

Copy filed in a subdual with Pub C-3(c) 8/25/71
9-30-71 Received Revised Notice, now
referred to as Federal 793-1 rather
than Bull Canyon Inv.

Confidential Released 8-1-72 SQ

FILE NOTATIONS

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

Checked by Chief *JWB*
Approval Letter 8-25-71
Disapproval Letter

COMPLETION DATA:

Date Well Completed 12-18-71
W..... WW..... TA.....
GW..... OS..... PA.....

Location Inspected
Bond released
State or Fee Land

LOGS FILED

Driller's Log.....
Electric Logs (No.)
E..... I..... Dual I Lat..... GR-N..... Micro.....
PHC Sonic GR..... Lat..... MI-L..... Sonic.....
CBLog..... CCLog..... Others.....

W. DON QUIGLEYCONSULTING GEOLOGIST
PETROLEUM - MINING WORK~~323 N. W. 10th St.~~ - SALT LAKE CITY, UTAH 84111

Suite 300, 65 South Main

August 24, 1971

Re: Bull Canyon #1 Well

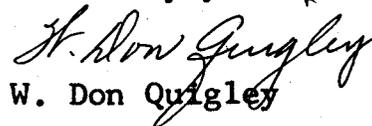
Oil & Gas Division
U.S. Geological Survey
Federal Bldg.
Salt Lake City, UtahDept. of Natural Resources
Oil and Gas Conservation Division
1588 West N. Temple
Salt Lake City, Utah

Dear Sirs:

The enclosed application for a permit to drill a well, the Bull Canyon #1, in Section 29, T.19 S., R.21 E., S.L.M., Grand County Utah is requesting a location which is less than the required distance from a sub-division line. The topography of the area is extremely rough and suitable locations for well sites are difficult to find. A copy of a portion of the topographic map of the area is attached. This shows the rugged nature of the location area.

It is therefore requested that an exception be granted to the ruling controlling the distance of a well site from a sub-division line due to topographic reasons. The Anschutz Corporation, Inc. controls all the lands within 1½ miles of the drill site thru a farm-out agreement with Champlin Petroleum Company.

Sincerely yours,


W. Don Quigley

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
The Anschutz Corporation, Inc.

3. ADDRESS OF OPERATOR
1100 Denver Club Bldg., Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface **NW. SE. Sec. 29, T.19 S., R.21 E., S.L.M.**
 At proposed prod. zone **2160' from E-line & 1487' from S-line**

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
About 12 miles northeast of Thompson, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) **1 1/2 miles**

16. NO. OF ACRES IN LEASE **600 acres**

17. NO. OF ACRES ASSIGNED TO THIS WELL **480 acres**

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

19. PROPOSED DEPTH **5000 feet**

20. ROTARY OR CABLE TOOLS **Rotary tools**

21. ELEVATIONS (Show whether DF, RT, GR, etc.) **6420' - grd.**

22. APPROX. DATE WORK WILL START* **Sept. 1, 1971**

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
10 1/4"	9 5/8"	26.5#	150'	50 sks
xx 13 3/4"	10 3/4"	40.50#	150'	60 sks
9 3/4"	8 5/8"	24.00#	800'	100 sks

It is planned to drill a well at the above location to test the gas potential of the Dakota, Cedar Mountain, & Morrison formations. It is anticipated that top of the Dakota will be encountered around 4620' and the Morrison at about 4710'. The well will be drilled about 300' into the Morrison unless commercial production is obtained at a lesser depth. The well will be drilled using air as a circulating medium. If a flow of water is encountered in the Castlegate member of the Mesaverde, an intermediate string of casing will be set and cemented to shut-off the water. If production is obtained 5 1/2" casing will be set and cemented. A blowout preventor and rotating head will be used at all times to insure control of the well and to prevent blowouts.

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 location and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED H. Row Gungley TITLE Consulting Geologist DATE August 23, 1971

(This space for Federal or State office use) APPROVAL DATE

APPROVED BY _____ TITLE _____

CONDITIONS OF APPROVAL, IF ANY:

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
The Anschutz Corporation, Inc.

3. ADDRESS OF OPERATOR
1100 Denver Club Bldg., Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface **NW. SE. Sec. 29, T.19 S., R.21 E., S.L.M.**
 At proposed prod. zone **2160' from E-line & 1487' from S-line**
W. NW. SE

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
About 12 miles northeast of Thompson, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
1 1/2 miles

16. NO. OF ACRES IN LEASE
600 acres

17. NO. OF ACRES ASSIGNED TO THIS WELL
480 acres

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
5000 feet

19. PROPOSED DEPTH
5000 feet

20. ROTARY OR CABLE TOOLS
Rotary tools

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
6420' - grd.

22. APPROX. DATE WORK WILL START*
Sept. 1, 1971

5. LEASE DESIGNATION AND SERIAL NO.
U-0149773

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Gov't

9. WELL NO.
Bull Canyon #1

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLM. AND SURVEY OR AREA
NW. SE. Sec. 29-19S-21E., S.L.M.

12. COUNTY OR PARISH
Grand

13. STATE
Utah

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 1/2"	26.00#	150'	50 sks
xx 13 3/4"	10 3/4"	40.50#	150'	60 sks
9 3/4"	8 5/8"	24.00#	800'	100 sks

It is planned to drill a well at the above location to test the gas potential of the Dakota, Cedar Mountain, & Morrison formations. It is anticipated that top of the Dakota will be encountered around 4620' and the Morrison at about 4710'. The well will be drilled about 300' into the Morrison unless commercial production is obtained at a lesser depth. The well will be drilled using air as a circulating medium. If a flow of water is encountered in the Castlegate member of the Mesaverde, an intermediate string of casing will be set and cemented to shut-off the water. If production is obtained 5 1/2" casing will be set and cemented. A blowout preventor and rotating head will be used at all times to insure control of the well and to prevent blowouts.

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 H. Don Gingley TITLE Consulting Geologist DATE August 23, 1971

(This space for Federal or State office use)

PERMIT NO. U-0149773 APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

FORM OGC-8-X

FILE IN QUADRUPLICATE

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

REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & Number Anschutz # 1 Fed. 773 Bldg., Denver, Colo.
Operator Anschutz Corporation Address 1110 Denver Club Phone 266-2367
Contractor Willard Pease Drlg. Co. Address Grand Junc., Colo. Phone 242 6912
Location NW 1/4 SE 1/4 Sec. 29 T. 19S R. 21 E Grand County, Utah

Water Sands:

<u>Depth</u>		<u>Volume</u>	<u>Quality</u>
From	To	Flow Rate or Head	Fresh or Salty
1. <u>4300-</u>	<u>4315'</u>	<u>Swabbed 2 bbl/hr.</u>	<u>Salty (26,000 ppm chlorides)</u>
2. <u>4420-</u>	<u>4440'</u>	<u>500' of water in 1 hr.</u>	<u>Salty (11,000 ppm chlorides)</u>
3. <u>4730-</u>	<u>4750'</u>	<u>500' on DST. of water in 1 hr.</u>	<u>Sl. salty (2000 ppm Chlorides)</u>
4.		<u>on DST.</u>	
5.			

(Continue on reverse side if necessary)

Formation Tops:

Mesaverde ---Surface	Dakota-----4076'
Mancos (Buck Tongue) -- 300'	Morrison --- 4166'
Castlegate Sd.-----504'	Summerville ---4690'
Mancos -----536'	Entrada -- 4738'

Remarks:

This well was completed as an oil well in the Entrada form.

NOTE:

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

H. Nowling

August 25, 1971

The Anschutz Corporation, Inc.
1100 Denver Club Bldg.
Denver, Colorado 80202

Re: Bull Canyon Gov't. #1
Sec. 29, T. 19 S, R. 21 E,
Grand County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above mentioned well is hereby granted in accordance with Rule C-3(c), 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:

PAUL W. BURCHELL-Chief Petroleum Engineer
HOME: 277-2890
OFFICE: 328-5771

This approval terminates within 90 days if the above well has not been spudded-in within said period.

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 43-019-30073.

Very truly yours,

DIVISION OF OIL & GAS CONSERVATION

CLEON B. FEIGHT
DIRECTOR

CBF:sd
cc: U.S. Geological Survey

Branch of Oil and Gas Operations
8416 Federal Building
Salt Lake City, Utah 84111

August 26, 1971

The Anschutz Corporation, Inc.
1100 Denver Club Building
Denver, Colorado 80202

Re: Well No. 1 Bull Canyon
2160' FEL & 1487' FSL (NW¼SE¼)
Sec. 19, T. 19 S., R. 21 E., SLM
Grand County, Utah
Lease Utah 0149773

Gentlemen:

We received your Application for Permit to Drill the referenced well dated August 23, 1971, signed by W. Don Quigley, Consulting Geologist.

Since the location will be less than 200 feet from the boundary of a legal subdivision, we will need three copies of a stipulation similar to the attached sample which has been executed by Champlin Petroleum Company.

Our records show Champlin Petroleum Company is lessee of record of the referenced lease and that drilling will be conducted under Champlin's bond. Therefore, we will need a Designation of Operator in favor of The Anschutz Corporation by Champlin. A supply of forms is enclosed. Please send an original and two copies. The designation should be for at least the eighty acres described in the stipulation.

This office has no objection to a well at this location and also has no objection if you wish to start road and location construction. However, before you move any dirt, contact the District Manager, Bureau of Land Management, 284 South 1st West, Monticello, Utah, 84535 for his approval.

When we receive the material, your Application for Permit to Drill will be approved.

Sincerely yours,

Gerald R. Daniels,
District Engineer

cc: State of Utah, Div. O&G ✓



1110 DENVER CLUB BUILDING
518 SEVENTEENTH STREET
DENVER, COLORADO 80202
TELEPHONE 266-2367

September 28, 1971

Re: Lease U-0149773
Anschutz #1 Federal-773
NW SE Sec.29-19S-21E
Grand County, Utah

Mr. Gerald R. Daniels
Branch of Oil & Gas Operations
U.S. Geological Survey
8416 Federal Building
Salt Lake City, Utah

Dear Mr. Daniels:

Transmitted herewith in triplicate is the APPLICATION FOR PERMIT TO DRILL (Form 9-331C) for the captioned well.

This application is a replacement for an application for the Anschutz #1 Bull Canyon-Government filed by W. Don Quigley under date of August 23, 1971. We request that the Survey plats then submitted by Mr. Quigley be attached to this application.

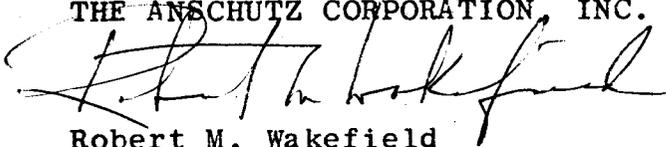
Attached in triplicate is the DESIGNATION OF OPERATOR in favor of Anschutz executed by Champlin Petroleum Company, Lessee of record.

Also attached is a Stipulation executed by Champlin requesting a location other than a center location for topographic reasons and Champlin's agreement not to make separate assignments of the two 40-acre tracts involved.

We would like to release this well to the contractor on or about October 1, and we shall appreciate your advising by telephone collection as soon as this application is approved.

Yours very truly,

THE ANSCHUTZ CORPORATION, INC.


Robert M. Wakefield
Geologist

cc: Mr. Cleon B. Feight ✓
Division of Oil & Gas Conservation
1588 West North Temple
Salt Lake City, Utah 84116

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
THE ANSCHUTZ CORPORATION, INC.

3. ADDRESS OF OPERATOR
1110 Denver Club Building, Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface **SW 1/4 NW 1/4 SE 1/4 Sec. 29** **1487' SSL**
2160' SEL
 At proposed prod. zone *SW NE SE*

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
Twelve miles northeast of Thompson, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
1487'

16. NO. OF ACRES IN LEASE
640

17. NO. OF ACRES ASSIGNED TO THIS WELL

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

19. PROPOSED DEPTH
5400'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
6420' GL

22. APPROX. DATE WORK WILL START*
October 1, 1971

5. LEASE DESIGNATION AND SERIAL NO.
Federal U-0149773

6. IS INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Federal-773

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., S., M., OR BLM. AND SURVEY OR AREA
29-19S-21E

12. COUNTY OR PARISH
Grand

13. STATE
Utah

22. APPROX. DATE WORK WILL START*
October 1, 1971

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8"	24	500'	150 sacks
7-7/8"	4-1/2"	9.5	5400'	200 sacks

We propose to drill this well to an approximate total depth of 5400' into the Entrada sand. Surface casing will be set into the top of the Mancos Shale. Hole will be drilled with air. If necessary to drill with mud, mud will be treated to maintain such weight, viscosity, and water loss as needed to control well and permit logging and testing. BOP and rotating head will be used to control well and prevent blowouts. Electric logs will be run to total depth. If production is encountered, casing will be set through the pay section and selectively perforated. Fracing or acidizing may be necessary to stimulate production. Principal objective formations are the Dakota, Cedar Mountain and Morrison.

Survey plats have been submitted previously.
 Designation of operator from Champlin Petroleum Co. is 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. *R. M. Wakefield*
 SIGNED R. M. Wakefield TITLE Geologist DATE Sept. 14, 1971
 (This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____
 APPROVED BY _____ TITLE _____
 CONDITIONS OF APPROVAL, IF ANY:

*Corrected
 Wakefield
 9-30-71*

SEC. 32

SURVEY LINE

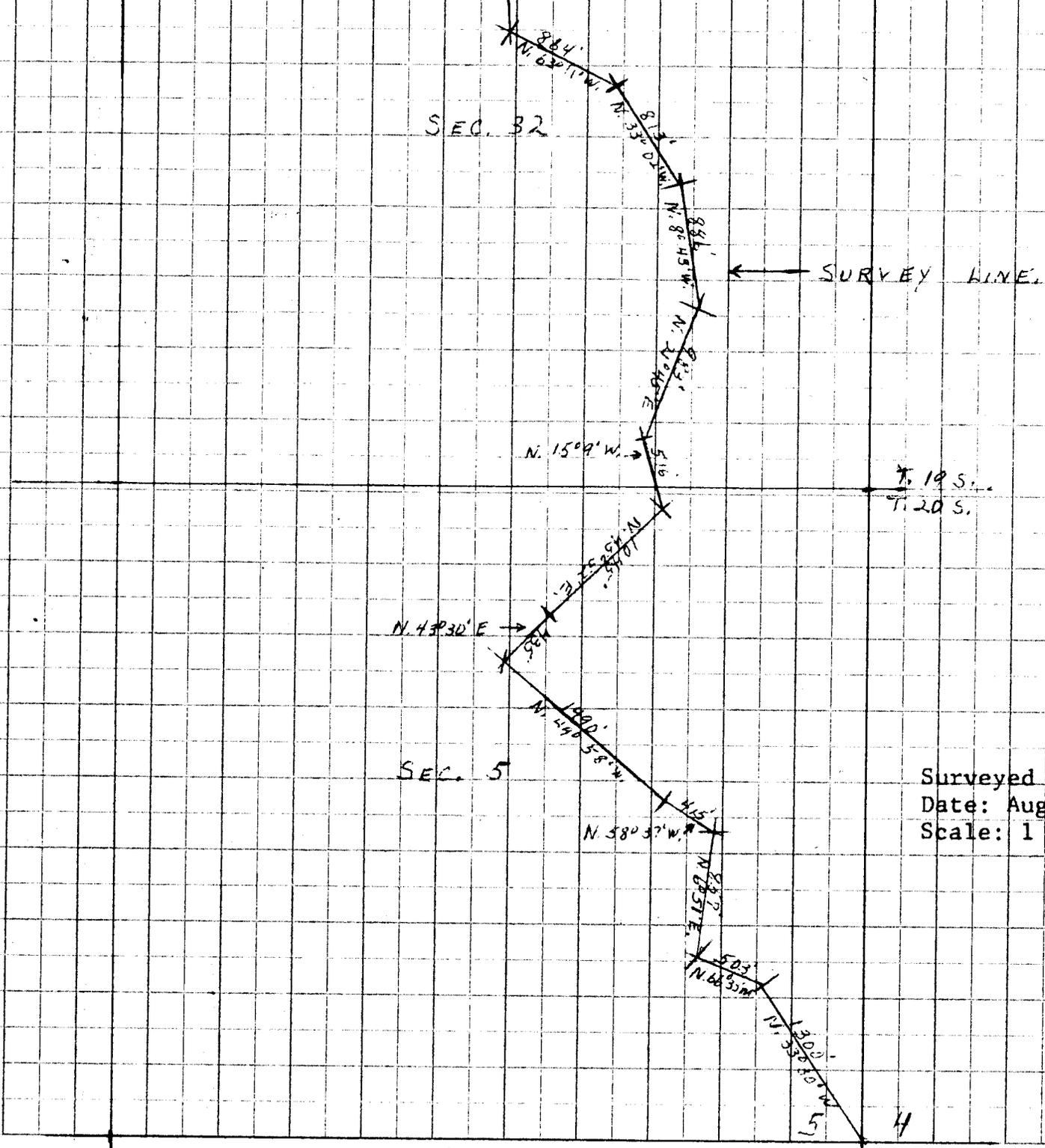
N. 43° 30' E

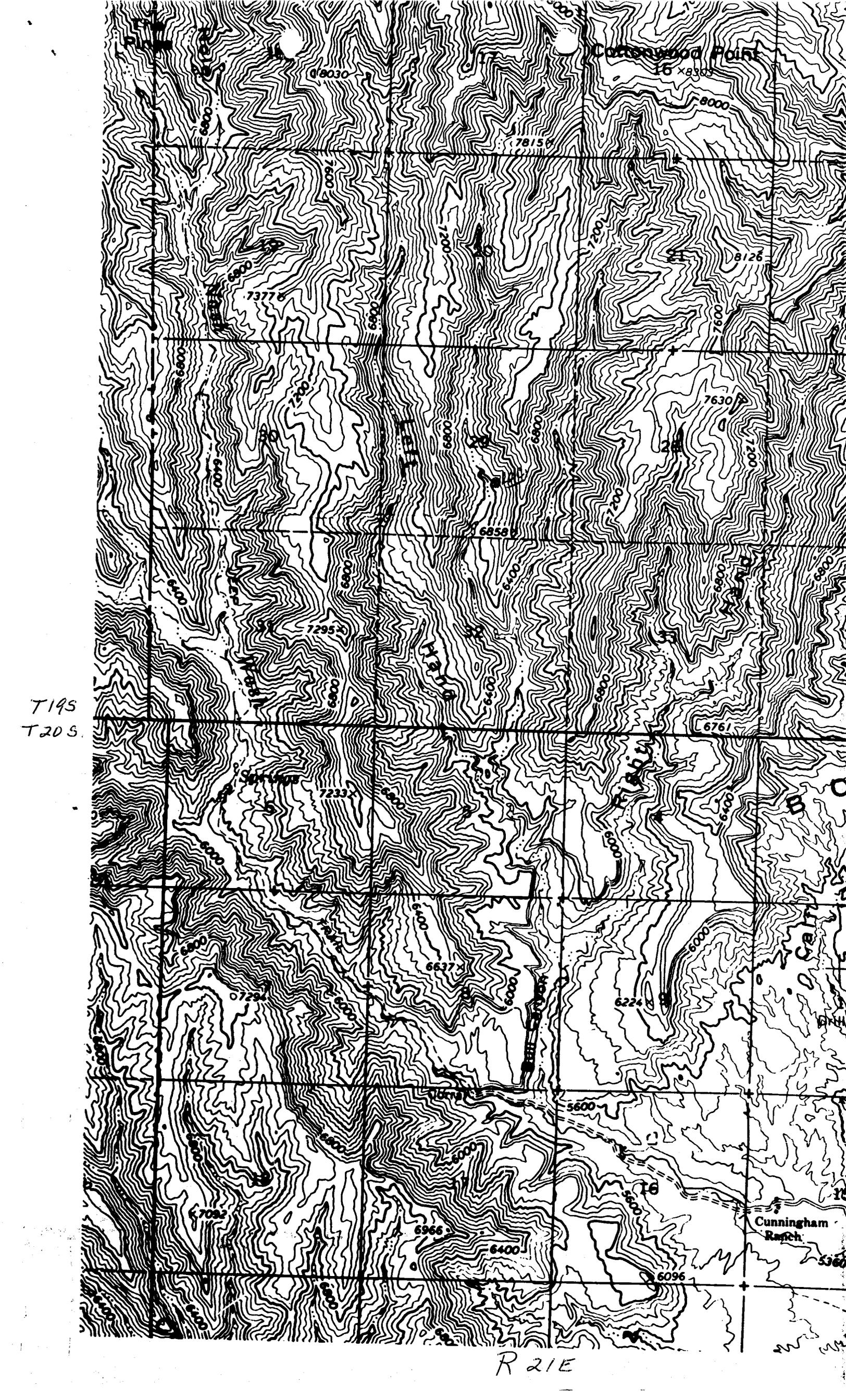
SEC. 5

Surveyed by: W. Don Quigley
Date: Aug. 21, 1971
Scale: 1 in. equals 1000 ft.

R. 21 E.

5
8
9





Cottonwood Point

16 x 8305

8030

8000

7815

8126

7377

7630

6858

7295

6761

7233

B C

T195
T20 S

B C

B C

B C

B C

B C

Cunningham Ranch

R 21 E



1110 DENVER CLUB BUILDING
518 SEVENTEENTH STREET
DENVER, COLORADO 80202
TELEPHONE 266-2367

November 30, 1970

DEC 5 1970

Re: Anschutz #1 Federal-773
NW SE Sec.29-19S-21E
Grand County, Utah

Mr. Gerald R. Daniels
U.S. Geological Survey
8416 Federal Building
Salt Lake City, Utah 84111

Mr. Cleon B. Feight
Oil & Gas Conservation Division
1588 West North Temple
Salt Lake City, Utah 84116

Gentlemen:

Commencing shortly you will be receiving various information items on the captioned well such as the DST reports, Electric logs and other reports.

