

~~FILE NOTATIONS~~

Entered in NID File
Location Map Pinned
Card Indexed

Checked by Chief
Approval Letter *B. 25. 69*
Disapproval Letter

COMPLETION DATA:

Date Well Completed *1-6-70*

Location Inspected

W..... WW..... TA.....

Bond released

GW..... OS..... PA.....

State or Fee Land

LOGS FILED

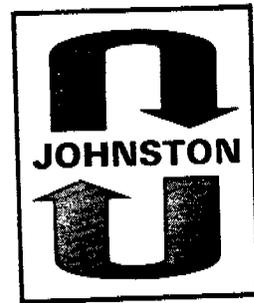
Driller's Log: *1-6-70*

Electric Logs (No.)

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

BHC Sonic GR..... Lat..... Mi-L..... Sonic.....

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



SPECIAL DATA ANALYSIS

JANUARY 6, 1969

GENTLEMEN:

THE ENCLOSED TEST APPEARS TO BE A GOOD MECHANICAL DRILL STEM TEST DURING WHICH THE TOOLS DID FUNCTION PROPERLY. THE FORMATION PRODUCED ENOUGH RESERVOIR FLUID FOR PROPER IDENTIFICATION. RESERVOIR PRESSURE DRAWDOWN WAS SUFFICIENT AND ADEQUATE SHUT-IN BUILD-UPS DID OCCUR FOR RELIABLE QUANTITATIVE ANALYSIS.

1. FLOW RATE: A FLOW RATE OF 313 BBL/DAY OF TOTAL LIQUID WAS NOTED DURING THIS TEST. RECOVERY WAS REPORTED AS SLIGHTLY OIL AND GAS CUT MUD AND GAS CUT WATER. THE WATER APPEARS TO BE FORMATION WATER.
2. RESERVOIR PRESSURE: EXTRAPOLATION OF THE INITIAL SHUT-IN PRESSURE BUILD-UP INDICATES A MAXIMUM RESERVOIR PRESSURE OF 2312 P.S.I.G. AT RECORDER DEPTH. EXTRAPOLATION OF THE SECOND SHUT-IN PRESSURE BUILD-UP INDICATES A MAXIMUM RESERVOIR PRESSURE OF 2307 P.S.I.G. AT RECORDER DEPTH. EXTRAPOLATION OF THE FINAL SHUT-IN PRESSURE BUILD-UP INDICATES A MAXIMUM RESERVOIR PRESSURE OF 2302 P.S.I.G. AT RECORDER DEPTH. THE DIFFERENCE BETWEEN THE INITIAL AND FINAL SHUT-IN PRESSURE OF 10 P.S.I.G. IS PROBABLY INSIGNIFICANT.
3. PERMEABILITY: THE CALCULATED TRANSMISSIBILITY FACTOR OF 144.2 MD.-FT./CP. INDICATES AN AVERAGE EFFECTIVE PERMEABILITY TO TOTAL LIQUID OF 2.25 MD. FOR THE REPORTED 64 FOOT TEST INTERVAL. THE CALCULATIONS WERE BASED ON A SLOPE OF 353 P.S.I./LOG CYCLE OBTAINED FROM THE FINAL SHUT-IN BUILD-UP PLOT. IT WAS ASSUMED FOR THESE CALCULATIONS THE PRODUCT OF THE LIQUID VISCOSITY AND FORMATION VOLUME FACTOR TO BE 1.0.
4. WELL BORE DAMAGE: THE CALCULATED ESTIMATED DAMAGE RATIO OF 1.3 INDICATES THAT WELL BORE DAMAGE IS PRESENT AT THE TIME AND CONDITIONS OF THIS TEST. THIS VALUE INFERS THAT THE RATE OF PRODUCTION OBSERVED AT THE FORMATION FACE DURING THIS TEST MAY BE INCREASED 1.3 TIMES IF THE WELL BORE DAMAGE ALONE WERE REMOVED.
5. RADIUS OF INVESTIGATION: THE CALCULATED RADIUS OF INVESTIGATION OF THIS TEST IS 73 FEET BASED ON AN ASSUMED POROSITY OF 10%, COMPRESSIBILITY OF 3.3×10^{-6} , AND OTHER ASSUMPTIONS MADE IN NUMBER 3 ABOVE.
6. GENERAL COMMENTS: THE FORMATION EXHIBITS THE CHARACTERISTICS OF RELATIVELY LOW PERMEABILITY EFFECTIVE TO THE RESERVOIR FLUID AND INDICATES THE PRESENCE OF WELL BORE DAMAGE.

THE PREDOMINANT FLUID PRODUCED ON THIS TEST APPEARS TO BE FORMATION WATER. THIS COUPLED WITH THE VIRTUAL ABSENCE OF HYDROCARBONS, MAKES CHANCES APPEAR POOR FOR A COMMERCIAL COMPLETION IN THIS ZONE.

TENNECO OIL COMPANY
UPPER VALLEY SOUTH #1, KANE COUNTY, UTAH
TEST #2, 8086' TO 8150' FIELD REPORT #14432 B

James Elison - James (Barlow OK)

8900 TD

Upper Valt South #1
40' of Conductor

3500 - 88 / macrami string
Cemented to

7 7/8 hole lala

Jyji 2110

Jolola 2630

Worosi 2805

Grampi 4390

Chenli 6500

Shenrui 7000 (7060 - 7240 ϕ 15%)

Worolaji 7240

Jolabal - 7870 (Jampup to ready)

Worosi - 8623

Cedar Mesa - 8840

7870 - 7960 - 77% ϕ av

7960 - 8000 - 15% ϕ ↓

8000 - 8110 - 77%

8110 - 8140 - 14%

8140 - 8200 - 7%

8200 - 8300 - 0%

to TD \approx 8% av. ϕ

DST #2 Jolabal

8086 - 8150 - 930' of VSGCW
3500 PPM NaCl
FSI - 2023 PSI

DST #1 Jampup - 7860 - 7897 = 1920 same as above
3700 PPM NaCl 7870' = 144'
FSI 2111 PSI

1) 8800 - 8750 - top of Cedar Mesa

2) 7850 - 7750 - Top of Jolabal

3) 200' plug of Shenrui - 7000 - 7700

4) 50' plug top of Chenli = ~~4370 to 4420~~
6475 - 6570

5) 50' = 4370 to 4420 top of Worolaji

6) 100' to 200' $\frac{1}{2}$ in $\frac{1}{2}$ out base of 88 ~~235~~
3400 to 2600

7) 10 sp / marker / mud g/lb 1/6/70
(Zone 4, S. G.S. No. at Zamboni Notes) PWB

2400 ISI
14432

2300

2200

2100

2000

1900

PRESSURE (P.S.I. .G.)

x

x

x

x

x

x

x

x

x

x

x

x

0.5

0

FSI
14332

PRESSURE (P.S.I.G.)

2300

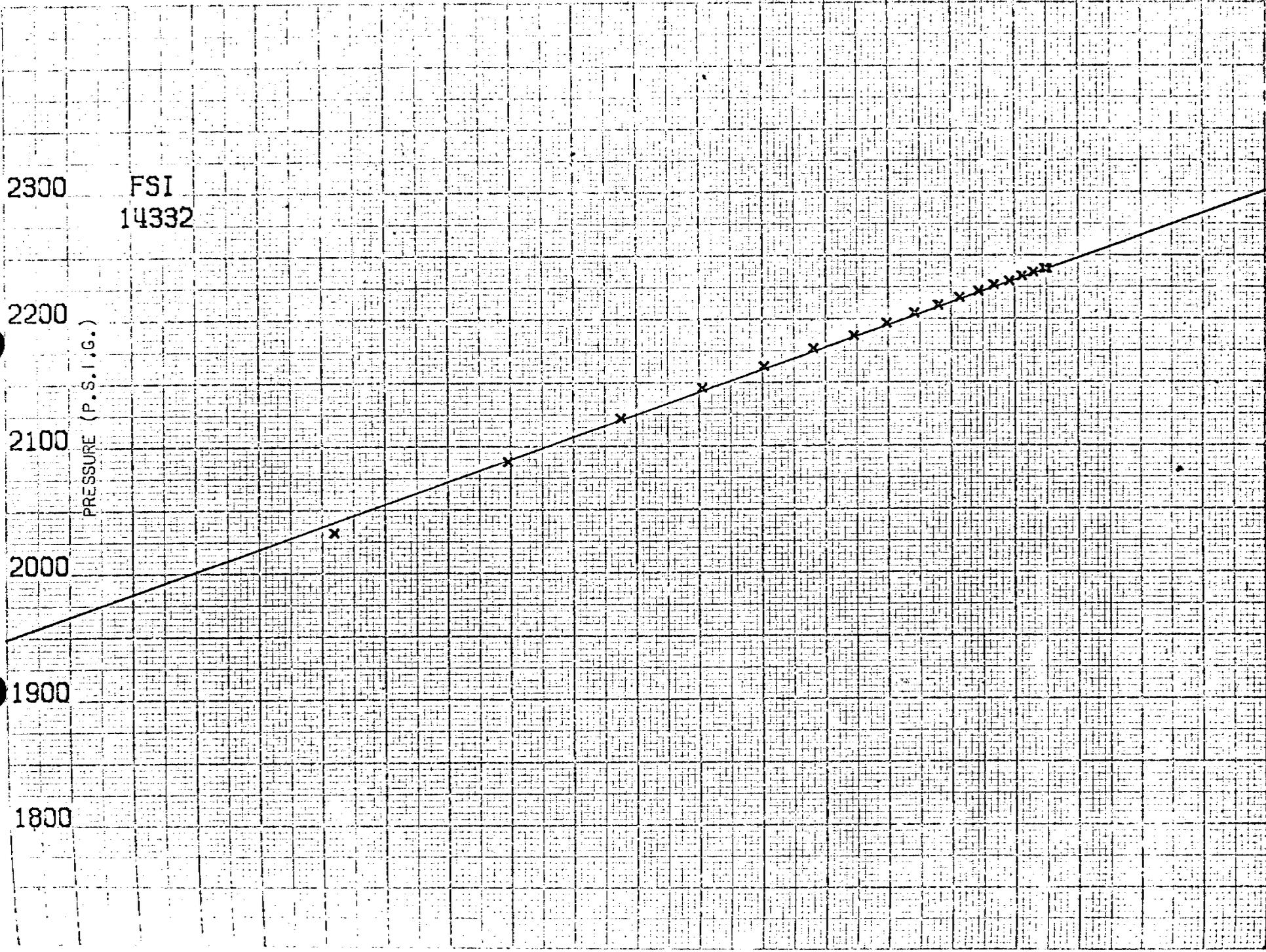
2200

2100

2000

1900

1800



Assumptions made for Calculations for Liquid Recoveries

1. Q is averaged at a constant rate.
2. P_f is formation flowing pressure at a constant rate.
3. Formation flow is taken as single phase flow.
If gas is produced at surface, phase separation is assumed to have occurred in drill pipe.
4. Radial flow is assumed.
5. For the purpose of calculating EDR where specific reservoir parameters are not available it is assumed that:

Effective permeability, K, will fall between	1 to 200 md
Formation porosity, ϕ , will fall between	0.1 to 0.3
Fluid compressibility, c, will fall between	10^{-6} to 10^{-4}
Fluid viscosity, μ , will fall between	0.05 to 50 cp.
Well bore radius, r_w , will fall between	$3\frac{1}{8}$ " to $4\frac{1}{2}$ "

Which gives an average value for the function $\log \frac{K}{\phi\mu cr_w^2}$ of 5.5

6. Other standard radial flow, equilibrium assumptions.

Empirical Equations:

1. $EDR = \frac{P_o - P_f}{M(\log T + 2.65)}$ where $M = \frac{P_1 - P_{10}}{\text{Log Cycle}}$
2. Transmissibility $\frac{Kh}{\mu\beta} = \frac{162.6 Q}{M}$
3. DST $J = \frac{Q}{P_o - P_f}$ Theoretical $J = \frac{7.08 \times 10^{-3} Kh}{\mu\beta \ln(r_e/r_w)}$ Assumed $\ln(r_e/r_w) = 7.60$
4. P.S. = $\left[P_o \times 2.309 \text{ ft./PSI} \right] - \left[\text{Recorder depth to sea level.} \right]$
5. Radius of investigation, $r_i \cong \sqrt{\frac{Kt}{40\phi\mu c}}$ where t = time in days

Symbols	Dimensions	Symbols	Dimensions
β	Formation volume factor vol./vol.	Q_o	Rate of oil flow during test Bbls./day
c	Fluid compressibility vol./vol./psi	Q_w	Rate of water flow during test Bbls./day
EDR	Estimated damage ratio	Q_g	Rate of gas flow during test MCF/day
ϕ	Formation porosity fractional	r_e	External Boundary Radius feet
h	Net producing interval feet	r_i	Radius of investigation feet
J	Productivity index (P.I.) Bbls./day/PSI	r_w	Well bore radius inches
K	Permeability Millidarcies	S_w	Water saturation %
M	Slope of shut-in build up PSI/log cycle	t	Shut-in time period minutes
P_f	Final flowing pressure PSIG	Δt	Increment time of shut-in period minutes
P_{fai}	Final shut-in pressure at time t PSIG	T	Open flow time period minutes
P_{isi}	Initial shut-in pressure PSIG	$^{\circ}T_f$	Formation temperature $^{\circ}$ Rankin
P_o	Maximum reservoir pressure PSIG	μ	Fluid viscosity (Reservoir Conditions) Centipoise
P_1	Final shut-in build up plot intercept @ 1 PSIG	Z	Gas deviation factor (compressibility factor)
P_{10}	Final shut-in build up plot intercept @ 10 PSIG	$\frac{Kh}{\mu\beta}$ or $\frac{Kh}{\mu}$	Transmissibility factor $\frac{\text{Md.} - \text{ft.}}{\text{Cp.}}$
P.S.	Potentiometric surface feet		
Q	Rate of flow during test Bbls./day		

In making any interpretation, our employees will give Customer the benefit of their best judgment as to the correct interpretation. Nevertheless, since all interpretations are opinions based on inferences from electrical, mechanical or other measurements, we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible, except in the case of gross or wilful negligence on our part, for any loss, costs, damages or expenses incurred or sustained by Customer resulting from any interpretation made by any of our agents or employees.



