3 *
* 19188.0	32.1	253	14.6	18	12.0	10.7	1 *
* 19192.0	28.7	240	14.6	14	11.5	10.8	1 *
* 19196.0	28.1	237	14.6	15	10.7	10.8	1 *

BEST COPY
AVAILABLE

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CONFIDENTIAL

DIPMETER
CLUSTER
CALCULATION
LISTING

MOBIL OIL CORPORATION

MCCORMICK FEDERAL CT1

WILDCAT

GRAND , UTAH

RUN NO. ONE JOB NO. 3677

CORRELATION LENGTH 4 FT.

STEP LENGTH 2 FT.

SEARCH ANGLE 30 DEG. X2

26-NOV-77

* FORMATION *		* BOREHOLE *		* QUAL. *			
----- INDEX *							
* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST *
		AZI.		AZI.	1-3	2-4	* #4 *
* 16344.0			11.2	308	15.2	10.3	
* 16346.0			11.2	12	15.6	10.5	
* 16348.0			11.3	9	15.9	10.7	
* 16350.0	59.2	151	11.4	5	15.0	10.3	1
* 16352.0	59.1	158	11.5	359	14.7	10.0	1
* 16354.0			11.6	359	15.4	9.8	
* 16356.0			11.6	1	16.4	9.8	
* 16358.0			11.8	1	16.9	10.0	
* 16360.0			11.9	1	16.6	10.2	
* 16362.0	58.2	17	11.9	358	16.3	10.1	1
* 16364.0			12.0	357	16.1	9.9	
* 16366.0			12.0	359	16.4	9.9	
* 16368.0			12.0	1	17.1	10.2	
* 16370.0			11.9	360	17.3	10.3	
* 16372.0			11.8	0	17.2	10.2	
* 16374.0			11.8	0	16.9	10.2	
* 16376.0			11.9	357	16.0	9.8	
* 16378.0			12.0	356	15.7	9.6	
* 16380.0	34.0	331	12.0	359	16.8	9.9	1
* 16382.0	79.9	137	12.1	4	17.6	10.9	1
* 16384.0	81.7	138	12.2	3	17.7	12.2	1
* 16386.0	67.8	120	12.2	1	17.7	12.0	1
* 16388.0			12.1	0	17.7	11.1	
* 16390.0			12.1	1	17.7	10.6	
* 16392.0			12.0	2	17.7	10.3	
* 16394.0			12.0	1	17.6	10.5	
* 16396.0			12.0	2	17.7	10.4	
* 16398.0			12.0	4	17.7	10.1	
* 16400.0			12.1	2	17.7	10.2	
* 16402.0			12.1	357	17.7	11.1	
* 16404.0			12.1	355	17.7	13.0	
* 16406.0			12.2	359	17.7	13.5	
* 16408.0			12.2	5	17.7	13.2	
* 16410.0			12.2	7	17.7	13.9	
* 16412.0			12.2	7	17.7	12.7	
* 16414.0			12.2	7	17.8	11.0	
* 16416.0			12.3	5	17.8	10.4	
* 16418.0			12.5	5	17.8	10.7	
* 16420.0			12.6	7	17.8	11.0	
* 16422.0			12.6	3	17.8	11.2	
* 16424.0			12.4	0	17.8	10.9	
* 16426.0			12.4	2	17.8	10.5	
* 16428.0			12.4	360	17.8	10.6	
* 16430.0			12.3	357	17.8	11.3	
* 16432.0			12.3	357	17.9	11.2	

*****		FORMATION		*****		BOREHOLE		*****	
* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST	* INDEX	* QUAL. *
*****		AZI.		*****		AZI.		*****	
*****		*****		*****		*****		*****	
*****		*****		*****		*****		*****	
* 16434.0			12.4	358	17.9	10.2			*
* 16436.0	23.1	191	12.4	4	17.9	10.5	1		*
* 16438.0			12.4	11	17.9	10.8			*
* 16440.0			12.4	9	17.9	10.1			*
* 16442.0			12.4	6	17.9	9.6			*
* 16444.0			12.4	10	17.9	9.4			*
* 16446.0			12.4	11	17.9	9.5			*
* 16448.0			12.4	9	17.9	9.6			*
* 16450.0			12.4	10	17.9	9.6			*
* 16452.0			12.4	5	17.7	10.0			*
* 16454.0			12.3	0	17.7	10.4			*
* 16456.0			12.2	1	17.9	10.4			*
* 16458.0			12.2	0	17.9	10.0			*
* 16460.0			12.2	0	17.9	9.6			*
* 16462.0			12.2	0	17.9	9.6			*
* 16464.0			12.2	3	17.9	9.8			*
* 16466.0			12.2	4	17.9	9.7			*
* 16468.0			12.3	5	17.9	9.6			*
* 16470.0			12.3	5	18.0	9.4			*
* 16472.0			12.3	5	17.9	9.6			*
* 16474.0			12.3	4	17.9	9.8			*
* 16476.0			12.3	3	18.0	9.7			*
* 16478.0			12.3	3	17.8	10.1			*
* 16480.0			12.3	2	16.9	10.5			*
* 16482.0			12.3	3	16.2	10.9			*
* 16484.0			12.3	4	16.5	11.6			*
* 16486.0			12.2	3	16.8	12.4			*
* 16488.0			12.2	3	16.8	13.1			*
* 16490.0			12.1	5	17.1	13.1			*
* 16492.0			12.0	6	17.4	12.5			*
* 16494.0			11.9	4	17.4	12.3			*
* 16496.0			11.8	3	16.6	12.6			*
* 16498.0			11.7	11	15.1	11.9			*
* 16500.0			11.8	30	14.9	11.2			*
* 16502.0			11.9	27	16.0	11.6			*
* 16504.0			11.9	10	16.4	12.2			*
* 16506.0			11.7	358	15.8	11.6			*
* 16508.0			11.6	345	14.7	10.2			*
* 16510.0			11.6	353	14.2	9.5			*
* 16512.0			11.6	6	14.2	9.2			*
* 16514.0			11.5	6	14.2	9.0			*
* 16516.0			11.4	4	14.2	8.5			*
* 16518.0			11.4	360	14.3	7.7			*
* 16520.0			11.4	350	14.3	7.7			*
* 16522.0			11.3	3	14.3	8.1			*

* FORMATION *	* BOREHOLE *			* QUAL. *	* INDEX *		
* DEPTH *	* DIP *	* DIP *	* DEV. *	DEV.	DIAM	DIAM	* BEST *
		AZI.		AZI.	1-3	2-4	* #4 *

* 16524.0			11.2	6	14.3	8.5	*
* 16526.0			11.1	5	14.3	8.4	*
* 16528.0			11.0	4	14.3	8.4	*
* 16530.0			10.9	3	14.3	8.6	*
* 16532.0			10.8	359	14.3	8.7	*
* 16534.0			10.8	359	14.3	8.7	*
* 16536.0			10.8	1	14.3	8.4	*
* 16538.0			10.8	360	14.3	8.2	*
* 16540.0			10.8	0	14.3	8.2	*
* 16542.0			10.8	2	14.3	8.1	*
* 16544.0			10.7	1	14.3	7.8	*
* 16546.0			10.6	0	14.3	7.5	*
* 16548.0			10.6	2	14.3	7.5	*
* 16550.0			10.6	5	14.3	7.7	*
* 16552.0			10.5	9	14.3	8.3	*
* 16554.0			10.4	8	13.7	9.1	*
* 16556.0			10.3	359	12.0	10.0	*
* 16558.0			10.1	353	10.9	10.5	*
* 16560.0			10.0	354	10.9	10.3	*
* 16562.0			9.9	354	11.3	10.0	*
* 16564.0			9.8	354	11.7	10.0	*
* 16566.0			9.7	345	11.7	10.3	*
* 16568.0			9.6	335	11.4	10.6	*
* 16570.0			9.5	335	11.6	10.6	*
* 16572.0			9.3	336	12.0	10.6	*
* 16574.0			9.2	335	11.9	10.5	*
* 16576.0			9.2	334	11.4	10.6	*
* 16578.0			9.2	332	11.7	10.7	*
* 16580.0			9.2	331	12.0	10.6	*
* 16582.0			9.2	331	12.3	10.7	*
* 16584.0			9.2	329	12.4	10.7	*
* 16586.0			9.2	329	12.4	10.7	*
* 16588.0			9.2	332	12.7	10.7	*
* 16590.0			9.2	333	12.9	10.8	*
* 16592.0			9.2	335	12.7	10.7	*
* 16594.0			9.2	334	12.1	10.8	*
* 16596.0			9.2	332	11.9	11.1	*
* 16598.0			9.2	331	12.4	11.3	*
* 16600.0			9.2	329	12.7	11.6	*
* 16602.0			9.1	328	13.1	12.0	*
* 16604.0			9.0	329	13.3	12.4	*
* 16606.0			9.0	328	12.6	12.9	*
* 16608.0			8.9	327	12.6	13.2	*
* 16610.0	47.3	222	8.7	325	12.5	13.0	3
* 16612.0	56.0	220	8.6	324	11.6	12.6	1

* FORMATION *					* FOREHOLE *			* QUAL. *	

* DEPTH *	* DIP *	DIP	* DEV. *	DEV.	DIAM	DIAM	* BEST *	* INDEX *	
		AZI.		AZI.	1-3	2-4	≅4		

* 16614.0			8.6	325	11.3	12.5			*
* 16616.0			8.6	327	11.5	12.4			*
* 16618.0			8.5	327	11.3	12.6			*
* 16620.0			8.5	327	10.9	12.7			*
* 16622.0	5.3	277	8.5	326	10.9	12.9	1		*
* 16624.0			8.4	325	11.0	13.2			*
* 16626.0			8.4	326	11.1	13.3			*
* 16628.0	3.0	242	8.3	326	11.2	12.9	1		*
* 16630.0	2.5	279	8.2	326	11.2	12.4	3		*
* 16632.0	5.1	89	8.1	322	11.6	12.0	1		*
* 16634.0			7.9	321	12.0	12.1			*
* 16636.0			7.8	323	12.1	12.4			*
* 16638.0			7.7	323	11.8	13.0			*
* 16640.0			7.6	322	11.2	13.2			*
* 16642.0			7.3	321	10.8	13.0			*
* 16644.0			7.0	320	10.5	12.5			*
* 16646.0			6.9	319	10.4	12.2			*
* 16648.0	20.5	8	6.7	319	10.5	12.1	1		*
* 16650.0	21.2	4	6.5	318	10.4	12.1	1		*
* 16652.0			6.2	315	10.3	11.9			*
* 16654.0			6.1	318	10.2	11.6			*
* 16656.0			6.0	317	10.1	11.8			*
* 16658.0			5.9	317	10.0	12.3			*
* 16660.0			5.8	317	10.0	12.5			*
* 16662.0			5.6	315	10.1	12.6			*
* 16664.0			5.4	313	10.1	12.0			*
* 16666.0			5.3	313	10.1	11.3			*
* 16668.0			5.2	314	10.0	11.4			*
* 16670.0			5.2	316	10.0	11.5			*
* 16672.0			5.1	314	9.9	11.4			*
* 16674.0			5.0	308	9.6	11.3			*
* 16676.0	55.1	235	4.9	305	9.8	11.3	1		*
* 16678.0			4.7	302	10.0	11.2			*
* 16680.0			4.6	299	10.2	11.2			*
* 16682.0			4.4	299	10.1	10.8			*
* 16684.0			4.4	299	9.8	10.4			*
* 16686.0			4.4	299	9.2	10.5			*
* 16688.0			4.4	297	9.2	10.9			*
* 16690.0			4.3	294	9.5	10.9			*
* 16692.0			4.1	293	9.7	10.7			*
* 16694.0			4.0	292	9.8	10.6			*
* 16696.0			4.0	292	10.0	10.4			*
* 16698.0			4.0	292	10.1	10.3			*
* 16700.0			4.0	291	10.2	10.4			*
* 16702.0			3.9	287	10.1	10.5			*

*****		FORMATION		BOREHOLE		QUAL.		*****	
*****		-----		-----		-----		*****	
DEPTH	DIP	DIP	DEV.	DEV.	DIAM	DIAM	BEST	INDEX	
		AZI.		AZI.	1-3	2-4	=4		