We respectfully request that the information contained therein be held confidential as long as applicable regulations permit.

Yours very truly,

THE ANSCHUTZ CORPORATION, INC.

Robert M. Wakefield
Geologist

/j

JOHNSTON
Schlumberger

technical
report



PRESSURE LOG*

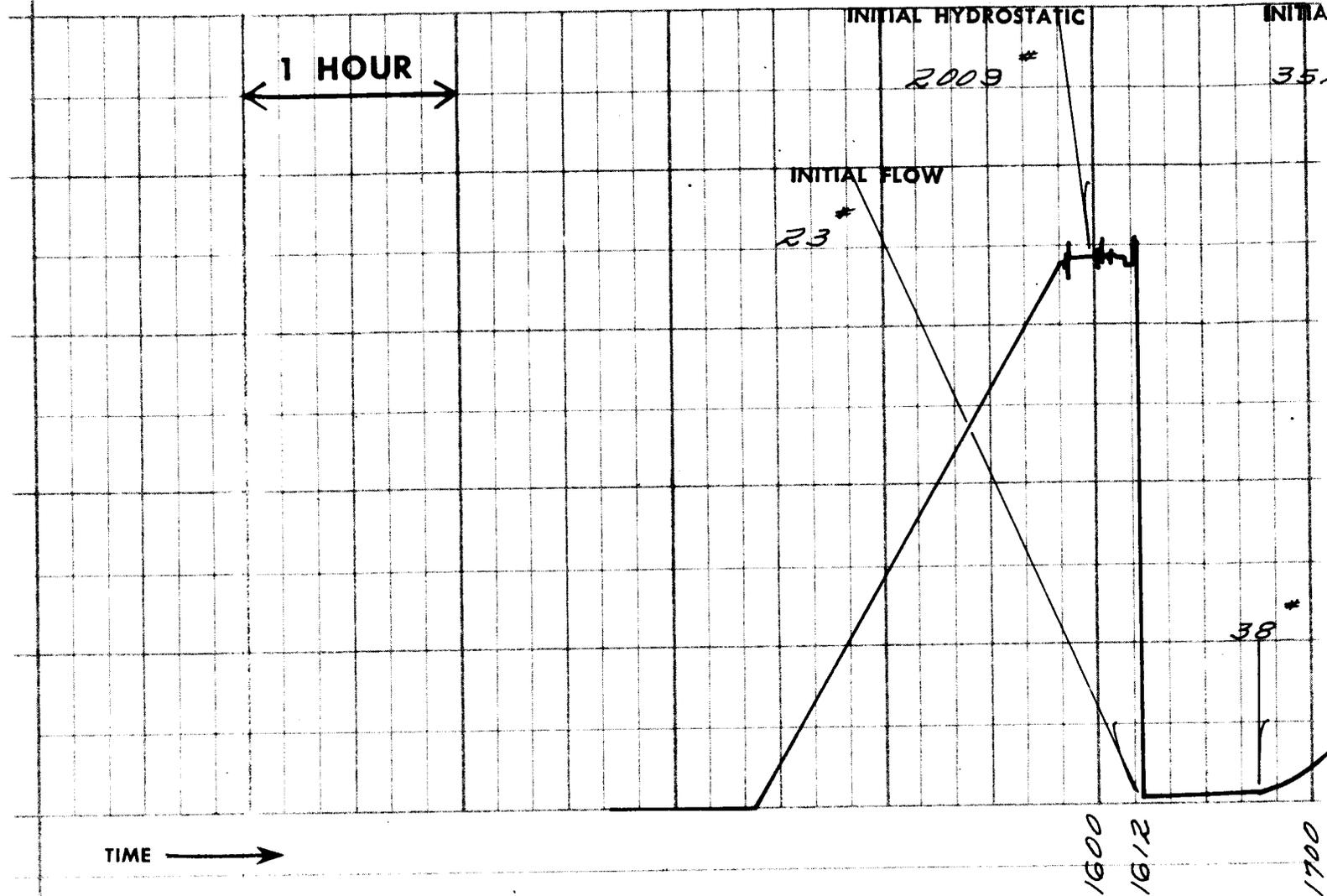
Field Report No. 16135B

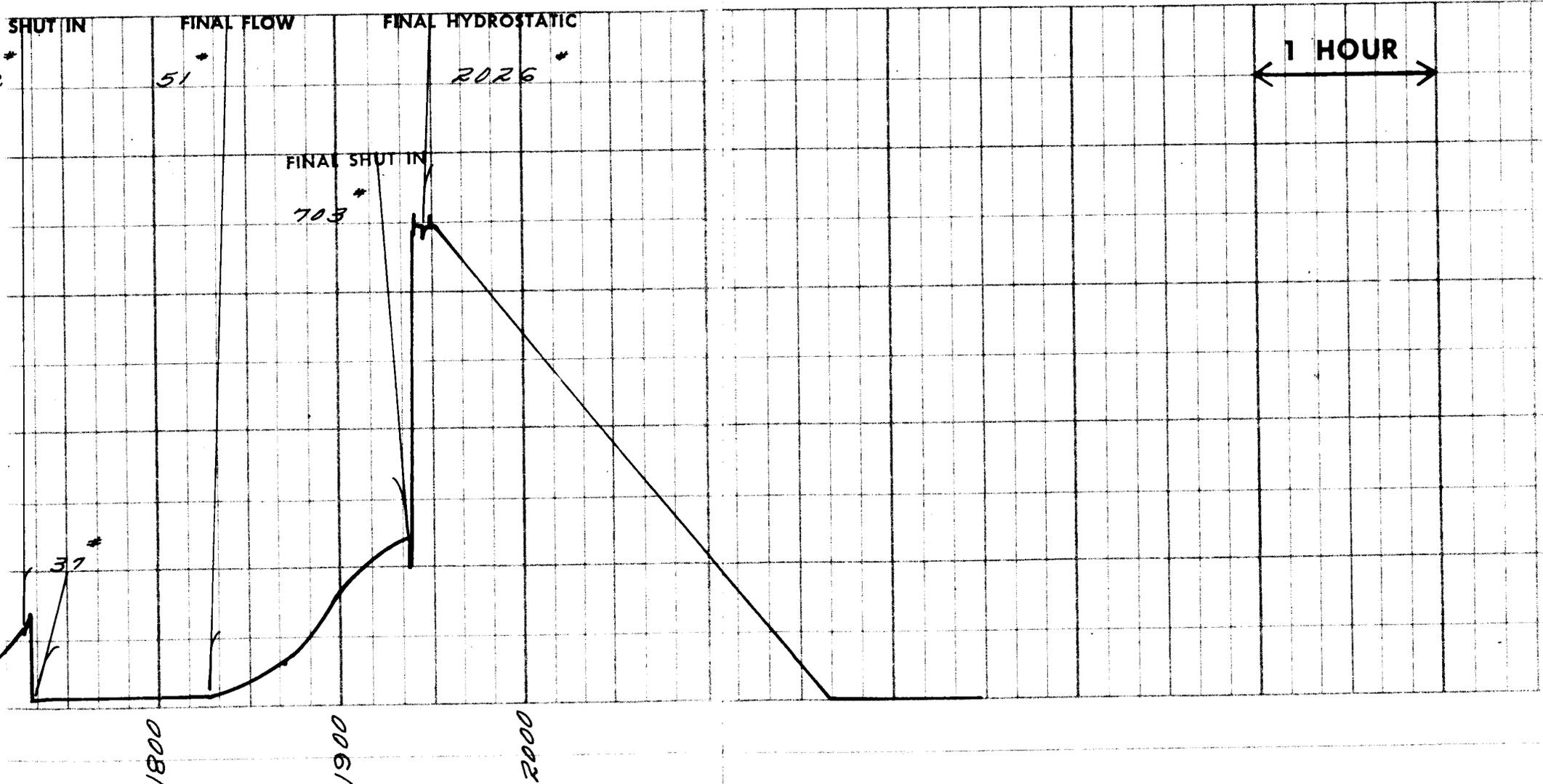
Instrument:
Number T-250

Capacity 3000 p.s.i.

Depth 4072 ft.

*a continuous tracing of the original chart







P.O. BOX 36369 • HOUSTON, TEXAS

CONFIRMATION OF TECHNICAL REPORT DISTRIBUTION

CUSTOMER THE ANSCHUTZ CORPORATION, INC. FIELD REPORT NO. 16135 B DATE 11-10-71
COMPANY SAME AS ABOVE LEASE FEDERAL WELL NO. 1-733
COUNTY GRAND STATE UTAH FIELD WILD CAT

JOHNSTON TESTERS HAS BEEN REQUESTED TO FURNISH THE FOLLOWING COMPANIES WITH TECHNICAL REPORTS. THIS DISTRIBUTION OF TECHNICAL REPORTS WILL BE USED FOR: [X] ALL TESTS ON THIS WELL, UNLESS OTHERWISE NOTIFIED. [] THIS ONE TEST ONLY,

3 TECHNICAL REPORT (S)
THE ANSCHUTZ CORPORATION, INC.
1110 DENVER CLUB BUILDING
DENVER, COLORADO 80202
ATTN: MR. R. M. WAKEFIELD

TECHNICAL REPORT (S)

2 TECHNICAL REPORT (S)
CHAMPLIN PETROLEUM COMPANY
P. O. BOX 1257
ENGLEWOOD, COLORADO 80110
ATTN: MR. K. N. HOULETTE

TECHNICAL REPORT (S)

3 TECHNICAL REPORT (S)
U.S. GEOLOGICAL SURVEY
8416 FEDERAL BUILDING
SALT LAKE CITY, UTAH 84111

TECHNICAL REPORT (S)

1 TECHNICAL REPORT (S)
STATE OIL AND GAS OFFICE
1588 W. N. TEMPLE
SALT LAKE CITY, UTAH 84116

TECHNICAL REPORT (S)

1 TECHNICAL REPORT (S)
MR. W. DON QUIGLEY
803 PHILLIPS PETROLEUM BUILDING
SALT LAKE CITY, UTAH 84101

TECHNICAL REPORT (S)

It is our pleasure to be of service.

JOHNSTON

2113

COMPANY THE ANSCHUTZ CORPORATION WELL ANSCHUTZ FEDERAL #1-733 TEST NO. 2 COUNTY GRAND STATE UTAH INC.

JOHNSTON
Schlumberger

**technical
report**



PRESSURE LOG*

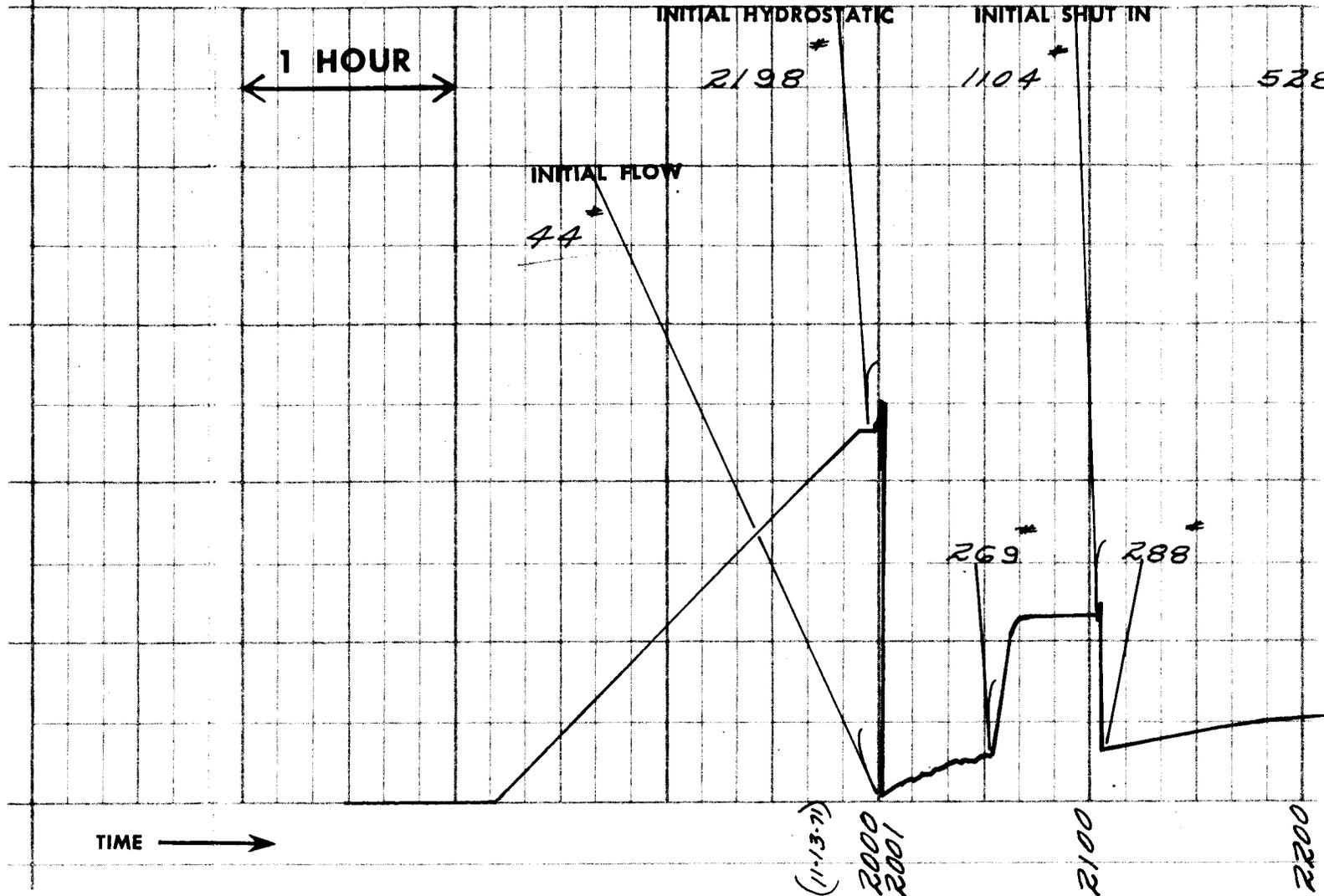
Field Report No. 18560B

Instrument:
Number J-040

Capacity 4700 p.s.i.

Depth 4379 ft.

*a continuous tracing of the original chart



FINAL FLOW

FINAL HYDROSTATIC

2208 *

FINAL SHUT IN

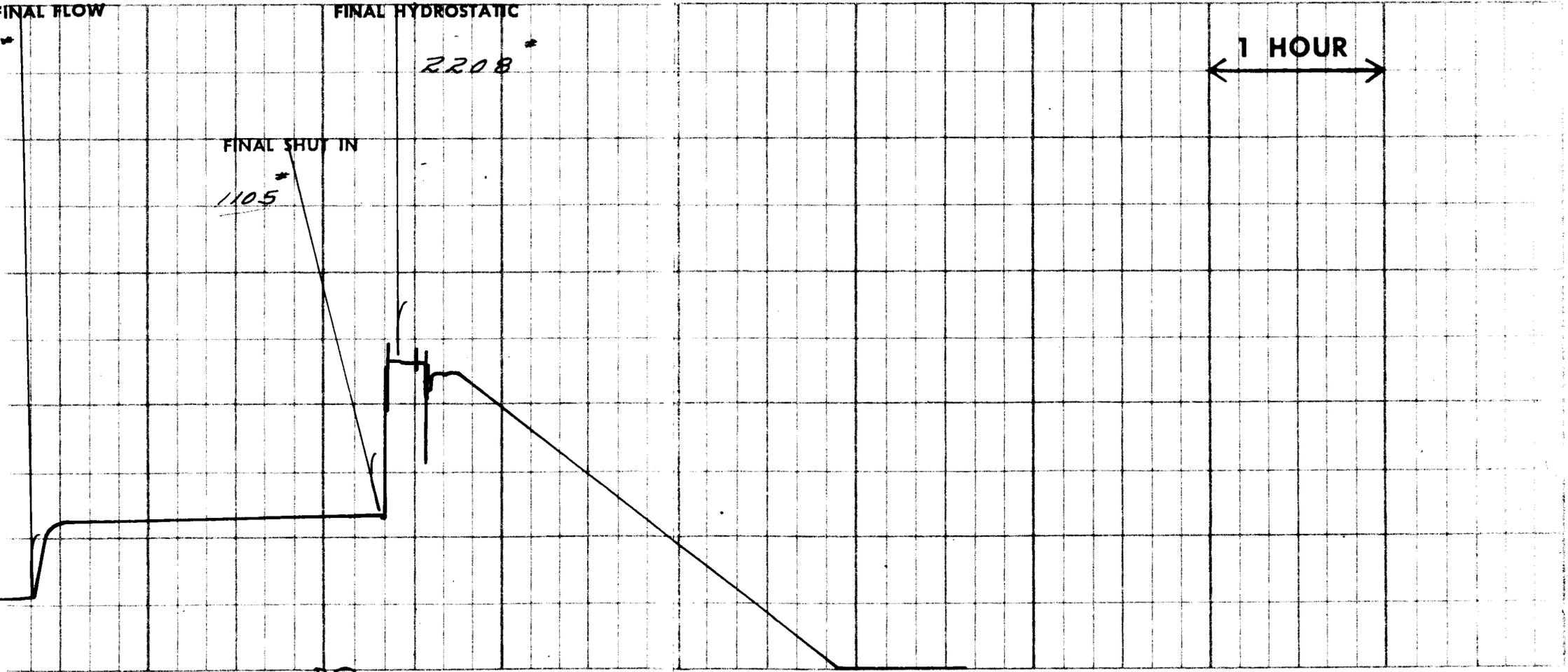
1105 *

1 HOUR

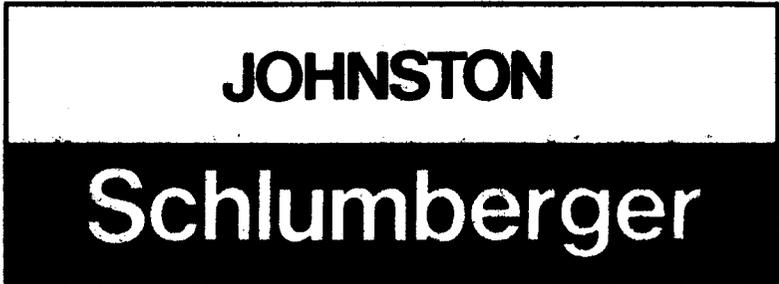
2300

2400
(11-14-77)