SURFACE INFORMATION

Flow Rate (Rate of Flow)	Time	Pressure (P.S.I.G.)	Surface Choke
Tool	0422	-	-
PEAK BLOW, 1 1/2" IN WATER, INCREASING TO BLOW, 5" IN WATER			
USED FOR INITIAL SHUT-IN	0425	-	-
FINISHED SHUT-IN	0510	-	-
OPENED TOOL	0512	-	-
PEAK BLOW, 1 1/2" IN WATER, INCREASING TO BLOW, 14" IN WATER			
USED FOR SECOND SHUT-IN	0542	-	-
FINISHED SHUT-IN	0712	-	-
OPENED TOOL	0714	-	-
PEAK BLOW, 2" IN WATER, INCREASING TO BLOW, 14" IN WATER			
USED FOR FINAL SHUT-IN	0814	-	-
RELEASED PACKER LOOSE	1118	-	-

EQUIPMENT & HOLE DATA

Type Test	M. F. E. OPEN HOLE
Formation Tested	MOENCOPI (TIMPOWEAP)
Elevation	7018 K.B. Ft.
Net Productive Interval	15 Ft.
Estimated Porosity	6-8 %
All Depths Measured From	KELLY BUSHING
Total Depth	7897 Ft.
Main Hole/Casing Size	7 7/8"
Rat Hole/Liner Size	-
Drill Collar Length	435' I.D. 2.25"
Drill Pipe Length	7393' I.D. 3.80"
Packer Depth(s)	7856 & 7860 Ft.

MULTI-FLOW EVALUATOR FLUID SAMPLE DATA

Sampler Pressure	40 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas	0.10
cc. Oil	-
cc. Water	2425
cc. Mud	-
Tot. Liquid cc.	2425
Gravity	- °API @ - °F.
Gas/Oil Ratio	- cu. ft./bbl.

RESISTIVITY CHLORIDE CONTENT

Recovery Water	0.54 @ 67 °F.	3700 ppm
Recovery Mud	- @ - °F.	- ppm
Recovery Mud Filtrate	- @ - °F.	- ppm
Mud Pit Sample	2.1 @ 60 °F.	- ppm
Mud Pit Sample Filtrate	1.8 @ 60 °F.	200 ppm

Cushion Type	Amount	Pressure	Bottom Choke Size
-	-	-	15/16"

MUD DATA

Mud Type	LOW SOLIDS	Wt.	9.0
Viscosity	55	Water Loss	5.2 C.C.
Yield of Mud	2.1 @ 60 °F.	Yield of Filtrate	1.8 @ 60 °F.
Solids Content	200		PPM

RECOVERY DESCRIPTION	FEET	BARRELS	% OIL	% WATER	% OTHERS	API GRAVITY	RESISTIVITY	CHL. PPM
GAS CUT WATER	1455	20.66				@ °F.	@ °F.	
TOP SAMPLE						@ °F.	.86 @ 67 °F.	2200
MIDDLE SAMPLE						@ °F.	.56 @ 67 °F.	3700
BOTTOM SAMPLE						@ °F.	.54 @ 67 °F.	3700
GAS CUT WATER	465	2.56				@ °F.	@ °F.	
	1420					@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	

Address: SUITE 1200, LINCOLN TOWER BUILDING; DENVER, COLORADO 80203

Company: TENNECO OIL COMPANY Field: WILD CAT

Well: UPPER VALLEY SOUTH #1 Location: SEC. 16-T38S-R2E

Net Interval: 7860' TO 7897' Test #: 1 Date: 12-22-69

County: KANE State: UTAH

Technician: STROTHER (VERNAL) Test Approved By: MR. JAMES F. EGGLISTON

Field Report No.: 10700 B

No. Reports Requested: 6X



JOHNSTON
...found a better way

PRESSURE DATA

Instrument No.	J-040	T-776		Field Report No. 10700 B	
Capacity (P.S.I.G.)	4700	5000			
Instrument Depth	7872'	7889'			
Instrument Opening	INSIDE	OUTSIDE			
Pressure Gradient P.S.I./Ft.					
Well Temperature °F.	144	144		TIME DATA	
Initial Hydrostatic Mud	A	2698.0	2690.0	Time Given	Time Computed
Initial Shut-in	B *	2133.6	* 2135.2	45 Mins.	46 Mins.
Initial Flow	C	37.6	27.6	3 Mins.	5 Mins.
SECOND FLOW	C-3	454.8	453.4	30 Mins.	31 Mins.
SECOND SHUT-IN	B-1 *	2115.8	* 2114.8	90 Mins.	91 Mins.
Final Flow	D	868.1	866.6	60 Mins.	61 Mins.
Final Shut-in	E *	2116.8	* 2116.8	184 Mins.	179 Mins.
Final Hydrostatic Mud	F	2718.6	2701.6		
Remarks:	C-1	168.8	164.4		
	C-2	184.8	199.3		
	C-4	471.6	462.1		

INCREMENTAL BREAKDOWN DONE ON INSTRUMENT NUMBER J-040.

*Shut in pressure did not reach static reservoir pressure.

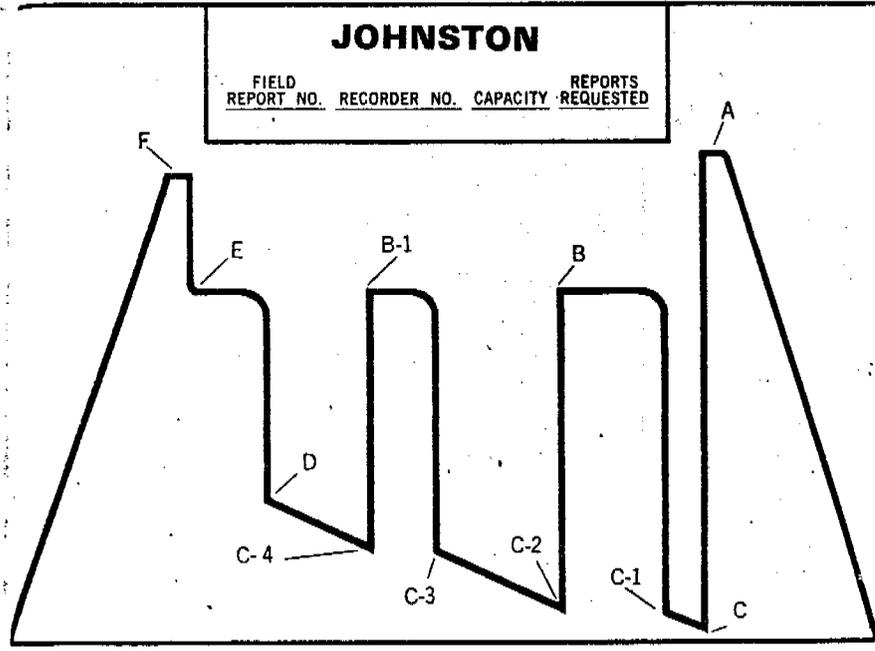
Clock Travel 0.02128

inches per min.

PRESSURE INCREMENTS

DT	PSI	LØG	DT	PSI	LØG
INITIAL SHUT IN BREAKDOWN					
C 1 0	168.8	0.000	27	2117.7	0.074
3	1862.7	0.426	30	2122.4	0.067
6	1999.6	0.263	33	2125.2	0.061
9	2051.1	0.192	36	2128.0	0.056
12	2076.5	0.151	39	2129.9	0.052
15	2091.5	0.125	42	2131.8	0.049
18	2101.8	0.106	45	2132.7	0.046
21	2108.3	0.093	B 46	2133.6	0.045
24	2114.0	0.082			
SECOND SHUT IN BREAKDOWN					
C 3 0	454.8	0.000	50	2092.4	0.236
5	1817.7	0.914	55	2097.1	0.219
10	1938.7	0.663	60	2101.8	0.204
15	1994.0	0.531	65	2104.6	0.191
20	2024.9	0.447	70	2107.4	0.180
25	2045.5	0.387	75	2109.3	0.170
30	2059.6	0.342	80	2112.1	0.161
35	2070.8	0.307	85	2114.0	0.153
40	2079.3	0.279	90	2114.9	0.146
45	2086.8	0.255	B 1 95	2115.8	0.140
FINAL SHUT IN BREAKDOWN					
D 0	868.1	0.000	100	2097.1	0.294
10	1927.4	1.029	110	2100.8	0.275
20	1996.8	0.767	120	2104.6	0.257
30	2029.6	0.627	130	2107.4	0.242
40	2049.3	0.535	140	2110.2	0.229
50	2062.4	0.468	150	2113.0	0.217
60	2072.7	0.418	160	2114.9	0.206
70	2080.2	0.378	170	2115.8	0.196
80	2086.8	0.345	E 179	2116.8	0.188
90	2092.4	0.318			

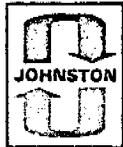
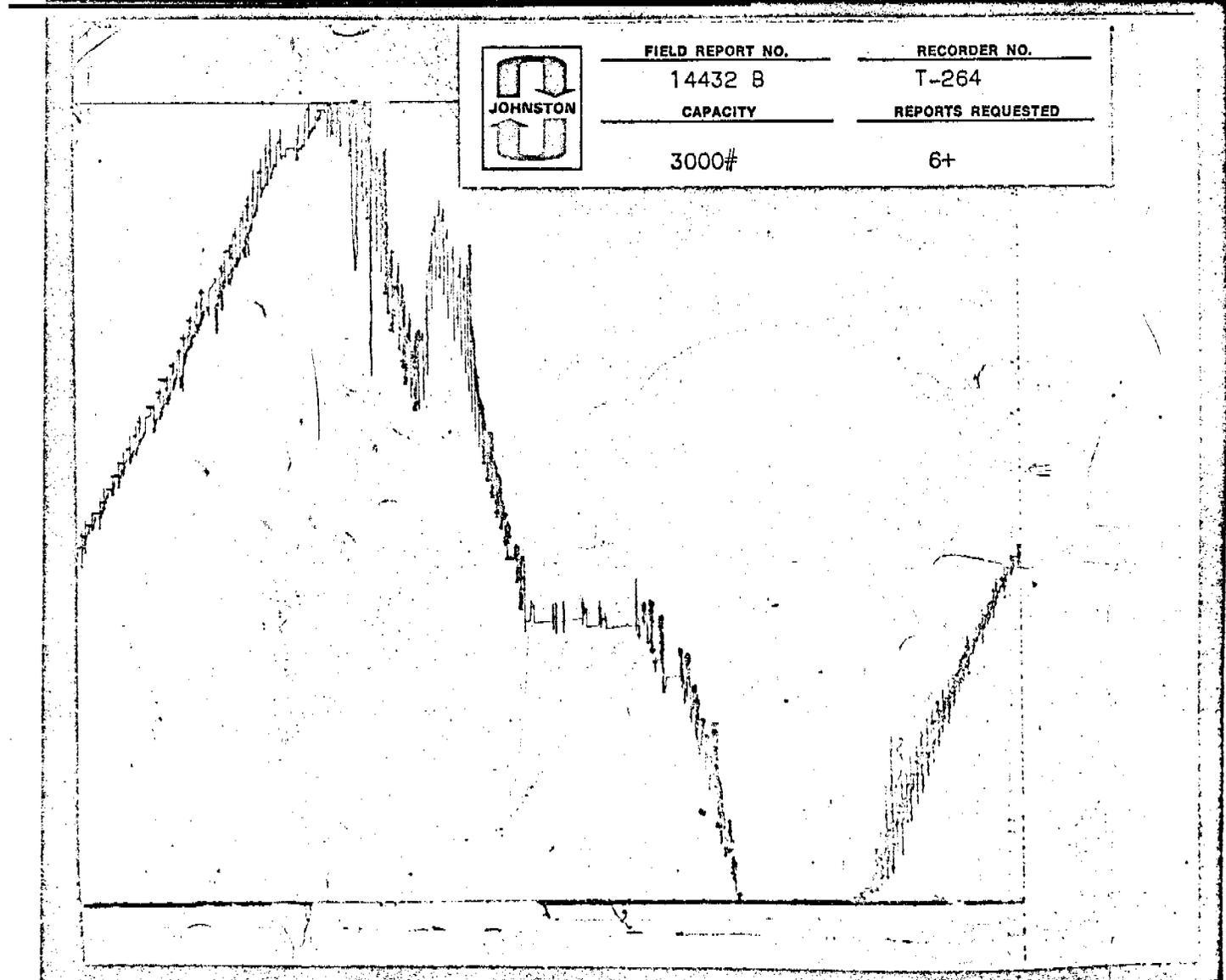
GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS



- 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.