* 16704.0			3.9	285	10.0	10.7			*
* 16706.0			3.9	286	10.1	10.9			*
* 16708.0			3.9	285	10.3	10.9			*
* 16710.0			3.9	279	10.3	10.9			*
* 16712.0			3.8	274	10.4	10.5			*
* 16714.0			3.8	273	10.5	10.3			*
* 16716.0			3.8	274	10.5	10.3			*
* 16718.0			3.8	273	10.3	10.5			*
* 16720.0			3.8	273	10.2	10.6			*
* 16722.0			3.7	272	10.2	10.6			*
* 16724.0			3.7	271	10.2	10.6			*
* 16726.0			3.7	269	10.2	10.6			*
* 16728.0			3.6	269	10.3	10.6			*
* 16730.0			3.7	268	10.4	10.6			*
* 16732.0			3.7	268	10.3	10.7			*
* 16734.0	71.7	263	3.7	269	10.2	10.8	1		*
* 16736.0			3.8	269	10.2	10.9			*
* 16738.0			3.8	268	10.2	11.2			*
* 16740.0			3.9	266	10.4	11.7			*
* 16742.0			3.9	267	10.6	12.1			*
* 16744.0			4.0	267	10.8	11.9			*
* 16746.0			4.0	265	10.9	11.6			*
* 16748.0			4.0	267	11.0	11.2			*
* 16750.0			4.0	266	11.6	10.9			*
* 16752.0			4.0	265	12.4	10.7			*
* 16754.0			4.0	265	12.3	10.5			*
* 16756.0	29.2	2	4.0	264	12.0	10.4	1		*
* 16758.0	34.3	2	4.1	264	12.2	10.4	1		*
* 16760.0			4.1	264	12.9	10.3			*
* 16762.0			4.1	264	13.3	10.4			*
* 16764.0	47.2	236	4.1	263	13.6	10.4	1		*
* 16766.0	46.6	244	4.1	263	13.9	10.4	1		*
* 16768.0			4.2	263	14.2	10.9			*
* 16770.0			4.3	261	14.3	11.4			*
* 16772.0			4.3	260	14.3	11.0			*
* 16774.0			4.4	259	14.3	10.4			*
* 16776.0			4.4	259	14.3	10.4			*
* 16778.0			4.4	261	14.1	10.3			*
* 16780.0			4.4	261	13.5	10.3			*
* 16782.0			4.4	260	12.8	10.3			*
* 16784.0			4.5	260	13.1	10.3			*
* 16786.0			4.6	260	13.7	10.3			*
* 16788.0			4.6	261	13.7	10.3			*
* 16790.0			4.6	261	13.4	10.3			*
* 16792.0			4.6	259	12.5	10.3			*

* FORMATION *		* BOREHOLE *					* QUAL. *		

* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* INDEX	* BEST *	

* * * * *	* * * * *	AZI.	* * * * *	AZI.	1-3	2-4	* * * * *	* =4 *	

* 16794.0			4.6	259	11.7	10.3			*
* 16796.0			4.6	259	11.5	10.4			*
* 16798.0			4.6	260	11.8	10.3			*
* 16800.0			4.6	260	12.0	10.3			*
* 16802.0			4.6	261	12.2	10.3			*
* 16804.0			4.6	262	12.4	10.4			*
* 16806.0			4.6	262	12.1	10.4			*
* 16808.0			4.6	261	12.2	10.5			*
* 16810.0			4.6	259	12.7	10.6			*
* 16812.0			4.6	258	13.0	10.6			*
* 16814.0			4.6	257	12.9	10.6			*
* 16816.0	68.2	355	4.6	258	12.6	10.7	2		*
* 16818.0	67.5	353	4.6	258	12.6	10.7	2		*
* 16820.0			4.6	259	12.7	10.7			*
* 16822.0			4.6	259	12.9	10.7			*
* 16824.0			4.5	260	13.3	10.6			*
* 16826.0			4.5	260	14.0	10.6			*
* 16828.0			4.4	259	14.4	10.7			*
* 16830.0			4.4	261	14.4	10.8			*
* 16832.0			4.4	261	14.2	10.7			*
* 16834.0			4.4	261	14.0	10.7			*
* 16836.0			4.4	263	13.6	10.5			*
* 16838.0			4.4	263	12.9	10.4			*
* 16840.0			4.5	263	12.0	10.4			*
* 16842.0			4.5	265	11.6	10.4			*
* 16844.0			4.6	264	12.1	10.3			*
* 16846.0			4.7	262	12.2	10.4			*
* 16848.0			4.7	261	11.7	10.4			*
* 16850.0			4.6	260	11.1	10.4			*
* 16852.0	64.7	144	4.6	262	10.8	10.4	2		*
* 16854.0	13.1	166	4.6	264	11.2	10.4	2		*
* 16856.0			4.5	265	12.1	10.4			*
* 16858.0			4.5	266	12.8	10.4			*
* 16860.0			4.6	266	12.9	10.4			*
* 16862.0			4.6	266	12.9	10.3			*
* 16864.0			4.5	267	13.2	10.3			*
* 16866.0			4.5	268	13.2	10.3			*
* 16868.0			4.5	269	12.9	10.3			*
* 16870.0			4.5	267	12.5	10.3			*
* 16872.0			4.5	266	12.1	10.4			*
* 16874.0			4.5	267	12.1	10.3			*
* 16876.0			4.6	267	12.3	10.4			*
* 16878.0			4.6	267	12.4	10.3			*
* 16880.0			4.5	269	12.5	10.3			*
* 16882.0			4.6	269	12.5	10.4			*

*****		FORMATION		BOREHOLE		*****		QUAL.	*****
*****		*****		*****		*****		INDEX	*****
DEPTH	DIP	DIP	DEV.	DEV.	DIAM	DIAM	BEST		
		AZI.		AZI.	1-3	2-4	≠4		

* 16884.0			4.6	268	12.6	10.4			*
* 16886.0			4.6	269	12.9	10.4			*
* 16888.0			4.6	269	12.9	10.3			*
* 16890.0			4.7	269	12.4	10.2			*
* 16892.0			4.8	267	11.5	10.1			*
* 16894.0			4.8	267	11.3	10.1			*
* 16896.0	16.0	142	4.8	268	11.3	10.1	1		*
* 16898.0	29.0	27	4.8	269	11.1	10.0	1		*
* 16900.0			4.8	269	11.2	10.0			*
* 16902.0			4.8	267	11.0	10.0			*
* 16904.0			4.7	267	10.7	10.0			*
* 16906.0			4.7	267	10.6	10.0			*
* 16908.0			4.7	268	10.6	10.0			*
* 16910.0			4.7	270	10.6	10.0			*
* 16912.0			4.7	271	10.7	10.0			*
* 16914.0			4.8	272	11.2	10.0			*
* 16916.0			4.8	273	11.5	10.0			*
* 16918.0			4.8	274	11.4	10.0			*
* 16920.0	60.8	327	4.9	274	11.1	10.0	2		*
* 16922.0			4.9	274	10.8	10.0			*
* 16924.0			5.0	273	11.0	10.0			*
* 16926.0			5.1	273	11.5	10.0			*
* 16928.0			5.1	273	11.8	10.0			*
* 16930.0			5.2	273	11.6	10.0			*
* 16932.0			5.2	274	11.1	10.0			*
* 16934.0			5.2	274	10.9	10.0			*
* 16936.0			5.2	274	10.8	10.0			*
* 16938.0			5.2	275	10.8	10.0			*
* 16940.0			5.2	274	11.0	9.9			*
* 16942.0			5.2	274	11.5	9.9			*
* 16944.0			5.2	274	11.9	9.9			*
* 16946.0			5.2	273	12.0	10.0			*
* 16948.0	56.3	94	5.2	272	11.9	10.0	1		*
* 16950.0	56.9	94	5.2	273	11.7	10.0	1		*
* 16952.0			5.2	274	11.4	10.0			*
* 16954.0			5.2	274	11.6	10.0			*
* 16956.0			5.2	274	12.6	10.0			*
* 16958.0			5.2	274	13.5	10.1			*
* 16960.0			5.2	274	13.7	10.2			*
* 16962.0			5.3	275	13.5	10.2			*
* 16964.0			5.3	277	13.1	10.0			*
* 16966.0			5.4	280	13.5	10.0			*
* 16968.0			5.4	281	13.9	10.1			*
* 16970.0			5.5	279	12.9	10.0			*
* 16972.0			5.5	280	12.0	9.9			*

* * * * *	FORMATION		BOREHOLE		QUAL.		* * * * *	
* * * * *	-----*							INDEX
* DEPTH	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST	
* * * * *	* * * * *	AZI.	* * * * *	AZI.	1-3	2-4	* =4	

* 16974.0	51.4	166	5.6	280	11.6	9.9	3	
* 16976.0	51.5	170	5.6	279	11.2	9.9	1	
* 16978.0			5.7	279	11.1	10.0		
* 16980.0			5.6	280	11.3	10.2		
* 16982.0			5.6	280	12.2	10.4		
* 16984.0			5.6	279	13.6	10.4		
* 16986.0			5.6	278	13.5	10.3		
* 16988.0			5.7	279	14.7	10.3		
* 16990.0			5.7	283	14.8	10.4		
* 16992.0			5.8	284	14.2	10.2		
* 16994.0			5.9	287	13.7	10.1		
* 16996.0			5.9	289	13.9	10.1		
* 16998.0			6.0	290	13.9	10.2		
* 17000.0			6.0	290	13.9	10.2		
* 17002.0	21.6	319	6.0	291	14.1	10.0	2	
* 17004.0			6.0	292	14.1	10.2		
* 17006.0	25.0	331	6.0	289	14.5	10.4	2	
* 17008.0			6.0	287	14.9	10.9		
* 17010.0			6.0	289	14.4	11.4		
* 17012.0			6.0	290	14.3	11.6		
* 17014.0			6.0	290	14.8	11.5		
* 17016.0			6.0	291	15.1	11.5		
* 17018.0			6.1	292	15.1	11.5		
* 17020.0			6.3	295	15.0	11.7		
* 17022.0			6.5	299	14.6	11.9		
* 17024.0			6.6	299	14.8	11.6		
* 17026.0			6.7	299	14.8	11.3		
* 17028.0			6.9	299	15.1	11.2		
* 17030.0			7.0	301	15.1	11.3		
* 17032.0	56.5	69	7.1	304	15.1	11.4	1	
* 17034.0			7.3	303	15.1	11.4		
* 17036.0			7.5	302	15.1	11.3		
* 17038.0			7.6	300	15.1	11.1		
* 17040.0			7.7	304	15.1	11.0		
* 17042.0	59.2	187	7.8	304	14.9	10.8	1	
* 17044.0	62.4	189	7.9	301	14.8	10.3	1	
* 17046.0			8.0	305	14.7	10.0		
* 17048.0			8.0	306	14.2	10.0		
* 17050.0			8.0	308	13.9	9.9		
* 17052.0	58.1	182	8.1	308	13.8	10.0	1	
* 17054.0			8.1	306	13.8	10.0		
* 17056.0	58.6	160	8.1	307	14.0	10.1	1	
* 17058.0	59.8	162	8.1	309	14.4	10.0	1	
* 17060.0			8.2	309	14.6	10.0		
* 17062.0			8.3	312	14.4	10.0		