0100



COMPANY THE ANSCHUTZ CORPORATION, INC. WELL ANSCHUTZ FEDERAL #1-733 TEST NO. 3 COUNTY GRAND STATE UTAH



technical report



PRESSURE LOG*

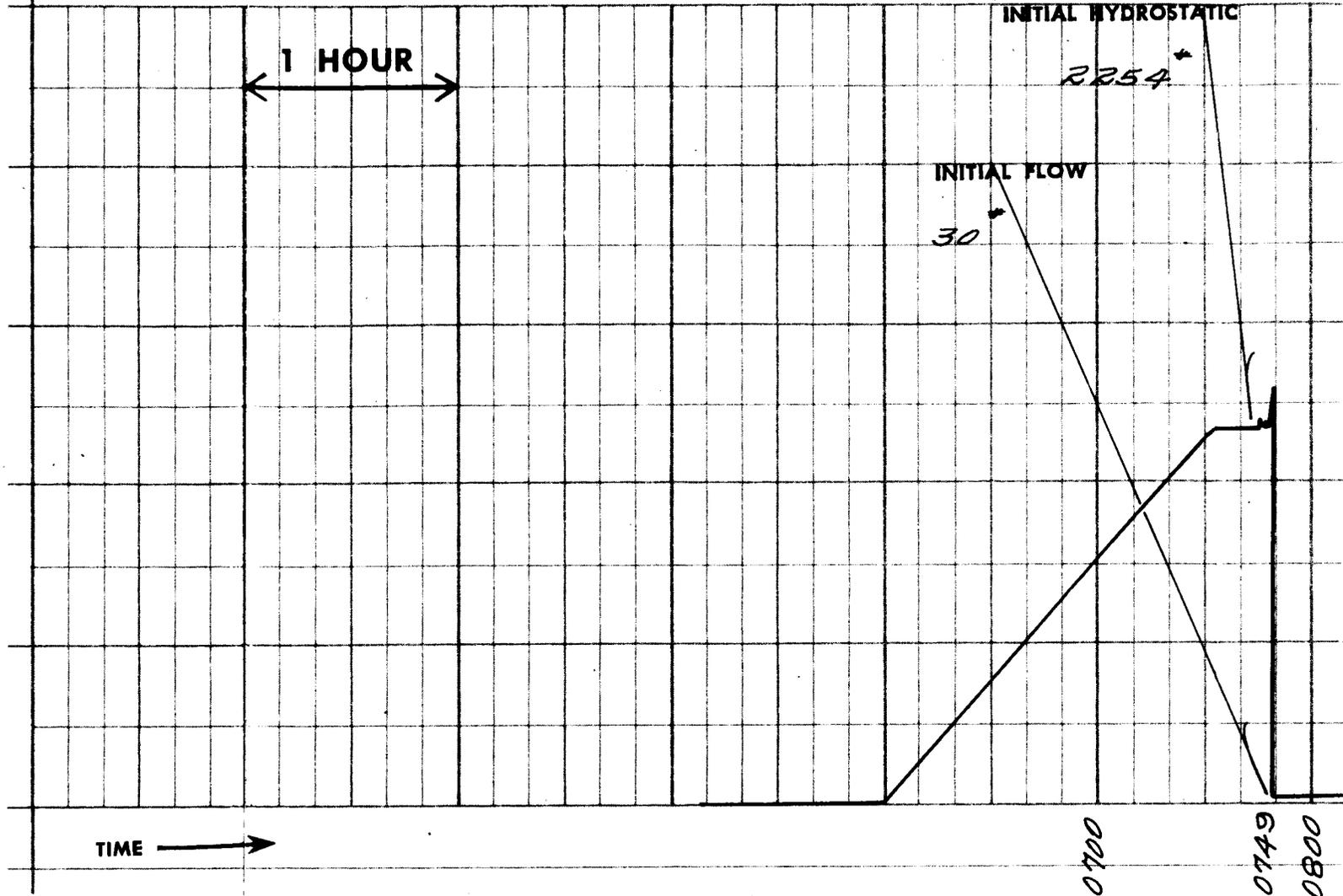
Field Report No. 18550B

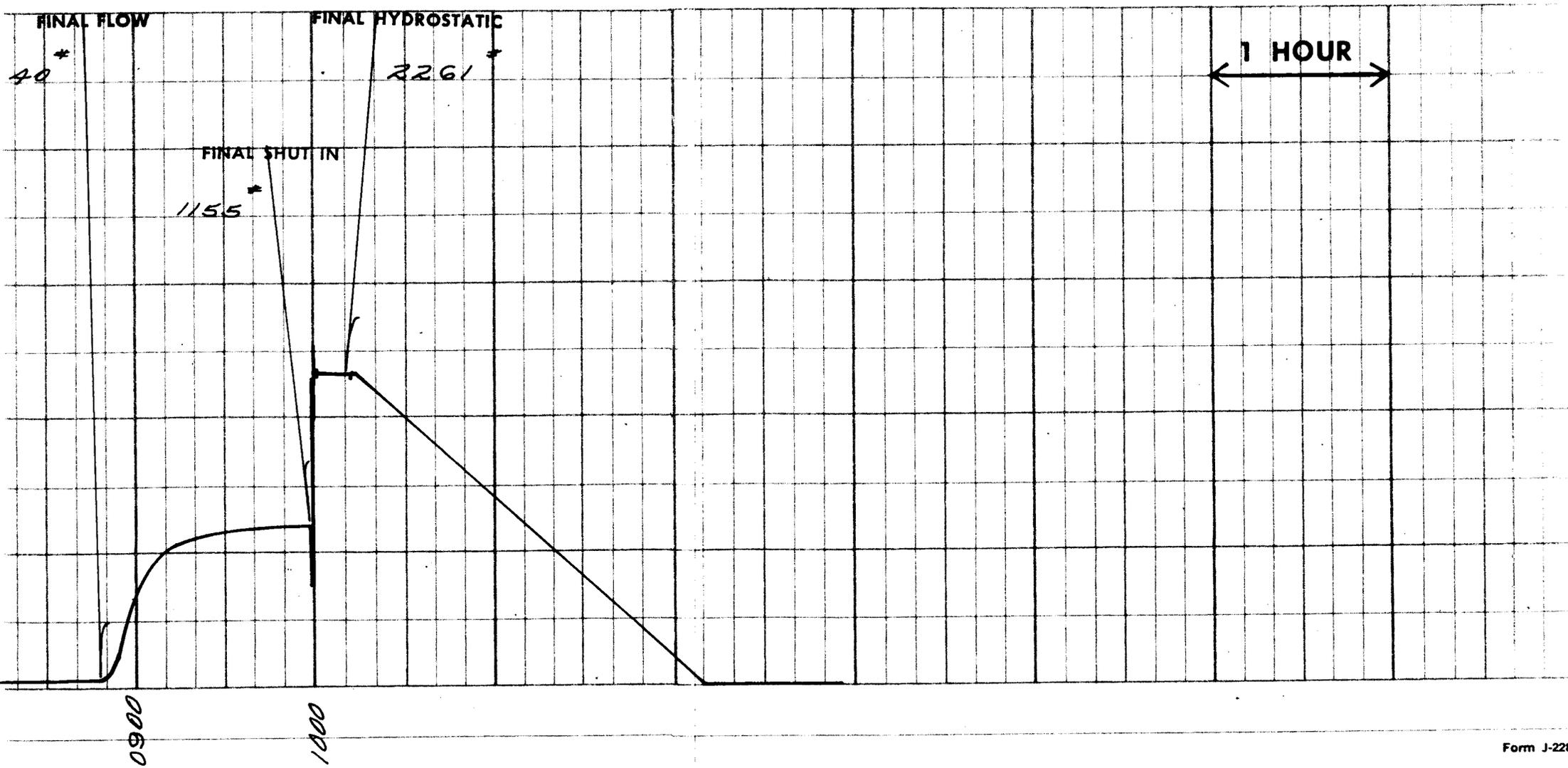
Instrument:
Number J-013

Capacity 4700 p.s.i.

Depth 4475 ft.

*a continuous tracing of the original chart







**technical
report**



PRESSURE LOG*

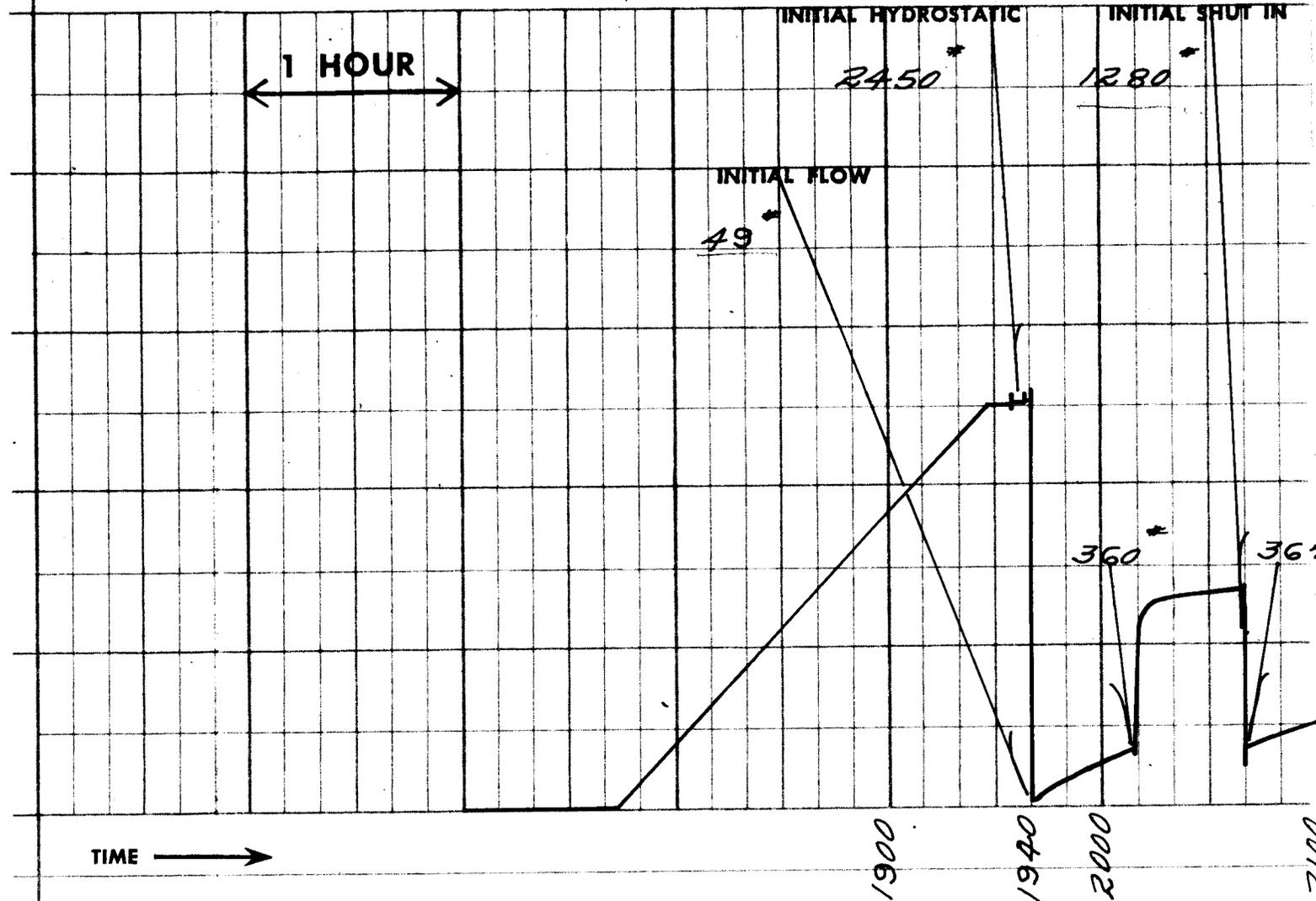
Field Report No. 20901B

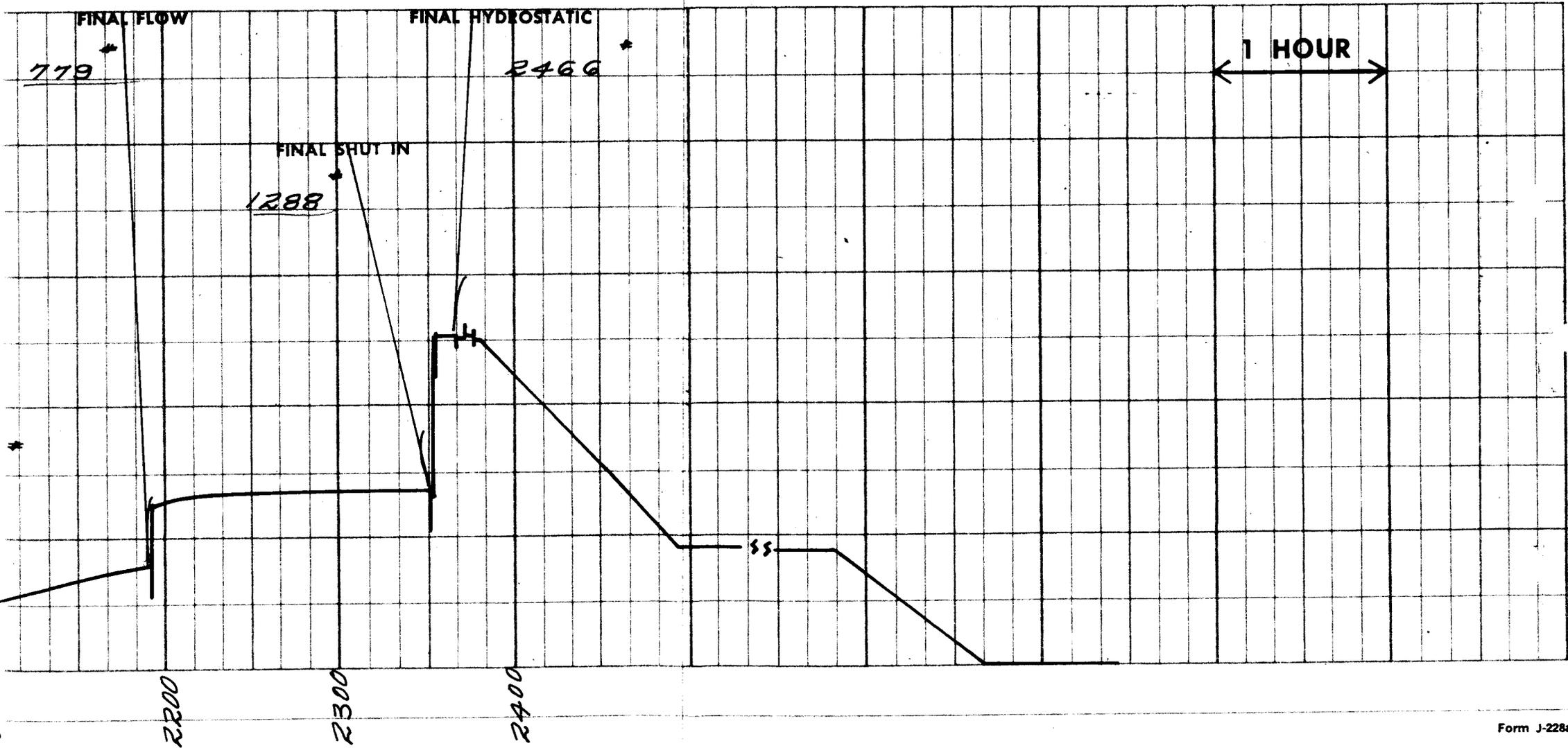
Instrument:
Number J-013

Capacity 4700 p.s.i.

Depth 4748 ft.

*a continuous tracing of the original chart





PRESSURE DATA

Instrument No.	J-013			Field Report No. <u>20901 B</u>
Capacity (P.S.I.G.)	4700			
Instrument Depth	4748'			
Instrument Opening	OUTSIDE			
Pressure Gradient P.S.I./Ft.				
Well Temperature °F.	176			
				TIME DATA
Initial Hydrostatic Mud	A	2450		Time Given Time Computed
Initial Shut-in	B	* 1280		30 Mins. 30 Mins.
Initial Flow	C	49		30 Mins. 29 Mins.
	C-1	360		- Mins. - Mins.
	C-2	367		- Mins. - Mins.
Final Flow	D	779		75 Mins. 75 Mins.
Final Shut-in	E	* 1288		97 Mins. 96 Mins.
Final Hydrostatic Mud	F	2466		

Remarks:

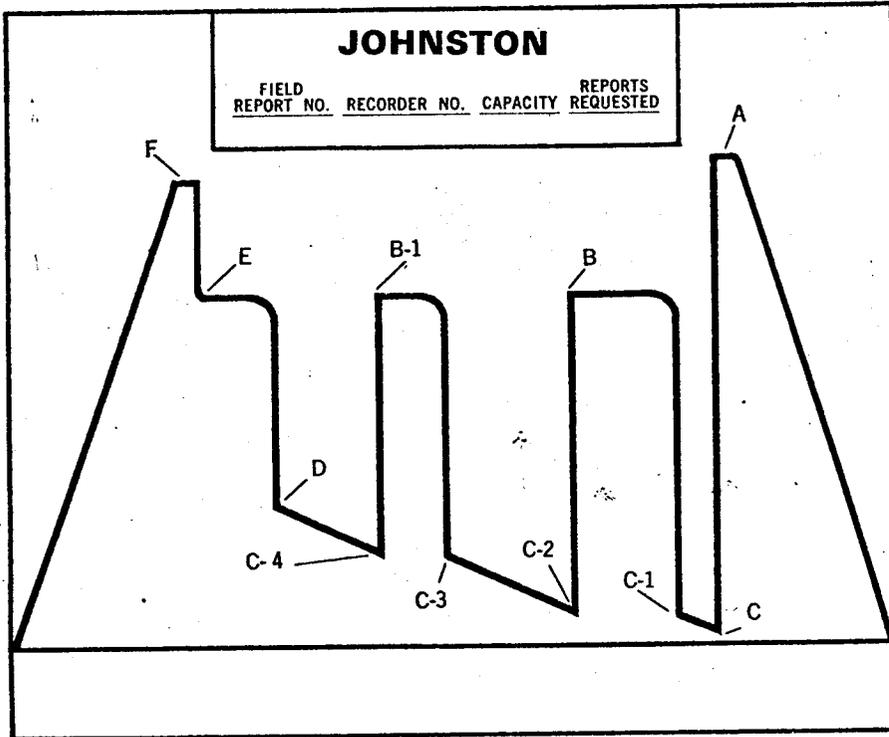
* Shut in pressure did not reach static reservoir pressure.

Clock Travel 0.02085 inches per min.

PRESSURE INCREMENTS

INITIAL SHUT-IN			FINAL SHUT-IN					
Point Minutes	Pressure	$\frac{T + \Delta t}{\Delta t}$	Point Minutes	Pressure	$\frac{T + \Delta t}{\Delta t}$	Point Minutes	Pressure	$\frac{T + \Delta t}{\Delta t}$
C-1	0	360				D	0	779
	3	1195					5	1240
	6	1235					10	1253
	9	1249					15	1260
	12	1259					20	1265
	15	1265					25	1268
	18	1270					30	1271
	21	1273					35	1273
	24	1276					40	1276
	27	1278					45	1278
B	30	1280					50	1280
							55	1281
							60	1283
							65	1283
							70	1283
							75	1284
							80	1284
							85	1286
							90	1286
							95	1288
						E	96	1288

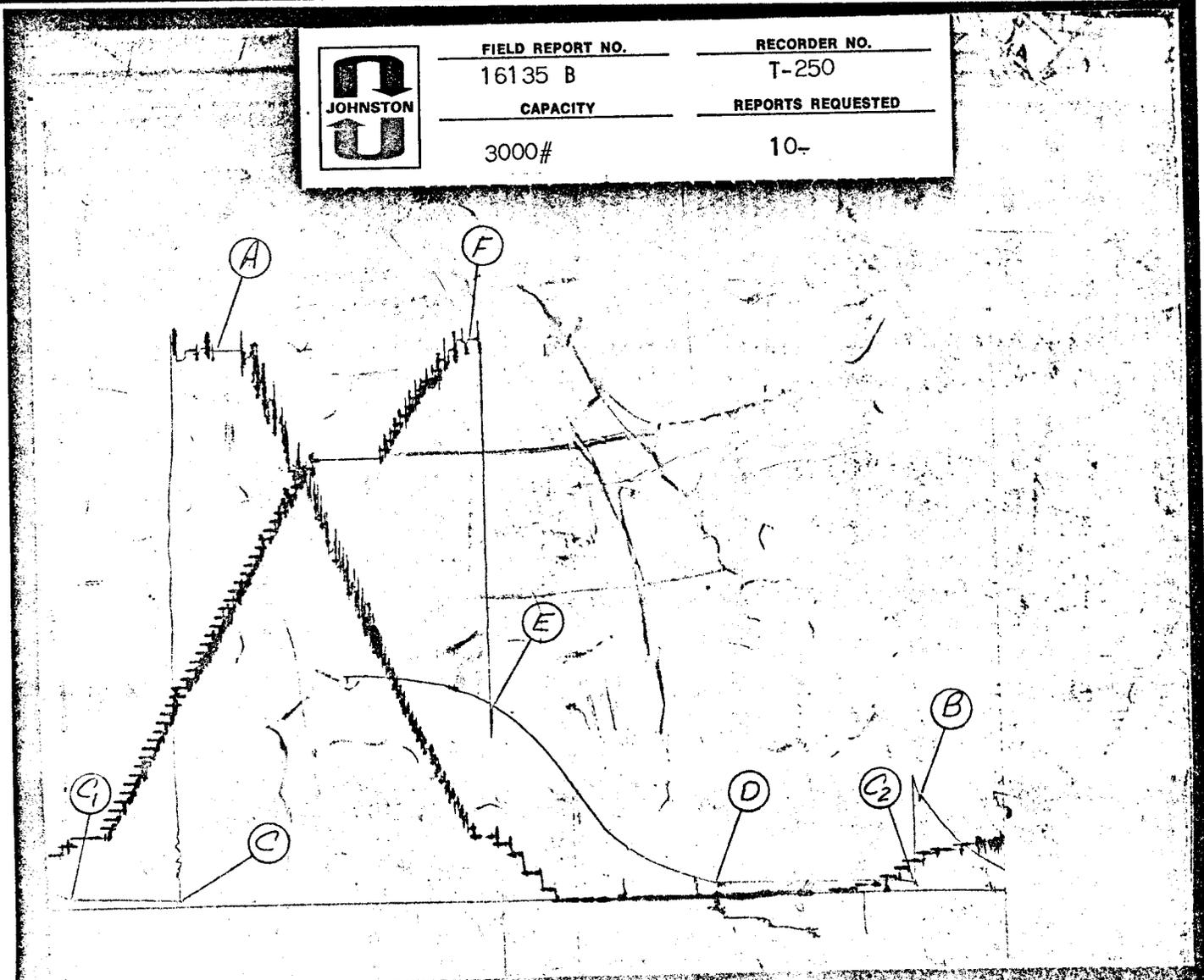
GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS



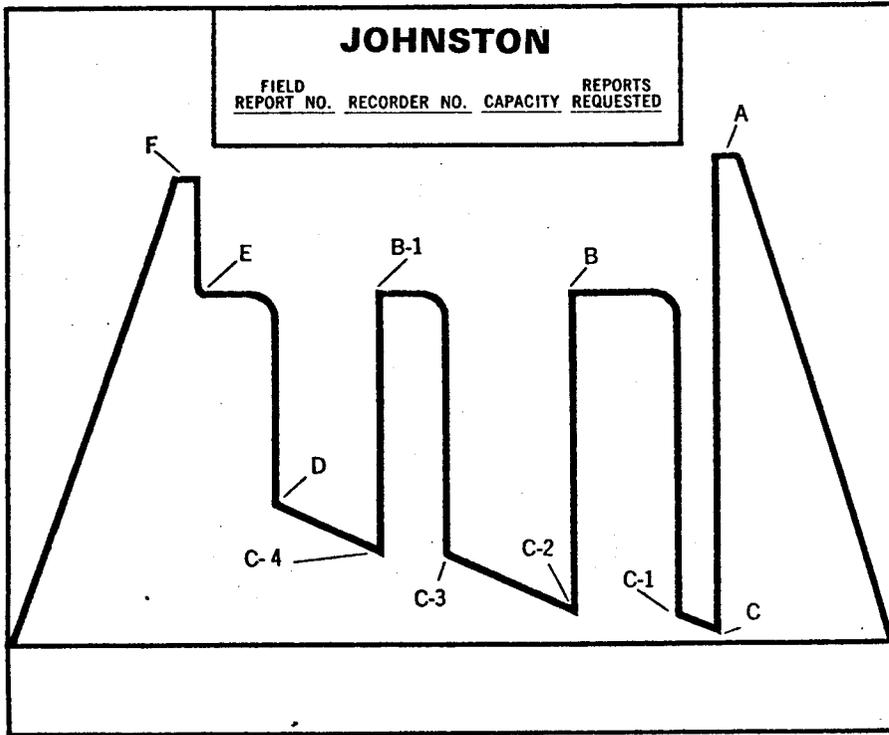
- A. Initial Hyd. Mud
- B. Initial Shut-in
- C. Initial Flow
- D. Final Flow
- E. Final Shut-in
- F. Final Hyd. Mud

The following points are either fluctuating pressures or points indicating other packer settings, (testing different zones).

