

TRILOBITE TESTING COMPANY, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name HERBERT #17-3A Test No. 1 Date 3/8/92
Company NORTH AMERICAN RESOURCES CO. Zone Tested ST LOUIS
Address 16E GRANITE BUTTE MT 69701 Elevation 2852 K.B.
Co. Rep./Geo. N/A Cont. RED TIGER RIG #10 Est. Ft. of Pay _____
Location: Sec. 17 Twp. 23S Rge. 30W co. FINNEY State KS

Interval Tested 4810-4825 Drill Pipe Size 4.5 XH
Anchor Length 15 Wt. Pipe I.D. - 2.7 Ft. Run 634
Top Packer Depth 4805-4810 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 4825
Total Depth 4900

Mud Wt. 9 lb / gal. Viscosity 52 Filtrate 10.4

Tool Open @ 9:30 AM Initial Blow 1/4" BLOW THROUGHOUT

Final Blow NO BLOW

Recovery — Total Feet 30 Flush Tool? NO

Rec. 30 Feet of DRILLING MUD

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

BHT 121 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 15000 ppm System

(A) Initial Hydrostatic Mud 2374.9 PSI Ak1 Recorder No. 13277 Range 4125

(B) First Initial Flow Pressure 11.4 PSI @ (depth) 4813 w/Clock No. 25828

(C) First Final Flow Pressure 11.4 PSI Ak1 Recorder No. 11038 Range 5075

(D) Initial Shut-in Pressure 831.5 PSI @ (depth) 4820 w/Clock No. 3942

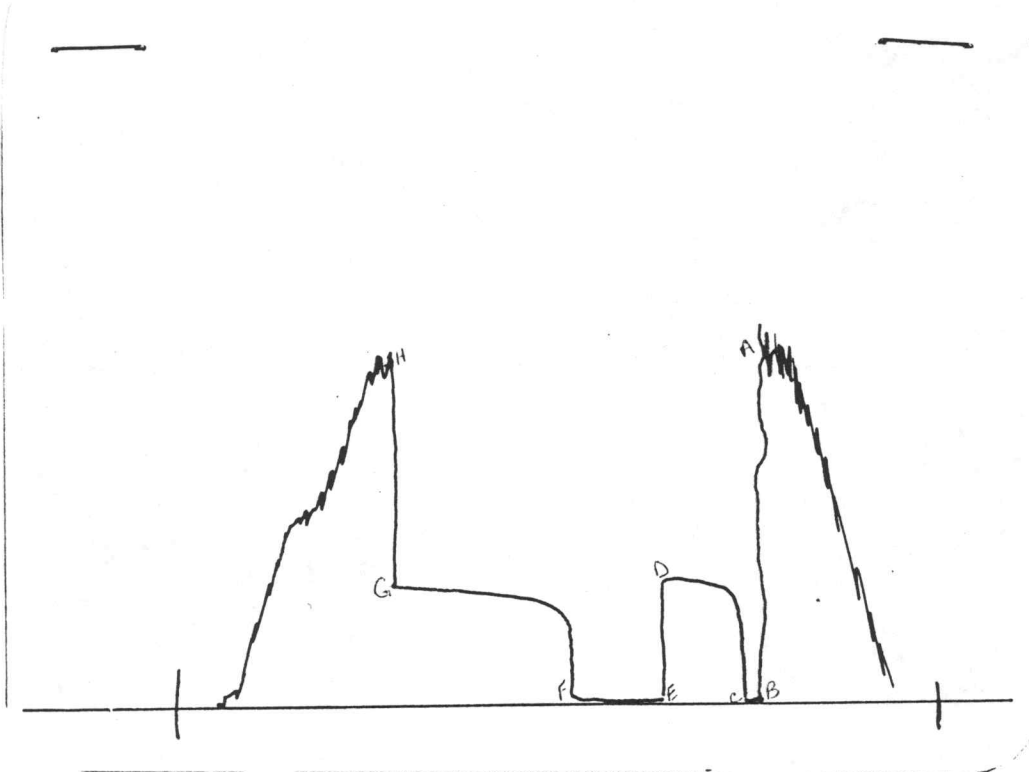
(E) Second Initial Flow Pressure 16.8 PSI Ak1 Recorder No. 5495 Range 4200