*****		FORMATION		BOREHOLE		QUAL.		*****	
*****		*****		*****		*****		*****	
DEPTH	DIP	DIP	DEV.	DEV.	DIAM	DIAM	BEST	INDEX	*****
		AZI.		AZI.	1-3	2-4	#4		*****
* 17064.0			8.4	314	14.4	10.0			*
* 17066.0			8.4	314	14.4	10.0			*
* 17068.0			8.5	312	14.4	10.0			*
* 17070.0			8.5	311	14.4	10.3			*
* 17072.0	27.5	276	8.6	311	14.6	10.5	1		*
* 17074.0			8.7	311	14.9	10.3			*
* 17076.0			8.7	312	14.8	10.1			*
* 17078.0			8.8	315	14.4	10.0			*
* 17080.0			8.8	317	14.5	10.0			*
* 17082.0			8.9	317	14.3	10.0			*
* 17084.0			9.0	315	14.3	10.0			*
* 17086.0			9.0	318	14.4	10.0			*
* 17088.0			9.0	322	13.9	10.0			*
* 17090.0			9.1	319	13.2	10.0			*
* 17092.0			9.1	317	12.5	10.0			*
* 17094.0			9.1	314	11.8	10.0			*
* 17096.0			9.2	311	11.4	10.3			*
* 17098.0			9.2	311	11.5	10.7			*
* 17100.0			9.1	312	11.5	10.7			*
* 17102.0			9.1	312	11.3	10.3			*
* 17104.0	29.1	263	9.2	312	11.1	10.0	1		*
* 17106.0	29.1	259	9.1	312	11.1	9.9	1		*
* 17108.0			9.0	312	11.1	9.9			*
* 17110.0			9.0	310	11.0	10.0			*
* 17112.0			9.0	309	10.9	10.0			*
* 17114.0			8.9	307	10.9	10.0			*
* 17116.0	21.3	258	8.9	308	11.0	10.0	1		*
* 17118.0			8.9	312	11.0	10.0			*
* 17120.0			8.9	315	11.2	10.0			*
* 17122.0			8.9	317	11.5	9.9			*
* 17124.0			8.9	316	11.6	9.9			*
* 17126.0			8.9	314	11.4	10.0			*
* 17128.0			9.0	313	11.2	10.0			*
* 17130.0			9.0	313	11.2	10.0			*
* 17132.0			9.0	313	11.3	10.0			*
* 17134.0			9.1	313	11.4	10.0			*
* 17136.0			9.1	314	11.6	10.0			*
* 17138.0			9.2	315	11.9	10.2			*
* 17140.0			9.2	314	12.1	10.3			*
* 17142.0			9.2	315	12.2	10.4			*
* 17144.0			9.2	319	12.5	10.5			*
* 17146.0			9.2	323	13.0	10.5			*
* 17148.0			9.2	322	13.2	10.4			*
* 17150.0			9.2	322	13.3	10.4			*
* 17152.0			9.2	322	13.1	10.4			*

* FORMATION *			* BOREHOLE *				* QUAL. *		

* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST *	* INDEX *	
* * *	* * *	AZI.	* * *	AZI.	1-3	2-4	* #4 *	*****	
* 17154.0			9.2	318	12.7	10.8			*
* 17156.0			9.2	317	12.5	11.3			*
* 17158.0			9.2	321	12.5	11.5			*
* 17160.0			9.2	321	12.7	11.5			*
* 17162.0			9.2	321	12.7	11.4			*
* 17164.0			9.3	321	12.2	11.1			*
* 17166.0			9.4	320	11.8	10.7			*
* 17168.0	47.4	262	9.4	319	11.8	10.7	1		*
* 17170.0			9.3	318	11.8	10.8			*
* 17172.0			9.3	318	11.9	10.8			*
* 17174.0			9.2	318	11.9	11.0			*
* 17176.0			9.2	318	11.9	11.2			*
* 17178.0			9.2	316	12.0	11.2			*
* 17180.0			9.2	317	12.1	11.0			*
* 17182.0			9.2	321	12.1	10.7			*
* 17184.0			9.2	322	11.7	10.7			*
* 17186.0			9.2	322	11.7	10.8			*
* 17188.0	68.9	194	9.2	319	12.2	11.1	1		*
* 17190.0			9.2	318	12.7	11.6			*
* 17192.0			9.2	319	12.7	12.0			*
* 17194.0			9.2	319	12.9	12.0			*
* 17196.0			9.2	321	13.4	12.0			*
* 17198.0			9.2	324	13.7	12.3			*
* 17200.0			9.2	324	13.0	12.4			*
* 17202.0	21.2	13	9.2	323	13.7	12.2	1		*
* 17204.0			9.2	325	13.8	11.6			*
* 17206.0			9.2	330	13.6	11.3			*
* 17208.0			9.2	332	13.3	10.9			*
* 17210.0			9.3	330	13.2	10.7			*
* 17212.0			9.4	325	12.5	10.6			*
* 17214.0			9.4	322	11.9	10.5			*
* 17216.0			9.5	322	11.5	10.3			*
* 17218.0			9.5	326	11.5	10.2			*
* 17220.0			9.5	330	11.6	10.3			*
* 17222.0			9.5	333	11.6	10.2			*
* 17224.0			9.5	331	11.4	10.0			*
* 17226.0			9.5	330	11.2	10.0			*
* 17228.0			9.5	331	11.0	10.0			*
* 17230.0			9.4	328	10.6	9.9			*
* 17232.0			9.4	326	10.4	9.9			*
* 17234.0	68.0	148	9.3	326	10.7	10.0	1		*
* 17236.0	51.9	288	9.3	325	10.9	10.0	3		*
* 17238.0	52.3	287	9.3	324	10.8	9.9	1		*
* 17240.0	45.5	332	9.3	325	10.8	10.0	1		*
* 17242.0			9.2	325	10.9	10.2			*

* FORMATION *					* BOREHOLE *			* QUAL. *	

* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST *	* INDEX *	
* * *	* * *	AZI.	* * *	AZI.	1-3	2-4	* =4 *	* * *	

* 17244.0			9.2	325	11.1	10.3			*
* 17246.0			9.2	326	11.1	10.5			*
* 17248.0			9.2	327	11.1	10.5			*
* 17250.0			9.2	327	11.2	10.5			*
* 17252.0	60.9	265	9.2	328	11.1	10.6	1		*
* 17254.0			9.2	331	11.1	10.6			*
* 17256.0			9.2	331	11.0	10.5			*
* 17258.0			9.3	327	10.8	10.4			*
* 17260.0			9.2	326	10.8	10.4			*
* 17262.0			9.2	323	10.9	10.4			*
* 17264.0			9.2	321	11.4	10.4			*
* 17266.0			9.2	327	11.7	10.4			*
* 17268.0			9.2	334	11.7	10.5			*
* 17270.0			9.2	334	11.8	10.4			*
* 17272.0			9.2	328	11.3	10.3			*
* 17274.0			9.3	324	10.9	10.2			*
* 17276.0			9.3	323	10.9	10.2			*
* 17278.0			9.3	320	10.8	10.2			*
* 17280.0			9.4	320	10.8	10.2			*
* 17282.0			9.4	325	11.1	10.3			*
* 17284.0			9.5	328	11.7	10.4			*
* 17286.0			9.5	327	12.0	10.5			*
* 17288.0			9.4	323	11.4	10.5			*
* 17290.0			9.4	319	11.4	10.5			*
* 17292.0			9.4	321	11.6	10.5			*
* 17294.0			9.4	322	11.5	10.7			*
* 17296.0			9.4	321	11.3	10.8			*
* 17298.0			9.4	319	10.8	10.9			*
* 17300.0			9.5	318	10.4	10.8			*
* 17302.0			9.6	318	10.2	10.8			*
* 17304.0			9.6	322	10.2	10.7			*
* 17306.0	31.3	76	9.6	327	10.2	10.7	1		*
* 17308.0			9.6	328	10.3	10.7			*
* 17310.0			9.6	328	10.3	10.6			*
* 17312.0			9.6	328	10.3	10.4			*
* 17314.0			9.6	328	10.2	10.4			*
* 17316.0			9.6	330	10.2	10.4			*
* 17318.0			9.6	333	10.2	10.4			*
* 17320.0			9.6	332	10.2	10.5			*
* 17322.0			9.6	332	10.3	10.5			*
* 17324.0			9.6	331	10.4	10.6			*
* 17326.0			9.6	329	10.4	10.8			*
* 17328.0			9.6	333	10.2	11.0			*
* 17330.0	66.5	265	9.6	338	10.1	11.1	1		*
* 17332.0	65.9	269	9.6	339	10.2	11.2	1		*

* FORMATION *					* BOREHOLE			* QUAL. *	

* DEPTH *	* DIP	* DIP	* DEV.	* DEV.	* DIAM	* DIAM	* BEST	* INDEX *	
* * *	* * *	* AZI.	* * *	* AZI.	* 1-3	* 2-4	* =4	* * *	

* 17334.0			9.6	337	10.2	11.7			*
* 17336.0			9.6	334	10.4	12.2			*
* 17338.0			9.6	336	10.5	12.6			*
* 17340.0	45.3	291	9.6	340	10.6	12.8	1		*
* 17342.0	53.9	289	9.6	339	10.9	12.7	1		*
* 17344.0	44.3	205	9.6	336	11.1	12.7	1		*
* 17346.0			9.7	336	11.2	12.8			*
* 17348.0			9.8	335	11.7	12.8			*
* 17350.0			9.8	335	12.3	12.9			*
* 17352.0			9.9	338	12.4	13.8			*
* 17354.0			9.9	337	12.1	14.3			*
* 17356.0			10.0	334	11.8	13.9			*
* 17358.0			10.0	335	11.8	13.4			*
* 17360.0			10.0	336	11.8	13.2			*
* 17362.0			10.0	333	11.8	13.3			*
* 17364.0			10.1	332	11.7	13.4			*
* 17366.0			10.1	333	11.3	13.6			*
* 17368.0			10.2	335	10.9	13.8			*
* 17370.0			10.3	338	10.1	14.1			*
* 17372.0			10.4	339	9.7	14.4			*
* 17374.0			10.4	338	9.8	15.0			*
* 17376.0			10.3	338	9.9	15.6			*
* 17378.0			10.4	341	10.0	16.0			*
* 17380.0			10.4	344	10.2	16.4			*
* 17382.0			10.3	345	10.3	16.6			*
* 17384.0			10.3	346	10.3	16.6			*
* 17386.0	80.8	140	10.2	345	10.3	16.2	1		*
* 17388.0			10.2	345	10.2	15.6			*
* 17390.0			10.2	344	10.3	15.3			*
* 17392.0			10.2	342	10.4	15.1			*
* 17394.0			10.3	341	10.5	15.0			*
* 17396.0			10.4	341	10.3	15.2			*
* 17398.0			10.4	339	10.0	15.3			*
* 17400.0			10.4	338	10.0	15.3			*
* 17402.0			10.4	345	10.0	15.5			*
* 17404.0			10.4	348	9.7	15.8			*
* 17406.0			10.4	347	9.6	15.9			*
* 17408.0			10.4	349	9.6	16.1			*
* 17410.0			10.3	349	9.8	16.2			*
* 17412.0			10.2	347	10.1	15.6			*
* 17414.0			10.2	347	10.5	15.2			*
* 17416.0			10.1	348	10.8	15.2			*
* 17418.0			10.1	344	10.7	15.4			*
* 17420.0			10.1	344	10.5	15.6			*
* 17422.0			10.1	347	10.2	15.9			*

*****		FORMATION		BOREHOLE		QUAL.		*****	
*****		*****		*****		*****		*****	
DEPTH	DIP	DIP	DEV.	DEV.	DIAM	DIAM	BEST	INDEX	*****
*****	*****	AZI.	*****	AZI.	1-3	2-4	*****	*****	*****
* 17424.0			10.1	352	10.1	16.3			*
* 17426.0			10.2	356	10.1	16.6			*
* 17428.0			10.1	353	10.6	16.3			*
* 17430.0			10.0	352	11.0	16.3			*
* 17432.0			10.0	351	11.0	16.4			*
* 17434.0	42.6	167	10.1	353	11.5	16.1	1		*
* 17436.0	42.7	165	10.2	357	11.9	15.8	1		*
* 17438.0			10.2	359	12.4	16.1			*
* 17440.0			10.3	0	12.7	16.6			*
* 17442.0			10.3	0	12.9	16.7			*
* 17444.0			10.4	359	12.8	16.5			*
* 17446.0			10.4	358	12.9	16.5			*
* 17448.0			10.4	360	12.6	16.3			*
* 17450.0			10.4	1	11.6	15.8			*
* 17452.0			10.5	5	10.6	15.5			*
* 17454.0			10.5	6	10.3	15.6			*
* 17456.0			10.6	3	10.3	15.6			*
* 17458.0			10.6	3	10.1	15.7			*
* 17460.0			10.7	0	10.3	15.9			*
* 17462.0			10.7	1	10.5	15.7			*
* 17464.0	37.8	56	10.7	2	11.4	15.3	1		*
* 17466.0	51.9	104	10.7	360	13.0	15.4	1		*
* 17468.0			10.7	5	12.8	15.4			*
* 17470.0			10.7	10	11.6	15.3			*
* 17472.0			10.7	9	10.8	15.4			*
* 17474.0			10.7	8	10.6	15.8			*
* 17476.0			10.6	8	10.3	15.9			*
* 17478.0			10.6	8	9.9	15.7			*
* 17480.0			10.6	8	9.7	16.3			*
* 17482.0	66.3	232	10.6	7	9.5	16.6	1		*
* 17484.0			10.6	3	9.5	16.3			*
* 17486.0			10.7	5	9.5	16.1			*
* 17488.0			10.8	8	9.5	16.3			*
* 17490.0			10.8	9	9.4	16.3			*
* 17492.0			10.8	10	9.4	15.8			*
* 17494.0			10.8	7	9.6	15.5			*
* 17496.0			11.0	5	9.6	15.9			*
* 17498.0			11.2	7	9.6	16.2			*
* 17500.0			11.3	8	9.5	16.3			*
* 17502.0			11.5	7	9.5	16.4			*
* 17504.0			11.6	7	9.5	16.4			*
* 17506.0			11.6	7	9.5	16.4			*
* 17508.0			11.6	4	9.4	16.2			*
* 17510.0			11.6	3	9.3	16.0			*
* 17512.0			11.6	6	9.4	16.1			*

* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
* * * * *	FORMATION	* * * * *	BOREHOLE		* * * * *	QUAL.	* * * * *	* * * * *
* * * * *	-----							
* * * * *	DEPTH	DIP	DIP	DEV.	DEV.	DIAM	DIAM	BEST
* * * * *	* * * * *	AZI.	* * * * *	AZI.	1-3	2-4	* * * * *	#4
* * * * *	*****							
* 17514.0			11.6	6	9.4	16.1		*
* 17516.0			11.6	6	9.6	16.1		*
* 17518.0			11.6	8	9.8	15.9		*
* 17520.0			11.6	9	10.0	15.6		*
* 17522.0			11.6	8	10.1	16.1		*
* 17524.0			11.6	12	10.2	16.5		*
* 17526.0			11.7	18	10.1	16.6		*
* 17528.0			11.9	16	10.0	16.8		*
* 17530.0			12.0	12	9.8	16.8		*
* 17532.0			12.2	9	9.7	16.7		*
* 17534.0			12.3	5	9.9	16.1		*
* 17536.0			12.4	1	10.2	15.9		*
* 17538.0			12.4	6	10.3	16.4		*
* 17540.0			12.4	11	10.4	16.7		*
* 17542.0			12.4	13	10.2	16.8		*
* 17544.0			12.4	15	10.0	16.8		*
* 17546.0			12.4	15	9.9	16.3		*
* 17548.0	51.8	276	12.4	16	9.9	16.0	1	*
* 17550.0	32.7	196	12.4	14	9.8	16.3	1	*
* 17552.0			12.4	10	9.6	16.3		*
* 17554.0			12.5	10	9.6	16.0		*
* 17556.0			12.6	10	9.6	15.8		*
* 17558.0			12.7	15	9.7	15.6		*
* 17560.0			12.6	16	9.8	15.7		*
* 17562.0			12.7	14	9.9	15.3		*
* 17564.0			12.8	15	9.8	14.6		*
* 17566.0	15.2	170	12.8	13	10.0	14.2	1	*
* 17568.0			12.8	18	10.7	14.8		*
* 17570.0			12.9	21	11.3	15.8		*
* 17572.0			12.9	18	11.3	16.1		*
* 17574.0			12.9	16	10.8	15.0		*
* 17576.0			12.7	14	10.6	13.2		*
* 17578.0			12.6	15	10.6	12.5		*
* 17580.0			12.7	17	10.3	12.7		*
* 17582.0			12.7	20	10.4	13.0		*
* 17584.0			12.6	22	10.4	13.5		*
* 17586.0			12.6	24	10.2	13.7		*
* 17588.0			12.7	27	10.0	13.3		*
* 17590.0	14.1	208	12.6	20	10.0	12.6	1	*
* 17592.0	33.7	206	12.6	15	10.1	13.2	1	*
* 17594.0			12.6	18	10.1	14.6		*
* 17596.0			12.6	14	10.0	15.1		*
* 17598.0			12.5	13	10.1	15.9		*
* 17600.0			12.4	17	10.1	15.3		*
* 17602.0			12.4	22	10.1	14.2		*

* FORMATION *	BOREHOLE						* QUAL. *	*	

* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST	* INDEX *	
* * *	* * *	AZI.	* * *	AZI.	1-3	2-4	* =4	* * *	

* 17604.0			12.4	23	10.2	13.1			*
* 17606.0			12.2	26	10.1	13.8			*
* 17608.0	39.1	61	12.3	12	9.9	14.0	1		*
* 17610.0			12.4	8	9.9	14.6			*
* 17612.0			12.4	6	9.9	14.8			*
* 17614.0			12.4	7	10.1	14.1			*
* 17616.0			12.4	13	10.6	12.2			*
* 17618.0			12.4	16	11.0	10.7			*
* 17620.0			12.4	18	11.2	10.4			*
* 17622.0			12.4	18	11.4	10.2			*
* 17624.0	17.6	298	12.4	16	11.4	10.1	1		*
* 17626.0	18.6	290	12.4	15	11.9	10.0	1		*
* 17628.0	18.1	296	12.4	24	12.5	10.0	1		*
* 17630.0			12.4	26	12.7	10.2			*
* 17632.0			12.4	22	12.3	10.1			*
* 17634.0	20.2	265	12.4	21	11.6	10.0	1		*
* 17636.0	16.4	309	12.4	21	11.4	10.2	1		*
* 17638.0			12.4	18	11.4	10.3			*
* 17640.0			12.4	18	11.3	10.2			*
* 17642.0	39.8	75	12.4	19	11.3	10.1	1		*
* 17644.0	60.3	237	12.4	21	11.4	10.1	1		*
* 17646.0			12.5	21	11.5	10.3			*
* 17648.0	37.1	85	12.5	21	11.5	10.3	3		*
* 17650.0			12.4	24	11.5	10.4			*
* 17652.0	55.1	230	12.4	25	11.4	10.2	1		*
* 17654.0	56.6	231	12.4	24	11.4	10.1	1		*
* 17656.0			12.4	25	11.3	10.2			*
* 17658.0			12.4	22	11.4	10.3			*
* 17660.0			12.4	26	11.6	10.2			*
* 17662.0			12.4	29	11.7	10.2			*
* 17664.0			12.3	30	11.7	10.2			*
* 17666.0	53.3	323	12.3	30	11.6	10.2	3		*
* 17668.0			12.3	29	11.7	10.1			*
* 17670.0			12.3	23	11.8	10.2			*
* 17672.0			12.3	18	12.1	10.6			*
* 17674.0			12.4	20	12.6	10.7			*
* 17676.0			12.3	24	13.0	10.3			*
* 17678.0			12.3	25	12.8	10.2			*
* 17680.0			12.3	27	12.4	10.4			*
* 17682.0			12.3	29	12.0	10.7			*
* 17684.0			12.3	29	12.4	10.7			*
* 17686.0			12.3	25	11.8	10.5			*
* 17688.0			12.4	21	11.5	10.3			*
* 17690.0	56.2	64	12.4	20	11.5	10.3	1		*
* 17692.0			12.4	18	11.4	10.3			*

* FORMATION *		* BOREHOLE *				* QUAL. *	
* DEPTH *	* DIP *	* DIP *	* DEV. *	DEV.	DIAM	DIAM	* BEST *
		AZI.	AZI.	1-3	2-4	=1	
* 17694.0			12.5	19	11.3	10.4	*
* 17696.0			12.5	19	11.3	10.3	*
* 17698.0			12.4	19	11.2	10.4	*
* 17700.0			12.4	22	11.1	10.4	*
* 17702.0			12.4	21	11.1	10.3	*
* 17704.0			12.3	22	11.0	10.3	*
* 17706.0			12.3	25	11.0	10.3	*
* 17708.0			12.2	26	11.0	10.4	*
* 17710.0			12.2	26	11.0	10.4	*
* 17712.0			12.2	27	11.0	10.2	*
* 17714.0			12.2	30	10.9	10.2	*
* 17716.0			12.2	30	10.8	10.2	*
* 17718.0			12.2	28	10.8	10.1	*
* 17720.0			12.3	27	10.8	10.1	*
* 17722.0			12.3	29	10.9	10.2	*
* 17724.0			12.2	30	11.0	10.3	*
* 17726.0			12.2	28	11.0	10.4	*
* 17728.0			12.2	25	11.0	10.3	*
* 17730.0			12.2	23	10.9	10.3	*
* 17732.0			12.2	23	10.9	10.2	*
* 17734.0			12.2	22	10.9	10.2	*
* 17736.0			12.2	24	10.9	10.1	*
* 17738.0			12.2	27	10.9	10.1	*
* 17740.0			12.2	30	10.9	10.2	*
* 17742.0			12.2	32	11.0	10.3	*
* 17744.0			12.2	34	11.1	10.4	*
* 17746.0			12.2	33	11.1	10.4	*
* 17748.0			12.2	31	11.1	10.4	*
* 17750.0			12.2	29	11.2	10.3	*
* 17752.0			12.2	29	11.2	10.2	*
* 17754.0			12.2	28	11.4	10.1	*
* 17756.0			12.2	28	11.5	10.1	*
* 17758.0			12.2	26	11.5	10.0	*
* 17760.0			12.2	28	11.5	10.0	*
* 17762.0			12.2	28	11.5	10.0	*
* 17764.0			12.2	28	11.5	10.1	*
* 17766.0			12.2	27	11.5	10.2	*
* 17768.0			12.2	29	11.5	10.2	*
* 17770.0			12.2	26	11.6	10.2	*
* 17772.0			12.2	29	11.6	10.2	*
* 17774.0			12.3	29	11.5	10.3	*
* 17776.0			12.3	28	11.5	10.4	*
* 17778.0			12.3	28	11.5	10.4	*
* 17780.0	44.0	12	12.3	28	11.5	10.3	1 *
* 17782.0			12.3	28	11.6	10.3	*

* FORMATION *					* BOREHOLE			* QUAL. *	

* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST *	* INDEX *	
* * *	* * *	AZI.	* * *	AZI.	1-3	2-4	* * *	* =1 *	

* 17784.0			12.3	26	11.6	10.3			*
* 17786.0			12.4	25	11.7	10.3			*
* 17788.0			12.4	26	12.0	10.2			*
* 17790.0			12.4	25	12.2	10.2			*
* 17792.0			12.4	25	12.2	10.3			*
* 17794.0			12.4	27	11.9	10.3			*
* 17796.0			12.4	28	11.7	10.2			*
* 17798.0			12.4	27	11.8	10.2			*
* 17800.0			12.4	28	12.0	10.2			*
* 17802.0			12.4	28	12.1	10.1			*
* 17804.0			12.4	28	12.1	10.1			*
* 17806.0			12.4	29	12.1	10.1			*
* 17808.0			12.4	29	12.1	10.1			*
* 17810.0			12.4	28	12.2	10.1			*
* 17812.0	10.7	268	12.4	27	12.3	10.1	1		*
* 17814.0	11.5	262	12.4	26	12.4	10.1	3		*
* 17816.0			12.4	26	12.5	10.1			*
* 17818.0			12.4	28	12.7	10.0			*
* 17820.0			12.4	29	13.0	10.0			*
* 17822.0			12.4	29	13.1	10.0			*
* 17824.0			12.4	28	13.0	10.2			*
* 17826.0			12.4	26	13.0	10.2			*
* 17828.0			12.4	24	12.9	10.3			*
* 17830.0			12.4	24	12.5	10.4			*
* 17832.0			12.4	25	12.4	10.4			*
* 17834.0			12.4	25	12.5	10.4			*
* 17836.0			12.4	23	12.6	10.3			*
* 17838.0			12.4	23	12.5	10.3			*
* 17840.0			12.4	26	12.5	10.3			*
* 17842.0			12.4	25	12.2	10.5			*
* 17844.0			12.4	24	12.1	10.6			*
* 17846.0			12.3	25	12.0	10.4			*
* 17848.0			12.2	25	12.0	10.4			*
* 17850.0			12.2	25	11.9	10.3			*
* 17852.0			12.3	25	11.9	10.4			*
* 17854.0			12.2	25	11.9	10.3			*
* 17856.0			12.2	25	11.8	10.3			*
* 17858.0			12.2	26	11.7	10.2			*
* 17860.0			12.2	26	11.6	10.2			*
* 17862.0			12.1	25	11.7	10.2			*
* 17864.0			12.0	23	11.9	10.2			*
* 17866.0			12.0	21	12.3	10.1			*
* 17868.0			12.0	22	12.8	10.1			*
* 17870.0			12.0	21	12.4	10.2			*
* 17872.0			11.9	22	12.1	10.2			*