- A-1, A-2, A-3, etc. Initial Hyd. Pressures
- B-1, B-2, B-3, etc. Subsequent Shut-in Pressures
- C-1, C-2, C-3, etc. Flowing Pressures
- D-1, D-2, D-3, etc. Subsequent Final Flow Pressures
- E-1, E-2, E-3, etc. Subsequent Final Shut-in Pressures
- F-1, F-2, F-3, etc. Final Hyd. Mud Pressures
- Z— Special pressure points such as pumping pressure recorded for formation breakdown.



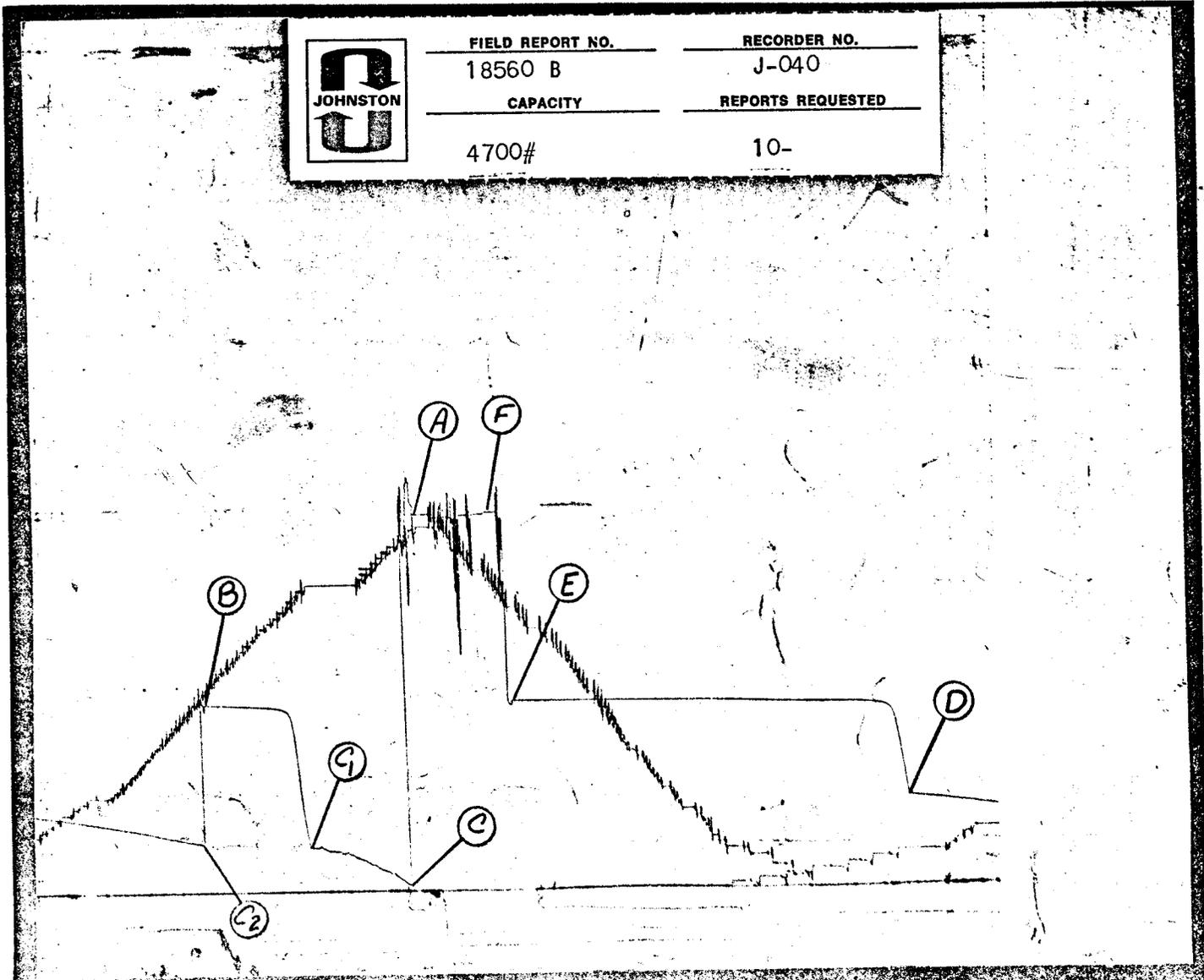
GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS



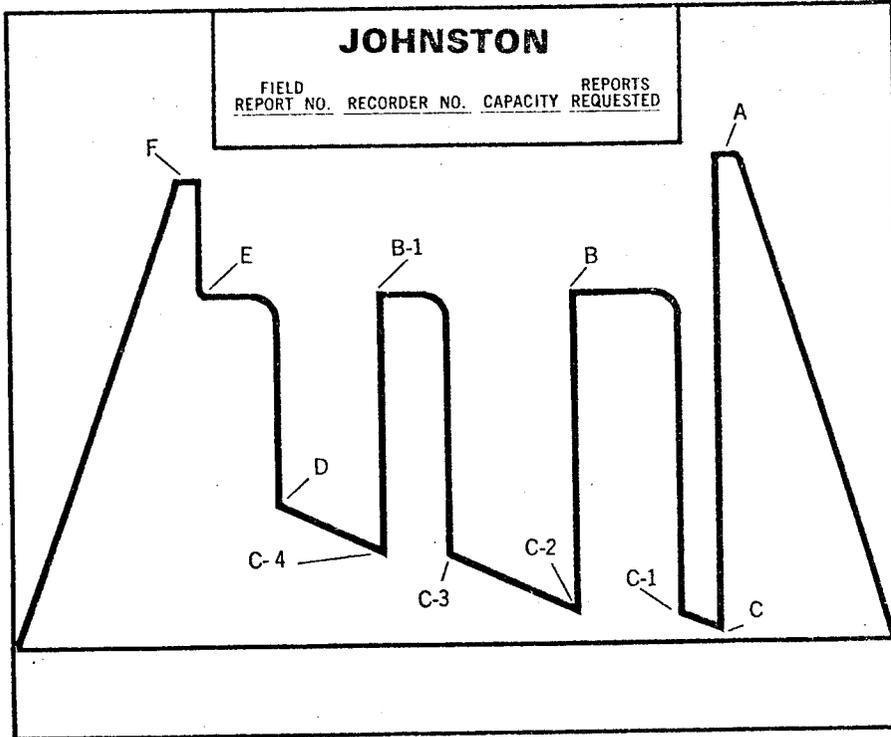
- A. Initial Hyd. Mud
- B. Initial Shut-in
- C. Initial Flow
- D. Final Flow
- E. Final Shut-in
- F. Final Hyd. Mud

The following points are either fluctuating pressures or points indicating other packer settings, (testing different zones).

- A-1, A-2, A-3, etc. Initial Hyd. Pressures
- B-1, B-2, B-3, etc. Subsequent Shut-in Pressures
- C-1, C-2, C-3, etc. Flowing Pressures
- D-1, D-2, D-3, etc. Subsequent Final Flow Pressures
- E-1, E-2, E-3, etc. Subsequent Final Shut-in Pressures
- F-1, F-2, F-3, etc. Final Hyd. Mud Pressures
- Z— Special pressure points such as pumping pressure recorded for formation breakdown.



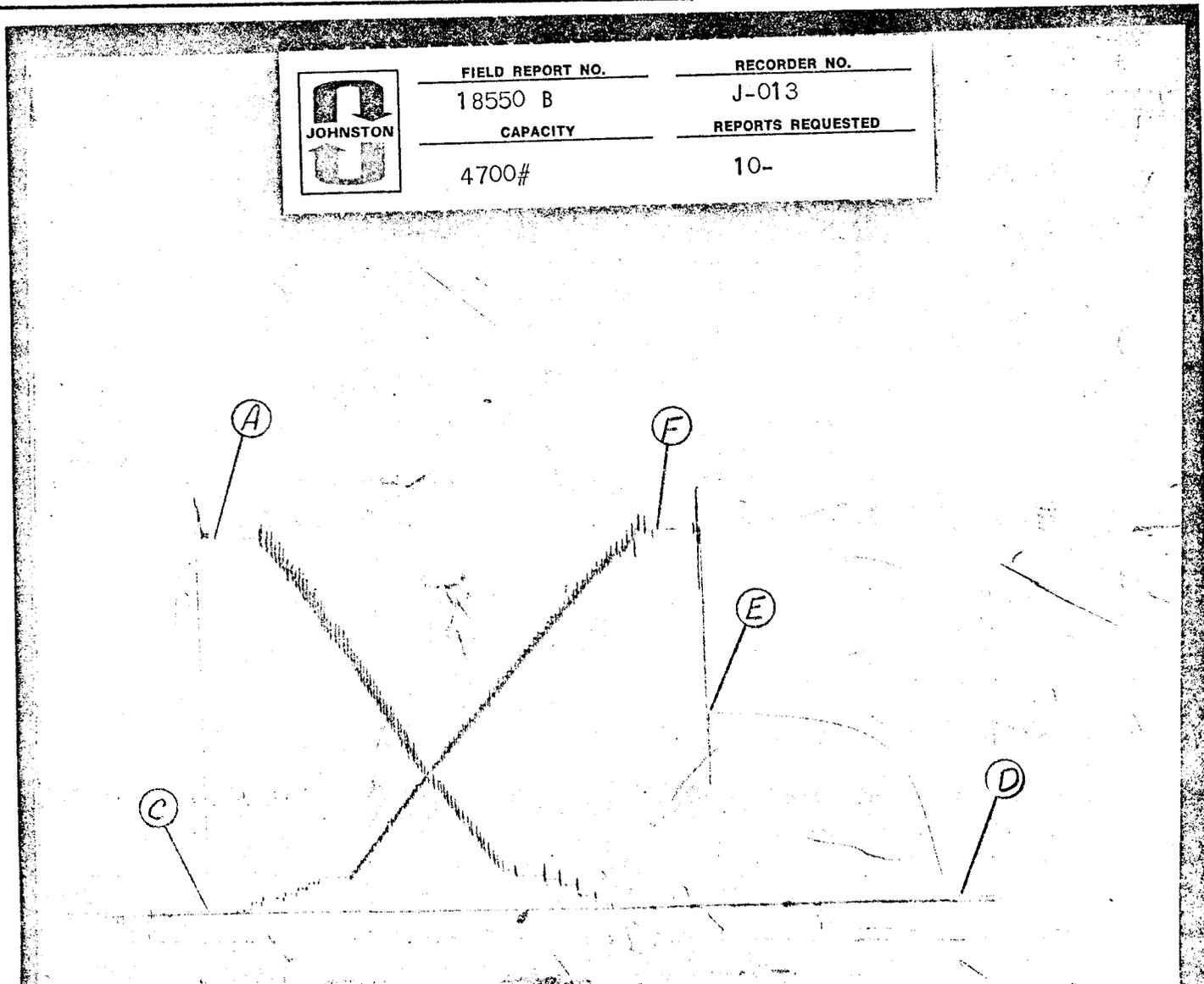
GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS



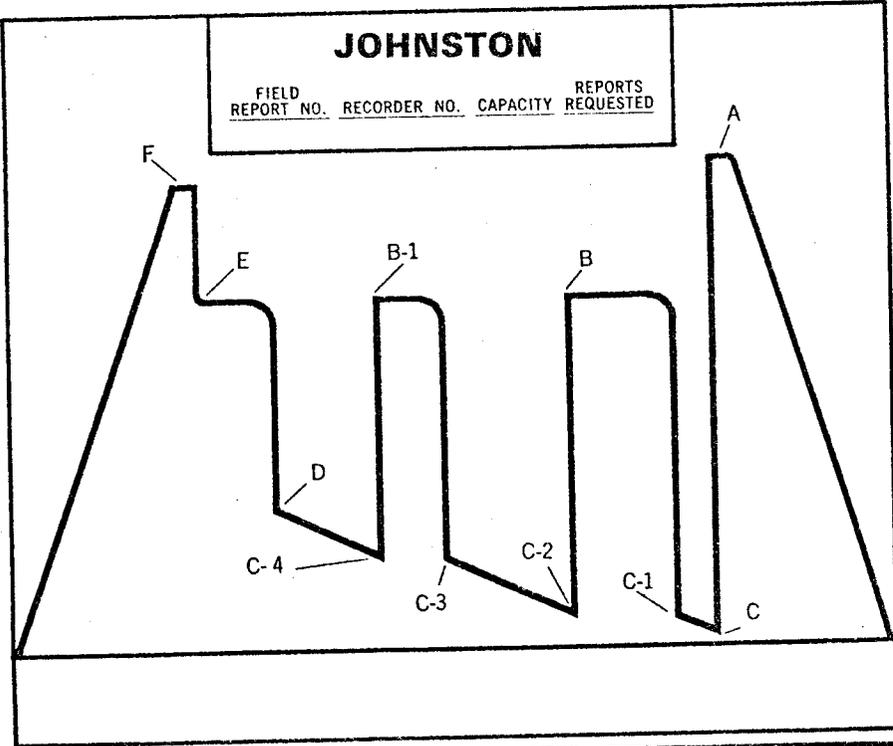
- A. Initial Hyd. Mud
- B. Initial Shut-in
- C. Initial Flow
- D. Final Flow
- E. Final Shut-in
- F. Final Hyd. Mud

The following points are either fluctuating pressures or points indicating other packer settings, (testing different zones).

- A-1, A-2, A-3, etc. Initial Hyd. Pressures
- B-1, B-2, B-3, etc. Subsequent Shut-in Pressures
- C-1, C-2, C-3, etc. Flowing Pressures
- D-1, D-2, D-3, etc. Subsequent Final Flow Pressures
- E-1, E-2, E-3, etc. Subsequent Final Shut-in Pressures
- F-1, F-2, F-3, etc. Final Hyd. Mud Pressures
- Z— Special pressure points such as pumping pressure recorded for formation breakdown.



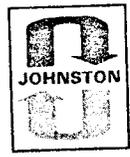
GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS



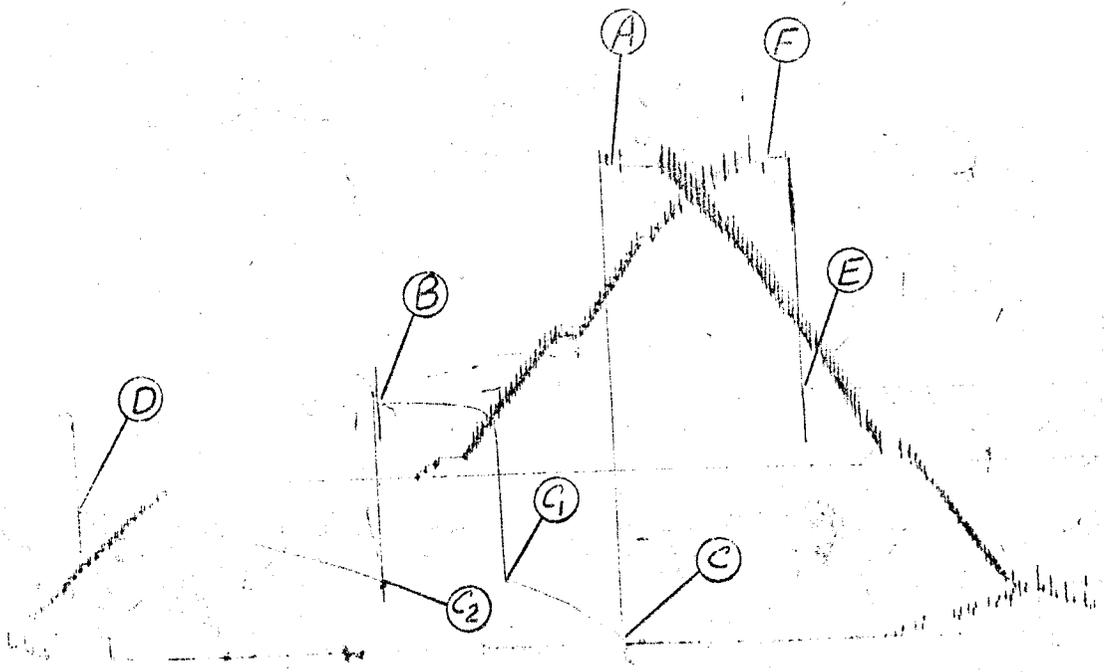
- A. Initial Hyd. Mud
- B. Initial Shut-in
- C. Initial Flow
- D. Final Flow
- E. Final Shut-in
- F. Final Hyd. Mud

The following points are either fluctuating pressures or points indicating other packer settings, (testing different zones).

- A-1, A-2, A-3, etc. Initial Hyd. Pressures
- B-1, B-2, B-3, etc. Subsequent Shut-in Pressures
- C-1, C-2, C-3, etc. Flowing Pressures
- D-1, D-2, D-3, etc. Subsequent Final Flow Pressures
- E-1, E-2, E-3, etc. Subsequent Final Shut-in Pressures
- F-1, F-2, F-3, etc. Final Hyd. Mud Pressures
- Z— Special pressure points such as pumping pressure recorded for formation breakdown.



FIELD REPORT NO.	RECORDER NO.
20901 B	J-013
CAPACITY	REPORTS REQUESTED
4700#	10-



DRILLING HISTORY
AND
GEOLOGIC REPORT
OF
ANSCHUTZ #1 FEDERAL 773 WELL

By

W. Don Quigley
Consulting Geologist
Salt Lake City, Utah

December 30, 1971

W. DON QUIGLEY

OIL AND MINERALS CONSULTANT
803 PHILLIPS PETROLEUM BLDG. - SALT LAKE CITY, UTAH 84101

Drilling History
of
Anschutz #1 Federal 773 - Well

Location: NW, SE, Sec. 29 T. 19 S., R. 21 E., S.L.M., Grand County, Utah
(2160' from E-line and 1487' from S-line)

Operator: The Anschutz Corp., Inc., 1110 Denver Club Bldg., Denver, Colorado
80202

Contractor: Willard Pease Drlg. Co., P.O. Box 548, Grand Junction, Colorado

Elevations: Grd.: 6420'; K.B.: 6430'

Spud Date: October 28, 1971

Finished Drilling: November 17, 1971

Total Depth: 4760'

Production Formation: Entrada and Morrison

Productive Intervals: (4738' to 4760' - Je), (4500' to 4518' - Jm), (4440' - Jm), and
(4306' to 4315' - Jm)

Initial Production Rate: *150 bbl. oil/day*

Oct. 26-27: Rigging up.

Oct. 28: Drilled 0' to 120' (120'). Drilled rat hole. Spudded-in at 5:30 a.m. Drilled 9" hole to 42' and then reamed out to 13 1/4". Drilled ahead with 9" hole. Survey at 100' was 3/4°.

Oct. 29: Drilled 120' to 152' (32'). Drilled 9" hole to 152' and then decided to set conductor pipe and drill ahead with 11" bit. Set 34' of 12" culvert and cemented with 15 sks. cement. Welded on drilling nipple and flow line. (Halliburton, welding truck, and supply truck stuck in mud and had to be pulled out by cat and maintainer.

Oct. 30: Drilled 152' to 400' (248'). Drilling 11" hole below 152'. Reamed 9" hole to 11" from 42' to 152' and then drilled ahead with 11" bit. Drilling in sand and shale.