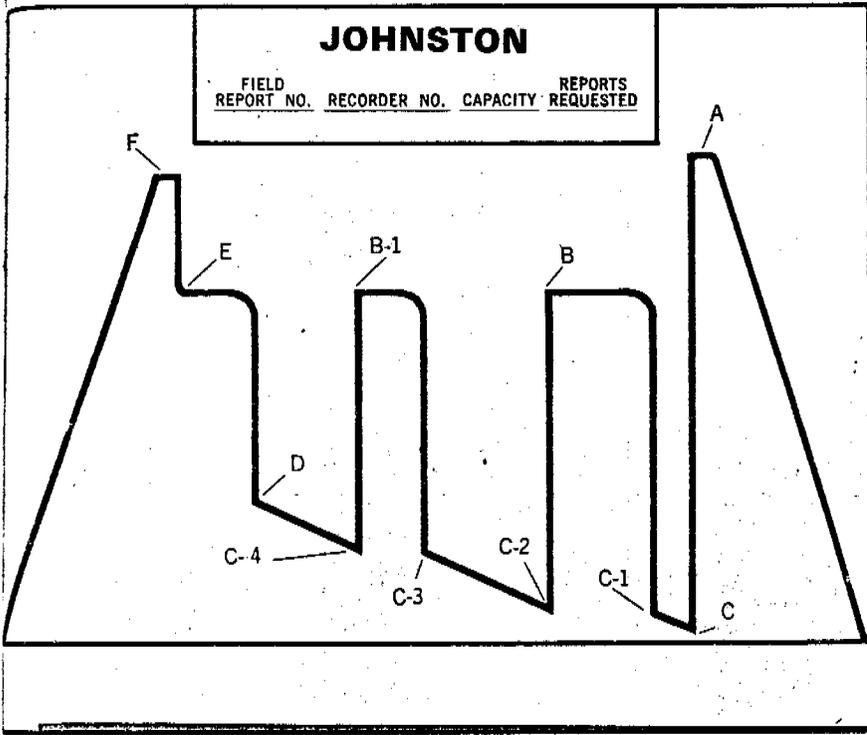


FIELD REPORT NO.	RECORDER NO.
14432 B	T-264
CAPACITY	REPORTS REQUESTED
3000#	6+



JOHNSTON
...found a better way

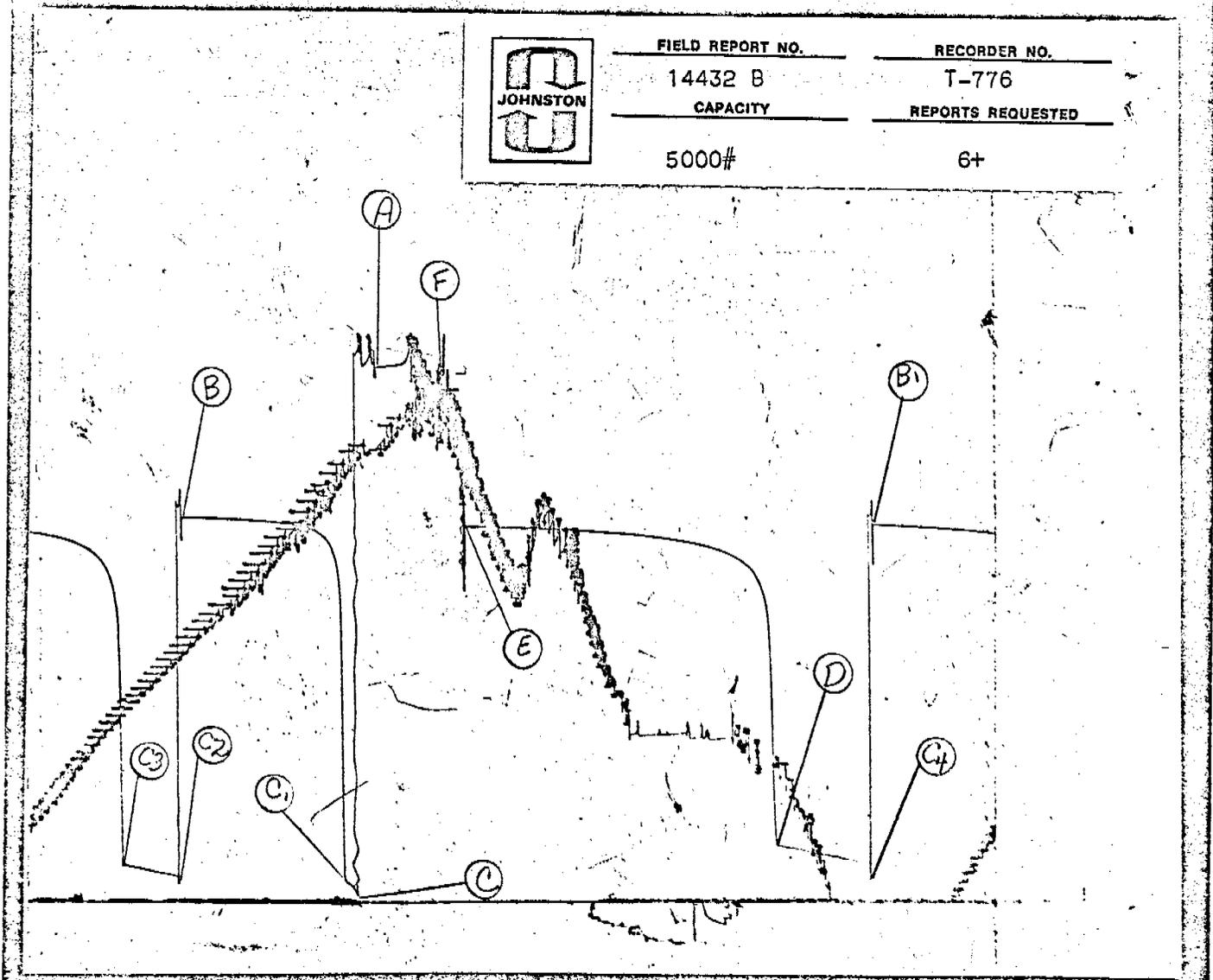
GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS

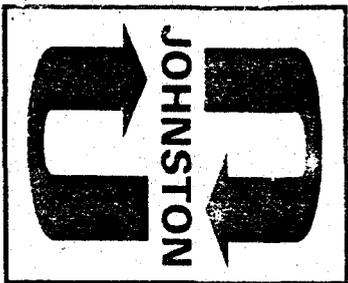


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PRESSURE LOG*

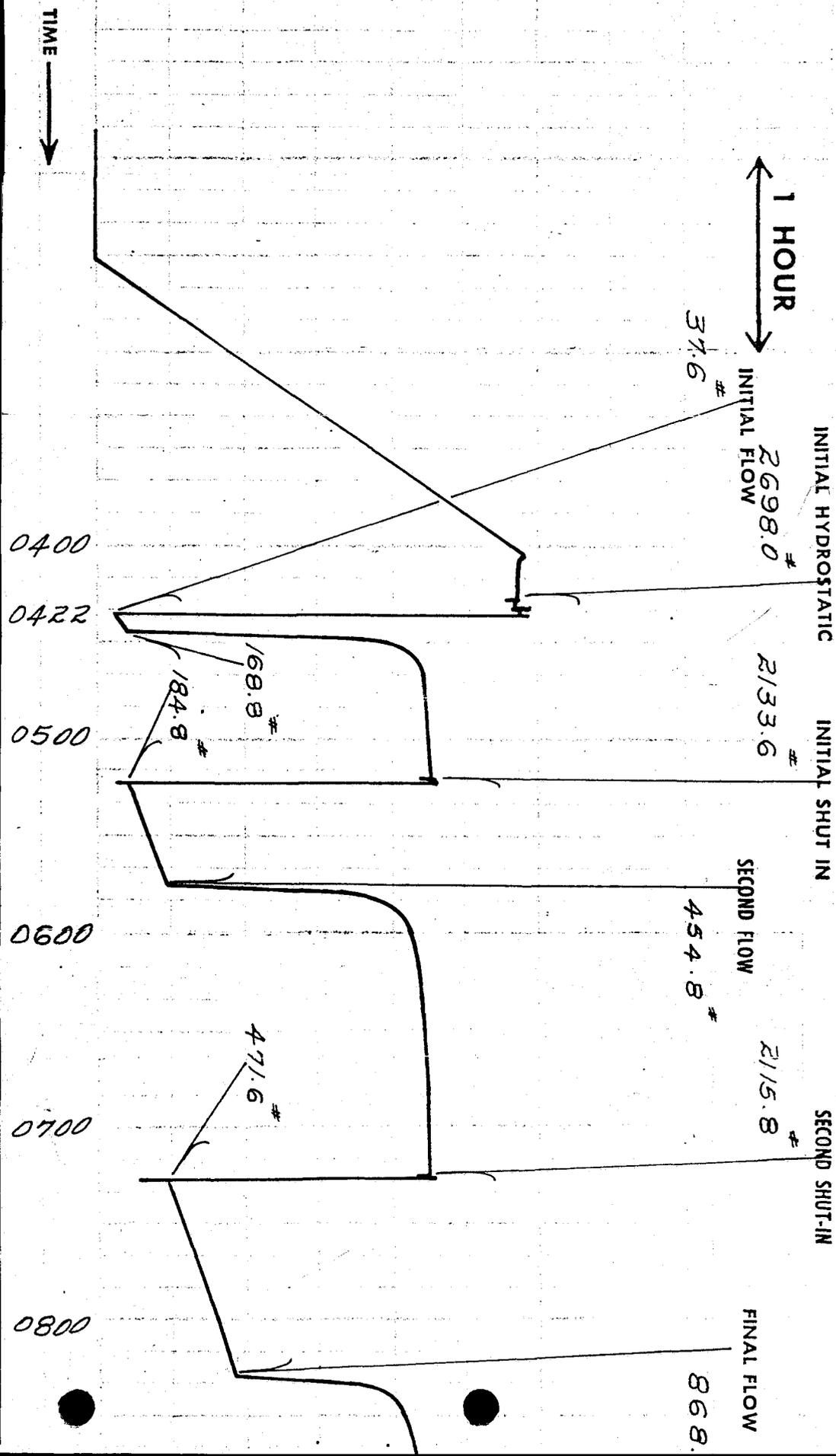
Field Report No. 10700B

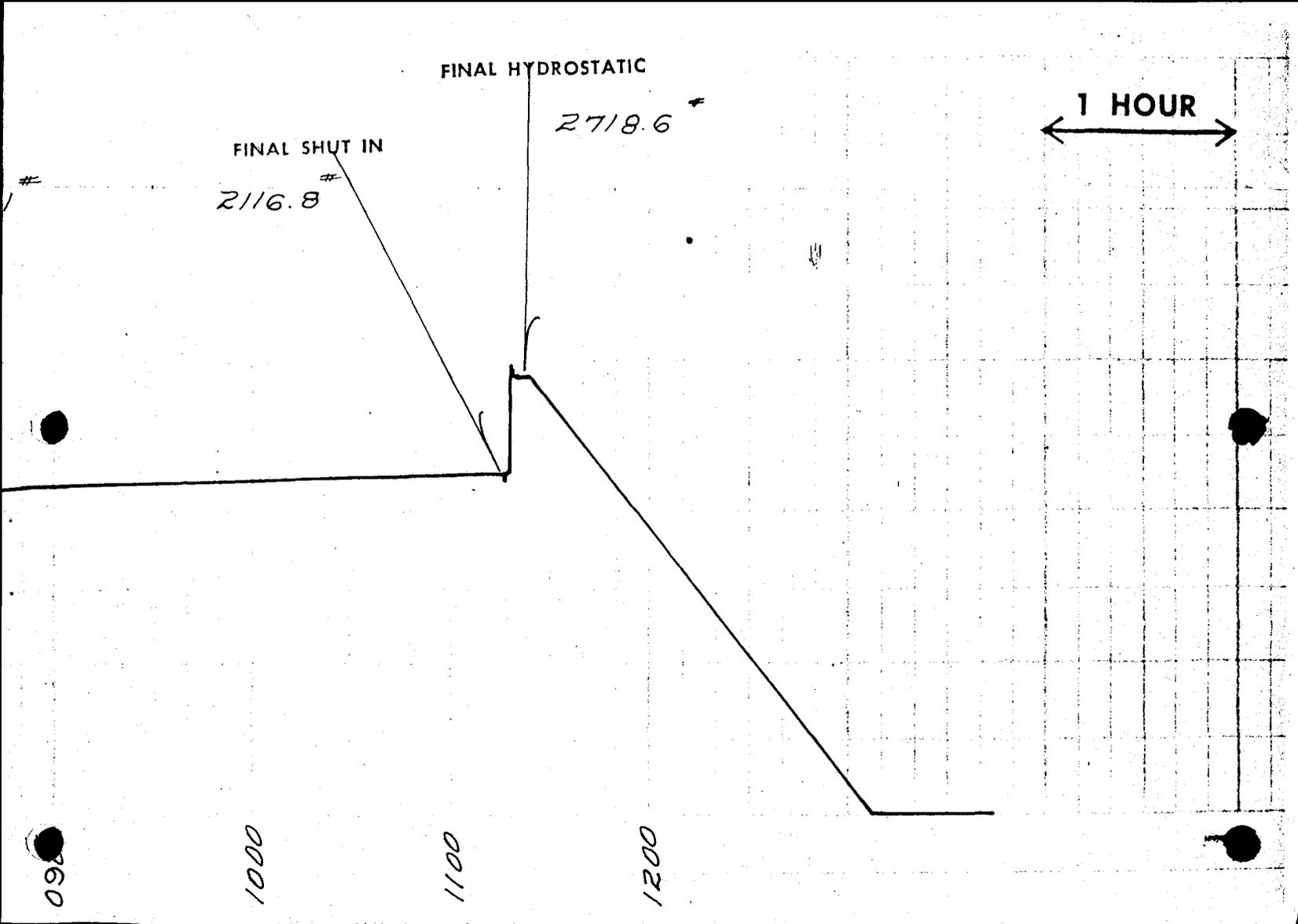
Instrument: Number J-040

Capacity 4700 p.s.i.