* #	* FORMATION *			* BOREHOLE *			* QUAL. *		
* #	*****								
* DEPTH	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST	* INDEX *	
* #	* #	AZI.	* #	AZI.	1-3	2-4	* #4	* #4 *	

* 17874.0			11.9	23	12.4	10.2			*
* 17876.0			11.8	23	12.5	10.2			*
* 17878.0			11.8	24	12.6	10.2			*
* 17880.0			11.7	23	12.8	10.1			*
* 17882.0			11.7	22	13.0	10.1			*
* 17884.0	51.1	4	11.7	21	13.4	10.1	1		*
* 17886.0	50.3	5	11.7	21	13.8	10.2	1		*
* 17888.0			11.6	23	14.0	10.7			*
* 17890.0			11.6	26	14.1	10.7			*
* 17892.0			11.6	21	14.2	10.4			*
* 17894.0			11.6	20	14.2	10.4			*
* 17896.0			11.6	20	14.0	10.2			*
* 17898.0			11.6	20	13.9	10.0			*
* 17900.0			11.7	22	13.7	9.9			*
* 17902.0			11.9	22	13.4	9.9			*
* 17904.0			12.0	22	13.2	9.9			*
* 17906.0			12.0	25	13.1	9.9			*
* 17908.0			12.0	26	13.0	9.9			*
* 17910.0			12.0	26	13.2	9.9			*
* 17912.0			11.9	26	13.3	9.8			*
* 17914.0			11.8	24	13.2	9.9			*
* 17916.0			11.8	21	13.2	10.0			*
* 17918.0			11.7	20	13.1	10.0			*
* 17920.0			11.6	21	13.1	10.0			*
* 17922.0	24.1	80	11.6	21	13.0	10.0	1		*
* 17924.0	19.3	83	11.6	20	13.1	9.9	1		*
* 17926.0			11.6	19	13.1	9.7			*
* 17928.0			11.6	19	13.1	9.7			*
* 17930.0			11.6	18	13.5	9.8			*
* 17932.0			11.6	19	13.6	9.7			*
* 17934.0			11.6	23	13.2	9.7			*
* 17936.0			11.6	25	13.0	9.7			*
* 17938.0			11.6	23	12.8	9.8			*
* 17940.0			11.6	23	12.8	9.8			*
* 17942.0			11.6	23	12.8	9.8			*
* 17944.0			11.7	23	12.8	9.9			*
* 17946.0			11.7	22	12.7	10.0			*
* 17948.0			11.7	21	12.7	10.0			*
* 17950.0			11.7	20	12.6	10.0			*
* 17952.0			11.7	21	12.4	9.9			*
* 17954.0			11.6	21	12.4	10.0			*
* 17956.0			11.6	22	12.4	10.1			*
* 17958.0			11.7	20	12.6	10.1			*
* 17960.0			11.7	10	13.2	10.3			*
* 17962.0			11.8	7	13.2	10.4			*

* FORMATION *					* BOREHOLE		* QUAL. *		

* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST *	* INDEX *	
* * *	* * *	AZI.	* * *	AZI.	1-3	2-4	* * *	* =4 *	

* 17964.0			11.9	12	12.8	10.6			*
* 17966.0	71.6	294	12.0	16	12.4	11.0	2		*
* 17968.0			12.0	20	12.2	11.8			*
* 17970.0			12.0	20	12.2	12.0			*
* 17972.0			12.0	16	12.4	11.5			*
* 17974.0			12.0	14	12.4	10.8			*
* 17976.0			12.1	16	12.3	10.4			*
* 17978.0			12.1	17	12.3	10.3			*
* 17980.0			12.1	17	12.0	10.5			*
* 17982.0			12.1	17	11.8	10.9			*
* 17984.0			12.1	18	11.7	11.5			*
* 17986.0			12.0	22	11.6	11.4			*
* 17988.0			12.0	22	11.4	10.9			*
* 17990.0			12.0	18	11.4	10.7			*
* 17992.0			12.0	18	11.5	10.5			*
* 17994.0			12.0	16	11.4	10.3			*
* 17996.0			12.0	14	11.2	10.4			*
* 17998.0			12.0	17	11.0	10.7			*
* 18000.0			12.0	19	10.9	10.8			*
* 18002.0			12.0	16	10.9	10.6			*
* 18004.0			12.0	17	10.9	10.5			*
* 18006.0			12.0	19	10.9	10.6			*
* 18008.0			12.0	21	10.8	10.6			*
* 18010.0	24.4	240	12.0	19	10.6	10.4	1		*
* 18012.0	22.6	242	12.0	17	10.7	10.3	1		*
* 18014.0			12.0	16	10.7	10.5			*
* 18016.0			11.9	15	10.8	10.5			*
* 18018.0			11.9	17	10.8	10.5			*
* 18020.0			11.8	18	11.0	10.6			*
* 18022.0			11.8	16	11.1	10.7			*
* 18024.0			11.9	15	10.9	10.8			*
* 18026.0			11.8	20	10.8	12.0			*
* 18028.0			11.7	24	10.8	12.6			*
* 18030.0			11.7	23	10.9	11.1			*
* 18032.0			11.7	19	11.0	10.3			*
* 18034.0			11.7	15	11.1	10.4			*
* 18036.0			11.8	11	11.1	10.4			*
* 18038.0			11.9	10	11.0	10.8			*
* 18040.0			11.9	7	10.7	10.9			*
* 18042.0			11.8	5	10.4	11.0			*
* 18044.0			11.7	2	10.2	11.7			*
* 18046.0			11.8	1	10.3	11.7			*
* 18048.0			11.7	2	10.3	11.4			*
* 18050.0			11.6	3	10.4	11.5			*
* 18052.0			11.6	6	10.6	11.3			*

* FORMATION *		* BOREHOLE *				* QUAL. *	
* DEPTH *	* DIP *	DIP	* DEV. *	DEV.	DIAM	DIAM	* INDEX *
		AZI.		AZI.	1-3	2-4	* BEST *
							* =4 *
* 18054.0			11.6	10	11.0	11.0	*
* 18056.0			11.6	16	11.4	10.7	*
* 18058.0			11.6	18	11.6	10.7	*
* 18060.0			11.6	15	12.1	10.8	*
* 18062.0			11.6	16	12.5	10.8	*
* 18064.0			11.6	16	12.7	10.7	*
* 18066.0			11.6	13	13.0	10.8	*
* 18068.0			11.6	13	13.0	10.9	*
* 18070.0			11.6	11	11.8	11.1	*
* 18072.0			11.6	11	10.9	11.0	*
* 18074.0	64.8	287	11.6	14	11.2	11.0	2 *
* 18076.0			11.6	11	11.1	11.1	*
* 18078.0			11.6	7	10.7	11.1	*
* 18080.0			11.6	8	10.9	10.9	*
* 18082.0			11.6	4	10.8	10.8	*
* 18084.0	51.0	129	11.6	2	10.7	10.7	1 *
* 18086.0	49.7	120	11.5	2	10.8	10.6	1 *
* 18088.0			11.5	360	11.3	10.5	*
* 18090.0			11.5	4	11.6	10.4	*
* 18092.0	57.8	235	11.5	7	11.5	10.5	1 *
* 18094.0	58.3	230	11.5	7	11.4	10.6	1 *
* 18096.0			11.5	7	11.3	10.5	*
* 18098.0			11.5	8	11.2	10.5	*
* 18100.0			11.5	14	11.2	11.0	*
* 18102.0			11.4	16	11.1	11.2	*
* 18104.0			11.5	14	11.1	11.0	*
* 18106.0			11.5	10	11.0	11.0	*
* 18108.0			11.5	9	10.9	11.3	*
* 18110.0			11.4	0	10.9	11.6	*
* 18112.0			11.3	353	10.9	11.8	*
* 18114.0			11.3	2	10.9	11.5	*
* 18116.0			11.3	10	10.8	11.3	*
* 18118.0			11.4	12	10.8	11.3	*
* 18120.0			11.5	12	10.9	11.2	*
* 18122.0			11.6	14	11.2	11.0	*
* 18124.0			11.6	13	11.1	11.1	*
* 18126.0			11.6	9	10.9	11.3	*
* 18128.0			11.6	12	11.0	11.3	*
* 18130.0			11.6	18	10.9	11.2	*
* 18132.0			11.6	21	11.0	11.3	*
* 18134.0			11.5	27	11.3	11.2	*
* 18136.0			11.5	26	11.8	10.9	*
* 18138.0			11.5	22	11.8	10.9	*
* 18140.0			11.4	21	11.6	11.1	*
* 18142.0			11.5	18	11.4	11.1	*

*****		FORMATION		BOREHOLE		QUAL.		*****	
*****		-----		-----		-----		*****	
DEPTH	DIP	DIP	DEV.	DEV.	DIAM	DIAM	BEST	INDEX	
		AZI.		AZI.	1-3	2-4	=4		
* 18144.0			11.5	13	11.1	11.1			*
* 18146.0			11.5	7	10.8	11.1			*
* 18148.0			11.6	6	10.7	11.1			*
* 18150.0			11.6	11	11.2	11.2			*
* 18152.0			11.6	22	12.3	11.2			*
* 18154.0			11.6	31	13.0	11.0			*
* 18156.0			11.6	32	13.3	10.9			*
* 18158.0	48.5	259	11.4	21	12.5	11.1	2		*
* 18160.0			11.4	18	12.7	11.2			*
* 18162.0			11.5	23	13.8	11.2			*
* 18164.0			11.5	22	14.0	11.2			*
* 18166.0			11.5	19	14.4	11.2			*
* 18168.0			11.5	18	14.8	11.2			*
* 18170.0			11.6	20	14.9	11.3			*
* 18172.0			11.6	20	13.6	11.3			*
* 18174.0			11.6	17	11.9	11.2			*
* 18176.0			11.6	13	11.3	11.1			*
* 18178.0			11.6	12	10.9	11.0			*
* 18180.0			11.6	13	10.8	10.9			*
* 18182.0			11.6	17	11.1	10.8			*
* 18184.0	74.7	251	11.6	20	12.0	10.7	1		*
* 18186.0			11.6	20	12.0	10.7			*
* 18188.0			11.6	17	12.1	10.7			*
* 18190.0			11.6	10	11.0	10.7			*
* 18192.0			11.6	11	10.5	10.8			*
* 18194.0			11.6	12	10.5	10.8			*
* 18196.0			11.7	11	10.6	10.9			*
* 18198.0			11.8	11	10.8	10.8			*
* 18200.0			11.9	10	11.2	10.8			*
* 18202.0			12.0	11	11.1	10.8			*
* 18204.0			12.0	17	10.9	10.7			*
* 18206.0			12.0	19	11.0	10.9			*
* 18208.0			12.1	16	11.4	11.5			*
* 18210.0			12.2	21	11.4	11.9			*
* 18212.0			12.2	22	11.2	11.6			*
* 18214.0			12.2	15	11.1	10.9			*
* 18216.0			12.3	7	11.1	10.4			*
* 18218.0			12.4	2	11.0	10.3			*
* 18220.0			12.4	6	10.8	10.5			*
* 18222.0			12.4	11	10.7	10.8			*
* 18224.0			12.4	13	10.7	10.8			*
* 18226.0			12.4	11	10.6	10.7			*
* 18228.0			12.4	9	10.4	11.0			*
* 18230.0			12.4	14	10.2	11.3			*
* 18232.0			12.3	20	10.1	11.5			*

* * * * *	* * * * *	FORMATION		BOREHOLE		* QUAL. *	

* * * * *	* * * * *	*****		*****		* INDEX *	
* * * * *	* * * * *	DIP	DIP	DEV.	DEV.	DIAM	DIAM
* * * * *	* * * * *		AZI.		AZI.	1-3	2-4
* * * * *	* * * * *						* REST *
* * * * *	* * * * *						* =4 *