- Oct. 31: Drilled 400' to 632' (232'). Made rd.-trip at 562' for Bit #3. Bit #2, (Reed 11" - YT3) made 412' (152' to 562') in 24 hrs. Drilled at rate of 17 1/2 ft./hr. Encountered top of Castlegate sand at about 500' to 540'; M. G. to C. G. glauconitic white ss. with good blue fluorescence. Gas in mud. Ordered out 3 more its. of 8 5/8" casing.
- Nov. 1: Drilled 632' to 780' (148'). Drilled to 780' into shale and decided that most of the potential water sands had been drilled and could safely set the surface casing. Ordered 5 more jts. of 8 5/8" casing. Encountered a good porous sand in Mancos from 580' to 600'; C. G. gry. glauc. ss. with excellent lt. blue fluorescence and oil stain. Gas and oil in mud; good oil out in samples. Bit #3 (Hughes - 11" Retip) made 218' (562' to 780') in 15 hrs. Drilled at rate of 14 1/2 ft./hr. Ran 24 jts. of 8 5/8", 24#, J-55, casing. Landed at 776' K. S. and cemented with 185 sks. of reg. cement W/2% CaCl. Preceded cement with 15 bbl water and displaced with 49 bbl. water. Plug down at 7 p. m. Waiting on cement to cure.
- Nov. 2: Waiting on cement until 11 a. m., and then began to nipple-up. Drilled mouse hole.
- Nov. 3: Finished nipping-up. Installed air-lines and blooey-line. Blew water out of casing and drilled cement plug. Dried up hole and began dusting.
- Nov. 4: Drilled 780' to 1642' (862'). Drilling ahead with 7 7/8" bit and using air for circulating media. Survey at 1370' was 1/2°. Drilling at rate of 60 ft./hr. in gry., calc., marine, silty shale. Made rd.-trip at 1530' for Bit #5. Bit #4 (Reed - YHG) made 752' (780 to 1530') in 15 1/2 hrs. Drilled at rate of about 50 ft./hr.
- Nov. 5: Drilled 1642' to 2834' (1192'). Drilling in silty sand and shale. Dusting good. Survey at 2500' was 1 3/4°.
- Nov. 6: Drilled 2834' to 3700' (866'). Made rd.-trip at 3098' for Bit #6. Bit #5 (Reed - YHWG) made 1568' (1530' to 3098') in 31 hrs. Drilled at rate of 50 ft./hr. in gry. calc. bent. silty shale.
- Nov. 7: Drilled 3700' to 3910' (210'). Encountered oil in hole at about 3700' and hole quit dusting. Drilling ahead slowly, trying to dry up oil and get hole to dust. Drilled to 3854' and hole got tight and air pressure rose to 200#, so started out of hole to clean up tight places. Worked out 12 jts. of drill pipe slowly before drill string was free. Had fire in the hole at one time and had to shut off air for a period of time. Came out of hole to check drill string and put on new bit. Bit #6 (Reed - FHGJ) made 761' (3098' to 3854') in 17 hrs. Drilled at rate of 45 ft. an hour. Went back in hole to drill out tight places and to dry up oil if possible.

Kept pressure below 150# and blew oil and gas out - 1 jt. at a time--from 3600' to 3854'. Had gas flare of 20' to 30' between connections. Got to bottom and drilled ahead slowly, but hole would not dust. Only a few oil-soaked cuttings were blown out. Hole got tight again by 3910' and air pressure began to rise rapidly. Pulled out 3 jts. of drill pipe before drill-string came free. Decided to convert to mud to drill ahead. Estimate that the productive interval in the Mancos from 3700' to 3910' would make about 25 bbls. of oil per day. Began mixing mud.

Nov. 8: Drilled 3910' to 3934' (24'). Mixed first pit of mud (Visc. 50; wt. - 8.5#/gal., W. L. - 5.6cc/15 min.) and pumped in hole. Plugged bit with loss-circulation material so had to pull wet string and unplug bit. Went back in hole and pumped in first pit of mud which was not enough to fill hole. Mixed second pit of mud (Vis. - 50; wt. - 8.8#/gal., W. L. - 5.4 cc/15 min.) and pumped in hole. Got circulation with only a small amount of mud to spare. Pushed gas out of hole and mud was oil cut. Began drilling ahead at rate of about 6 ft./hr.

Nov. 9: Drilled 3934' to 4080' (146'). Made rd.-trip at 4045' for Bit #8. Bit #7 (Reed - YS4G) made 191' (3854' to 4045') in 18 1/2 hrs. Drilled at average rate of about 10 ft./hr. Picked-up 9 more 6" drill collars. Drilling in mixed ss. and shale; ss. is thin bedded, f.g. to m.g., calc., bent., and drty, w/pyrite, with oil stain and fluor. (v. carbonaceous). Survey at 4000' was 1 3/4°.

Nov. 10: Drilled 4080' to 4105' (25'). Drilled thin beds of f.g. to m.g. ss. from 4060' to 4080' that had good fluor., oil st. and cut. Had drilling break at 4095 to 4100' which was a white m.g., bent., gtz. ss. w/rd'd grns. and good blue fluor. Decided to test interval 4060' to 4100'. Drilled to 4105' and circulated for 5 hours and started out of hole. (Had to wait 7 hrs. for tester to come from Vernal.) Started out of hole at 10 a.m. Tester arrived at 1:30 p.m. Unloaded test tool and went in hole to run drill-stem-test.

DST #1 - Time interval 2 p.m. to 11:30 p.m.

Test Interval 4055' - 4105' (50')

Init. open - 33 min.

Init. close - 30 min.

Final open - 1 hr.

Final shut in - 1 hr.

Blow: Moderate blow thru-out test (15" in water)

Rec.: 60 ft. of slightly gas cut drilling mud. Gas in pipe at 1000' above tool.

Pressures: L.H.P. - 1999#; I.F.P. - 22# to 33#; I.S.L.P. - 339#; F.F.P. - 33# to 50#; F.S.L.P. - 698# and building (probably would have reached about 825#). F.H.P. - 2016#.

Bit #8 (HTC. _ OWC) made 60 ft. (4045' to 4105') in 9 hrs. (Drilled at average rate of 7 ft./hr. in hard ss. and shale.) Estimate top of Dakota formation at about 4060:

- Nov. 11: Drilled 4105' to 4242' (137'). Went in hole with a button bit which drilled at rate of 6 to 8 ft./hr. Drilling in shale siltstone and hard quartzitic sandstone. Went into the red beds at the top of the Morrison formation at about 4140'. The Buckhorn sandstone member at the base of the Cedar Mountain (Dakota) was not present. (Strapped pipe in hole and made a +0.31' correction.)
- Nov. 12: Drilled 4242' to 4403' (161'). Drilling at rate of 6 to 8 ft./hr. with button bit. Drilling in quartzitic sand, siltstone and varicolored calcareous shale. Encountered top of Salt Wash sands at about 4400'. Sand at 4300' to 4315' is quartzitic, but has some coarse sand grains and has no fluorescence.
- Nov. 13: Drilled 4403' to 4460' (57'). Encountered first, Salt Wash sand at 4415' to 4440'. Apparent porosity is better but still looks tight. Very faint hint of fluorescence. Decided to test this sand to be sure. Drilled 4460' at 8 a. m. and began circulating for DST #2. Waited for tester until 11:30 a. m. and started out of hole. Got out at 2:30 p. m. and waited on tester until 4:00 p. m. Picked up tool and went in hole for test. Opened tool at 8:00 p. m.
- DST #2 - 4361' to 4460' (99')
 - Initial open - 30 min.
 - Initial shut in - 30 min.
 - Final open - 1 hr., 20 min.
 - Final shut in - 1 hr. 50 min.
- Blow: Good blow thru-out test.
- Rec: Gas to surface in 80 min. - 3 ft. flame 1100' of fluid: 600' of highly oil cut mud (15% oil) 500' of oil and gas cut water (5% oil). Water is 11,000 ppm chlorides.
- A. F. E. Tool Rec: .7 cu. ft. of gas at 350#; 100 cc of oil, 1600 cc of water and 140 cc of mud.
- Pressures: I. H. P. - 2193#; I. F. P. - 41-65#; I. S. I. P. - 1098#; F. F. P. - 284-527# and climbing; F. S. L. P. - 1098#; F. H. P. - 2193#.
- Survey at 4440' was 1°. Bit #9 (Hughes-J-44) made 355 ft. (4105' - 4460') in 51 hrs. Drilled at average rate of 7 ft./hr.
- Nov. 14: Drilled 4460' to 4550' (90'). Finished coming out of hole with test tool; loaded test tool out and started back in hole with Bit #10 at 7:00 a. m. Had drilling break at 4499' to 4514' (15') which was a porous m. g. calc. bent. ss. w/rd'd grns. Sand had a slight residual fluorescence. Decided to test sand, so drilled to 4550' at 11:30 p. m. and circulated for 1 1/2 hrs. before coming out of hole for DST 3#.
- Nov. 15: Drilled 4500' - 4613' (63'). Came out of hole for DST #3. Picked up test tool and got back on bottom for test at 7:45 a. m.
- DST #3 - 4470' to 4550' (80')
 - Initial open - 1 hr.
 - Initial closed - 1 hr. 15 min.

No final periods--

Blow: Weak blow initially-dead in 30 min.

Rec.: 60 ft. of drilling mud.

Pressures: I. H. P. - 2264#; I. F. P. - 24# to 44#; I. S. I. P. - 1149#;

F. H. P. - 2264#.

Went back in hole with bit #10 (button bit). Had a drilling break at 4569' to 4597' (28') which was a m. g. wh. to tan calc. bent. ss. w/sub rd'd grns. Had no fluor. and looked wet and had fair porosity. Decided not to test but to check carefully on logs.

Nov. 16: Drilled 4613' to 4709' (96'). Survey at 4676' was 1 1/4°. Made rd.-trip at 4676' for new bit. Bit #10 (Reed-SCM5) made 216' (4460' to 4676') in 34 1/2 hrs. Drilled at average rate of about 6 ft./hr. Encountered top of Summerville at about 4700' - red shale and siltstone mixed with green and blk. shale plus thin beds of limestone.

Nov. 17: Drilled 4709' to 4760' (51'). Had a slight drilling break at 4738' to 4760'. This was a clear, gtz. white, mg. to c.g. well rounded ss with slight and scattered blue fluorescence. This is probably the Entrada, so decided to run a D. S. T. to determine content. Sand is loosely consolidated and has good porosity. Circulated for 1 hr. and started out of hole. Picked up test tool and went back in for D. S. T.

DST #4 - 4730' to 4760' (30'). Opened at 7:45 p. m.

Init. open - 30 min.

Init. shut in - 30 min.

Final open - 1 hr. 15 min.

Final shut in - 1 hr. 30 min.

Blow: Good blow thru-out test (18" in water)

Rec: 1900' of fluid (1100' of pure oil - 44°, 300' of h, o. & g, c. m.; 500' of o. & g. c water. Water is 2900 ppm chlorides and has a resistance of 1.6 ohms

Pressures: I. H. P. - 2474#; I. F. P. - 39# - 361#; I. S. I. P. - 1281#; F. F. P. - 45# - 777#; F. S. I. P. - 1281#; F. H. P. - 2474#; B. H. T. - 176° F.

Started out of hole with test tool at 11:30 p. m.

Nov. 18: Pulled test tool out of hole. Had to shut-down at 2:00 a. m. to wait for daylight to pull rest of string after oil was encountered in the 46th stand. Went back in hole to circulate prior to logging hole. Condition hole and started out at 6:30 p. m. Started logging at 10 p. m. Ran IES log first, and then ran Compensated-Neutron log.

Nov. 19: Finished logging at 12:30 p. m. Ran Gamma-Density log. Went back in hole and circulated for 1 hr. to condition hole for casing. Came out laying down. Began running casing (5 1/2", J-55, 14#) at 8:00 p. m. Ran 147 jts. of casing, 4786 ft., and landed at 4758 ft. K. B. Ran float shoe on bottom with centralizers at approximately 4739', 4670', 4610', 4550', 4490', 4430', 4770', 4310', 4250', 4190', 4130',

4070', 4010', 3950', 3890', 3830', 3770', 2840', 1880', and 760'. Cemented with 275 sks. of reg. cement with 2% CaCl and tailed in with 50 sks. of Halliburton Latex cement. Preceded cement with 25 bbl. water and displaced with 117 bbls. of water. Plug down at 3:00 a. m., November 20. Released rig.

Respectfully submitted,

W. Don Quigley
W. Don Quigley, Geologist

Geologic Report
on
Anschutz #1 Federal 773 Well

General Geologic Conditions

The Anschutz #1 Federal 773 well was located on a northeast trending anticlinal nose located in the southwest quarter of T. 19 S., R. 21 E. The positive anomaly and trend was found through geophysical work and stratigraphic study of the area. The sub-surface structure is transverse to the surface structure and is somewhat distorted by two faults, one trending northeastward parallel to the axis of the structure and one trending northwestward through the approximate center of the structure and perpendicular to its axis.

The surface structure, evident from exposed beds of the Mesaverde and Mancos formation, is a northwest plunging anticline whose axis is located a short distance to the east of the subject well location. The subsurface is much older than the surface structure and was probably distorted somewhat by the later folding. All parts of the older structure may actually be lower structurally at the present than the younger structure as seen from the attitude of the surface rocks; but this is not critical, since the oil and gas were probably accumulated prior to the more recent folding and have been retained in the old structure. Considerable adjustment and variation of structure and movement have undoubtedly been absorbed by the thick sequence of Mancos shale in the area plus the unconformity at the top of the Morrison formation and in the middle Cretaceous section. There is considerable lensing and overlap in the upper Mancos and lower Mesaverde beds which tend to erase underlying structure.

Regionally, the prospect area is located on the northwest plunging flank of the Uncompahgre nose extending northwestward from the Uncompahgre plateau into the Uinta Basin. On the flanks of this nose and southern edge of the Basin a number of natural gas fields have been found and developed during the last twenty years. These natural gas accumulations have been primarily found in the Dakota, Cedar Mountain, Morrison and Entrada formations. The reservoirs in the first three formations have been lenticular sands of varying thickness and areal extent. To date, the fields developed in these formations have been confined to good structural positions; but this may or may not be essential to the gas accumulation. Production may eventually be established in structurally unfavorable positions

and the lenticularity of the sands could be found to provide their own trapping mechanism. The gas accumulations found in the Entrada formation to date have all been structurally controlled and have a water drive. The Entrada is a fairly consistent, blanket sand in the region and, visually has a high porosity (22 to 32%), thus structural entrapment is necessary to contain the hydrocarbon accumulation. Generally the Entrada, where tested in the area, has contained water (usually saline) or natural gas having a low B. T. U. content (480 to 720 B. T. U.). Thus the natural gas produced from the formation has had to be treated and/or mixed with better quality gas to permit marketing. No oil has been produced heretofore from the Entrada formation in the region. It has long been a primary aim of many companies to find an oil structure in the area to test for possible oil production from the Entrada. It is recognized by most that the Entrada would make an excellent reservoir rock, but the problem has been finding a structure with good quality hydrocarbons in the Entrada.

The rocks exposed in the area around the subject well site belong to the lower Mesaverde and upper Mancos formations. The strata in the Mesaverde consist of a series of lenticular sandstone beds with interfingering layers of shale and siltstone. The upper Mancos strata are interbedded gray marine shales, siltstones and sandstones.

Considerable faulting and adjustment has taken place throughout the area due to the various rejuvenations of the Uncompahgre Uplift. In general, this faulting and movement is not apparent in the Mesaverde strata other than by stratigraphic irregularities. Through experience, it has been found that the faulting has not been essential to hydrocarbon accumulations, but has definitely effected the reservoir rocks adjacent to the fault plane. The natural porosity and permeability of the reservoir rock have been destroyed by the influx of clay minerals and gouge material, thus inhibiting production near the fault plane (nearer than 500 to 600 feet). This is particularly pertinent to the Dakota, Cedar Mountain, and Morrison reservoirs. It may not be so critical to the Entrada reservoirs, due to the greater porosity and permeability inherent with the sands of that formation. It is also possible that the faulting may have aided entrapment of hydrocarbons in the Entrada by the forming of fault traps. This has not been established to date.

Drilling History

A complete daily history of the drilling of the Anschutz #1 Federal 773 is attached hereto. No unusual problems were encountered in the drilling of

the well--other than the weather. Considerable rain, snow, and mud kept the road to the well in miserable shape much of the time, necessitating much maintenance work and many of the trucks with supplies and equipment had to be pulled into the well site by a dozer or grader. The upper portion of the well, 0 to 780, was drilled using mud as a circulating medium. It was desired to set the surface casing below any of the upper water sands, so that air could be used to drill the Mancos shale and Dakota formation. Accordingly, all of the potential water sands near the surface, which includes the Castlegate sand below the Buck Tongue member of the Mancos and some of the upper Mancos sands, were penetrated before the surface casing was set. Approximately 776 ft. of 8 5/8" casing were set and cemented, thereby shutting-off all of the upper sands. After blowing the water out of the casing, air was then used to drill the Mancos formation until oil was encountered at a depth of 3,600' and below. The amount of oil seeping into the hole was sufficient to stop further drilling with air beyond 3,910'. Consequently, it was necessary to convert to mud again, and the rest of the hole was drilled using mud for a circulating medium. All further shows of hydrocarbons in potential reservoir sands had to be drill-stem tested. Four drill-stem tests were taken on the well from 3,910' to total depth. The details and results of these tests are described under the attached "Drilling History" of the well.

Stratigraphy

A detailed sample descriptive log is attached hereto. The stratigraphic section was nearly normal, although somewhat thinner than expected; and the formation tops were encountered at the approximate predicted depths.

The sands in the Dakota and Cedar Mountain formations were very poorly developed; in fact, there was only one sand present. This sand was only eight feet thick and was located near the top of the Dakota formation. It was drill-stem tested and the results were not favorable.

The Morrison formation had four different and well-developed sands which had various hydrocarbon shows which are described below. Two of these sands were drill-stem tested with promising results. The sands have a high content of bentonite and the visual porosity was estimated to vary from 10 to 17%.

The Entrada formation was penetrated by 22 feet and drill-stem tested with highly favorable results. The sand was loosely consolidated with well rounded grains and has a siliceous matrix. Visual porosity was estimated to be between 22 and 30%.

The formations with their tops, thicknesses, and datum points which were encountered in the subject well are as follows:

<u>Formation</u>	<u>Depth to Top</u>	<u>Thickness</u>	<u>Datum</u>
Mesaverde	0' (surface)	300'	6430' K. B.
Mancos (Buck Tongue)	300'	204'	6130'
Castlegate Sand (Kmv.)	504'	32'	5926'
Mancos	536'	3540'	5894'
Dakota	4076'	90'	2354'
Cedar Mountain (not present)	---	---	---
Morrison	4166'	524'	2264'
Salt Wash (Jm.)	4420'	---	---
Summerville	4690'	48'	1740'
Entrada	4738'	(22')	1692'

The missing Cedar Mountain formation, which is an erosional formation (eroded Morrison sediments), indicates the positive nature of the area during early Cretaceous time. This is particularly significant and tends to confirm the presence of the old structure at the end of Jurassic time and early Cretaceous time.

Hydrocarbon Shows

The first show of hydrocarbons in the subject well was obtained at 500' to 540' while drilling the surface hole with mud. This was the Castlegate sand and considerable gas was observed in the mud and the sand was coarse-grained with sub-rounded grains and had good fluorescence. The Castlegate sand is a known producer of shallow natural gas in the area. Several small, low pressure gas wells, have been completed in the Castlegate at depths of 500' to 750' on the Westwater Creek structure located northeast of the subject area. There is definite possibilities of natural gas production in the subject well and surrounding area in the Castlegate which can be developed at a later date.

A second hydrocarbon show was encountered in the upper part of the hole while drilling with mud at a depth of 582' to 602'. This was a salt and pepper sand with medium sized grains and good porosity (15-18%) and had excellent fluorescence (light blue), oil stain, and cut. Gas and oil were observed on the mud also. This is a sand in the upper Mancos which has definite possibilities for gas and oil production. Like the Castlegate, this zone can and should be developed at a future date for shallow, low pressure gas and/or oil.

Oil was obtained in the lower Mancos formation at a depth of 3,600 feet and below while drilling with air. Various oil zones were encountered

from 3625' to 3910' and the amount of oil was sufficient to prevent further drilling with air. The cuttings were oil soaked and could not be blown out of the hole. The air pressure increased, resulting in a down-hole fire. From experience it is known that the amount of oil required to prevent further drilling and cleaning the hole with air has to be greater than 15 bbls. per day. Sprays of oil were obtained at the surfaced (at the end of the blooey-line) while drilling this section and considerable gas was emitted at the same time. At periods the gas would produce a 20-foot flare at the end of the blooey-line. Examination of the electric logs indicate that the zone 3625' to 3900' has five different productive intervals which vary in thickness from 10' to 36'. Thus, it is evident that the lower Mancos contains oil in the subject well and probable surrounding area; and could produce an unknown amount of oil at an unknown rate (probably about 30 to 60 bbls./day) for an indeterminate length of time.

The next hydrocarbon show was obtained in the Dakota formation at 4090' to 4110'. The sand 4094' to 4102' was medium-grained, well rounded, to fine-grained with a bentonitic matrix; and appeared to have limited porosity about 10%. The sand was oil-stained and had good fluorescence plus some specks of oil on the mud.

This sand was tested (D. S. T. #1) with only moderate success. No gas was obtained at the surface and the only recovery other than "rat hole" mud was about 1000 feet of gas in the drill pipe. The shut-in pressure was slow to build-up and had not reached a maximum at the end of one hour, indicating a tight and damaged section. The ultimate shut-in pressure would have probably reached about 825# to 900#, if the tool had been shut-in for 1 1/2 to 2 hours. This zone could probably be made to produce a small amount of gas and some oil with fracture treatment.

The first porous, well-developed sandstone found in the Morrison formation was at 4302' to 4315'. This was a coarse-grained, white, quartz sand with rounded grains and bentonite silica matrix. There was no evidence of fluorescence or shows. It was felt that this sand could contain gas but most probably water, so it was not tested.

Good shows of hydrocarbons were obtained in the next Morrison sand at 4424' to 4440'. This was a very-fine-grained, bentonitic, tight sandstone which had low visual porosity. However, there was slight fluorescence on scattered sand grains so it was tested. The results were surprising and interesting. Gas was obtained at the surface in 80 minutes, which burned with a three-foot flame and was too small to measure. About 1100 feet of fluid were recovered, in about a two-hour period; about 600 feet

was highly oil cut mud (est. 15% oil) and 500 feet was oil and gas cut water (est. 5% oil). The final shut-in pressure was 1105 lbs. Although later testing operations recovered an appreciable amount of water from this zone, it is felt that fracture-treatment could provide economic production. Much lesser shows in other wells in the area have, with proper fracture-treatment, produced very satisfactory results.

