



December 3, 1965

Cactus Drilling Corporation
Drawer 71
San Angelo, Texas

RE: Formation Test No. 4
Navajo "A" No. 1
Field Report No. 17666-A

Gentlemen:

Enclosed is a copy of the Productivity Log obtained during the above referenced test along with the Technical Reports.

The subject test was conducted utilizing our "MFE" and Productivity Logging system of tools. The recovery data indicate this to be essentially a dry test as no show of formation fluid was noted in the recovery.

The log obtained "Before" test is presented for your review. An "After" log was not obtained due to a malfunction in the starting mechanism. The equipment was completely checked at the conclusion of this job and the trouble removed.

Please accept our appreciation for your use of this service.

Yours very truly,

A. T. Campbell, Jr.
Manager, Interpretation and
Evaluation

ATC:mc





MULTI-FLOW EVALUATOR (MFE)

Field Data Technical Report

The **Multi-Flow Evaluator (MFE)** is a wholly new formation evaluation tool that provides test data on an unlimited number of flow and shut-in pressure tests, plus a pressurized formation fluid sample under final flowing pressure. This sample may be drained at the well site, at our field location, or in your laboratory.

[illegible][illegible]

Remarks:	

EQUIPMENT, HOLE & MUD DATA		
Type Test	M. F. E. AND PROD. LOG	
Formation Tested	-	
Elevation	4954 K.B.	Ft.
Net Productive Interval	-	Ft.
Estimated Porosity	-	%
All Depths Measured From	KELLY BUSHING	
EQUIPMENT SEQUENCE		
COMPONENTS	Size/Type	Depth/Length/ I.D.
DRILL PIPE	4" FH	6280' /
		3.2"
DRILL COLLARS	4 1/2" XH	270' /
		2.25"
CIRCULATING SUB	4 1/2"	
DRILL COLLARS	4 1/2" XH	90' / 2.25"
MULTI-FLOW		
EVALUATOR	5"	
BY-PASS VALVE	3 1/2" MFE	
JARS	3 1/2" HS-1	
RECORDER CARRIER	3 1/2" T	6'
RECORDER CARRIER	3 1/2" J	6'
SAFETY JOINT	3 1/2" BOWEN	
BY-PASS SUB	3 1/2"	
SAFETY SEAL	4 1/2"	
BOB-TAIL PACKER	6 3/4"	6664'
BOB-TAIL PACKER	6 3/4"	6670'
PERF. ANCHOR	4 1/2" HVY	5'
DRILL COLLARS	4 1/2" XH	60' / 2.25"
BOB-TAIL PACKER	6 3/4"	6735'
BOB-TAIL PACKER	6 3/4"	6741'
PERF. ANCHOR	4 1/2" HVY	4'
DRILL COLLARS	4 1/2" XH	210' /
		2.25"
PROD. LOG TOOL		22'
Total Depth	6977	Ft.
Main Hole/Casing Size	7 7/8"	
Rat Hole/Liner Size	-	
Bottom Choke Size	-	
Mud Type	FRESH WATER GEL	Wt. 10.8
Viscosity	44	Water Loss 8.0 C.C.
Cushion Type	Amount	Pressure
	-	

No. Reports Requested 18(4x's)



MULTI-FLOW EVALUATOR FLUID SAMPLE REPORT

Date 11-26-65 Field Report No. 17666 A

Company CACTUS DRILLING CORPORATION

Well NAVAJO "A" #1 Field WILD CAT

County SAN JUAN State NEW MEXICO

Test Interval 6670' To 6735' Test No. 4

Type of Test M.F.E. AND PROD. LOG Recovery Description 270' OF DRILLING MUD

Bot. Hole Temp. 150 °F. Recorded Pressures: ISI B-1 * 90 psig.
SSI - psig.
FF 188 psig.
FSI 189 psig.

*Shut-in Pressure did not reach static reservoir pressure.

EVALUATOR SAMPLER UNIT

Sample Drained: ☒ On Location ☐ Service Center ☐ Other _____
☐ Laboratory Name _____
Address _____

Sampler Pressure 0 psig. at Surface

Recovery: Cu. Ft. Gas -
cc. Oil -
cc. Water -
cc. Mud 2000
Total Liquid cc. 2000

Gravity - °API - °F.
Gas/Oil Ratio -

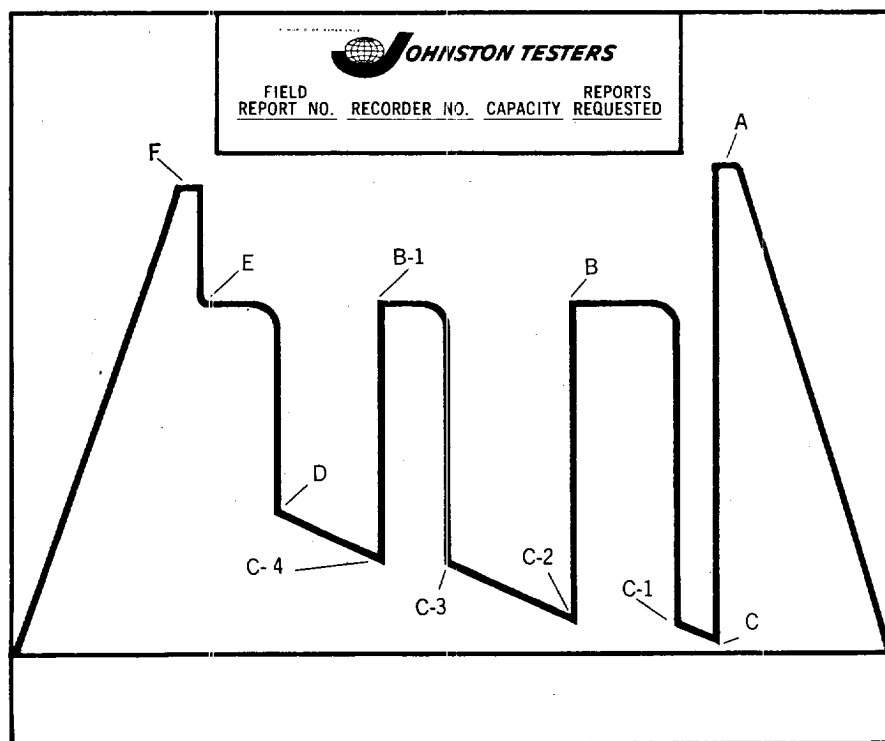
RESISTIVITY

CHLORIDE CONTENT

Recovery Water	<u>-</u>	@	<u>-</u>	°F.	<u>-</u>	ppm.
Recovery Mud	<u>1.7</u>	@	<u>70</u>	°F.	<u>-</u>	ppm.
Recovery Mud Filtrate	<u>-</u>	@	<u>-</u>	°F.	<u>-</u>	ppm.
Mud Pit Sample	<u>1.8</u>	@	<u>70</u>	°F.	<u>400</u>	ppm.
Mud Pit Sample Filtrate	<u>-</u>	@	<u>-</u>	°F.		

Remarks THIS APPEARS TO BE ESSENTIALLY A DRY TEST OF A TIGHT FORMATION AS THERE WERE NO INDICATIONS OF ANY FORMATION FLUIDS RECOVERED.

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.