* 18234.0	37.4	161	12.3	22	10.1	11.4	2 *
* 18236.0	39.0	161	12.3	21	10.2	11.2	2 *
* 18238.0			12.3	20	10.2	11.2	* *
* 18240.0	62.2	92	12.3	19	10.2	11.3	1 *
* 18242.0			12.4	19	10.3	11.2	* *
* 18244.0			12.4	20	10.2	11.3	* *
* 18246.0			12.4	22	10.2	11.3	* *
* 18248.0			12.4	23	10.2	11.3	* *
* 18250.0			12.4	25	10.2	11.3	* *
* 18252.0			12.4	24	10.3	11.3	* *
* 18254.0			12.4	20	10.2	11.1	* *
* 18256.0			12.4	17	10.2	11.0	* *
* 18258.0			12.4	17	10.1	11.2	* *
* 18260.0			12.4	15	10.0	11.5	* *
* 18262.0			12.4	9	10.1	11.5	* *
* 18264.0			12.4	2	10.2	11.3	* *
* 18266.0			12.4	357	10.2	11.2	* *
* 18268.0			12.4	355	10.2	11.1	* *
* 18270.0			12.3	353	10.2	11.0	* *
* 18272.0			12.3	353	10.2	10.9	* *
* 18274.0			12.3	355	10.4	10.8	* *
* 18276.0			12.2	0	10.5	10.6	* *
* 18278.0			12.2	7	10.5	10.5	* *
* 18280.0			12.2	10	10.7	10.4	* *
* 18282.0			12.1	15	10.8	10.4	* *
* 18284.0			12.1	17	10.6	10.3	* *
* 18286.0			12.1	16	11.0	10.3	* *
* 18288.0			12.0	14	11.2	10.2	* *
* 18290.0			12.1	14	11.1	10.4	* *
* 18292.0			12.1	11	11.1	10.4	* *
* 18294.0			12.1	5	11.0	10.3	* *
* 18296.0			12.1	0	10.6	10.4	* *
* 18298.0			12.1	2	10.3	10.6	* *
* 18300.0			12.2	8	10.2	10.7	* *
* 18302.0			12.2	15	10.1	10.8	* *
* 18304.0			12.2	20	10.1	10.7	* *
* 18306.0			12.2	16	10.1	10.9	* *
* 18308.0			12.3	19	10.3	11.5	* *
* 18310.0			12.3	21	10.4	11.5	* *
* 18312.0	51.9	68	12.3	18	10.2	11.1	1 *
* 18314.0			12.3	20	10.2	10.9	* *
* 18316.0			12.3	24	10.3	10.9	* *
* 18318.0			12.2	24	10.4	10.9	* *
* 18320.0			12.2	24	10.4	10.9	* *
* 18322.0			12.3	24	10.4	10.9	* *

* FORMATION *					* BOREHOLE		* QUAL. *		

* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST	* INDEX *	
* * *	* * *	AZI.	* * *	AZI.	1-3	2-4	* * *	* * *	

* 18324.0			12.3	25	10.4	10.9			*
* 18326.0			12.4	24	10.3	10.9			*
* 18328.0			12.4	26	10.3	10.8			*
* 18330.0	24.8	302	12.3	28	10.3	10.8	1		*
* 18332.0	26.1	307	12.3	26	10.3	10.8	1		*
* 18334.0			12.2	24	10.3	10.7			*
* 18336.0	11.1	46	12.3	24	10.3	10.7	1		*
* 18338.0	12.3	42	12.3	25	10.2	10.7	1		*
* 18340.0			12.3	26	10.2	10.7			*
* 18342.0			12.3	26	10.2	10.7			*
* 18344.0	14.2	153	12.3	26	10.2	10.8	1		*
* 18346.0	40.9	207	12.3	24	10.2	10.8	1		*
* 18348.0	37.0	202	12.3	22	10.2	10.8	1		*
* 18350.0			12.3	21	10.2	10.9			*
* 18352.0			12.3	21	10.2	11.0			*
* 18354.0			12.4	22	10.2	11.2			*
* 18356.0	22.0	148	12.3	22	10.2	11.1	1		*
* 18358.0	24.3	143	12.4	21	10.3	11.0	3		*
* 18360.0			12.4	23	10.3	11.1			*
* 18362.0			12.4	25	10.4	11.4			*
* 18364.0			12.4	27	10.5	11.4			*
* 18366.0			12.4	23	10.4	11.0			*
* 18368.0			12.4	21	10.2	10.8			*
* 18370.0			12.4	22	10.2	10.8			*
* 18372.0			12.4	22	10.3	10.7			*
* 18374.0			12.4	22	10.2	10.6			*
* 18376.0			12.4	24	10.1	10.6			*
* 18378.0			12.4	28	10.1	10.6			*
* 18380.0			12.4	28	10.2	10.5			*
* 18382.0			12.4	28	10.2	10.6			*
* 18384.0			12.4	26	10.3	10.7			*
* 18386.0			12.4	23	10.3	10.8			*
* 18388.0			12.4	22	10.3	10.7			*
* 18390.0			12.4	22	10.1	10.5			*
* 18392.0			12.4	24	10.1	10.4			*
* 18394.0			12.4	25	10.2	10.5			*
* 18396.0			12.4	25	10.4	10.7			*
* 18398.0			12.4	24	10.4	10.8			*
* 18400.0			12.4	24	10.3	10.8			*
* 18402.0			12.4	25	10.4	10.8			*
* 18404.0			12.4	26	10.6	10.8			*
* 18406.0			12.4	26	10.8	10.9			*
* 18408.0			12.4	25	10.6	11.2			*
* 18410.0			12.4	24	10.4	11.0			*
* 18412.0			12.4	25	10.4	10.9			*

*****		* FORMATION *		* BOREHOLE *		* QUAL. *		* INDEX *	
* DEPTH *	* DIP *	DIP	* DEV. *	DEV.	DIAM	DIAM	* BEST *		
*****		AZI.	AZI.	1-3	2-4	* =1 *	*****		
* 18414.0			12.4	25	10.3	11.0			*
* 18416.0			12.4	26	10.3	11.1			*
* 18418.0			12.4	27	10.2	11.1			*
* 18420.0			12.4	27	10.2	11.1			*
* 18422.0			12.4	24	10.2	11.0			*
* 18424.0			12.5	24	10.3	11.0			*
* 18426.0			12.5	26	10.3	11.1			*
* 18428.0			12.4	26	10.3	11.2			*
* 18430.0			12.4	26	10.2	11.2			*
* 18432.0			12.4	24	10.3	11.2			*
* 18434.0			12.4	25	10.3	11.2			*
* 18436.0			12.4	25	10.2	11.3			*
* 18438.0			12.4	25	10.3	11.4			*
* 18440.0			12.3	26	10.3	11.3			*
* 18442.0			12.4	25	10.3	11.3			*
* 18444.0			12.4	26	10.3	11.3			*
* 18446.0			12.4	26	10.2	11.4			*
* 18448.0			12.4	26	10.2	11.5			*
* 18450.0	9.9	356	12.4	26	10.2	11.6	1		*
* 18452.0	10.0	355	12.4	26	10.2	11.5	1		*
* 18454.0			12.4	26	10.2	11.5			*
* 18456.0			12.4	26	10.2	11.6			*
* 18458.0	74.8	172	12.4	28	10.1	11.6	3		*
* 18460.0			12.4	28	10.1	11.7			*
* 18462.0			12.4	27	10.2	11.5			*
* 18464.0			12.4	27	10.2	11.4			*
* 18466.0			12.4	26	10.2	11.5			*
* 18468.0			12.4	29	10.2	11.5			*
* 18470.0			12.4	28	10.1	11.6			*
* 18472.0			12.4	28	10.1	11.6			*
* 18474.0			12.4	29	10.1	11.6			*
* 18476.0			12.4	29	10.2	11.6			*
* 18478.0			12.4	26	10.2	11.6			*
* 18480.0	42.4	118	12.4	26	10.2	11.6	1		*
* 18482.0			12.4	27	10.2	11.6			*
* 18484.0			12.4	27	10.2	11.6			*
* 18486.0			12.4	26	10.1	11.5			*
* 18488.0			12.4	28	10.1	11.6			*
* 18490.0			12.4	29	10.2	11.8			*
* 18492.0			12.4	27	10.2	11.6			*
* 18494.0			12.4	27	10.2	11.5			*
* 18496.0			12.4	25	10.2	11.3			*
* 18498.0			12.4	25	10.3	11.3			*
* 18500.0			12.4	28	10.5	11.6			*
* 18502.0			12.4	29	10.6	11.8			*

*****		FORMATION		BUREHOLE		QUAL.		*****	
*****		INDEX		*****		*****		*****	
DEPTH	DIP	DIP	DEV.	DEV.	DIAM	DIAM	BEST		
		AZI.		AZI.	1-3	2-4	# 4		

* 18504.0			12.4	27	10.6	11.7		*	
* 18506.0			12.4	27	10.5	12.1		*	
* 18508.0			12.4	28	10.4	12.3		*	
* 18510.0			12.4	28	10.3	11.8		*	
* 18512.0			12.4	35	10.2	11.6		*	
* 18514.0			12.4	35	10.2	11.6		*	
* 18516.0			12.4	29	10.2	11.6		*	
* 18518.0			12.5	29	10.2	11.6		*	
* 18520.0			12.5	28	10.2	11.6		*	
* 18522.0	8.6	47	12.5	28	10.2	11.6	1	*	
* 18524.0	10.5	78	12.5	28	10.2	11.7	1	*	
* 18526.0			12.5	27	10.2	11.8		*	
* 18528.0			12.4	28	10.1	11.8		*	
* 18530.0	6.1	81	12.4	29	10.1	11.8	1	*	
* 18532.0	14.0	223	12.4	30	10.0	12.0	1	*	
* 18534.0			12.4	31	10.1	12.1		*	
* 18536.0			12.4	31	10.1	12.0		*	
* 18538.0			12.4	32	10.2	11.9		*	
* 18540.0			12.4	32	10.1	12.0		*	
* 18542.0			12.4	31	10.0	12.2		*	
* 18544.0			12.4	30	10.1	12.1		*	
* 18546.0			12.4	30	10.1	12.0		*	
* 18548.0			12.4	27	10.2	12.2		*	
* 18550.0			12.4	25	10.2	12.8		*	
* 18552.0	30.1	74	12.4	25	10.2	12.8	1	*	
* 18554.0			12.5	26	10.1	12.3		*	
* 18556.0			12.4	33	10.1	12.8		*	
* 18558.0			12.5	37	10.1	12.7		*	
* 18560.0			12.5	37	10.2	12.1		*	
* 18562.0			12.5	31	10.2	12.2		*	
* 18564.0			12.5	23	10.5	12.7		*	
* 18566.0	74.1	181	12.7	21	10.8	13.4	1	*	
* 18568.0			12.7	20	10.9	13.9		*	
* 18570.0			12.6	22	10.8	13.8		*	
* 18572.0			12.5	26	10.6	12.9		*	
* 18574.0			12.5	20	10.3	11.8		*	
* 18576.0			12.6	28	10.0	11.5		*	
* 18578.0			12.7	29	10.0	11.5		*	
* 18580.0			12.7	29	10.0	11.5		*	
* 18582.0			12.7	28	9.9	11.3		*	
* 18584.0			12.8	27	9.8	11.2		*	
* 18586.0	17.9	282	12.8	28	9.9	11.1	1	*	
* 18588.0			12.8	26	9.9	11.1		*	
* 18590.0			12.7	27	9.6	11.1		*	
* 18592.0			12.6	27	9.8	11.0		*	

FORMATION		BOREHOLE		QUAL.		INDEX	
DEPTH	DIP	DIP	DEV.	DEV.	DIAM	DIAM	BEST
		AZI.		AZI.	1-3	2-4	≥4
* 18594.0			12.7	28	9.9	10.9	*
* 18596.0			12.8	29	9.8	10.8	*
* 18598.0			12.7	29	9.8	10.8	*
* 18600.0	45.8	253	12.6	27	9.8	10.8	1 *
* 18602.0	45.8	250	12.6	26	9.9	10.6	1 *
* 18604.0	57.6	250	12.8	26	9.9	10.5	1 *
* 18606.0			12.8	25	9.9	10.5	*
* 18608.0			12.7	26	9.8	10.5	*
* 18610.0	37.1	73	12.6	26	9.8	10.5	1 *
* 18612.0	37.9	74	12.5	26	9.8	10.5	1 *
* 18614.0			12.6	25	9.7	10.5	*
* 18616.0			12.7	25	9.7	10.5	*
* 18618.0			12.7	26	9.7	10.6	*
* 18620.0			12.8	27	9.8	10.6	*
* 18622.0			12.8	28	9.9	10.6	*
* 18624.0			12.7	29	9.9	10.6	*
* 18626.0			12.5	27	9.9	10.6	*
* 18628.0	52.7	78	12.4	28	9.8	10.6	2 *
* 18630.0			12.5	29	9.8	10.5	*
* 18632.0			12.6	28	9.7	10.5	*
* 18634.0			12.6	28	9.7	10.5	*
* 18636.0			12.6	28	9.7	10.5	*
* 18638.0			12.5	28	9.7	10.5	*
* 18640.0	58.8	244	12.5	29	9.8	10.6	1 *
* 18642.0			12.6	31	10.0	10.6	*
* 18644.0			12.6	31	10.1	10.6	*
* 18646.0			12.6	31	10.1	10.6	*
* 18648.0			12.5	30	10.0	10.6	*
* 18650.0			12.5	27	9.9	10.7	*
* 18652.0			12.5	26	9.8	10.8	*
* 18654.0			12.6	25	9.8	10.8	*
* 18656.0	15.0	322	12.5	26	9.9	10.9	1 *
* 18658.0			12.6	25	10.1	11.1	*
* 18660.0			12.6	24	10.2	11.2	*
* 18662.0			12.6	25	10.2	11.2	*
* 18664.0			12.5	28	10.0	11.1	*
* 18666.0			12.6	30	9.8	11.0	*
* 18668.0			12.7	31	9.8	11.1	*
* 18670.0			12.7	31	9.7	11.1	*
* 18672.0			12.6	30	9.7	11.1	*
* 18674.0			12.7	28	9.6	11.1	*
* 18676.0			12.9	28	9.7	11.2	*
* 18678.0			12.9	29	9.7	11.2	*
* 18680.0			12.8	29	9.7	11.2	*
* 18682.0			12.7	29	9.7	11.2	*