The next Morrison sand was encountered at 4498' to 4520'. This was a thick, medium-grained bentonitic sand with fair apparent porosity. Slight **fluorescence** was observed on the sand grains so the zone was tested. The results were very disappointing. Only about 60 feet of mud were recovered from the test with no gas to the surface or oil recovery. The shut-in pressure, however, was about 1150 lbs. The electric logs indicated that this zone might have some possibilities for production. The results of the later testing through the casing were unfavorable. Thus, this zone is somewhat of a mystery and additional data on the zone from adjacent wells may help to resolve the problem.

The lower sand in the Morrison from 4570' to 4602' was the thickest and had fair porosity with medium-sized, sub-rounded grains and bentonitic matrix. There was no fluorescence and the sand appeared to be water-wet; therefore, the zone was not tested. The electric logs tended to confirm the unfavorable nature of this zone.

Finally, the last hydrocarbon show obtained in the well was in the top of the Entrada formation. The sand was coarse-grained, well-rounded, loosely consolidated, with minor siliceous matrix. Porosity was very good. Slight fluorescence and residual specks of oil were evident in the sand grains. The showings were really quite meager, but it was decided to test the shows to be certain. The results were really quite surprising. Approximately 1100' of free oil (44° gravity) were recovered in 1 1/2 hrs., with about 300 feet of highly oil and gas cut mud and about 500 feet of oil and gas cut water. Oil in the Entrada was unexpected and is a first for the area. No gas was obtained at the surface which made the oil recovery all the more surprising. Final shut-in pressure of the zone was 1288 lbs. and the temperature was 176°F., which indicated good reservoir energy. There is no doubt that this zone can be completed for good commercial production.

Testing and Completion Work

Production casing, 5 1/2", was set and cemented as detailed in the "Drilling History". The rig was removed and a work-over rig was moved in to do the testing and completion work. The testing and completion work was accomplished during the period November 26 to December 18, 1971. Correlation bond and gamma ray logs were run to check the cement bond and

to identify the sand zones in relation to the casing collars. The bond log indicated bond throughout, with the top of the cement at 3835'.

The Morrison sand zone from 4498' to 4520' was perforated from 4500' to 4516' with two shots/foot. The zone was swabbed down and no gas or oil were obtained. The zone was acidized with 750 gallons of 7 1/2% mud-control-acid and swabbed again, without recovering any oil or gas. This zone remained blocked as was indicated by D. S. T. #3. A good shut-in pressure was obtained but there was no recovery of hydrocarbons or water. This zone would have to be fracture-treated for any satisfactory results.

The Morrison sand zone from 4303' to 4315' was perforated from 4305' to 4312' with two shots per foot, and swabbed down. Slightly gas cut water (slightly salty - 26,000 ppm chlorides) was recovered at rate of 2 bbl./hr. The zone was acidized with 300 gallons of 7 1/2% M. C. A. and swabbed again. Slightly gas cut salt water was recovered at a rate of about 12 bbl./hour. This zone did not have any shows when drilled and was believed to contain water. It was not tested at the time for this reason.

The thin Dakota sand at 4094' to 4102' was perforated from 4095' to 4100' with 2 shots/foot and swabbed. Some gas and oil cut water was recovered. About 1 bbl. of fluid (est. 15% oil) per hour was recovered on the swab test. The zone was acidized with 250 gallons of 7 1/2% M. C. A. and swabbed again. About 1 1/2 bbls. of oil and gas cut water (est. 3 to 5% oil) were recovered per hour. The water was slightly salty. Due to the tight and thin nature of the sand, it was felt that fracture treatment of this sand would not be justified at this time.

The Morrison sand at 4422' to 4440' was perforated from 4423' to 4438' with 2 shots per foot. The zone was swabbed and about 1 1/2 bbl. of oil and gas cut water (est. 2-3% oil) per hour were uncovered. Gas would burn with about a three-foot flare with each swab. This zone was not acidized, and appears to have some future potential. Fracture treatment could provide commercial production of gas and oil from this zone.

All of the above zones were squeezed with cement and isolated for possible future use. The cement was drilled out and the casing was checked for any leaks prior to perforating the Entrada sand.

The Entrada sand at 4738' to 4760' was perforated from 4750' to 4755' ft. with four shots per foot and swabbed. Fluid (50% oil) was swabbed at a

continuous and steady rate of 10 bbl. per hour. It is estimated that this well will produce at a rate of 100 to 150 barrels of oil per day on pump. The oil is low pour point and has a gravity of 42.2°. There is no gas with the oil.

Production tanks, a heater-treater, and pump jack are being installed now. The well should be on production by the first of February, 1972.

Conclusions

The Anschutz #1 Federal 773 well was drilled on a northeast trending structure which is not discernible from surface studies, and on a northeast stratigraphic trend of sand development in the Dakota and Morrison formations. The data from the well tend to confirm the presence of the structure plus the sand trends in the Morrison formation. The Dakota sands were not well developed and the Cedar Mountain formation was absent. The absence of the Cedar Mountain also indicates that a positive feature existed or was forming in the area during late Jurassic - early Cretaceous time.

Low pressure gas was found in the Castlegate sand at about 500 feet in depth. This sand could probably be developed in the area for low pressure gas production. The subject well found potential oil production in the Mancos formation (both shallow and deep) which can probably be developed in the future for commercial production.

The Dakota formation had only one sand which was thin (8 feet thick) and tight. It did contain a very small amount of gas and oil with some water. It is possible that fracture treatment of this sand could result in some production, but it was not felt that the treatment could be justified at this time.

The Morrison formation contained four different sand benches, two of which show some promise for commercial production with fracture treatment. However, since the most significant and promising zone for immediate production was in the Entrada formation, it was not feasible to fracture-treat and complete these zones at the present time.

The Entrada formation in the subject well was most interesting and gave up an appreciable amount of oil (42° gravity-low pour point) when drill-stem tested. The hydrocarbon show in the samples was quite slight and insignificant. One wonders how many other wells in the region may have had similar shows and were untested.

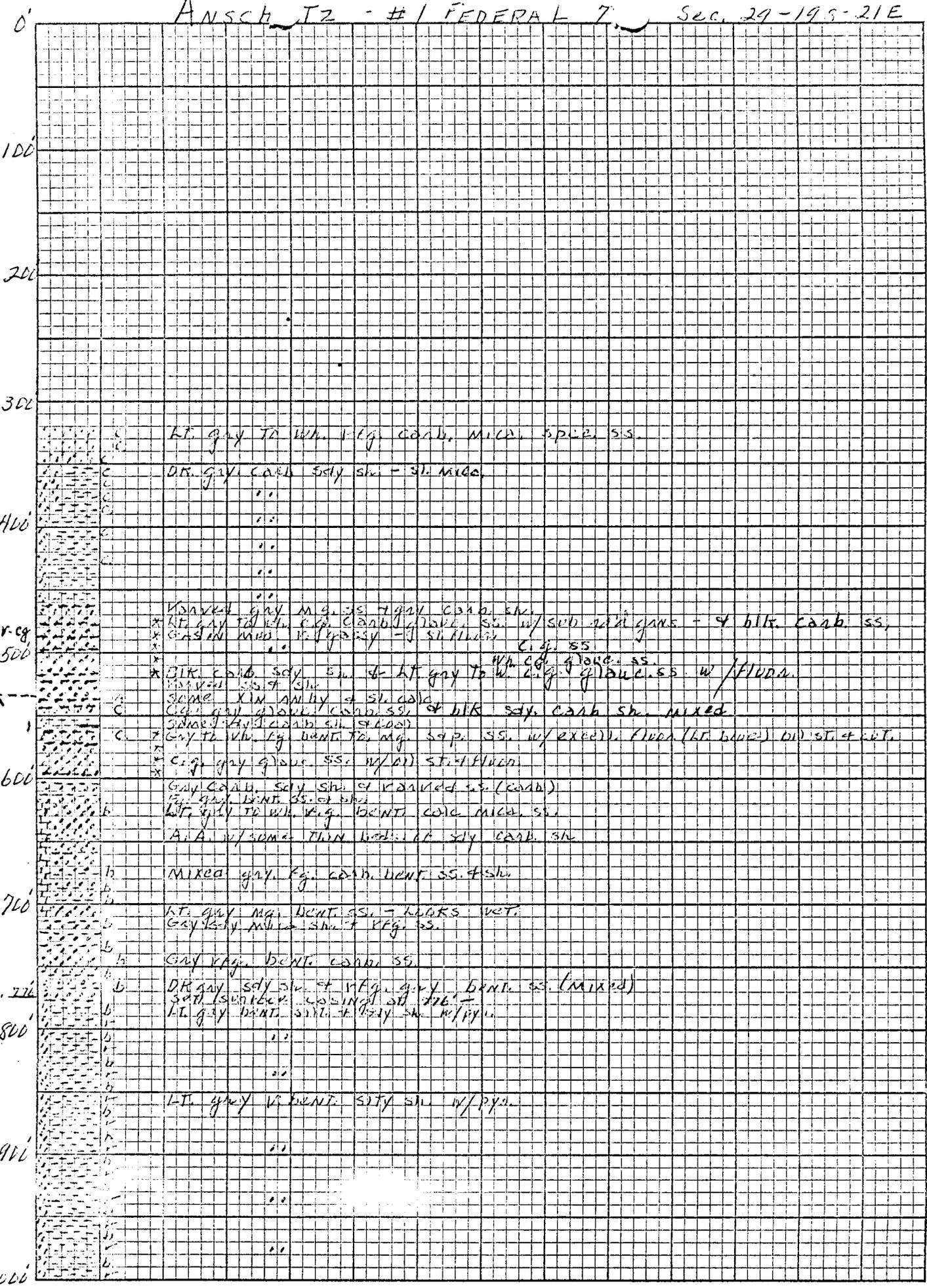
The potential oil production found in the Entrada by the Anschutz #1 Federal 773 well is a first for the area and is therefore highly significant. It provides a potential and reason for testing a great many other structures in the region. The Entrada is a sandstone with blanket-type characteristics, and usually has good porosity and permeability, thus making a good reservoir sand which is probably structurally controlled.

Several more wells will have to be drilled on the structure and in the area before the full significance of the discovery can be ascertained. At present, however, the data are most promising and should initiate considerable more exploration work and drilling in the region.

W. Don Quigley

W. Don Quigley
Consulting Geologist
Certificate No. 1296

ANSCH T2 - #1 FEDERAL 7 Sec. 29-195-21E



Kmr. 08
500

600

700

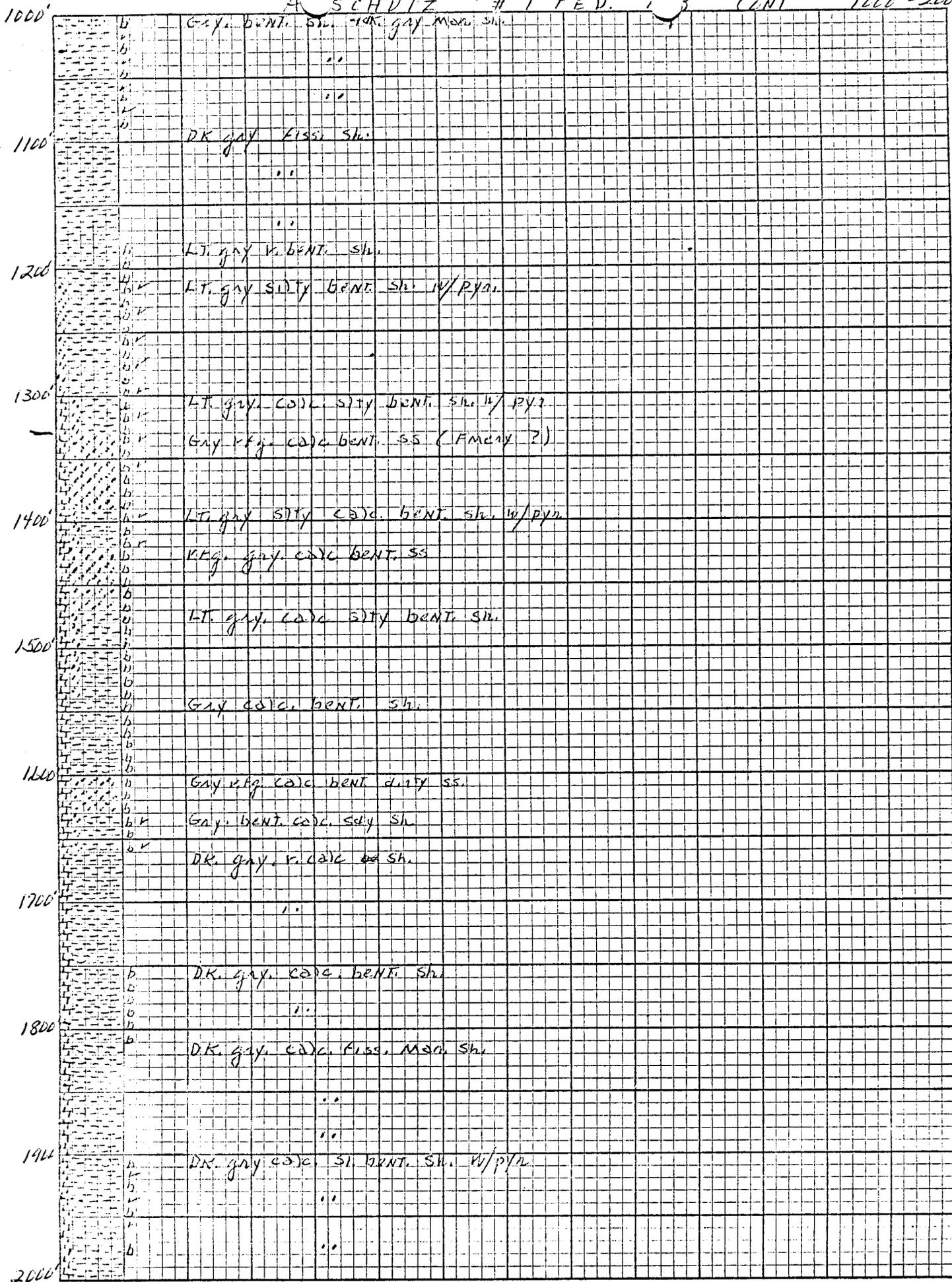
s.c. 776

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900

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2000		DK. gray calc. sh.	
		..	
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2100	b	LT. gray bent. calc. sh.	
	b	DK. gray bent. calc. sh.	
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2200	b	LT. gray bent. calc. sh. silty sh.	
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2300	b	..	
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2400	b	LT. gray bent. calc. sh. silty sh.	
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	b	Gray bent. calc. sh.	
2500	b	..	
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	b	DK. gray calc. max. sh.	
2600	b	..	w/ py.
	b	..	
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2700		DK. gray calc. sh.	
		DK. gray calc. sh.	
2800		DK. gray calc. max. sh. w/ py.	
		DK. gray calc. sh. w/ py.	
		..	
2900		DK. gray max. calc. sh. w/ py. & py.	
		DK. gray max. calc. sh. & bent.	
3000		DK. gray max. calc. sh. w/ py. & py.	


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3000'	g	DK gray med. calc. sh. w/ pyx. & gyp	
	g	DK gray med. calc. sh. w/ pyx.	
	g	..	
3100'	g	DK gray calc. sh. w/ pyx. & bent.	
	g	..	
	g	..	
3200'	g	..	
	g	DK gray bent. calc. sh.	
	g	..	
3300'	g	DK gray calc. sh. w/ bent., pyx., & gyp.	
	g	..	
	g	..	
3400'	g	..	w/ some oil st.
	g	LT. gray calc. bent. & dk. gray calc. sh.	
	g	..	
	g	..	
3500'	g	DK gray calc. med. sh. w/ bent.	
	g	SOME buff bent. calc. ffg. ss.	
	g	Gray bent. calc. sh.	
	g	..	
3600'	g	DK gray calc. bent. sh. / w. st. oil st.	
	g	..	
	g	..	
	g	DK gray silty calc. sh. w/ oil st., mica, & Alun.	
3700'	g	..	
	g	DK gray silty calc. sh. w/ bent. oil st., mica, Alun. & clt.	
	g	..	
3800'	g	GRAY like oil st. Alun. & clt. IN dk gray calc. silty sh. w/ pyx.	
	g	..	
	g	Red clay - cuttings - sat. - gold cut & Alun.	
	g	Some ffg. gray calc. ss.	
3900'	g	DK gray calc. dns sh.	
	g	DK gray calc. ffg. ss. w/ oil st.	
	g	Blk. dns. calc. sh.	
	g	Mixed ss. & sh. = blk. sdy. sh. - clay w/ Alun.	
	g	Some v. f. g. qtz. good. ss. any calc. sh. & blk. sdy. sh. & vfg. gray ss.	
	g	Blk. calc. sh. f. g. vfg. sdy. ss.	
	g	Calc. mat. in sh. w/ pyx.	
	g	Blk. calc. carb. sh. & gray vfg. to f. g. calc. mica, carb. ss. w/ pyx.	
4000'	g	Some dk gray f. g. mica. qtz. calc. ss. blk. carb. calc. sh. & daty. vfg. mica carb. ss.	

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ANS JUTZ #11 FEBRUARY - 7 CONT

Hood -

4000

BRK calc. carb. sh. + vfg. gray calc. carb. mica ss. w/ pyr.
 some calcite & anhy - vfg. dirty calc. mica ss & blk fiss. calc. sh.
 some gray (lt.) bent. w/ pyr.

Rd
4055
4100

lt. gray to lt. tan bent
 blk calc. sh. + gray. fgy spec. calc. ss w/ lt. blue fluid
 gray + wh. bent. - (wh. vfg. Tgt. qtz ss, + blk calc. sh. w/ pyr.
 LT. gray to wh. Mg. calc. mica ss. w/ (lt. st. + some blue fluid. + (v) on mud
 DST #1 - Gas in mud pipe - 1000' - 60' - 825' press.
 wh. Mg. bent. calc. ss. w/ qtz fluid. (lt. blue)
 gray + gray bent. calc. sh. + blk sh. + wh. bent. w/ some chert

Jan
4170

GAN, gray, qtz. bent. sh. wh. bent. of some fgy. wh. v. bent. ss. Tgt.
 Rd. gray, gray, blk bent. sily sh. w/ pyr.
 lots of red mud. sily sh. + siltst.
 red. siltst, gan, bent. sh. + wh. vfg. qtzitic Tgt. ss, blk. sh.

4200

GAN. sh. bent. siltst. v. sh. rd. gray, blk. sh.
 some wh. qtzitic. ss. + wh. v. bent. sily bent. sh.
 some blk calc. sh. + ms., wh. qtzitic ss. + varic. sh. w/ pyr. sh.

4300

More purple (lav.) sh. + siltst. - varic. sh., bent., + wh. qtzitic ss.
 Varic. calc. sh., siltst., + wh. qtzitic ss.
 white calc. qtz. ss. w/ some por. - NO. fluid. - Pass. gas. but prob. had
 some white sh. qtzitic ss w/ longer red grains in siltst. cement - varic. calc. sh.
 varic. calc. bent. sh. + siltst. (lots of gan) + wh. qtzitic ss

4400

More fgy. ang. qtz. many of various colors - varic. calc. siltst. NO. fluid. - on show
 wh. qtzitic Tgt. ss + varic. calc. sh. + siltst.
 DST #2 - Gas in mud pipe. Rec. 600' DCN. (15' to oil) + 500' DTG. (15' to oil). 1100' press.
 wh. qtzitic + v. calc. Tgt. ss

4420
Jmsw

wh. to lt. tan, anhy. w/ varic. calc. sh. + siltst.
 wh. vfg. bent. Tgt. ss. w/ sh. fluid
 DK gray sily sh. + siltst

4500

wh. qtzitic + calc. ss. w/ varic. sh. + siltst. w/ pyrite sh.
 varic. calc. sh. + gray wh. bent. sh. + gray blk calc. ss
 wh. fgy. calc. sh. + wh. bent. sh. + fluid
 varic. calc. sh. + some ss. as above
 wh. mag. v. calc. sh. bent. qtz. ss w/ fluid from sh. fluid. + fair por.

4600

DST #3 - Red. bot of mud. no press. - 1146'
 Rd. sh. calc. siltst. gan. bent. sh. + blk calc. sh.
 wh. calc. siltst. blk calc. sh.
 gan + wh. bent. sh. + wh. vfg. bent. calc. ss. + varic. calc. sh.
 mag. wh. to tan v. calc. bent. ss w/ sub. red grains. - looks wet - NO. fluid

4690

blk. rd. + gan. fiss. sh.
 blk. rd. + gan. fiss. sh. + blk. gray v. fgy. mica. ss
 some wh. vfg. calc. ss, varic. sh. + wh. bent.