(F) Second Final Flow Pressure 16.8 PSI @ (depth) 4897 w/Clock No. 17652

(G) Final Shut-in Pressure 794.4 PSI Initial Opening 8 Final Flow 60

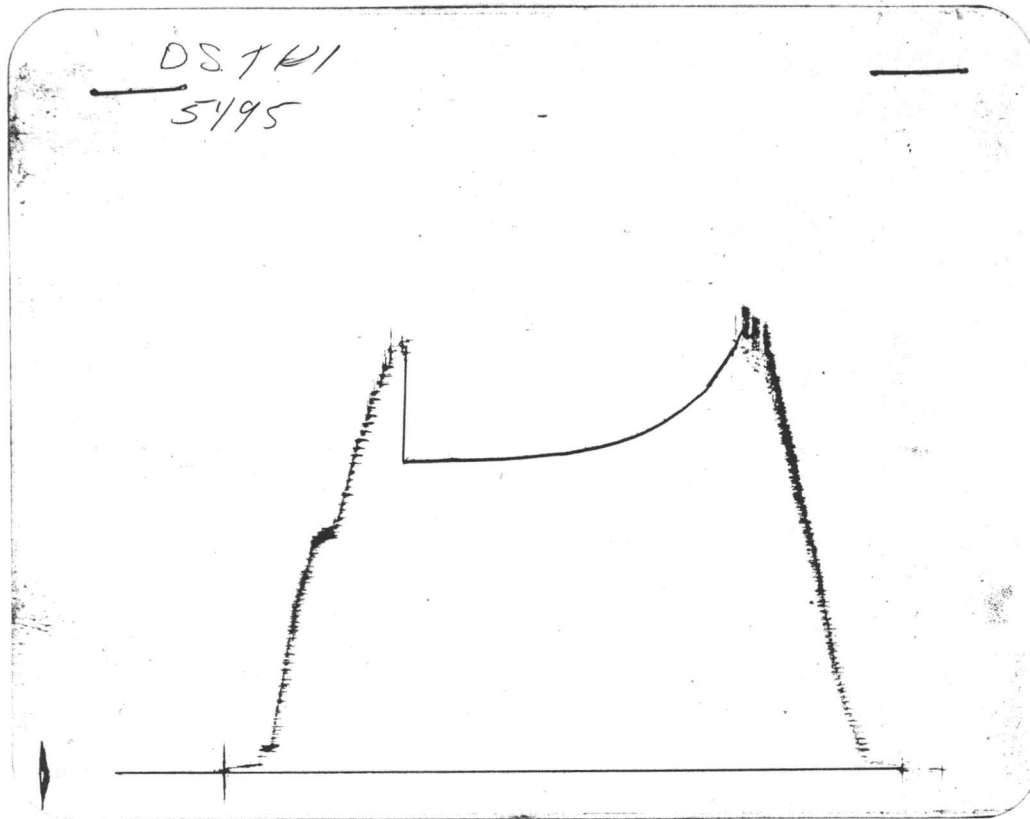
(H) Final Hydrostatic Mud 2285.1 PSI Initial Shut-in 60 Final Shut-in 120

Our Representative TOM HORACEK TOTAL PRICE \$ 1400



POINT This is an actual photograph of recorder chart PRESSURE

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2362	2374.9
(B) FIRST INITIAL FLOW PRESSURE	14	11.4
(C) FIRST FINAL FLOW PRESSURE	14	11.4
(D) INITIAL CLOSED-IN PRESSURE	817	831.5
(E) SECOND INITIAL FLOW PRESSURE	14	16.8
(F) SECOND FINAL FLOW PRESSURE	14	16.8
(G) FINAL CLOSED-IN PRESSURE	791	794.4
(H) FINAL HYDROSTATIC MUD	2298	2285.1



POINT

This is an actual photograph of recorder chart
PRESSURE

FIELD
READING

OFFICE
READING

- (A) INITIAL HYDROSTATIC MUD
- (B) FIRST INITIAL FLOW PRESSURE
- (C) FIRST FINAL FLOW PRESSURE
- (D) INITIAL CLOSED-IN PRESSURE
- (E) SECOND INITIAL FLOW PRESSURE
- (F) SECOND FINAL FLOW PRESSURE
- (G) FINAL CLOSED-IN PRESSURE
- (H) FINAL HYDROSTATIC MUD

HERBERT #17-3A DST #1
 INITLAL SHUTIN
 8 FLOW TIME

 Slope -311.05 psi/cycle
 P * 848 psi

	TIME(MIN)	Pws (psi)	Log		<> PRESSURE
			Horn T	Horn T	
	6	689.2	2	0.368	689.2
	12	761.2	2	0.222	72.0
	18	794.4	1	0.160	33.2
	24	807.2	1	0.125	12.8
	30	817.4	1	0.103	10.2
X	36	821.3	1	0.087	3.9
	42	824.7	1	0.076	3.4
	48	826.3	1	0.067	1.6
	54	828.5	1	0.060	2.2
X	60	831.5	1	0.054	3.0