* FORMATION *					* BOREHOLE			* QUAL. *	

* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST *	* INDEX *	
* * *	* * *	AZI.	* * *	AZI.	1-3	2-4	* =4 *	* * *	

* 18684.0	16.0	94	12.7	28	9.8	11.2	1	*	
* 18686.0			12.9	27	9.9	11.2		*	
* 18688.0			12.9	28	9.9	11.2		*	
* 18690.0			12.8	26	9.9	11.2		*	
* 18692.0			12.7	27	9.8	11.2		*	
* 18694.0	20.1	78	12.7	28	9.7	11.3	3	*	
* 18696.0	19.8	81	12.8	28	9.6	11.4	3	*	
* 18698.0	24.5	98	12.8	28	9.6	11.5	1	*	
* 18700.0			12.8	27	9.6	11.5		*	
* 18702.0			12.7	28	9.6	11.5		*	
* 18704.0			12.7	29	9.5	11.7		*	
* 18706.0			12.8	29	9.5	11.7		*	
* 18708.0			12.7	29	9.5	11.8		*	
* 18710.0	29.2	27	12.6	29	9.6	11.9	1	*	
* 18712.0	31.7	28	12.5	27	9.5	11.9	1	*	
* 18714.0			12.6	25	9.6	12.0		*	
* 18716.0			12.6	24	9.6	12.1		*	
* 18718.0			12.6	24	9.7	12.3		*	
* 18720.0			12.6	24	9.8	12.4		*	
* 18722.0			12.6	26	9.9	12.5		*	
* 18724.0			12.6	26	9.9	12.5		*	
* 18726.0			12.6	24	10.0	12.6		*	
* 18728.0			12.6	23	10.1	12.8		*	
* 18730.0			12.6	25	10.2	12.8		*	
* 18732.0	30.7	264	12.6	26	10.2	12.7	1	*	
* 18734.0	30.6	263	12.7	25	10.0	12.8	1	*	
* 18736.0			12.6	24	10.0	12.8		*	
* 18738.0			12.6	24	10.0	12.8		*	
* 18740.0			12.6	23	10.2	12.8		*	
* 18742.0			12.6	23	10.4	12.9		*	
* 18744.0			12.6	26	10.5	12.8		*	
* 18746.0			12.6	28	10.4	12.9		*	
* 18748.0			12.6	25	10.3	13.2		*	
* 18750.0			12.7	23	10.4	12.7		*	
* 18752.0			12.6	24	10.3	12.1		*	
* 18754.0			12.6	26	10.2	12.1		*	
* 18756.0			12.6	28	10.2	12.2		*	
* 18758.0			12.7	26	10.2	12.1		*	
* 18760.0			12.7	23	10.2	12.0		*	
* 18762.0			12.7	23	10.1	11.6		*	
* 18764.0	21.8	215	12.7	24	10.1	11.6	1	*	
* 18766.0			12.7	22	10.0	11.6		*	
* 18768.0			12.6	19	10.1	12.0		*	
* 18770.0			12.6	19	10.1	12.0		*	
* 18772.0			12.6	15	10.2	11.4		*	

* FORMATION *					* BOREHOLE *			* QUAL. *	

* DEPTH *	* DIP *	DIP	* DEV. *	DEV.	DIAM	DIAM	* BEST *	* INDEX *	
		AZI.		AZI.	1-3	2-4		* #4 *	

* 18774.0			12.7	12	10.2	11.0			*
* 18776.0			12.7	13	10.4	10.8			*
* 18778.0	22.4	225	12.7	14	10.4	10.6	1		*
* 18780.0			12.7	21	10.4	10.6			*
* 18782.0			12.7	25	10.6	10.5			*
* 18784.0			12.7	24	10.7	10.3			*
* 18786.0			12.8	23	10.6	10.2			*
* 18788.0			12.8	23	10.5	10.2			*
* 18790.0			12.8	23	10.4	10.2			*
* 18792.0			12.8	22	10.5	10.2			*
* 18794.0			12.8	24	10.6	10.3			*
* 18796.0			12.8	24	10.6	10.3			*
* 18798.0			12.8	23	10.8	10.3			*
* 18800.0			12.8	20	10.9	10.3			*
* 18802.0			12.9	20	11.1	10.3			*
* 18804.0			13.0	23	11.2	10.4			*
* 18806.0			12.9	24	11.2	10.4			*
* 18808.0			12.9	24	11.1	10.3			*
* 18810.0			12.9	24	11.2	10.4			*
* 18812.0			12.9	25	11.3	10.4			*
* 18814.0			13.0	26	11.4	10.3			*
* 18816.0			13.0	26	11.4	10.3			*
* 18818.0			13.0	27	11.5	10.4			*
* 18820.0			13.1	27	11.5	10.5			*
* 18822.0			13.1	25	11.5	10.4			*
* 18824.0			13.2	25	11.5	10.4			*
* 18826.0			13.2	25	11.5	10.3			*
* 18828.0	30.7	301	13.2	26	11.5	10.3	2		*
* 18830.0			13.2	26	11.5	10.2			*
* 18832.0			13.2	25	11.6	10.2			*
* 18834.0			13.2	24	11.6	10.2			*
* 18836.0	22.6	293	13.2	24	11.5	10.1	2		*
* 18838.0	22.7	293	13.2	24	11.5	10.0	4		*
* 18840.0			13.2	24	11.5	10.1			*
* 18842.0			13.2	24	11.5	10.1			*
* 18844.0			13.2	24	11.5	10.1			*
* 18846.0			13.2	25	11.5	10.1			*
* 18848.0			13.2	27	11.6	10.2			*
* 18850.0			13.2	26	11.6	10.2			*
* 18852.0			13.2	26	11.8	10.2			*
* 18854.0	27.9	99	13.2	25	11.6	10.1	1		*
* 18856.0	25.9	99	13.2	26	11.6	10.1	1		*
* 18858.0			13.2	26	11.5	10.1			*
* 18860.0			13.2	25	11.5	10.2			*
* 18862.0			13.2	24	11.5	10.3			*

*****		FORMATION		BOREHOLE		QUAL.		*****	
*****		-----		-----		-----		*****	
DEPTH	DIP	DIP	DEV.	DEV.	DIAM	DIAM	BEST	INDEX	
		AZI.		AZI.	1-3	2-4	#4		
* 18864.0			13.2	24	11.4	10.3			*
* 18866.0			13.2	23	11.5	10.3			*
* 18868.0			13.2	22	11.5	10.3			*
* 18870.0			13.2	22	11.3	10.3			*
* 18872.0			13.2	21	11.2	10.3			*
* 18874.0			13.2	20	11.1	10.3			*
* 18876.0			13.2	19	11.2	10.3			*
* 18878.0			13.3	20	11.2	10.3			*
* 18880.0			13.3	20	11.1	10.3			*
* 18882.0	50.9	236	13.3	21	11.1	10.4	1		*
* 18884.0	51.1	235	13.3	21	11.1	10.4	1		*
* 18886.0			13.3	17	11.3	10.3			*
* 18888.0			13.3	12	11.5	10.4			*
* 18890.0			13.3	15	11.3	10.6			*
* 18892.0	59.0	202	13.3	16	11.1	10.8	1		*
* 18894.0			13.4	7	10.9	11.0			*
* 18896.0			13.4	9	10.6	11.5			*
* 18898.0			13.4	17	10.3	11.5			*
* 18900.0			13.4	19	10.3	11.1			*
* 18902.0			13.4	20	10.3	11.2			*
* 18904.0			13.5	22	10.3	11.2			*
* 18906.0			13.6	22	10.2	11.6			*
* 18908.0			13.8	21	10.2	12.7			*
* 18910.0			13.9	21	10.2	13.4			*
* 18912.0			13.8	21	10.2	13.4			*
* 18914.0			13.8	24	10.3	13.0			*
* 18916.0			13.7	28	10.3	12.3			*
* 18918.0	58.2	103	13.7	27	10.2	11.9	1		*
* 18920.0			13.8	22	10.2	11.6			*
* 18922.0			13.8	21	10.2	11.7			*
* 18924.0			13.8	25	10.3	12.5			*
* 18926.0			13.9	27	10.4	13.2			*
* 18928.0			13.9	26	10.3	13.2			*
* 18930.0			13.8	24	10.3	12.9			*
* 18932.0			13.8	17	10.2	12.0			*
* 18934.0			13.8	9	10.4	11.2			*
* 18936.0			13.8	2	10.8	11.8			*
* 18938.0			13.8	6	10.7	11.7			*
* 18940.0			13.9	13	10.5	10.8			*
* 18942.0			13.9	13	11.0	10.7			*
* 18944.0			14.0	19	11.5	10.6			*
* 18946.0			14.1	23	11.9	10.3			*
* 18948.0			14.1	25	11.9	10.3			*
* 18950.0			14.1	26	11.3	10.3			*
* 18952.0			14.0	25	11.3	10.3			*

*****		* FOREATION *		* BOREHOLE		* QUAL. *		*****	
*****		*-----*		*-----*		*-----*		*****	
* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST *	* INDEX *	*-----*
-----	*-----*	AZI.	*-----*	AZI.	1-3	2-4	*-----*	*-----*	*-----*
*****		*****		*****		*****		*****	
* 18954.0			14.0	26	11.6	10.3		*	
* 18956.0			14.1	25	12.6	10.7		*	
* 18958.0			14.1	22	13.5	11.1		*	
* 18960.0			14.1	21	13.1	11.2		*	
* 18962.0			14.0	17	13.1	11.1		*	
* 18964.0			14.1	21	13.7	10.7		*	
* 18966.0			14.1	29	14.0	10.4		*	
* 18968.0			14.0	27	13.8	10.3		*	
* 18970.0			14.0	23	13.5	10.6		*	
* 18972.0			14.0	21	13.5	10.7		*	
* 18974.0			14.1	20	14.1	10.7		*	
* 18976.0			14.2	20	14.3	10.6		*	
* 18978.0			14.2	19	13.8	10.6		*	
* 18980.0			14.2	20	12.7	10.4		*	
* 18982.0			14.2	18	12.5	10.3		*	
* 18984.0			14.3	19	12.9	10.4		*	
* 18986.0			14.4	20	12.6	10.3		*	
* 18988.0			14.4	16	12.4	10.3		*	
* 18990.0			14.4	23	12.5	10.1		*	
* 18992.0			14.4	21	12.4	10.1		*	
* 18994.0			14.4	12	12.7	10.1		*	
* 18996.0			14.2	13	12.9	10.0		*	
* 18998.0			14.1	18	13.3	10.3		*	
* 19000.0	21.9	101	14.1	22	13.6	10.4	2	*	
* 19002.0			14.2	24	13.5	10.1		*	
* 19004.0			14.1	23	13.3	10.2		*	
* 19006.0			14.1	19	12.7	10.2		*	
* 19008.0			14.2	17	12.1	10.1		*	
* 19010.0			14.2	18	12.3	10.1		*	
* 19012.0			14.3	16	12.5	10.2		*	
* 19014.0	49.1	321	14.3	17	12.6	10.4	2	*	
* 19016.0			14.4	17	12.8	10.3		*	
* 19018.0			14.5	12	12.9	10.2		*	
* 19020.0			14.3	12	12.7	10.2		*	
* 19022.0			14.3	16	12.3	10.1		*	
* 19024.0			14.2	18	12.3	10.1		*	
* 19026.0			14.2	17	12.3	10.1		*	
* 19028.0			14.2	17	12.3	10.1		*	
* 19030.0			14.2	16	12.3	10.2		*	
* 19032.0			14.2	16	12.1	10.1		*	
* 19034.0			14.2	16	12.1	10.1		*	
* 19036.0			14.2	16	12.1	10.2		*	
* 19038.0			14.3	15	12.2	10.2		*	
* 19040.0			14.2	15	12.0	10.2		*	
* 19042.0			14.2	16	11.8	10.2		*	
*****		*****		*****		*****		*****	