4700

Rd. blk., gan, + tan sh. + siltst., + some vfg. calc. wh. ss. + gan. ms.
 lots of rd. gray siltst. + blk calc. sh. w/ bent. gan bent. sh. + ms.
 some wh. qtzitic calc. gray wh. ss, ms. + varic. sh.
 lots of bent.
 Rd. + gan. calc. siltst. + sh. + gan. + 500' of vfg. calc. - Press - 1281'

4738
Ja

DST #4. Rec. 1100' DIL + 300' + some blk. + blk. sh.
 some wh. vfg. will red qtz. ss, w/ sh. fluid. + some amber gas. (see residual)
 T.O. - 4760' - blk. specks

4800

4900

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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE Utah
LEASE NUMBER U-0149773
UNIT _____

LESSEE'S MONTHLY REPORT OF OPERATIONS

State Utah County Grand Field Left Hand Canyon

The following is a correct report of operations and production (including drilling and producing wells) for the month of December, 1971, Federal 773

Agent's address 1110 Denver Club Building Company The Anschutz Corporation, Inc.
Denver, Colorado 80202

Signed Beth Hastings

Phone 266-2367 Agent's title Production Clerk

SEC. AND K OF K	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)
NW SE Sec 29	19S	21E	1	no	12-31-71	Building Tank Battery				Pump

NOTE.—There were no runs or sales of oil; no M cu. ft. of gas sold;

no 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

SUBMIT IN DUPLICATE

(See other instructions on reverse side)

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

State 10

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 _____

2. NAME OF OPERATOR
The Anschutz Corp., Inc.

3. ADDRESS OF OPERATOR
1110 Denver Club Bldg., Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface **NW. 3E. Sec. 29, T. 19 S., R. 21 E., S.L.M.**
At top prod. interval reported below **2160' fr. E-line & 1487' fr. S-line.**
At total depth _____

5. LEASE DESIGNATION AND SERIAL NO.
U-0149773

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Federal

9. WELL NO.
#1 Fed. 773

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
Sec. 29, T. 19S, R. 21E. S.L.M.

12. COUNTY OR PARISH
Grand

13. STATE
Utah

15. DATE SPUNDED **Oct. 28, '71** 16. DATE T.D. REACHED **Nov. 17, '71** 17. DATE COMPL. (Ready to prod.) **Dec. 18, '71** 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* **Grd.: 6420'; K.B. 6430'** 19. ELEV. CASINGHEAD **6419'**

20. TOTAL DEPTH, MD & TVD **4760'** 21. PLUG, BACK T.D., MD & TVD _____ 22. IF MULTIPLE COMPL., HOW MANY* _____ 23. INTERVALS DRILLED BY ROTARY TOOLS **0-4760'** CABLE TOOLS _____

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
Entrada 4738'-4760'

25. WAS DIRECTIONAL SURVEY MADE
Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN
IES; Gamma Density; Compensated Neutron Porosity, Dipmeter

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
8 5/8"	24#	776'	11"	185 sks.	none
5 1/2"	14#	4758'	7 7/8"	275 sks.	

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)

4500'-4516'	2 sh/ft.	4750'-4755'	
4305'-4312'	2 sh/ft.	4 sh/ft.	
4095'-4100'	2 sh/ft.		
4423'-4438'	2 sh/ft.		

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
4500'-4516'	750 gal. acid (7 1/2% Hcl)
4305'-4312'	300 gal. acid "
4095'-4100'	250 gal. acid "

33.* **Only zone 4750'-55' open** PRODUCTION **First four zones squeezed off.**
DATE FIRST PRODUCTION _____ PRODUCTION METHOD* (Flowing, gas lift, pumping—size and type of pump) _____ WELL STATUS (Producing or shut-in) **Producing**

Max Feb. 1, '72 Pumping

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
Dec. 16-18	24 hrs.	open	→	150	none	125	

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
		→	150		100	42.2°

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) **no gas** TEST WITNESSED BY **Wayne Fincher**

35. LIST OF ATTACHMENTS

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

SIGNED *H. Roy Gingley* TITLE **Consulting Geologist** DATE **Jan. 28, 1972**

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

INSTRUCTIONS

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

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

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

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

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

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

37. SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
		<i>See report</i>	

38. GEOLOGIC MARKERS

NAME	MEAS. DEPTH	TOP	TRUE VERT. DEPTH

JAN 31 1972

Anschutz Oil Completes Discovery Near Moab

Anschutz Corp. has completed its oil discovery in Grand County about 35 miles north of Moab.

W. W. Wakefield, Anschutz vice president, said the well is completed for an initial pump gauge of 150 barrels of oil daily. The oil production is from a perforated depth of 4,750 to 4,755 feet.

He said that more wells in the near future will be drilled near the discovery well.

Toledo Mining Co. reports its oil discovery, No. 1 Bull Canyon, two miles southeast of the Anschutz well, flowed 25 barrels of oil an hour with gas gauged at the rate of 500,000 cubic feet.

Northwest of Cisco

Toledo's well is about 18 miles northwest of Cisco. This well produces from a different formation than that of the Anschutz well. Toledo's oil production is from 3,600 feet in the Salt Wash formation. The Anschutz well produces from the Entrada sandstone formation.

Elsewhere in this area, Union Oil is drilling below 9,000 feet at a projected 12,000-foot test of Mississippian just east of Moab. The well is located on the Burkholder Unit where 18,896 acres of federal, state and patented lands have been leased together for possible future drilling.

The Utah Geological and Mineralogical Survey reports that gas wells in Grand County, some shut in for more than 20 years, will begin producing gas in 1972 upon completion of a pipeline and gathering system connecting the Cisco Dome field and other wells to the Pacific Northwest Pipeline.

42 Miles of Pipe

The project, costing about \$600,000, will consist of 42 miles of 2.5 and 4 and 6-inch lines designed to gather and deliver six million cubic feet of gas per day.

Cisco Dome field was discovered in 1925 and produced 3.1 billion cubic feet of gas from Dakota formation sandstones, mostly for carbon black manufacture. Production ceased in the early 1930s and except for sporadic drilling in the 1950s, little exploration has occurred in the area since.

The project was initiated by Texas Gas Corp., Corpus Christi, Tex. A Utah corporation, Grand Gas Corp., was

created to construct and operate the system.

*Saco Lake Tribune
Sunday, February 13, 1972*

Bill, D's note



CALVIN L. RAMPTON
Governor

OIL & GAS CONSERVATION BOARD

GORDON E. HARMSTON
Executive Director,
NATURAL RESOURCES

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS CONSERVATION

DELBERT M. DRAPER, JR.
Chairman

CHARLES R. HENDERSON
ROBERT R. NORMAN
WESLEY R. DICKERSON
EVART J. JENSEN

1588 WEST NORTH TEMPLE
SALT LAKE CITY, UTAH 84116
328-5771

March 20, 1972

The Anschutz Corporation
1110 Denver Club Building
Denver, Colorado

Gentlemen:

We would appreciate it very much if you would inform this Division as to the depth and thickness of any coal beds that your wells penetrate in the Left Hand Canyon - Bull Canyon area, Grand County, Utah.

This information should be noted on all "Well Completion Reports" filed in the future.

Very truly yours,

DIVISION OF OIL AND GAS CONSERVATION

Cleon B. Feight
CLEON B. FEIGHT
DIRECTOR

CBF:sd

*RMH
JDH
Jack: These aren't any
coals to my knowledge
not that we can
measure any way -
all behind surface
anyway in any case
for*

MAR. 21 1972

FORM OGC-8-X

FILE IN QUADRUPLICATE

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

REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & Number Anschutz # 1 Fed. 773 Bldg., Denver, Colo.
Operator Anschutz Corporation Address 1110 Denver Club Phone 266-2367
Contractor Willard Pease Drlg. Co. Address Grand Junc., Colo. Phone 242 6912
Location NW 1/4 SE 1/4 Sec. 29 T. 19S R. 21 E Grand County, Utah

Water Sands:

<u>Depth</u>		<u>Volume</u>	<u>Quality</u>
From	To	Flow Rate or Head	Fresh or Salty
1. 4300-	4315'	Swabbed 2 bbl/hr.	Salty (26,000 ppm chlorides)
2. 4420-	4440'	500' of Water in 1 hr.	Salty (11,000 ppm chlorides)
3. 4730-	4760'	500' on DST. of water in 1 hr. on DST.	Sl. salty (2000 ppm Chlorides)
4.			
5.			

(Continue on reverse side if necessary)

Formation Tops:

Mesaverde ---Surface	Dakota-----4076'
Mancos (Buck Tongue) -- 300'	Morrison --- 4166'
Castlegate Sd.-----504'	Summerville ---4690'
Mancos ----536'	Entrada -- 4738'

Remarks: **This well was completed as an oil well in the Entrada form.**

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

H. Row Gingley

THE AN CHUTZ CORPORATION, INC.

1110 DENVER CLUB BLDG. • DENVER, COLORADO 80202 • PHONE 266-2367

M E S S A G E

R E P L Y

TO **Mr. Cleon B. Feight**
Utah Department of Oil & Gas Comm.
1588 West North Temple
Salt Lake City, Utah 84116

DATE **March 31, 1972**

Mr. Feight:

**There aren't any coals to our
knowledge in the Federal 773 area
(Left Hand Canyon - Bull Canyon)
Grand County, Utah.**

**This will be noted ;in the future on
"Well Completion Reports".**

DATE

SIGNED

BY

Form N-873-R The Drawing Board, Inc., Box 505, Dallas, Texas

RECIPIENT KEEP THIS COPY, RETURN WHITE COPY TO SENDER

THE AN CHUTZ CORPORATION, INC.

1110 DENVER CLUB BLDG. • DENVER, COLORADO 80202 • PHONE 266-2367

MESSAGE

REPLY

TO [Mr. Cleon B. Feight]
[Utah Department of Oil & Gas Conn.]
[1588 West North Temple]
[Salt Lake City, Utah 84116]

DATE

DATE March 31, 1972

Mr. Feight:

There aren't any coals to our
knowledge in the Federal 773 area
(Left Hand Canyon - Bull Canyon)
Grand County, Utah.

This will be noted ;in the future on
"Well Completion Reports".

SIGNED

BY

Form N-R73R The Drawing Board, Inc., Box 505, Dallas, Texas

INSTRUCTIONS TO SENDER:

1. KEEP YELLOW COPY. 2. SEND WHITE AND

INSTRUCTIONS TO RECEIVER:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Salt Lake UG.
Water Analyses
JMD

Laboratory - Casper, Wyoming

INFORMATION TO BE FURNISHED WITH EACH SAMPLE OF WATER

Marks on container _____ Lab. No. 72-W 150 (Filled by Chemist)
SOURCE OF SAMPLE:

Field Left Hand Canyon, Utah Farm or Lease Utah 0149773
Permit _____
(Serial Number)

Operator Anschutz Corp. Inc. Operator's Address _____

Well No. 1 NWSE, $\frac{1}{4}$ Sec. 29, T. 19 S., R. 21 E., S. L. M.

Sample taken by G. R. Daniels Date taken 3/15/72

If known, name of sand (or formation) from which this sample is produced Entrada
(If doubtful, so state)

Depth to top of sand 4,738' Depth to bottom of sand ---

Depth well drilled 4,760' Present depth 4,758'

Depths (if known) where water encountered perforations @ 4,750-55'

Depth at which water string is landed, cemented, mudded $\frac{5}{8}$ cc @ 4,758' w/275 sacks

METHOD OF SAMPLING:

Place where sample was obtained (sump hole, lead line, flow tank, bailer, etc.)
well head

Method of production (flowing, pumping, air, etc.) _____

Initial production:
Barrels Oil 150/day
Barrels Water 100/day
Gas Volume _____
Rock Pressure _____

Present production
Barrels Oil _____
Barrels Water _____
Gas Volume _____
Rock Pressure _____

REASON FOR ANALYSIS:

- (1) Future Reference: XXXX
- (2) _____
- (3) Correlation: _____
- (4) _____

RECEIVED
BR. OF OIL & GAS OPERATIONS
JUN 22 1972
U. S. GEOLOGICAL SURVEY
SALT LAKE CITY, UTAH

Note: A sample for analysis is of no value unless accompanied by above information. Complete information on this form is to be attached to each sample container; otherwise sample will be disregarded. Be sure to seal or tightly cork all containers immediately after sampling and label all samples so that there will be no confusion.

Condition of Sample _____ Lab. No. 72-W 150

Analysis by K. P. Moore at Casper, Wyoming Date 6/12/72

CHEMICAL and PHYSICAL PROPERTIES

Spec. Grav. @ 60/60°F _____ pH 7.9 Color _____

Spec. Resistance (ohm-meters) @ _____ °F., observed _____, calculated _____

Constituent	Milligrams Per Liter (mg./l.)	Reacting Value in	
		Milliequivalents Per Liter (meq./l.)	Per Cent
Sodium (Na) & Potassium (K) (calculated as Sodium	1,984	86.301	41.391
Potassium (K)			
Calcium (Ca).....	307	15.319	7.347
Magnesium (Mg).....	32	2.630	1.262
Iron (Fe)			
.....			
Sulfate (SO ₄)	2,532	52.666	25.259
Nitrate (NO ₃)	0.8	0.013	0.006
Chloride (Cl)	1,712	18.278	23.155
Fluoride (F)	1.5	0.079	0.038
Carbonate (CO ₃)			
Bicarbonate (HCO ₃)	196	3.214	1.542
Hydroxide (OH)			
Silica (SiO ₂)			
Boron (B)	2.2		
(calculated as B ₄ O ₇)			
Selenium (Se)	0.017		
Sulfide (S)			
Hydrogen Sulfide (H ₂ S)			
Total Dissolved Solids			
By evaporation	6,888		
After ignition	6,682		
Calculated	6,668		

Properties of Reaction in Per Cent

Salinity, primary 82.78 secondary 14.13 chloride 17.78 sulfate 52.13
 Alkalinity, primary 0.00 secondary 3.09

Remarks and Conclusions: Appears questionable for any common surface use. Would not be suitable for irrigation purposes and of doubtful quality for livestock water. Sulfate, at 2532 mg/l, is higher than considered safe. EPA prefers the suggested safe limit of 1,000 mg/l but apparently view waters in these semi-arid regions with some leniency. State of Wyoming suggest safe upper limit for sulfate as 2,000 mg/l. Reportedly, water containing 2,004 mg/l of sulfate has caused weakening and death in cattle.

SW 1/4 + SE 1/4
 Sec 29, T19S,
 R. 21 E

UNITED STATES DEPARTMENT OF THE INTERIOR
 GEOLOGICAL SURVEY
 WRD CENTRAL QW LAB, SALT LAKE CITY, UTAH

→ *File in #1 - Anschutz*

WATER QUALITY ANALYSIS

DATE 720414

STATION ID
 390710109370310

(D-19-21) 29DBC-1 ANSCHUTZ-FED #1

STATE CODE LOCATION	COUNTY CODE	PROJECT CODE	AGENCY CODE	MAILING ADDRESS			
49	19	UT99		SALT LAKE CITY, UT.			
BEGIN DATE	END DATE	TIME	TYPE	NO. OF DETR	SAMPLE ID.	RECORD NO.	SOURCE
720314			2	25	82002	12653	GROUND WATER

NO. 3 SAMPLE ACIDIFIED BEFORE FILTERING ON PURPOSE "BALANCE"? KEEP ANALYSIS CONFIDENTIAL. SEND TO HOOD, SAMPLE SUBMITTED FOR UTAH O&GCC SAMPLE FROM SEPARATOR DISCHARGE LINE. FIELD COND 8000 PLUS

BORON DISSOLVED	UG/L	4100	CONDUCTIVITY	9540
IRON DISS (AS FE)	UG/L	1600	MANGANESE DISSOLVED	UG/L 290
PH		7.1	SILICA	MG/L 31
PHOS DISORTHO (AS P)	MG/L	0.02	PHOSPHATE DISSORTHO	MG/L 0.06
ALK, TOT (AS CAC03)	MG/L	149	TOTAL HARDNESS	MG/L 860
NONCARB HARDNESS	MG/L	710	SAR	28
PERCENT SODIUM		82	CALC DISSOLVED SOLID	MG/L 6810
DIS SOLIDS (TON/AFT)		9.26		

MAJOR IONS

CATIONS (MG/L)	ANIONS (MG/L)
CALCIUM DISS. 300	BICARBONATE 182
MAGNESIUM DISS. 27	CARBONATE 0
POTASSIUM 50	CHLORIDE 1800
SODIUM 1900	FLOURIDE DISS. 2.6
	SULFATE 2600
	NO2+NO3 AS N 0.04

CORRECTIONS SHOULD BE SUBMITTED TO THE WRD CENTRAL LAB, SALT LAKE CITY UTAH, WITHIN 15 DAYS OF THE DATE OF THE ANALYSIS. INDICATE SAMPLE IDENTIFICATION NO. AND THE RECORD NO. WITH RESPONSE.

THIS DATA HAS RECEIVED CENTRAL LABORATORY QUALITY CONTROL CHECKS AND HAS BEEN PLACED INTO PERMANENT WRD DATA STORAGE FILES.

9-348
(September 1943)

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
JUL 5 1972
U.S. GEOLOGICAL SURVEY
SALT LAKE CITY, UTAH

Casper, Wyoming, Laboratory

INFORMATION TO BE FURNISHED WITH EACH SAMPLE

Marks on container Lab. No. 72-052 (Filled in by Chemist)

Field Left Hand Canyon, Utah Farm or Lease Utah 0119773
(Serial Number)

Operator Anschutz Corporation, Inc. Address

Well No. 1, NW 1/4, SE 1/4 sec. 29, T. 19 S., R. 21 E., S.L. M.

Sample taken by G. R. Daniels Date taken 3/15/72

Name of sand (or formation) from which this sample was obtained (if unknown or doubtful, so state) Entrada

Depth to top of sand 4,738' Depth to bottom of sand - - - -

Depth well drilled 4,760' Present depth

Depths at which casing is perforated 4,750-55'

If drill stem test, depth at which packer is set

Depth at which last shut-off string of casing is landed, cemented or mudded (state which) 5 1/2" cc @ 4,758' w/275 sacks

Depths (if known) where water encountered

If acidized, dates, depths and gallons of acid

Place where sample was obtained (drill stem, lead line, flow tank, bailer, etc.) well head

Method of production (flowing, pumping, air, etc.)

Initial Production:	Present Production:
Barrels Oil 150/day	Barrels Oil
Barrels Water 100/day	Barrels Water
Gas Volume	Gas Volume
Rock Pressure	Rock Pressure

REASON FOR ANALYSIS future reference

Note: A sample for analysis is of no value unless accompanied by above information. Complete information on this form is to be attached to each sample container; otherwise sample will be disregarded. Be sure to seal or tightly cork all containers immediately after sampling and label all samples so that there will be no confusion.

CRUDE OIL ANALYSIS

Condition of sample Analysis by K. P. Moore Laboratory No. 72-052
 Date 6/22/72

GENERAL CHARACTERISTICS

Specific Gravity 0.8212 A.P.I. Gravity 40.8
 Per cent Sulphur 0.27 Pour Point 50° F
 Saybolt Universal Viscosity at 70°F 50.1 sec. Color brownish-green (dark)
 Saybolt Universal Viscosity at 100°F 40.2 sec. Base paraffin-intermediate

DISTILLATION, BUREAU OF MINES, HEMPEL METHOD

Distillation at atmospheric pressure 631 mm Hg First Drop 72° C (162° F)

Fraction No.	Cut at °C.	Per Cent °F.	Sum Per Cent	Sp.Gr. 60/60°F.	°A.P.I. 60°F.	C.I.*	S.U. Visc. 100°F.	Cloud Test °F.
1	50	122	tr	tr	--	--		
2	75	167	2.1	2.1	0.691	73.3		
3	100	212	3.5	5.6	0.714	66.7	9.4	
4	125	257	5.9	11.5	0.735	61.0	12	
5	150	302	6.8	18.3	0.755	55.9	14	
6	175	347	6.9	25.2	0.775	51.1	18	
7	200	392	7.8	33.0	0.791	47.4	20	
8	225	437	9.3	42.3	0.805	44.3	21	
9	250	482	9.8	52.1	0.817	41.7	22	
10	275	527						

*Note: C.I. values calculated basis Bureau of Mines T.P. #610.

Distillation continued at 40 mm.

11	200	392	2.7	54.8	0.833	38.4	26	42	16
12	225	437	2.6	61.4	0.838	37.4	24	46	32
13	250	482	7.2	71.6	0.849	35.2	26	57	54
14	275	527	6.4	78.0	0.865	32.1	31	78	70
15	300	572	6.7	84.7	0.880	29.3	35	120	90

Residuum 15.3 100.0 0.918 22.6

Carbon residue of residuum 3.1% Carbon residue of crude 0.5%

APPROXIMATE SUMMARY

	Per cent	Sp.Gr. 60/60°F.	°A.P.I. 60°F.	Viscosity, secs.
Light gasoline	2.1	0.691	73.3	
Total gasoline and naphtha	25.2	0.745	58.4	
Kerosene distillate	26.9	0.805	44.3	
Gas oil	11.0	0.840	37.0	Below 50
Nonviscous lubricating distillate	16.1	0.843-0.875	36.4-30.2	50-100
Medium lubricating distillate	5.5	0.875-0.886	30.2-28.2	100-200
Viscous lubricating distillate				Above 200
Residuum	15.3	0.918	22.6	
Distillation loss	0			

5

DRILLING HISTORY
and
GEOLOGIC REPORT
of
ANSCHUTZ #1 FED. 772 WELL

By

W. Don Quigley
Consulting Geologist
Salt Lake City, Utah

May 31, 1974

DMB



1110 DENVER CLUB BUILDING
318 SEVENTEENTH STREET
DENVER, COLORADO 80202
TELEPHONE 303-573-5665

June 21, 1974

Mr. G. R. Daniels
U. S. Geological Survey
8426 Federal Building
Salt Lake City, Utah 84111

Clean Feight
Utah Oil & Gas Conservation Director
1588 West, North Temple
Salt Lake City, Utah 84116

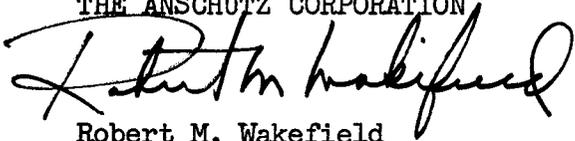
Re: Anschutz #1 Fed 772
NW SWSW Section 21-19S-21E
Grand County, Utah

Gentlemen:

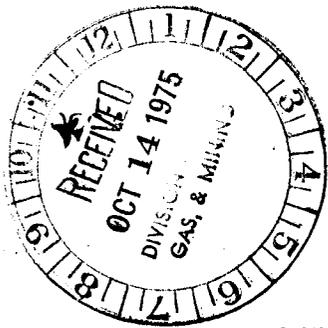
Transmitted herewith is the GEOLOGICAL REPORT AND WELL
HISTORY on the captioned well.