Depth 7872 ft.

* a continuous tracing of the original chart





FINAL HYDROSTATIC

2718.6

FINAL SHUT IN

2116.8

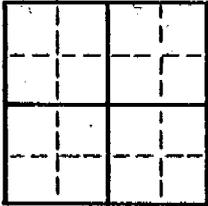
1 HOUR

090

1000

1100

1200



STATE OF UTAH
OIL & GAS CONSERVATION COMMISSION

STATE CAPITOL BUILDING
SALT LAKE CITY 14, UTAH

Fee and Patented.....
State ML 26146 r.....
Lease No.
Public Domain
Lease No.
Indian
Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

Notice of Intention to Drill.....	<input checked="" type="checkbox"/>	Subsequent Report of Water Shut-off.....	<input type="checkbox"/>
Notice of Intention to Change Plans.....	<input type="checkbox"/>	Subsequent Report of Altering Casing.....	<input type="checkbox"/>
Notice of Intention to Redrill or Repair.....	<input type="checkbox"/>	Subsequent Report of Redrilling or Repair.....	<input type="checkbox"/>
Notice of Intention to Pull or Alter Casing.....	<input type="checkbox"/>	Supplementary Well History.....	<input type="checkbox"/>
Notice of Intention to Abandon Well.....	<input type="checkbox"/>		<input type="checkbox"/>

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Upper Valley South

August 20, 1969

Well No. 1 is located 650 ft. from {N} line and 595 ft. from {E} line of Sec. 16

NE 1/4 Sec. 16 T - 38 - S R - 2 - E SLM
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)

Wildcat Kane Utah
(Field) (County or Subdivision) (State or Territory)

The elevation of the ~~surface~~ ^{GR} ~~floor~~ above sea level is 6994 feet.

A drilling and plugging bond has been filed with State of Utah

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important work, surface formation, and date anticipate spudding-in.)

Well to be drilled to approximate T.D. of 8300'. If production is indicated, casing will be set, perforated and treated as necessary to establish commercial production.

Casing Program: Drill 13-3/4" hole set approx 3000' of 8-5/8" 24# casing with sufficient cement from T.D. to 1600' and cement 100' to surface. Run 2-1/16" parasite string for air drilling outside of 8-5/8".

Drill out under surface W/7-7/8" hole to T.D. of approx. 8300' and set 8300' of 5-1/2" 17# and 15.5# casing with sufficient cement to fill approx. 500' above pay zone.

I understand that this plan of work must receive approval in writing by the Commission before operations may be commenced.

Company Tenneco Oil Company

Address Suite 1200 Lincoln Tower Bldg. By [Signature]

Denver, Colorado 80203 Title Sr. Production Clerk

INSTRUCTIONS: A plat or map must be attached to this form showing the location of all leases, property lines, drilling and producing wells, within an area of sufficient size so that the Commission may determine whether the location of the well conforms to applicable rules, regulations and orders.

PHB

COMPANY TENNECO OIL COMPANY

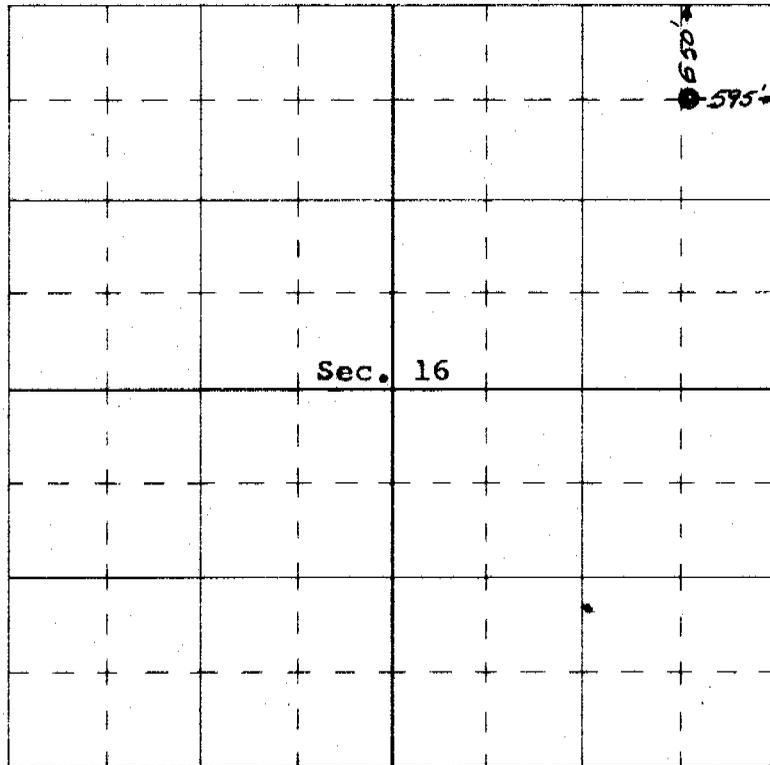
Well Name & No. UPPER VALLEY SOUTH #1 Lease No. _____

Location 650 FEET FROM THE NORTH LINE & 595 FEET FROM THE EAST LINE

Being in NE NE

Sec. 16, T. 38S, R. 2 E, S.L.M., Kane County, Utah

Ground Elevation 6994' ungraded

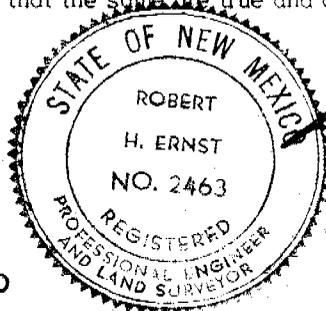


Scale -- 4 inches equals 1 mile

Surveyed 14 August, 19 69

This is to certify that the above plat was prepared from field notes of actual surveys made by me or under my supervision and that the same are true and correct to the best of my knowledge and belief.

Seal:



Robert H. Ernst

Registered Professional Engineer and Land Surveyor.

Robert H. Ernst
Colo. PE & LS 4979
N. Mex. PE & LS 2463

ERNST ENGINEERING CO
Durango, Colorado

August 25, 1959

Tenneco Oil Company
Suite 1200
Lincoln Tower Building
Denver, Colorado 80203

Re: Well No's: John's Valley #1
Sec. 35, T. 35 S, R. 2 W,
Garfield County, Utah,
Upper Valley South #1
Sec. 16, T. 38 S, R. 2 E,
Kane County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above mentioned wells is hereby granted.

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

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

This approval terminates within 90 days if the wells have 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 while drilling. Your co-operation with respect to completing this form will be greatly appreciated.

The API numbers of these wells are: John's Valley #1 - 43-017-30022
Upper Valley South #1 - 43-025-30005
(see Bulletin D-12 published by the American Petroleum Institute).

Very truly yours,

DIVISION OF OIL AND GAS CONSERVATION

CLEON B. FEIGHT
DIRECTOR

CBF:ed
Enclosures

cc: Division of State Lands

U.S. Geological Survey

PI

Schuler



STATE OF UTAH
OIL & GAS CONSERVATION COMMISSION

STATE CAPITOL BUILDING
SALT LAKE CITY 14, UTAH

Fee and Patented.....
State ML-26146.....
Lease No.
Public Domain
Lease No.
Indian
Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

Notice of Intention to Drill.....	Subsequent Report of Water Shut-off.....	<input checked="" type="checkbox"/>
Notice of Intention to Change Plans.....	Subsequent Report of Altering Casing.....	<input type="checkbox"/>
Notice of Intention to Redrill or Repair.....	Subsequent Report of Redrilling or Repair.....	<input type="checkbox"/>
Notice of Intention to Pull or Alter Casing.....	Supplementary Well History.....	<input type="checkbox"/>
Notice of Intention to Abandon Well.....		<input type="checkbox"/>

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Upper Valley South

December 9, 1969

Well No. 1 is located 650 ft. from N line and 595 ft. from E line of Sec. 16

NE 1/4 Sec. 16 T-38-S R-2-E SLM
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)

Wildcat Kane Utah
(Field) (County or Subdivision) (State or Territory)

The elevation of the ~~top of casing~~ ^{GR} above sea level is 6994 feet.

A drilling and plugging bond has been filed with State of Utah

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important work, surface formation, and date anticipate spudding-in.)

Well spudded 11/28/69, drilled 13-3/4" hole to T.D. of 3523', ran 28 jts. of 8-5/8" 32# (909.5') and 82 jts. of 8-5/8" 24# (2626.6') landed at 3523', cemented with 370 sacks from T.D. to approx. 1600' and cemented with 100 sacks at surface. Ran 95 jts. of 2-1/16" 3.25# I J tubing as parasite string outside of 8-5/8" casing for air drilling. Preparing to drill out as of 12/9/69.

Landed at 2960'

I understand that this plan of work must receive approval in writing by the Commission before operations may be commenced.

Company Tenneco Oil Company

Address Suite 1200 Lincoln Tower Bldg. By *B. A. Ford*

Denver, Colorado 80203 Title Sr. Production Clerk

INSTRUCTIONS: A plat or map must be attached to this form showing the location of all leases, property lines, drilling and producing wells, within an area of sufficient size so that the Commission may determine whether the location of the well conforms to applicable rules, regulations and orders.

PI

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 Upper Valley South No. 1
Operator Tenneco Oil Company Address Suite 1200 Lincoln Tower Bldg., Denver, Colorado 80203 Phone 292-9920
Contractor Signal Drilling Company Address Denver, Colorado Phone _____
Location NE 1/4 NE 1/4 Sec. 16 T. 38 N. R. 2 E Kane County, Utah
S N

Water Sands:

<u>Depth</u>		<u>Volume</u>	<u>Quality</u>
From	To	Flow Rate or Head	Fresh or Salty
1. None ✓			
2.			
3.			
4.			
5.			

(Continue on reverse side if necessary)

<u>Formation Tops:</u>			
Tropic	2120	Moenkopi	7210
Dakota	2630	Timpoweap	7865
Winsor	2820	Kaibab	7920
Carmel	3500	Toroweap	8230
Navajo	4390	Coconino	8570
Kayenta	5955	Hermit	8620
Wingate	6290	Cedar Mesa	8840
Chinle	6405		
Shinarump	7060		

Remarks:

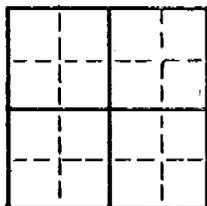
- NOTE:
- (a) Upon diminishing supply forms, please inform this office.
 - (b) Report on this form as provided for in Rule C-20, General Rules and Regulations and Rules of Practice and Procedure, (See Back of form).
 - (c) If a water analysis has been made of the above reported zone, please forward a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

RULE C-20

REPORTING OF FRESH SANDS.

It shall be the duty of any person, operator or contractor drilling an oil or gas well or drilling a seismic, core or other exploratory hole to report to this office all fresh water sands encountered; such report shall be in writing and give the location of the well or hole, the depth at which the sands were encountered and the thickness of such sands, and the rate of flow of water if known.

If no fresh water sands are encountered, it is requested that a negative report to that effect be filed.



STATE OF UTAH
OIL & GAS CONSERVATION COMMISSION
SALT LAKE CITY, UTAH

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SUNDRY NOTICES AND REPORTS ON WELLS

Notice of Intention to Drill.....		Subsequent Report of Water Shut-off.....	
Notice of Intention to Change Plans.....		Subsequent Report of Altering Casing.....	
Notice of Intention to Redrill or Repair.....		Subsequent Report of Redrilling or Repair.....	
Notice of Intention to Pull or Alter Casing.....		Supplementary Well History.....	
Notice of Intention to Abandon Well.....		To Correct Location Only.....	X

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Upper Valley South December 24, 19⁶⁹
Well No. 1 is located 650 ft. from {N} line and 650 ft. from {E} line of Sec. 16
NE 1/4 Sec. 16 T-38-S R-2-E SLM
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)
Wildcat Kane Utah
(Field) (County or Subdivision) (State or Territory)

The elevation of the ^{GR}derrick floor above sea level is 7007' feet.

A drilling and plugging bond has been filed with State of Utah

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important work, surface formation, and date anticipate spudding-in.)

Notice filed to correct location only from 595' F/EL to 650' F/EL and elevation.

I understand that this plan of work must receive approval in writing by the Commission before operations may be commenced.

Company Tenneco Oil Company
Address 1200 Lincoln Tower Building By G.A. Ford
Denver, Colorado 80203 Title Sr. Production Clerk

INSTRUCTIONS: A plat or map must be attached to this form showing the location of all leases, property lines, drilling and producing wells, within an area of sufficient size so that the Commission may determine whether the location of the well conforms to applicable rules, regulations and orders.

REB

COMPANY TENNECO OIL COMPANY

Well Name & No. UPPER VALLEY SOUTH #1

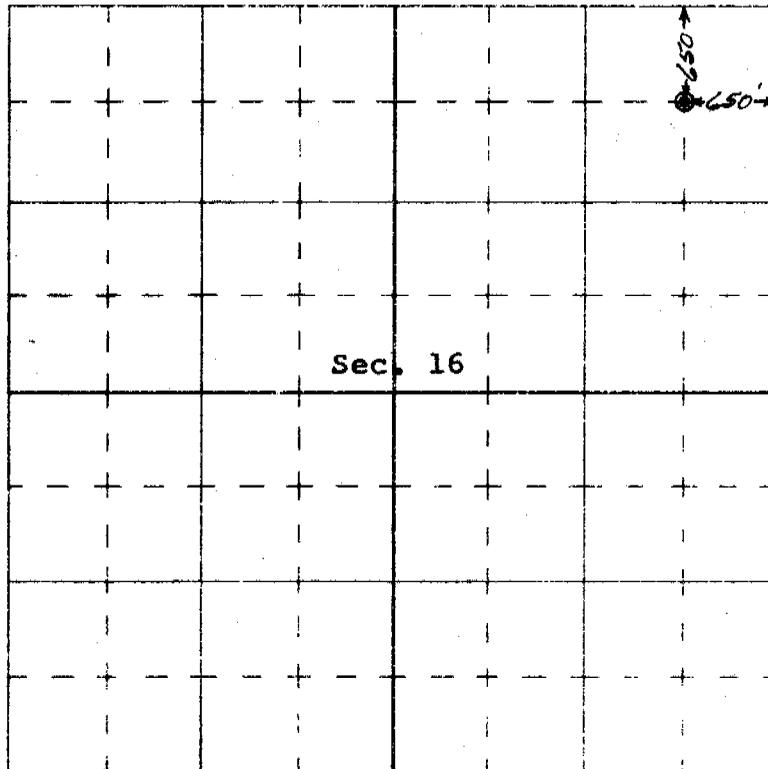
Lease No.