* FORMATION *	* BOREHOLE *						* QUAL. *	* INDEX *	
* DEPTH *	* DIP *	DIP	* DEV. *	DEV.	DIAM	DIAM	* REST *		
		AZI.		AZI.	1-3	2-4	* #4 *		

* 19044.0			14.2	19	11.6	10.3			*
* 19046.0			14.2	20	12.0	10.3			*
* 19048.0			14.2	18	12.2	10.2			*
* 19050.0	62.9	354	14.2	16	12.2	10.2	2		*
* 19052.0			14.2	18	12.1	10.4			*
* 19054.0			14.3	19	12.1	10.4			*
* 19056.0			14.3	17	11.9	10.4			*
* 19058.0			14.2	17	11.7	10.3			*
* 19060.0			14.3	18	11.5	10.2			*
* 19062.0			14.3	17	11.5	10.2			*
* 19064.0			14.4	16	11.5	10.3			*
* 19066.0			14.4	15	11.5	10.3			*
* 19068.0			14.4	14	11.5	10.3			*
* 19070.0			14.3	14	11.5	10.3			*
* 19072.0			14.3	15	11.5	10.3			*
* 19074.0	25.5	206	14.3	16	11.3	10.3	1		*
* 19076.0			14.2	17	11.3	10.3			*
* 19078.0			14.2	16	11.2	10.3			*
* 19080.0	68.2	248	14.2	15	11.2	10.4	1		*
* 19082.0			14.3	13	11.2	10.4			*
* 19084.0			14.3	7	11.2	10.4			*
* 19086.0	19.2	281	14.3	2	11.2	10.4	1		*
* 19088.0			14.3	359	11.2	10.4			*
* 19090.0			14.3	354	11.1	10.4			*
* 19092.0	29.3	192	14.3	348	11.1	10.4	3		*
* 19094.0			14.3	344	11.0	10.4			*
* 19096.0			14.3	348	10.7	10.6			*
* 19098.0			14.3	353	10.6	10.7			*
* 19100.0			14.3	355	10.6	10.8			*
* 19102.0			14.3	357	11.1	10.8			*
* 19104.0	22.4	267	14.3	358	11.0	10.9	1		*
* 19106.0			14.3	358	10.5	11.0			*
* 19108.0			14.3	1	10.4	11.4			*
* 19110.0			14.4	6	10.6	11.5			*
* 19112.0			14.5	7	10.7	11.1			*
* 19114.0			14.5	13	10.7	10.9			*
* 19116.0			14.5	21	11.0	10.8			*
* 19118.0			14.6	23	11.3	11.0			*
* 19120.0			14.5	22	11.5	11.3			*
* 19122.0			14.5	20	11.2	11.5			*
* 19124.0			14.5	16	10.7	11.3			*
* 19126.0			14.7	15	10.4	11.3			*
* 19128.0			14.7	15	10.4	11.4			*
* 19130.0			14.7	15	10.4	11.5			*
* 19132.0			14.6	15	10.4	11.4			*

* FORMATION *					* BOREHOLE		* QUAL. *		

* DEPTH *	* DIP	DIP	* DEV.	DEV.	DIAM	DIAM	* BEST *	* INDEX *	
* * *	* * *	AZI.	* * *	AZI.	1-3	2-4	* =4 *	* * *	

* 19134.0			14.6	16	10.4	11.3			*
* 19136.0			14.7	15	10.3	11.3			*
* 19138.0			14.7	14	10.4	11.3			*
* 19140.0			14.6	12	10.5	11.3			*
* 19142.0			14.5	9	10.4	11.3			*
* 19144.0			14.5	6	10.3	11.2			*
* 19146.0			14.5	5	10.3	11.1			*
* 19148.0	33.0	195	14.5	5	10.2	11.1	1		*
* 19150.0	32.4	194	14.5	4	10.2	11.2	3		*
* 19152.0			14.5	2	10.2	11.2			*
* 19154.0			14.5	360	10.3	11.2			*
* 19156.0			14.5	358	10.3	11.2			*
* 19158.0			14.5	356	10.3	11.3			*
* 19160.0			14.6	355	10.3	11.4			*
* 19162.0	25.4	201	14.6	355	10.3	11.5	1		*
* 19164.0			14.6	355	10.3	11.3			*
* 19166.0			14.6	353	10.3	11.2			*
* 19168.0			14.6	352	10.3	11.1			*
* 19170.0	26.7	184	14.7	356	10.3	11.0	3		*
* 19172.0	28.5	186	14.7	0	10.4	10.9	3		*
* 19174.0			14.7	5	10.5	10.9			*
* 19176.0			14.7	10	10.6	10.8			*
* 19178.0			14.7	14	10.8	10.7			*
* 19180.0	26.7	245	14.6	19	10.7	10.7	4		*
* 19182.0	27.1	246	14.6	23	10.9	10.6	4		*
* 19184.0	27.6	247	14.6	21	11.3	10.6	2		*
* 19186.0	29.5	239	14.6	18	11.6	10.6	2		*
* 19188.0			14.6	19	11.9	10.8			*
* 19190.0			14.6	18	12.4	10.8			*
* 19192.0	25.2	238	14.6	11	11.7	10.8	2		*
* 19194.0	27.3	236	14.6	10	10.6	10.8	2		*
* 19196.0			14.6	16	10.7	10.8			*
* 19198.0			14.6	20	10.8	10.9			*

* FORMATION *	* BOREHOLE *						* QUAL. *

* DEPTH *	* DIP *	DIP	* DEV. *	DEV.	DIAM	DIAM	* BEST *
* * *	* * *	AZI.	* * *	AZI.	1-3	2-4	* #4 *

* 17658.0			12.3	28	11.4	10.3	*
* 17660.0			12.3	30	11.6	10.2	*
* 17662.0			12.4	31	11.8	10.2	*
* 17664.0			12.4	32	11.7	10.3	*
* 17666.0			12.3	32	11.6	10.2	*
* 17668.0			12.3	30	11.7	10.1	*
* 17670.0			12.3	25	11.8	10.2	*
* 17672.0	19.8	171	12.3	20	12.1	10.7	1 *
* 17674.0	26.2	158	12.3	22	12.7	10.7	1 *
* 17676.0			12.3	23	13.1	10.3	*
* 17678.0			12.3	22	13.0	10.2	*
* 17680.0	34.2	172	12.3	25	12.9	10.3	1 *
* 17682.0	23.1	163	12.3	28	12.9	10.7	1 *
* 17684.0	27.7	158	12.3	28	12.6	10.9	1 *
* 17686.0	33.9	45	12.3	24	11.9	10.5	1 *
* 17688.0	33.6	49	12.4	21	11.6	10.3	1 *
* 17690.0			12.4	19	11.5	10.3	*
* 17692.0			12.4	20	11.5	10.4	*
* 17694.0			12.4	21	11.4	10.4	*
* 17696.0			12.4	20	11.4	10.4	*
* 17698.0			12.4	21	11.3	10.3	*
* 17700.0			12.4	22	11.2	10.4	*
* 17702.0			12.4	22	11.2	10.3	*
* 17704.0			12.4	23	11.1	10.3	*
* 17706.0			12.3	24	11.1	10.4	*
* 17708.0			12.3	24	11.0	10.5	*
* 17710.0			12.3	25	11.0	10.4	*
* 17712.0			12.3	26	11.0	10.3	*
* 17714.0			12.3	27	10.9	10.3	*
* 17716.0			12.3	28	10.8	10.3	*
* 17718.0			12.3	27	10.8	10.2	*
* 17720.0			12.3	27	10.8	10.2	*
* 17722.0			12.3	27	10.8	10.2	*
* 17724.0			12.3	27	10.9	10.4	*
* 17726.0			12.3	28	11.0	10.5	*
* 17728.0			12.2	28	11.0	10.4	*
* 17730.0	57.2	215	12.3	27	11.0	10.4	2 *
* 17732.0	31.6	62	12.3	25	10.9	10.4	2 *
* 17734.0			12.3	22	11.0	10.3	*
* 17736.0			12.3	23	10.9	10.1	*
* 17738.0			12.2	27	10.8	10.1	*
* 17740.0			12.2	30	10.8	10.3	*
* 17742.0			12.2	32	10.8	10.4	*
* 17744.0			12.2	33	11.0	10.5	*
* 17746.0			12.3	33	11.0	10.5	*

* FORMATION *		* BOREHOLE *				* QUAL. *	
----- INDEX *							
* DEPTH *	* DIP	* DIP	* DEV.	* DEV.	* DIAM	* DIAM	* BEST *
		* AZI. *		* AZI. *	1-3	2-4	* #4 *

* 17748.0			12.3	31	11.1	10.5	*
* 17750.0			12.2	29	11.1	10.4	*
* 17752.0			12.2	28	11.2	10.2	*
* 17754.0			12.2	27	11.2	10.1	*
* 17756.0			12.2	27	11.3	10.1	*
* 17758.0			12.2	26	11.4	10.1	*
* 17760.0			12.2	26	11.5	10.1	*
* 17762.0			12.2	27	11.5	10.1	*
* 17764.0			12.2	26	11.5	10.2	*
* 17766.0			12.2	25	11.5	10.2	*
* 17768.0			12.3	24	11.5	10.3	*
* 17770.0			12.3	25	11.6	10.3	*
* 17772.0			12.2	29	11.7	10.3	*
* 17774.0			12.3	29	11.6	10.4	*
* 17776.0			12.4	28	11.5	10.4	*
* 17778.0			12.4	27	11.5	10.4	*
* 17780.0			12.3	27	11.5	10.3	*
* 17782.0			12.3	27	11.6	10.3	*
* 17784.0			12.4	26	11.7	10.3	*

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* DEPTH * DIP * DIP * DEV. DEV. DIAM DIAM * BEST *

* * AZI. * AZI. 1-3 2-4 * =4 *

* 17666.0 12.3 31 11.7 10.2 *

* 17670.0 12.3 25 11.9 10.4 *

* 17674.0 12.3 21 12.6 10.5 *

* 17678.0 12.3 24 13.0 10.3 *

* 17682.0 27.0 38 12.3 27 12.7 10.6 1 *

* 17686.0 29.8 42 12.3 25 12.1 10.6 3 *

* 17690.0 31.1 44 12.4 20 11.5 10.4 3 *

* 17694.0 12.4 20 11.4 10.4 *

* 17698.0 12.4 21 11.3 10.4 *

* 17702.0 12.4 22 11.2 10.3 *

* 17706.0 12.3 24 11.1 10.4 *

* 17710.0 12.3 25 11.0 10.4 *

* 17714.0 12.3 27 10.9 10.3 *

* 17718.0 12.3 27 10.8 10.2 *

* 17722.0 12.3 27 10.9 10.3 *

* 17726.0 12.3 28 11.0 10.4 *

* 17730.0 12.3 26 11.0 10.4 *

* 17734.0 12.3 24 10.9 10.2 *

* 17738.0 12.3 26 10.9 10.2 *

* 17742.0 12.2 31 10.9 10.4 *

* 17746.0 12.2 32 11.0 10.5 *

* 17750.0 12.2 30 11.1 10.3 *

* 17754.0 12.2 27 11.2 10.2 *

* 17758.0 12.2 27 11.4 10.1 *

* 17762.0 12.2 26 11.5 10.1 *

* 17766.0 12.2 25 11.5 10.2 *

* 17770.0 12.2 26 11.6 10.3 *

* 17774.0 12.3 29 11.6 10.4 *

* 17778.0 12.3 27 11.5 10.4 *

* 17782.0 12.4 27 11.6 10.3 *