Yours very truly,

THE ANSCHUTZ CORPORATION


Robert M. Wakefield
Geologist

RMW:mds
Enclosure



STATE OF UTAH
 DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF OIL & GAS CONSERVATION
 1588 WEST NORTH TEMPLE
 SALT LAKE CITY, UTAH 84116
 328-5771

State Lease No. _____
 Federal Lease No. U-0149773
 Indian Lease No. _____
 Fee & Pat. _____

REPORT OF OPERATIONS AND WELL STATUS REPORT

STATE Utah COUNTY Grand FIELD/LEASE Left Hand Canyon

The following is a correct report of operations and production (including drilling and producing wells) for the month of:
August, 1975

Agent's Address 1110 Denver Club Building Company The Anschutz Corporation
Denver, Colorado 80202 Signed Beth Vienna
 Phone No. 573-5665 Title Production Clerk

Sec. & 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)
NW SE Sec. 29	19S	21E	1	31	143	40	tstm	-	8,795	Pump
CUMULATIVE					19,386				102,177	

OIL or CONDENSATE: (To be reported in Barrels)

On hand at beginning of month 650
 Produced during month 143
 Sold during month 375
 Unavoidably lost 0
 Reason: _____
 On hand at end of month 418

SHUT-IN OR TEMPORARILY SHUT-IN WELLS: This report must be filed on or before the sixth month day of the calendar month following the month for each well. Where a well is temporarily shut-in, a negative report must be filed. **THIS REPORT MUST BE FILED**



Form DOGCA

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS CONSERVATION

1588 WEST NORTH TEMPLE
SALT LAKE CITY, UTAH 84116
328-5771

State Lease No. _____
Federal Lease No. U-0149773
Indian Lease No. _____
Fee & Pat. _____

REPORT OF OPERATIONS AND WELL STATUS REPORT

STATE Utah COUNTY Grand FIELD/LEASE Left Hand Canyon

The following is a correct report of operations and production (including drilling and producing wells) for the month of:
September 1975

Agent's Address 1110 Denver Club Building Company The Anschutz Corporation
Denver, Colorado 80202 Signed Beth Sierra
Title Production Clerk
Phone No. 573-5665

Sec. and 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)
NW SE Sec. 29	19S	21E	1	30	149	40°	TSTM		9,750	Pump
CUMULATIVE					19,535				111,927	

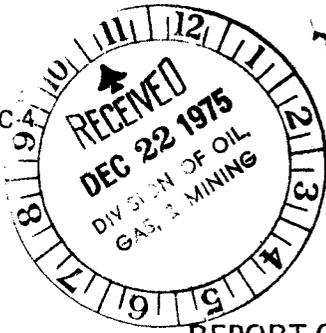
Handwritten: 773-1

OIL or CONDENSATE: (To be reported in Barrels)

On hand at beginning of month _____
Produced during month _____
Sold during month _____
Unavoidably lost _____
Reason: _____
On hand at end of month _____

Produced _____
Went _____
Off Lease _____

WELLS: This report must be filed on or before the sixteenth day of the succeeding month following the month for each well. Where a well is temporarily shut-in, a negative report must be filed. THIS REPORT MUST BE FILED



STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL & GAS CONSERVATION 1588 WEST NORTH TEMPLE SALT LAKE CITY, UTAH 84116 328-5771

State Lease No. Federal Lease No. U-0149773 Indian Lease No. Fee & Pat.

REPORT OF OPERATIONS AND WELL STATUS REPORT

773-1

STATE Utah COUNTY Grand FIELD/LEASE Left Hand Canyon

The following is a correct report of operations and production (including drilling and producing wells) for the month of: November, 1975

Agent's Address: 1110 Denver Club Building, Denver, Colorado 80202. Company: The Anschutz Corporation. Signed: [Signature] Title: Production Clerk. Phone No.: 573-5665

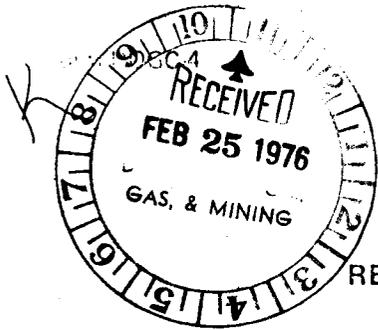
Table with columns: Sec. and 1/4 c. s., Twp., Range, Well No., Days Produced, Barrels of Oil, Gravity, Cu. Ft. of Gas (In thousands), Gallons of Gasoline Recovered, Barrels of Water (if none, so state), REMARKS. Row 1: NW SE Sec. 29, 19S, 21E, 1, 0, Well shut in for winter - roads impassable, Pump.

CUMULATIVE

GAS (MCF) Sold, Vented, Off Lease

OIL or CONDENSATE: (To be reported in Barrels) On hand at beginning of month, Produced during month, Sold during month, Unavoidably lost, Reason, On hand at end of month

NOTE: ON PRODUCING WELLS: This report must be filed on or before the sixteenth day of the succeeding month following the month for each well. Where a well is temporarily shut-in, a negative report must be filed. THIS REPORT MUST BE FILED



STATE OF UTAH
 DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF OIL & GAS CONSERVATION
 1588 WEST NORTH TEMPLE
 SALT LAKE CITY, UTAH 84116
 328-5771

State Lease No. _____
 Federal Lease No. U-0149773
 Indian Lease No. _____
 Fee & Pat. _____

REPORT OF OPERATIONS AND WELL STATUS REPORT

f

State Utah COUNTY Grand FIELD/LEASE Left Hand Canyon

The following is a correct report of operations and production (including drilling and producing wells) for the month of:
January, 1976

Agent's Address 1110 Denver Club Building Company The Anschutz Corporation
Denver, Colorado 80202 Signed Beth Vienna
 Phone No. 573-5665 Title Production Clerk

Sec. and 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)
NW SE Sec. 29	19S	21E	1	0						Pump Shut in for winter
CUMULATIVE										

GAS: _____

OIL or CONDENSATE: (To be reported in Barrels)
 On hand at beginning of month _____
 Produced during month _____
 Sold during month _____
 Unavoidably lost _____
 Reason: _____
 On hand at end of month _____

DRILLING AND PRODUCING WELLS: This report must be filed on or before the sixteenth day of the succeeding month following production for each well. Where a well is temporarily shut-in, a negative report must be filed. **THIS REPORT MUST BE FILED**



1110 DENVER CLUB BUILDING
518 SEVENTEENTH STREET
DENVER, COLORADO 80202
TELEPHONE 303-573-5665

4 copies

August 24, 1976

P

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

Re: Analysis, Water
Utah

Dear Mr. Feight:

Enclosed are copies of laboratory reports on water samples conducted after 1972 on wells drilled in Utah. The well name, location, date of test, and depth are listed below.

Federal 773 No. 1 NW SE 29-19S-21E Grand County, Utah	6-8-76	4760'
State 428 No. 1 SW SE 5-16S-22E Grand County, Utah	3-1-74 2-14-74 2-5-74	9685-95' & 9778-92'
State 913 No. 1-A SE 9-16S-22E Grand County, Utah	8-15-74	9450-65'
Federal 614 No. 1 SE SW 3-17S-21W Grand County, Utah	7-25-74 8-16-74	2800' 2070-2110'

Cordially yours,

John D. Haley
John D. Haley

JDH:bv

Enclosures - Noted

JOHN C. KEPHART & CO.
GRAND JUNCTION LABORATORIES

435 NORTH AVENUE

PHONE 242-7618

GRAND JUNCTION, COLORADO 81501

Analysis
Water
Left Hand Canyon

ANALYTICAL REPORT

Received from: Anschutz Corp.
Denver, Colorado

Attn: Wayne Pierce

Customer No. Federal 773-1 Laboratory No. 1172 Sample Well Water

Date Received June 4, 1976 Date Reported June 8, 1976

Sample Federal 773-1
Well Water

Ph 7.5
Specific Gravity 60/70° 1.005
Resistivity(Ohms Meter) 1.14

Chloride(Cl)	1675 mg/L	47.2 meq/L
Sodium(Na)	2000 "	87 "
Calcium(Ca)	321 "	16 "
Magnesium(Mg)	24.3 "	1.99 "
Sulfate(SO ₄)	2855 "	94.7 "

Carbonate(CO ₃)	0.0 mg/L	0.0 meq/L
Bicarbonate(HCO ₃)	206 "	3.37 "

Iron(Fe)	*L.T. 0.01 mg/L	
Potassium(K)	52.6 mg/L	1.34 meq/L

Total Alkalinity(CaCO ₃)	169 mg/L	2.76 meq/L
--------------------------------------	----------	------------

Solids Before Ignition	12702 mg/L	
Solids After Ignition	12188 "	

By J. C. Kephart



STATE OF UTAH
 DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF OIL & GAS CONSERVATION

1588 WEST NORTH TEMPLE
 SALT LAKE CITY, UTAH 84116
 328-5771

State Lease No. _____
 Federal Lease No. U-0149773
 Indian Lease No. _____
 Fee & Pat. _____

REPORT OF OPERATIONS AND WELL STATUS REPORT

COUNTY Grand FIELD/LEASE Left Hand Canyon

Following is a report of operations and production (including drilling and producing wells) for the month of:
October, 1976

Agent's Address: 1110 Denver Club Building Company: The Anschutz Corporation
Denver, Colorado 80202 Signed: Beth Zierman
 Phone No. (303) 573-5665 Title: Production Clerk

Sec. No.	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)
NW SE Sec. 29	19S	21E	1	0					SI for Winter
CUMULATIVE									
MONTHLY DISPOSITION:									
GAS: (MCF)				OIL OR CONDENSATE: (Barrels)			WATER DISPOSITION (Bbls):		
Sold				Sold			Pit		
Vented/Flared				Used			Injected		
Used on Lease				Unavoidably Lost			Unavoidably Lost		
Lost				Reason			Reason		
Reason							Other		

GAS: (MCF)
 Sold _____
 Vented _____
 Used on Lease _____
 Lost _____
 Reason _____

OIL or CONDENSATE: (To be reported in Barrels)
 On hand at beginning of month _____
 Produced during month _____
 Sold during month _____
 Unavoidably lost _____
 Reason: _____
 On hand at end of month _____

NOTE: THIS REPORT MUST BE FILED IN THE OFFICE OF THE DIVISION OF OIL & GAS CONSERVATION, SALT LAKE CITY, UTAH, BEFORE THE FIFTEENTH DAY OF THE FOLLOWING MONTH. THIS REPORT MUST BE FILED FOR EACH WELL. Where a well is temporarily shut-in, a negative report must be filed.

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS CONSERVATION

1588 WEST NORTH TEMPLE
SALT LAKE CITY, UTAH 84116
328-5771

State Lease No. _____
Federal Lease No. U-0149773
Indian Lease No. _____
Fee & Pat. _____

REPORT OF OPERATIONS AND WELL STATUS REPORT

Utah COUNTY Grand FIELD/LEASE Left Hand Canyon

The following is a correct report of operations and production (including drilling and producing wells) for the month of:
November 1976

Agent's Address: 1110 Denver Club Building, Denver, Colorado 80202
Company: The Anschutz Corporation
Signed: Beth Vienna
Title: Production Clerk
Phone No. (303) 573-5665

Sec.	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)
NW SE Sec. 29	19S	21E	1	0	0					Pump SI for winter
CUMULATIVE										
MONTHLY DISPOSITION:										
GAS: (MCF)			OIL OR CONDENSATE: (Barrels)			WATER DISPOSITION (Bbls):				
Sold			Sold			Pit				
Vented/Flared			Used			Injected				
Used on Lease			Unavoidably Lost			Unavoidably Lost				
Lost			Reason			Reason				
Reason						Other				

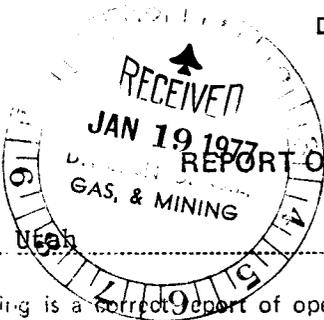
GAS: (MCF)
Sold _____
Vented _____
Off Lease _____

OIL or CONDENSATE: (To be reported in Barrels)
On hand at beginning of month _____
Produced during month _____
Sold during month _____
Unavoidably lost _____
Reason: _____
On hand at end of month _____

STATE OF UTAH
 DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF OIL & GAS CONSERVATION

State Lease No. _____
 Federal Lease No. U-0149773
 Indian Lease No. _____
 Fee & Pat. _____

1588 WEST NORTH TEMPLE
 SALT LAKE CITY, UTAH 84116
 328-5771



REPORT OF OPERATIONS AND WELL STATUS REPORT

STATE Utah COUNTY Grand FIELD/LEASE Left Hand Canyon

The following is a correct report of operations and production (including drilling and producing wells) for the month of:
December, 19 76

Agent's Address 1110 Denver Club Building Company The Anschutz Corporation
Denver, Colorado 80202 Signed Beth Vienna
 Phone No. (303) 573-5665 Title Production Clerk

Well No.	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)	
NW SE Sec. 29	19S	21E	1							xxxx SI - Roads impassable	
CUMULATIVE					19,907		55		126,409		
MONTHLY DISPOSITION:											
GAS: (MCF)					OIL OR CONDENSATE: (Barrels)			WATER DISPOSITION (Bbls):			
Sold			0	Sold		0	Pit		0		
Vented/Flared			0	Used		0	Injected		0		
Used on Lease			0	Unavoidably Lost		0	Unavoidably Lost		0		
Lost			0	Reason			Reason				
Reason							Other		0		

GAS: (MCF)
 Sold _____
 Vented _____
 Off Lease _____

OIL or CONDENSATE: (To be reported in Barrels)
 On hand at beginning of month _____
 Produced during month _____
 Sold during month _____
 Unavoidably lost _____
 Reason: _____
 On hand at end of month _____

OPERATING WELLS: This report must be filed on or before the sixteenth day of the succeeding month following production for each well. Where a well is temporarily shut-in, a negative report must be filed. **THIS REPORT MUST BE FILED**

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-0149773

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

2. NAME OF OPERATOR
The Anschutz Corporation

3. ADDRESS OF OPERATOR
1110 Denver Club Bldg., Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface 2160' fr. E-line and 1487' fr. S-line.
NW. SE. Sec. 29, T. 19S., R. 21E., SLM

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Federal 773

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 29, T.19S, R.21E
SLM

14. PERMIT NO.

--

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

GR: 6420'; K.B: 6430'

12. COUNTY OR PARISH 13. STATE

Grand Utah

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

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

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

Federal 773 will be abandon because revenue is inadequate to pay operating cost. The well was drilled to total depth of 4760' with a maximum deviation of 1 3/4 °. The present oil and water production zone is in the Entrada formation at 4738' to 4760'. The well was drilled with air from surface to total depth. From ground level 776' of 8 5/8 inch OD 24# casing was cemented to the surface in an 11 inch hole. From 776' to 4758' a 5 1/2 inch OD 14# casing was cemented in a 7 7/8 inch hole. This cementing was done using 185 sx for surface casing and 275 sx for production casing. This 275 sx results in cement from total depth up to 3835'. This effectively seals the Entrada (4738'), Summerville (4690'), Saltwash (4420'), Morrison (4166'), Dakota (4076') and a portion of the Mancos. The number of free points would probably be one at a depth of 3835' (top of the production casing cement). The amount and size of casing to be pulled will probably be 3059' of 5 1/2 inch OD 14# production casing. This casing will be pulled by hydraulic casing jacks after parting the casing. The depth to the top of any casing left in the hole would be at 3835'. The proposed bottom depth plug (40sx) will be placed at 3835' one half in and one half out of the casing stub. The proposed 2nd plug (50sx) will be at 776' one half in and one half out of surface casing shoe. A top plug (10 sx) will be placed at the surface. Mud will be placed below, between and above the plugs. Upon setting top plug a regulation marker will be erected. The location will be restored according to BLM specifications as soon as the

18. I hereby certify that the foregoing is true and correct reserve pit dries out and can be filled.

SIGNED W. Lee Kuhre TITLE Operations Coordinator DATE July 5, 1977

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

APPROVED BY THE DIVISION OF
OIL, GAS, AND MINING

DATE: July 8, 1977

BY: [Signature]

*See Instructions on Reverse Side

THE INSCHUTZ CORPORATION
1110 DENVER CLUB BUILDING • DENVER, COLORADO 80202
PHONE (303) 573-5665

M E S S A G E

R E P L Y

TO Mr. Cleon B. Feight, Dir.
Utah Division of Oil , Gas & Mining
1588 West, North Temple
Salt Lake City, Utah 84116

DATE July 6, 1977

Re: U-0149773

Grand County, Utah

Enclosed are two copies of the U.S.G.S.

"Sundry Notice" to abandon the Federal

772 No. 1 (U-0149773).

Cordially,

Beth Vierra

Beth Vierra

BY Secretary, Production

DATE

P



SIGNED

Form N-773 © The Drawing Board, Inc., Box 505, Dallas, Texas

INSTRUCTIONS TO SENDER:

1. KEEP YELLOW COPY. 2. SEND WHITE AND PINK COPIES WITH CARBON INTACT.

INSTRUCTIONS TO RECEIVER:

1. WRITE REPLY. 2. DETACH STUB, KEEP PINK COPY, RETURN WHITE COPY TO SENDER.

THE ANSCHUTZ CORPORATION
1110 DENVER CLUB BUILDING - DENVER, COLORADO 80202
PHONE (303) 573-5665

MESSAGE

REPLY

TO Mr. Cleon B. Feight, Dir.
Utah Division of Oil, Gas & Mining
1588 West, North Temple
Salt Lake City, Utah 84116

DATE

DATE July 8, 1977

Re: *U-0149773

Grand County, Utah

Enclosed are two copies of the U.S.G.S.

"Sundry Notice" to abandon the Federal

772 No. 1 (U-0149773).

Cordially,

Beth Vierra

BY Secretary, Production

SIGNED

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

MONTHLY REPORT
OF
OPERATIONS

Lease No. U-0149773
FEDERAL 73
Communitization Agreement No. _____
Field Name Left Hand Canyon
Unit Name _____
Participating Area _____
County Grand State Utah
Operator The Anschutz Corporation

Amended Report

The following is a correct report of operations and production (including status of all unplugged wells) for the month of September, 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	NW SE 29	19S	21E	POW					Temporarily Abandoned



*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	0	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Produced	0	0	0
*Sold	0	0	XXXXXXXXXXXXXXXXXXXX
*Spilled or Lost	0	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXXXX	0	XXXXXXXXXXXXXXXXXXXX
*Used on Lease	0	0	XXXXXXXXXXXXXXXXXXXX
*Injected	0	0	0
*Surface Pits	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	0
*Other (Identify)	0	0	0
*On hand, End of Month	0	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	na	na	XXXXXXXXXXXXXXXXXXXX

Authorized Signature: Beth Verra

Address: 1110 Denver Club Building
Denver, Colorado 80202

Title: Production Clerk

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT 1
(Other im-
verse side)

Form approved.
Budget Bureau No. 42-R14

5. LEASE DESIGNATION AND SERIAL NO.
42-149773

6. IF INDIAN, ALLOTTEE OR TRIBE NA

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Federal #773

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 29, T. 19S, R. 21E., SLM

12. COUNTY OR PARISH
Grand

13. STATE
Utah

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
The Anschutz Corporation

3. ADDRESS OF OPERATOR
1110 Denver Club Building, Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
2160' FEL and 1487' FSL
NW SE Sec. 29, T. 19S, R. 21E., SLM

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
GR 6420'; KB: 6430'

DIVISION OF
OIL, GAS & MINING

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

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

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

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

Abandonment on Federal 733 #1 was started on 1-3-78 and down hole work completed on 1-19-78. Rig was moved in and sucker rods were layed down. TBG was pulled to remove production equipment. TBG was run to 4761' KB and hole was filled w/8.7 #/gal mud. On 1-5-78 a 25 sk cement plug was set @ 4761'-4660' and a 25 sk cement plug set at 3950'-3850' KB as witnessed by Mr. Ron Alexander - USGS and Mr. Russ Cook - USGS. 5-1/2" OD production casing was free pointed @ 3175' KB w/70% movement. 5-1/2" OD production casing was parted @ 3120' KB using McCollough Services "Jet Cutter" and pulled from well. Free point and parting was witnessed by Mr. Russ Cook and Mr. Ron Alexander of USGS. On 1-9-78 #35 Sk cement plug was set across 5-1/2" OD casing stub from 3178' KB to 3070' KB. A 40 Sk cement plug was set across bottom of 8-5/8" OD surface casing. From 809' to 700' Laid down production TBG used to spot cement plugs. Fill 8-5/8" casing to 16' GL w/8.7 #/gal mud. Set surface plug from 0' G.L.M. Set dry hole marker welded to 8-5/8" stub and in cement. Surface restoration has not been completed as of this date, due to weather and road conditions. Restoration will be completed as weather permits.

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

SIGNED W. Lee Kuhre TITLE Operations Coordinator DATE 1-24-78

(This space for Federal or State office use)

APPROVED BY J. W. Gynn TITLE FOR E. W. GYNN DISTRICT ENGINEER DATE JUL 23 1981

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

UTAH STATE OFFICE