Location 650 FEET FROM THE NORTH LINE & 650 FEET FROM THE EAST LINE

Being in NE NE

Sec. 16 T 38S, R2E, S.L.M., Kane County, Utah

Ground Elevation 7007' graded



Scale — 4 inches equals 1 mile

Surveyed 16 December

, 19 69

This is to certify that the above plat was prepared from field notes of actual surveys made by me or under my supervision and that the same are true and correct to the best of my knowledge and belief.



Robert H. Ernst

Registered Land Surveyor.
Robert H. Ernst
Colo. PE & LS 4979
N. Mex. PE & LS 2463

Ernst Engineering Co.
Durango, Colorado

James Nelson -
Tennessee

12/26/69

Upper Waley # 1 - south

8 5/8" - 3525'

Logan - 2110

Dalton - 2630

Winn - 2805

Carmel - 3600

Warrior - 4380 - made some water

Chick - 6290 - shale

Sherrill - 7056 - no show - no ϕ

Jasper - 7855 - some ϕ

Hiabob - 7950 - cased - no show - no ϕ

White River - 8079'

Foranap - 8255 - ϕ - tested water 3700ppm NaCl

T.D. @ 8310 Only @ 8300

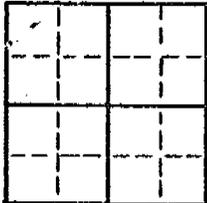
- ① T.D. to 8200 -
- ② 8000 to 7750
- ③ 7000 to 7200
- ④ bore of 8 5/8" \approx 3400' plug
3250 to 3550 (will ~~drop~~ drop)
- ⑤ 10 lbs / at r/o / maker / mdy - ~~OK~~
between plug

Can't get a hold
of H.S.G.S

PMR



Submit



STATE OF UTAH
OIL & GAS CONSERVATION COMMISSION

STATE CAPITOL BUILDING
SALT LAKE CITY 14, UTAH

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Notice of Intention to Pull or Alter Casing.....		Supplementary Well History.....	
Notice of Intention to Abandon Well.....			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Upper Valley South

December 30, 1969

Well No. 1 is located 650 ft. from {N} line and 650 ft. from {E} line of Sec. 10

NE/4 Sec. 16 (1/4 Sec. and Sec. No.)	T38S (Twp.)	R2E (Range)	SLM (Meridian)
Wildcat (Field)	Kane (County or Subdivision)		Utah (State or Territory)

The elevation of the ~~surface~~^{GR} above sea level is 6994 feet.

A drilling and plugging bond has been filed with State of Utah

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important work, surface formation, and date anticipate spudding-in.)

Well to be drilled to approx. TD of 8900'. If production is indicated, casing will be set perforated and treated as necessary to establish commercial production.

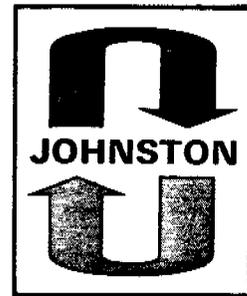
Csg. Program: Drilled 13-3/4" hole - set 3500' of 8-5/8" 24# and 32# csg. Top of cement at 1600' and 100' of cement at surface. Ran 3000' of 2-1/16" parasite string for air drilling. Will drill out w/7-7/8" hole to TD of approx. 8900' and set 8900' of 5-1/2" 17# and 15.5# w/sufficient cement to fill approx. 500' above pay zone.

NOTE: Original Intention to Drill was for 8300' T.D.

I understand that this plan of work must receive approval in writing by the Commission before operations may be commenced.

Company Tenneco Oil Company
 Address Suite 1200 Lincoln Tower Bldg. By *S. A. Ford*
Denver, Colorado 80203 Title Sr. Production Clerk

INSTRUCTIONS: A plat or map must be attached to this form showing the location of all leases, property lines, drilling and producing wells, within an area of sufficient size so that the Commission may determine whether the location of the well conforms to applicable rules, regulations and orders.



SPECIAL DATA ANALYSIS

JANUARY 6, 1970

GENTLEMEN:

THE ENCLOSED TEST APPEARS TO BE A GOOD MECHANICAL DRILL STEM TEST DURING WHICH THE TOOLS DID FUNCTION PROPERLY. THE FORMATION PRODUCED ENOUGH RESERVOIR FLUID FOR PROPER IDENTIFICATION. RESERVOIR PRESSURE DRAWDOWN WAS SUFFICIENT AND ADEQUATE SHUT-IN BUILD-UPS DID ALLOW FOR RELIABLE QUANTITATIVE ANALYSIS.

1. FLOW RATE: A FLOW RATE OF 344 BBLs/DAY OF WATER WAS NOTED DURING THIS TEST.
2. RESERVOIR PRESSURE: EXTRAPOLATION OF THE INITIAL SHUT-IN PRESSURE BUILD-UP INDICATES A MAXIMUM RESERVOIR PRESSURE OF 2158 P.S.I.G. AT RECORDER DEPTH. EXTRAPOLATION OF THE SECOND SHUT-IN PRESSURE BUILD-UP INDICATES A MAXIMUM RESERVOIR PRESSURE OF 2146 P.S.I.G. AT RECORDER DEPTH. EXTRAPOLATION OF THE FINAL SHUT-IN PRESSURE BUILD-UP INDICATES A MAXIMUM RESERVOIR PRESSURE OF 2156 P.S.I.G. AT RECORDER DEPTH. THE DIFFERENCE BETWEEN THE INITIAL AND FINAL SHUT-IN PRESSURE OF 2 P.S.I.G. IS PROBABLY INSIGNIFICANT.
3. PERMEABILITY: THE CALCULATED TRANSMISSIBILITY FACTOR OF 275.5 MD.-FT./CP. INDICATES AN AVERAGE EFFECTIVE PERMEABILITY TO WATER OF 18.4 MD. FOR THE REPORTED 15 FOOT POROUS INTERVAL. THE CALCULATIONS WERE BASED ON A SLOPE OF 203 P.S.I./LOG CYCLE OBTAINED FROM THE FINAL SHUT-IN BUILD-UP PLOT. IT WAS ASSUMED FOR THESE CALCULATIONS THE PRODUCT OF THE WATER VISCOSITY AND FORMATION VOLUME FACTOR TO BE 1.0.
4. WELL BORE DAMAGE: THE CALCULATED ESTIMATED DAMAGE RATIO OF 1.4 INDICATES THAT WELL BORE DAMAGE IS PRESENT AT THE TIME AND CONDITIONS OF THIS TEST. THIS VALUE INFERS THAT THE RATE OF PRODUCTION OBSERVED AT THE FORMATION FACE DURING THIS TEST MAY BE INCREASED 1.4 TIMES IF THE WELL BORE DAMAGE ALONE WERE REMOVED.
5. RADIUS OF INVESTIGATION: THE CALCULATED RADIUS OF INVESTIGATION OF THIS TEST IS 366 FEET BASED ON AN ASSUMED POROSITY OF 7%, COMPRESSIBILITY OF 3.3×10^{-6} , AND OTHER ASSUMPTIONS MADE IN NUMBER 3 ABOVE.
6. GENERAL COMMENTS: THE FORMATION EXHIBITS THE CHARACTERISTICS OF RELATIVELY GOOD PERMEABILITY EFFECTIVE TO THE RESERVOIR FLUID AND INDICATES THE PRESENCE OF WELL BORE DAMAGE. HIGH WATER PRODUCTION MAKES CHANCES APPEAR POOR FOR A PRACTICAL COMPLETION IN THIS ZONE.

TENNECO OIL COMPANY
UPPER VALLEY SOUTH #1, KANE COUNTY, UTAH
TEST #1, 7860' TO 7897'

FIELD REPORT #10700 B



JOHNSTON
...found a better way

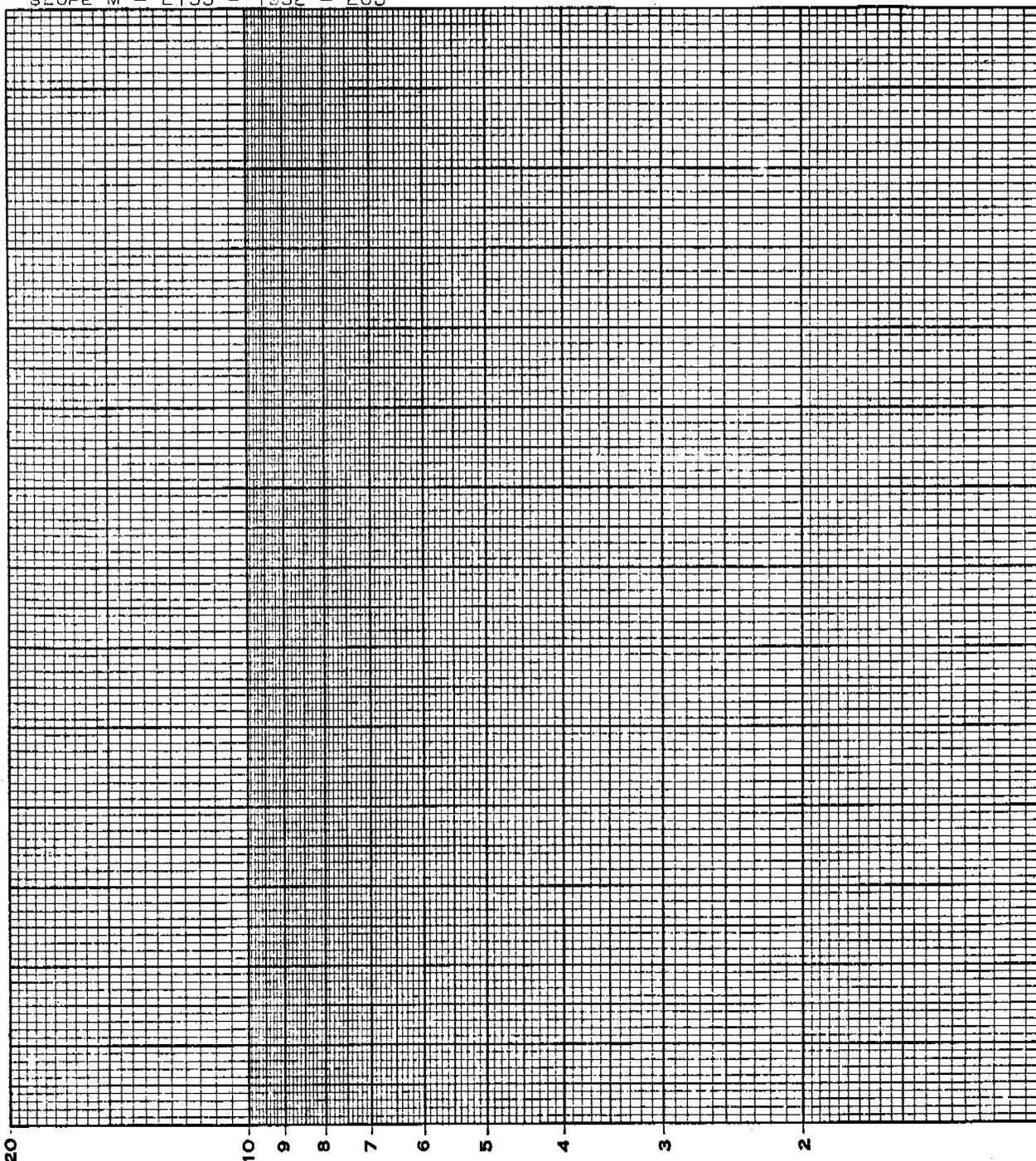
Document No. J-040

Reservoir Engineering Data

Field Report No. 10700 B

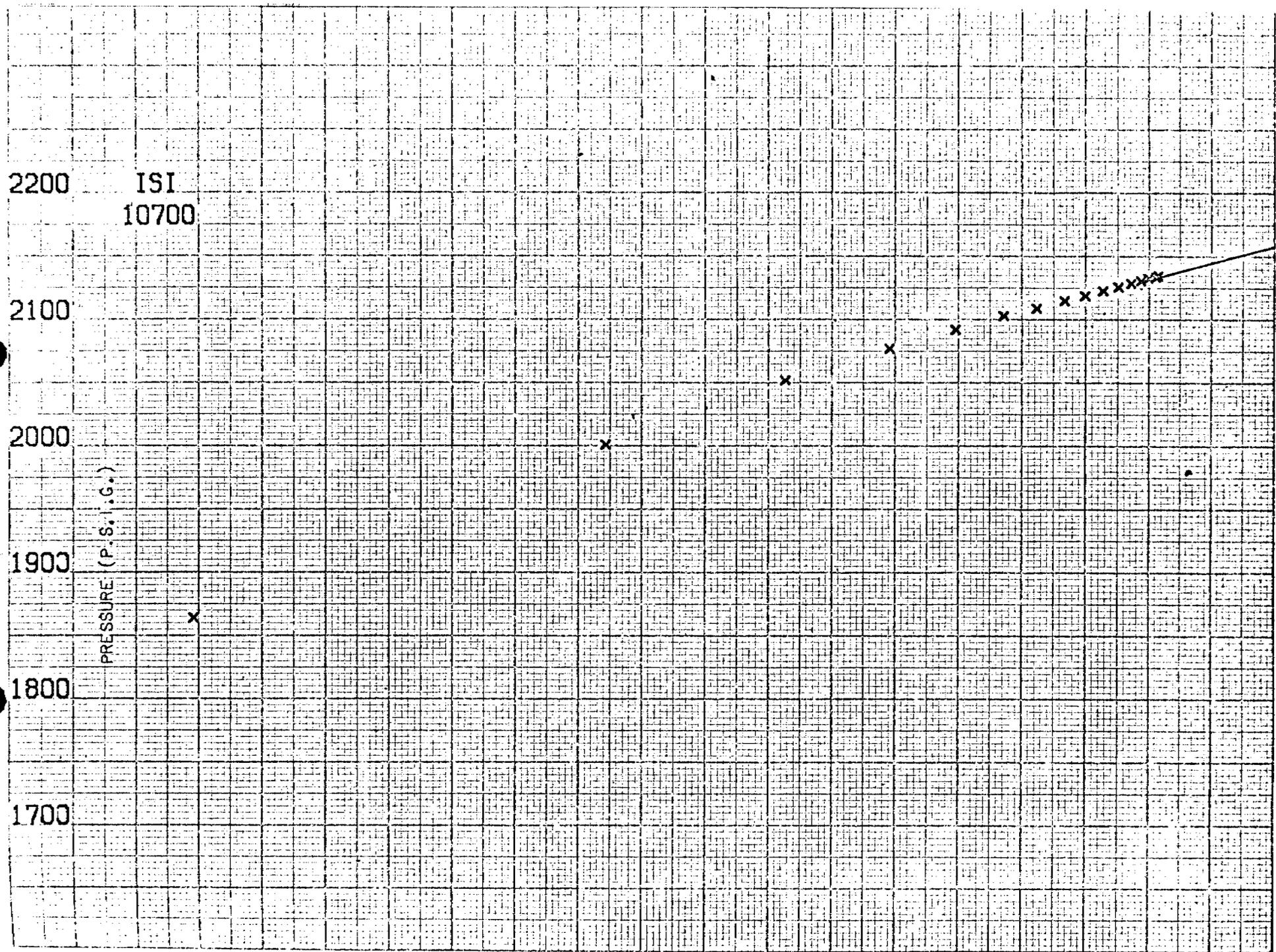
Estimated Damage Ratio	EDR	1.4		Effective Transmissibility LIQUID	$\frac{Kh}{\mu B}$	275.5	Md-ft. Cp.
Maximum Reservoir Pressure INITIAL SHUT-IN	P _o	2158	P.S.I.G.	Effective Transmissibility	$\frac{Kh}{\mu B}$		Md-ft. Cp.
Slope of Shut-in Curve INITIAL SHUT-IN	M	203	PSI/log cycle	Flow Rate LIQUID	Q	344	Bbl./day
Potentiometric Surface (Datum Plane, Sea Level)	PS	4129	ft.	Flow Rate	Q		Bbl./day
Productivity Index	PI	0.267	Bbl./day/PSI	Gas Oil Ratio	GOR		CF/Bbl.
Radius of Investigation		366	ft.	K (Effective to LIQUID)		18.4	Md.

SLOPE M = 2155 - 1952 = 203



Pressure (P.S.I.G.)

T + Δ t



0.5

LOG OF T + ΔT

0

2200 2SI
10700

PRESSURE (P.S.I.G.)

2100

2000

1900

1800

1700

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Assumptions made for Calculations for Liquid Recoveries



1. Q is averaged at a constant rate.
2. P_f is formation flowing pressure at a constant rate.
3. Formation flow is taken as single phase flow.
If gas is produced at surface, phase separation is assumed to have occurred in drill pipe.
4. Radial flow is assumed.
5. For the purpose of calculating EDR where specific reservoir parameters are not available it is assumed that:

Effective permeability, K, will fall between	1 to 200 md
Formation porosity, ϕ , will fall between	0.1 to 0.3
Fluid compressibility, c, will fall between	10^{-6} to 10^{-4}
Fluid viscosity, μ , will fall between	0.05 to 50 cp.
Well bore radius, r_w , will fall between	3 3/4" to 4 1/2"

Which gives an average value for the function $\log \frac{K}{\phi \mu c r_w^2}$ of 5.5

6. Other standard radial flow, equilibrium assumptions.

Empirical Equations:

1. $EDR = \frac{P_o - P_f}{M(\log T + 2.65)}$ where $M = \frac{P_1 - P_{10}}{\text{Log Cycle}}$
2. Transmissibility $\frac{Kh}{\mu\beta} = \frac{162.6Q}{M}$
3. DST $J = \frac{Q}{P_o - P_f}$ Theoretical $J = \frac{7.08 \times 10^{-3} Kh}{\mu\beta \ln(r_e/r_w)}$ Assumed $\ln(r_e/r_w) = 7.60$
4. P.S. = $\left[P_o \times 2.309 \text{ ft./PSI} \right] - \left[\text{Recorder depth to sea level.} \right]$
5. Radius of investigation, $r_i \cong \sqrt{\frac{Kt}{40\phi\mu c}}$ where t = time in days

Symbols	Dimensions	Symbols	Dimensions
β	Formation volume factor vol./vol.	Q_o	Rate of oil flow during test Bbbls./day
c	Fluid compressibility vol./vol./psi	Q_w	Rate of water flow during test Bbbls./day
EDR	Estimated damage ratio	Q_g	Rate of gas flow during test MCF/day
ϕ	Formation porosity. fractional	r_e	External Boundary Radius feet
h	Net producing interval feet	r_i	Radius of investigation feet
J	Productivity index (P.I.) Bbbls./day/PSI	r_w	Well bore radius inches
K	Permeability Millidarcies	S_w	Water saturation %
M	Slope of shut-in build up PSI/log cycle	t	Shut-in time period minutes
P_f	Final flowing pressure PSIG	Δt	Increment time of shut-in period minutes
$P_{f_{si}}$	Final shut-in pressure at time t PSIG	T	Open flow time period minutes
$P_{1_{si}}$	Initial shut-in pressure PSIG	$^{\circ}T_f$	Formation temperature $^{\circ}$ Rankin
P_o	Maximum reservoir pressure PSIG	μ	Fluid viscosity (Reservoir Conditions) Centipoise
P_1	Final shut-in build up plot intercept @ 1 PSIG	Z	Gas deviation factor (compressibility factor)
P_{10}	Final shut-in build up plot intercept @ 10 PSIG	$\frac{Kh}{\mu\beta}$ or $\frac{Kh}{\mu}$	Transmissibility factor Md. - ft. Cp.
P.S.	Potentiometric surface feet		
Q	Rate of flow during test Bbbls./day		

In making any interpretation, our employees will give Customer the benefit of their best judgment as to the correct interpretation. Nevertheless, since all interpretations are opinions based on inferences from electrical, mechanical or other measurements, we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible, except in the case of gross or wilful negligence on our part, for any loss, costs, damages or expenses incurred or sustained by Customer resulting from any interpretation made by any of our agents or employees.



JOHNSTON
...found a better way

SURFACE INFORMATION

Rate of Flow	Time	Pressure (P.S.I.G.)	Surface Choke
Tool	1000	-	-
WEAK BLOW, 1/2" IN			
WATER INCREASING TO BLOW,			
2" IN WATER.			
USED FOR INITIAL SHUT-IN	1003	-	-
SHUT-IN	1048	-	-
OPENED TOOL	1050	-	-
WEAK BLOW, 1/2" IN			
WATER INCREASING TO BLOW,			
2" IN WATER.			
USED FOR SECOND SHUT-IN	1105	-	-
SHUT-IN	1205	-	-
OPENED TOOL	1207	-	-
WEAK BLOW, 1/2" IN			
WATER INCREASING TO BLOW,			
2" IN WATER.			
USED FOR FINAL SHUT-IN	1237	-	-
PACKER LOOSE	1407	-	-

EQUIPMENT & HOLE DATA

Type Test	M. F. E. STRADDLE OPEN HOLE		
Formation Tested	KABAB K. B. B.		
Elevation	7018 K.B. Ft.		
Net Productive Interval	- Ft.		
Estimated Porosity	- %		
All Depths Measured From	KELLY BUSHING		
Total Depth	8318 Ft.		
Main Hole/Casing Size	7 7/8"		
Rat Hole/Liner Size	-		
Drill Collar Length	281'	I.D.	2.5"
Drill Pipe Length	7771'	I.D.	3.8"
Packer Depth(s)	8082, 8086 & 8150 Ft.		

**MULTI-FLOW EVALUATOR
FLUID SAMPLE DATA**

Sampler Pressure	40	P.S.I.G. at Surface
Recovery: Cu. Ft. Gas	-	
cc. Oil	-	
cc. Water	2450	
cc. Mud	-	
Tot. Liquid cc.	2450	
Gravity	-	°API @ - °F.
Gas/Oil Ratio	-	cu. ft./bbl.

RESISTIVITY CHLORIDE CONTENT

Recovery Water	.85 @ 66 °F.	3500 ppm
Recovery Mud	- @ - °F.	
Recovery Mud Filtrate	- @ - °F.	- ppm
Mud Pit Sample	1.5 @ 69 °F.	
Mud Pit Sample Filtrate	1.2 @ 69 °F.	200 ppm

Cushion Type	Amount	Pressure	Bottom Choke Size
-	-	-	15/16"

MUD DATA

Type	LOW SOLIDS	Wt.	9.0
Viscosity	58	Water Loss	5.0 C.C.
Vol. of Mud	1.5 @ 69 °F.	of Filtrate	1.2 @ 69 °F.
Solids Content	200		PPM

RECOVERY DESCRIPTION	FEET	BARRELS	% OIL	% WATER	% OTHERS	API GRAVITY	RESISTIVITY	CHL. PPM
LIGHTLY OIL & GAS CUT MUD	279	3.96				@ °F.	1.5 @ 71 °F.	400
GAS CUT WATER	312	4.43				@ °F.	.85 @ 70 °F.	3500
GAS CUT WATER	281	1.38				@ °F.	.85 @ 70 °F.	3500
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	

well site engineer reported 932 VSGCW

Remarks:

Address: SUITE 1200; LINCOLN TOWER BUILDING; DENVER, COLORADO 80203

Company: TENNECO OIL COMPANY Location: SEC. 16-T-38S-R2E Field: WILD CAT

Interval: 8086' TO 8150' Test #: 2 Date: 12-28-69

County: KANE State: UTAH Field Report No.: 14432 B

Operator: STROTHER (VERNAL) Test Approved By: MR. JAMES F. EGGLESTON No. Reports Requested: 6x

PRESSURE DATA

Instrument No.	T-776	J-040	T-264	Field Report No. 14432 B		
Capacity (P.S.I.G.)	5000	4700	3000			
Instrument Depth	8100'	8116'	8144'			
Instrument Opening	INSIDE	OUTSIDE	INSIDE			
Pressure Gradient P.S.I./Ft.						
Well Temperature °F.	144	144	144	TIME DATA		
Initial Hydrostatic Mud	A	3174.9	3192.9	-	Time Given	Time Computed
Initial Shut-in	B *	2286.5	2291.1	-	45 Mins.	47 Mins.
Initial Flow	C	32.5	54.5	-	3 Mins.	4 Mins.
SECOND FLOW	C-3	216.7	228.8	-	15 Mins.	15 Mins.
SECOND SHUT-IN	B-1 *	2245.8	2253.6	-	60 Mins.	60 Mins.
Final Flow	D	337.0	354.5	-	30 Mins.	26 Mins.
Final Shut-in	E *	2231.2	2238.6	-	90 Mins.	91 Mins.
Final Hydrostatic Mud	F	3039.1	3018.5	-		
Remarks:	C-1	125.6	141.7	-		
	C-2	105.2	121.0	-		
	C-4	123.6	248.5	-		

INCREMENTAL BREAKDOWN DONE ON INSTRUMENT NUMBER J-040.

INSTRUMENT NUMBER T-264: BELOW STRADDLE, PRESSURES EXCEEDED CAPACITY OF RECORDER. PRESSURES *Shut in pressure did not reach static reservoir pressure. Clock Travel 0.02169 / UNDETERMINED inches per min.

PRESSURE INCREMENTS

DT	PSI	LOG	DT	PSI	LOG	
INITIAL SHUT IN BREAKDOWN						
C 1	0	141.7	0.000	27	2276.1	0.060
	3	1997.7	0.368	30	2279.9	0.054
	6	2160.8	0.222	33	2281.7	0.050
	9	2210.5	0.160	36	2284.6	0.046
	12	2234.9	0.125	39	2286.4	0.042
	15	2249.9	0.103	42	2288.3	0.040
	18	2259.2	0.087	45	2290.2	0.037
	21	2265.8	0.076	B 47	2291.1	0.035
	24	2271.4	0.067			
SECOND SHUT IN BREAKDOWN						
C 3	0	228.8	0.000	35	2222.7	0.188
	5	1977.1	0.681	40	2232.1	0.169
	10	2096.1	0.462	45	2238.6	0.153
	15	2148.6	0.355	50	2244.2	0.140
	20	2177.7	0.290	55	2249.9	0.129
	25	2197.4	0.246	B 1 60	2253.6	0.119
	30	2212.4	0.213			
FINAL SHUT IN BREAKDOWN						
D	0	354.5	0.000	50	2203.9	0.279
	5	1874.0	1.000	55	2209.6	0.260
	10	2030.5	0.740	60	2216.1	0.243
	15	2086.8	0.602	65	2220.8	0.228
	20	2120.5	0.512	70	2225.5	0.216
	25	2144.9	0.447	75	2229.3	0.204
	30	2161.8	0.398	80	2233.0	0.194
	35	2175.8	0.359	85	2235.8	0.185
	40	2186.1	0.327	90	2238.6	0.176
	45	2196.4	0.301	E 91	2238.6	0.174



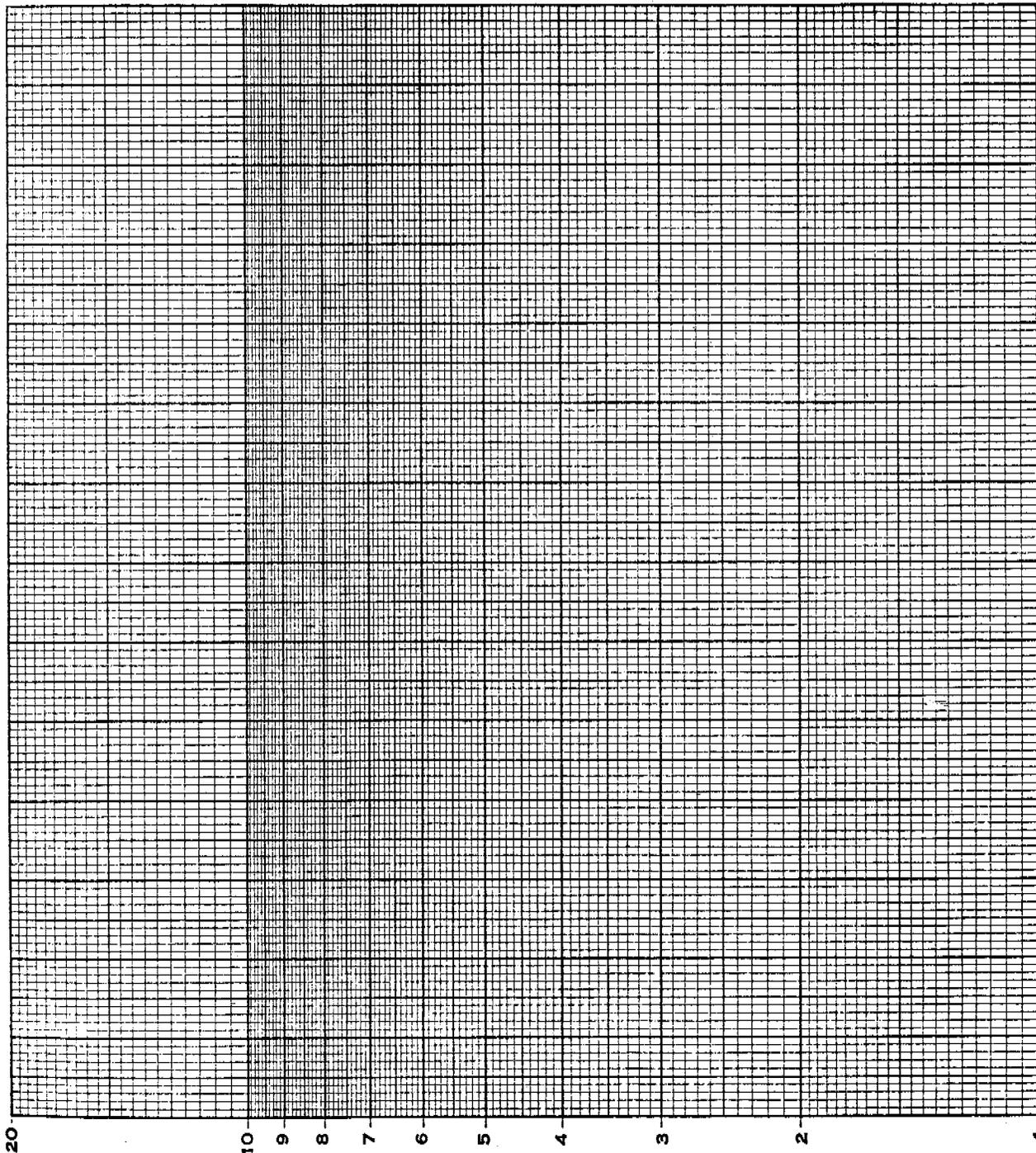
Document No. J-040

Reservoir Engineering Data

Field Report No. 14432 B

Estimated Damage Ratio	EDR	1.3		Effective Transmissibility LIQUID	$\frac{Kh}{\mu B}$	144.2	$\frac{Md-ft.}{Cp.}$
Maximum Reservoir Pressure INITIAL SHUT-IN	P_o	2312	P.S.I.G.	Effective Transmissibility	$\frac{Kh}{\mu B}$		$\frac{Md-ft.}{Cp.}$
Type of Shut-in Curve FINAL SHUT-IN	M	353	PSI/log cycle	Flow Rate	LIQUID Q	313	Bbl./day
Potentiometric Surface (Datum Plane, Sea Level)	PS	4242	ft.	Flow Rate	Q		Bbl./day
Productivity Index	PI	.160	Bbl./day/PSI	Gas Oil Ratio	GOR		CF/Bbl.
Radius of Investigation		73	ft.	K (Effective to LIQUID)		2.25	Md.

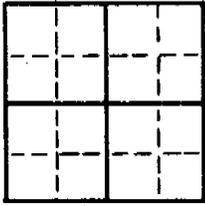
SLOPE $m=2302-1949=353$



Pressure (P.S.I.G.)

$T + \Delta t$

Selva



STATE OF UTAH
OIL & GAS CONSERVATION COMMISSION
SALT LAKE CITY, UTAH

Fee and Patented.....
State ML 26146.....
Lease No.
Public Domain
Lease No.
Indian
Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

Notice of Intention to Drill.....		Subsequent Report of Water Shut-off.....	
Notice of Intention to Change Plans.....		Subsequent Report of Altering Casing.....	
Notice of Intention to Redrill or Repair.....		Subsequent Report of Redrilling or Repair.....	
Notice of Intention to Pull or Alter Casing.....		Supplementary Well History.....	
Notice of Intention to Abandon Well.....		
Notice of Intention to Temporarily Abandon <u>x</u>		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Upper Valley South

January 9, 1970

Well No. 1 is located 650 ft. from {N} line and 650 ft. from {E} line of Sec. 16

NE 1/4 Sec. 16 (1/4 Sec. and Sec. No.) T-38S (Twp.) R-2E (Range) S. 11 M. (Meridian)
Wildcat (Field) Kane (County or Subdivision) Utah (State or Territory)

The elevation of the ~~derrick floor~~ above sea level is 7007 feet. Gr

A drilling and plugging bond has been filed with State of Utah

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important work, surface formation, and date anticipate spudding-in.)

1-6-70 Well drilled to T.D. of 8900' and all zones tested dry, We propose to temporarily abandon well as follows:

Depth	No Sacks Cement
8800-8750	20
7850-7750	40
7200-7000	70
6475-5525	25
4420-4370	25
3600-3400	70

Blind flange to be bolted on Braden Head and location will be cleaned when the weather permits.

I understand that this plan of work must receive approval in writing by the Commission before operations may be commenced.

Company Tenneco Oil Company
Suite 1200 Lincoln Tower Bldg.
Address Denver, Colorado 80203 By G. A. Ford
Title Sr. Production Clerk

INSTRUCTIONS: A plat or map must be attached to this form showing the location of all leases, property lines, drilling and producing wells, within an area of sufficient size so that the Commission may determine whether the location of the well conforms to applicable rules, regulations and orders.

**STATE OF UTAH
OIL & GAS CONSERVATION COMMISSION**

State Capitol Building
Salt Lake City 14, Utah

LOCATE WELL CORRECTLY

To be kept Confidential until _____
(Not to exceed 4 months after filing date)

LOG OF OIL OR GAS WELL

Suite 1200 Lincoln Tower Bldg.
Denver, Colorado 80203

Operating Company Tenneco Oil Company Address _____
Lease or Tract: Upper Valley South Field Wildcat State Utah
Well No. 1 Sec. 16 T. 38 R. 2 Meridian SLM County Kane
Location .650 ft. N of N Line and .650 ft. E of E Line of Sec. 16 Elevation 7007 GR
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed G. A. Ford

Date 1-26-70 Title Sr. Production Clerk

The summary on this page is for the condition of the well at above date.

Commenced drilling 11-28, 1969 Finished drilling 1-6, 1970

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from None to _____ No. 4, from _____ to _____
No. 2, from _____ to _____ No. 5, from _____ to _____
No. 3, from _____ to _____ No. 6, from _____ to _____

IMPORTANT WATER SANDS

No. 1, from None to _____ No. 3, from _____ to _____
No. 2, from _____ to _____ No. 4, from _____ to _____

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From--	To--	
<u>24"</u>	<u>Culvert</u>	<u>Pipe</u>		<u>40'</u>	<u>None</u>	<u>Conductor</u>			
<u>8-5/8</u>	<u>32</u>	<u>8</u>	<u>CF&I</u>	<u>909</u>					
<u>8-5/8</u>	<u>24</u>	<u>8</u>	<u>CF&I</u>	<u>2626</u>	<u>Hallib.</u>				

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
<u>24</u>	<u>40</u>	<u>75</u>	<u>Hallib.</u>	<u>-</u>	<u>-</u>
<u>8-5/8</u>	<u>3523</u>	<u>470</u>	<u>Hallib.</u>	<u>-</u>	<u>-</u>

MARK

PI

PLUGS AND ADAPTERS

Heaving plug—Material Length Depth set
 Adapters—Material None Size

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out
		None				

TOOLS USED

Rotary tools were used from 0 feet to 8900 feet, and from - feet to - feet
 Cable tools were used from - feet to - feet, and from - feet to - feet

DATES

....., 19..... Put to producing Dry Hole, 19.....

The production for the first 24 hours was None barrels of fluid of which% was oil;% emulsion;% water; and% sediment. Gravity, °Bé.

If gas well, cu. ft. per 24 hours Gallons gasoline per 1,000 cu. ft. of gas

Rock pressure, lbs. per sq. in.

EMPLOYEES

....., Driller , Driller
 , Driller , Driller

FORMATION RECORD

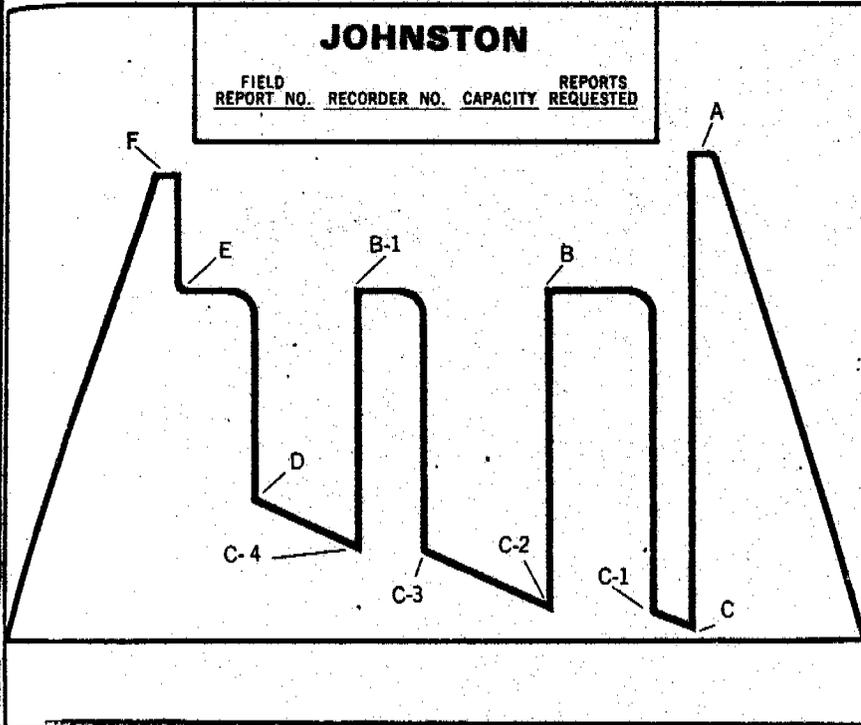
FROM—	TO—	TOTAL FEET	FORMATION
2120	2630	510	Tropic Shale
	2630	190	Dakota Sanstone
	2820	680	Winsor FM
	3500	890	Carmel FM
	4390	1565	Navajo Sandstone
	5955	335	Kayenta Siltstone
	6290	115	Wingate Sandstone
	6405	655	Chinle Shale
	7060	150	Shinarump Conglomerate
	7210	655	Moenkopi Shale
	7865	55	Timpoweap LS
	7920	310	Kaibab LS
	8230	340	Toroweap FM
	8570	50	Coconino Sandstone
	8620	220	Hermit Shale
	8840	60+	Cedar Mesa Sandstone
	8900+		

NOTE: WELL T&A 1-8-70



JOHNSTON
...found a better way

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.

10700 B

CAPACITY

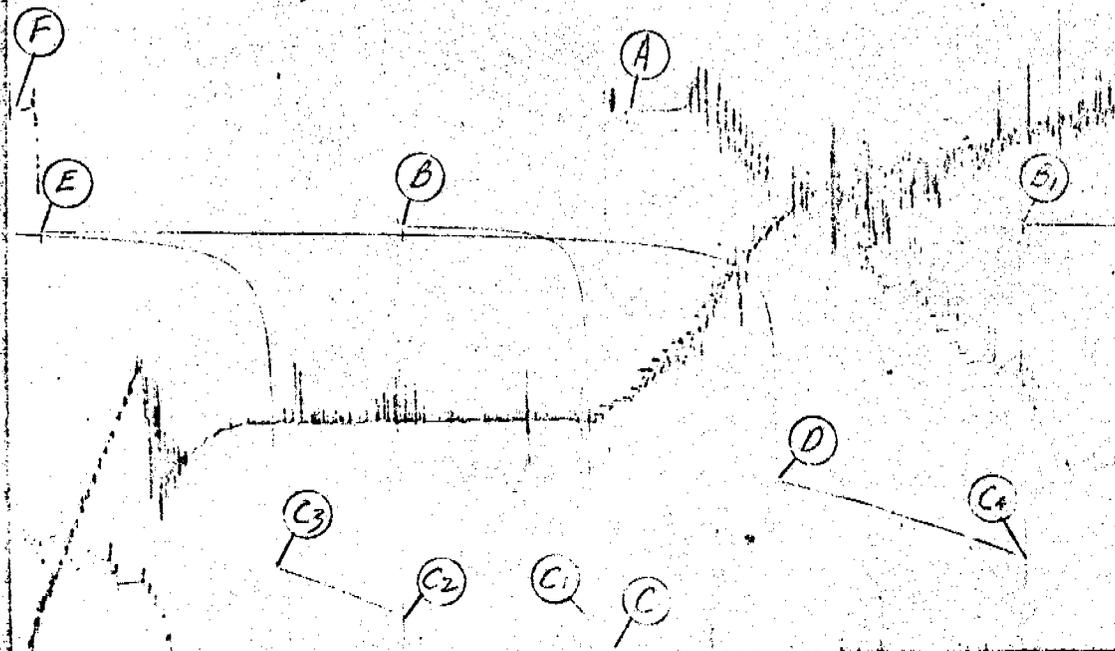
4700#

RECORDER NO.

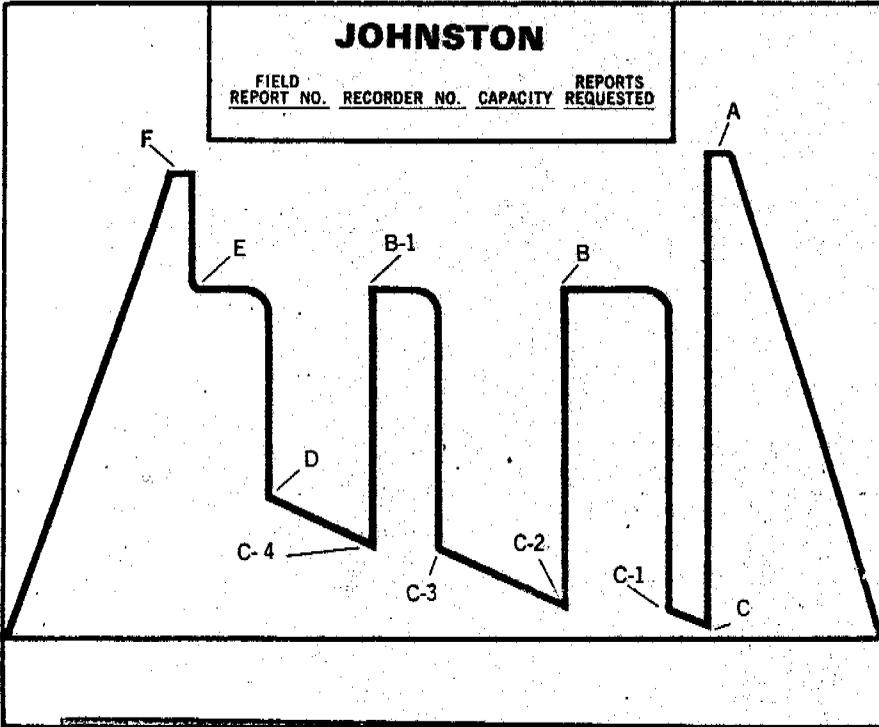
J-040

REPORTS REQUESTED

6+



GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS

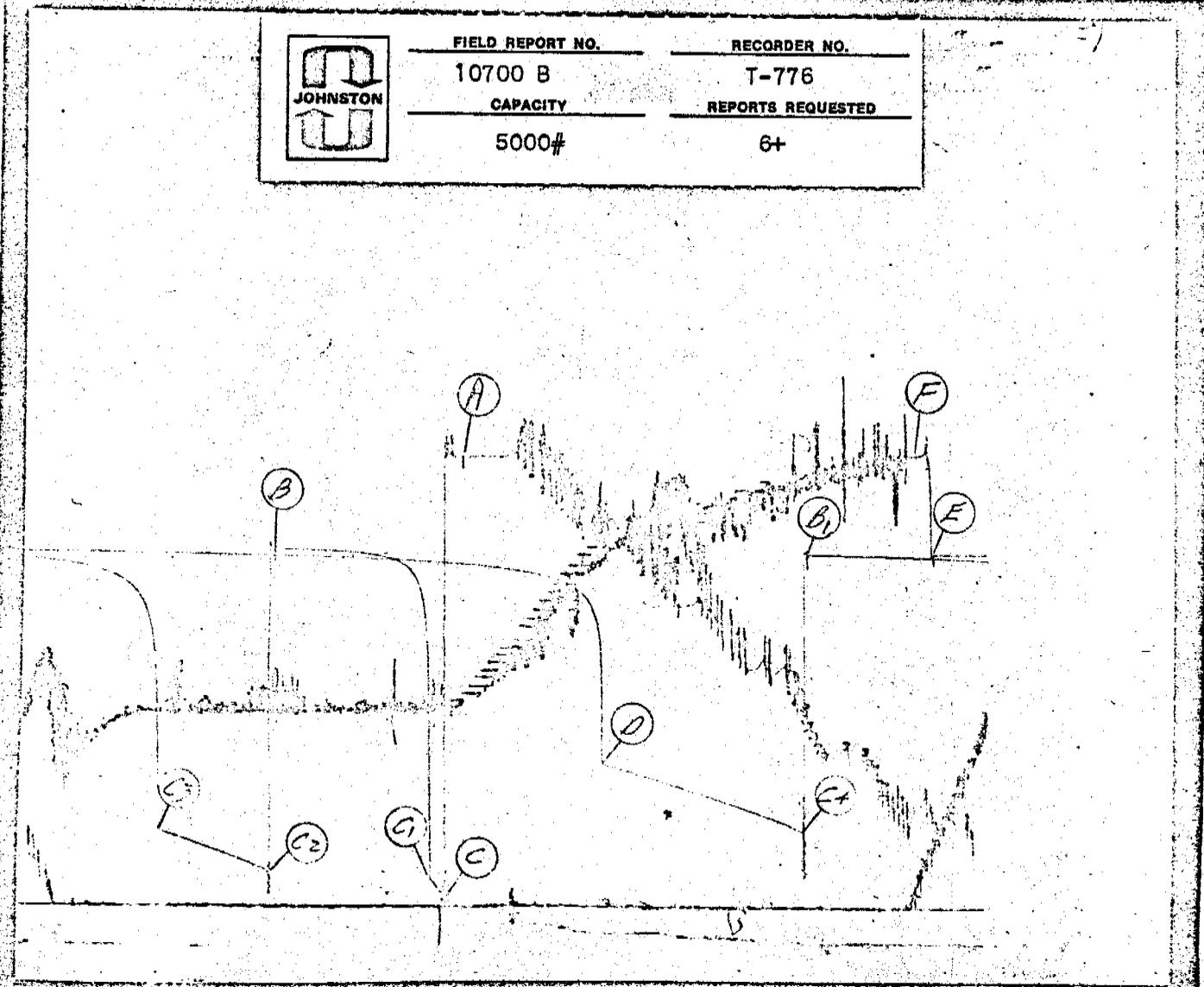


- A. Initial Hyd. Mud
- B. Initial Shut-in
- C. Initial Flow
- D. Final Flow
- E. Final Shut-in
- F. Final Hyd. Mud

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

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- 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.
	10700 B	T-776
	CAPACITY 5000#	REPORTS REQUESTED 6+





CALVIN L. RAMPTON
Governor

OIL, GAS, AND MINING BOARD

GORDON E. HARMSTON
Executive Director,
NATURAL RESOURCES

STATE OF UTAH

GUY N. CARDON
Chairman

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL, GAS, AND MINING

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

CLEON B. FEIGHT
Director

1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

January 17, 1977

Tenneco Oil Co.
1200 Lincoln Tower Bldg.
Denver, Colorado 80203

Attn: Allen T. Washburn

Re: Well No. Upper Valley South #1
Sec. 16, T. 38S, R. 2E,
Kane County, Utah

Gentlemen:

Our records indicate that you have not filed the necessary
Drill Stem Test information.

Rule C-5, The General Rules and Regulations and Rules of
Practice and procedure, requires that this information shall include
details of such tests.

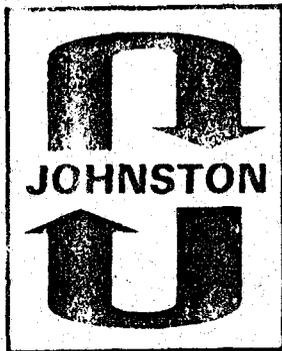
In order to keep our records accurate and complete, submit such
report as soon as possible.

Sincerely,

DIVISION OF OIL, GAS, AND MINING

KATHY OSTLER
RECORDS CLERK

/ko



PRESSURE LOG*

Field Report No. 14432B

Instrument:
Number J-040

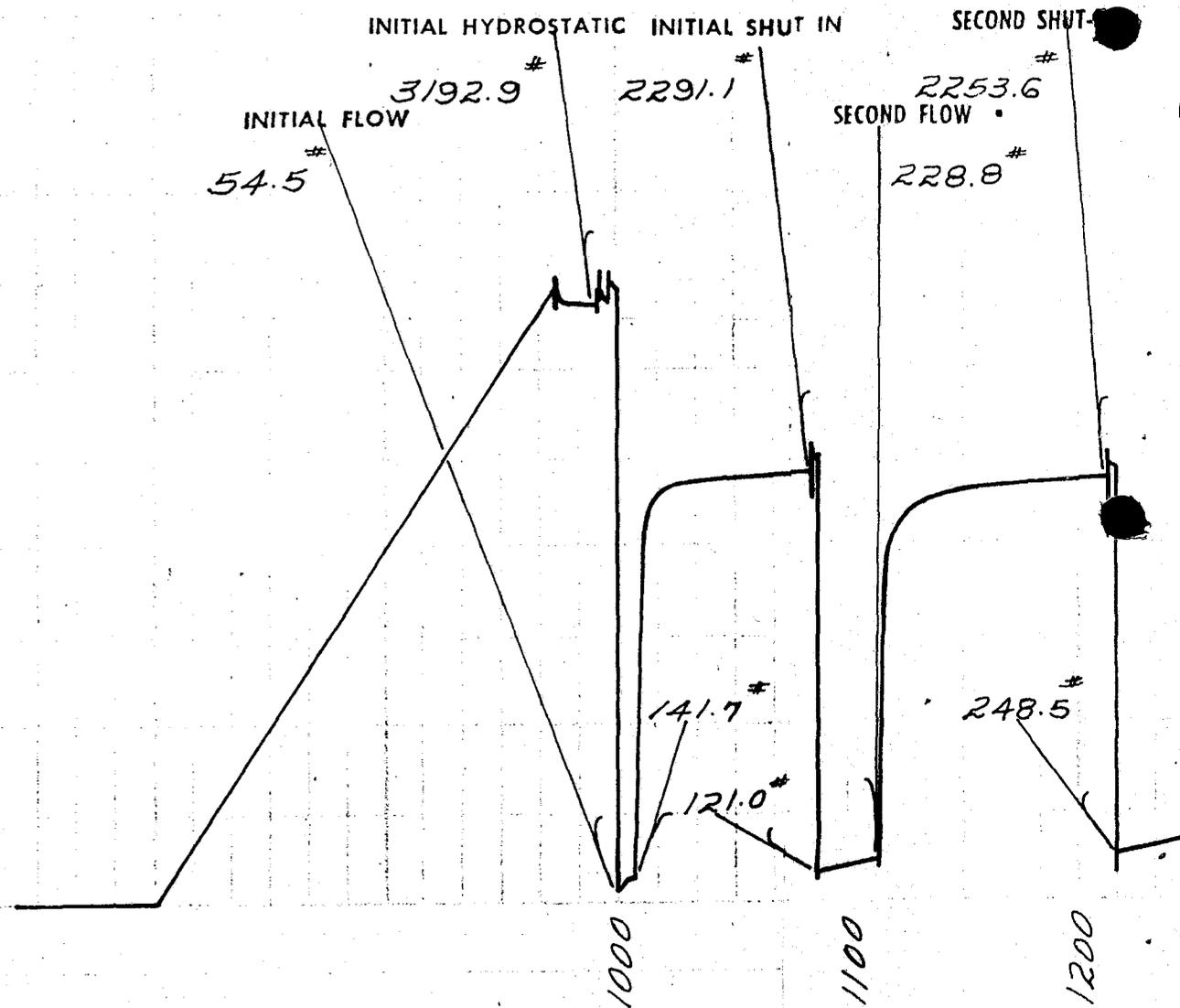
Capacity 4700 p.s.i.

Depth 8116 ft.

*a continuous tracing of the original chart

← 1 HOUR →

TIME →



FINAL FLOW

354.5 #

FINAL HYDROSTATIC

3018.5 #

FINAL SHUT IN

2238.6 #

1 HOUR

1300

1400

1500