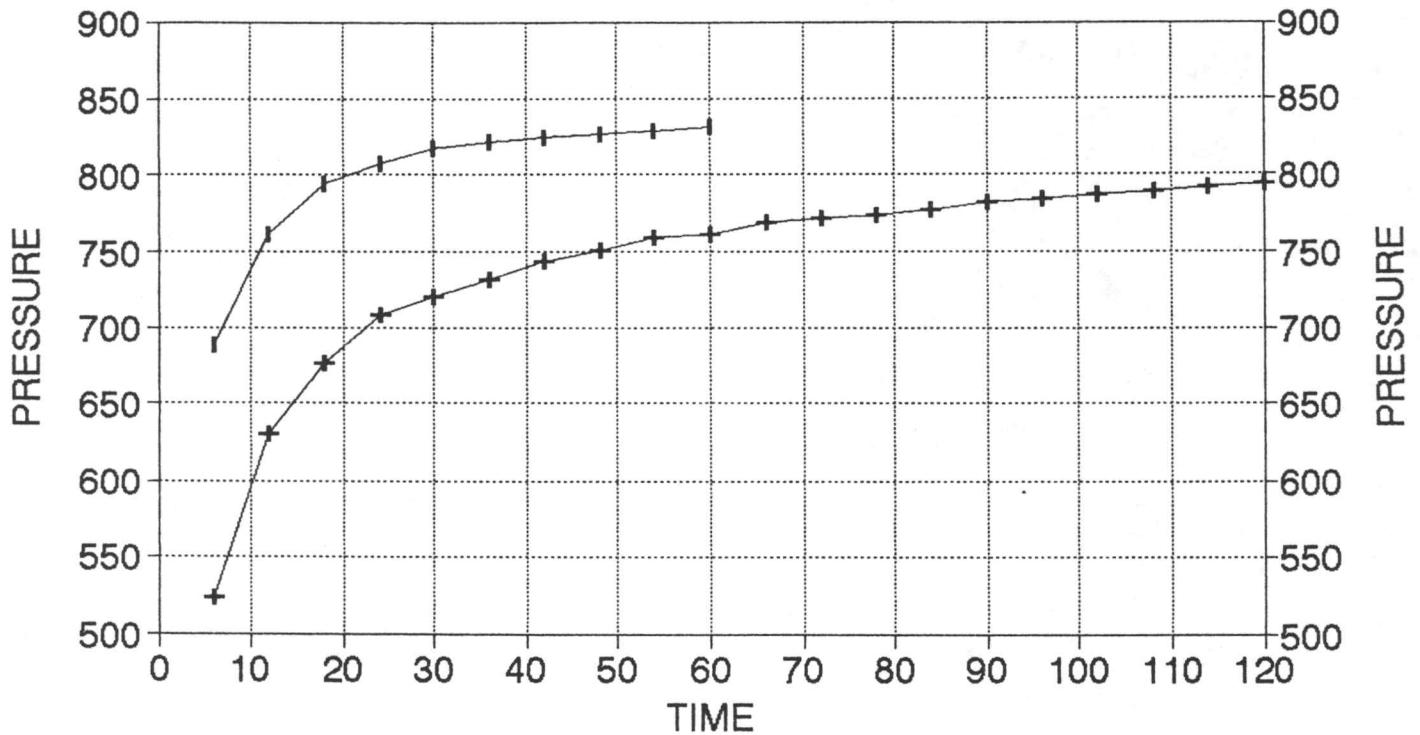
HERBERT #17-3A DST #1
 FINAL SHUTIN
 68 TOTAL FLOW

 Slope -227.39 psi/cycle
 P * 839 psi

	TIME(MIN)	Pws (psi)	Log		<> PRESSURE
			Horn T	Horn T	
	6	523.4	12	1.091	523.4
	12	629.9	7	0.824	106.5
	18	676.4	5	0.679	46.5
	24	708.5	4	0.584	32.1
	30	720.1	3	0.514	11.6
	36	731.7	3	0.461	11.6
	42	743.2	3	0.418	11.5
	48	750.9	2	0.383	7.7
	54	758.6	2	0.354	7.7
	60	761.2	2	0.329	2.6
X	66	768.8	2	0.308	7.6
	72	771.4	2	0.289	2.6
	78	774.0	2	0.272	2.6
	84	776.5	2	0.258	2.5
	90	781.6	2	0.244	5.1
	96	784.2	2	0.233	2.6
	102	786.8	2	0.222	2.6
	108	789.3	2	0.212	2.5
	114	791.9	2	0.203	2.6
X	120	794.4	2	0.195	2.5

DELTA T DELTA P

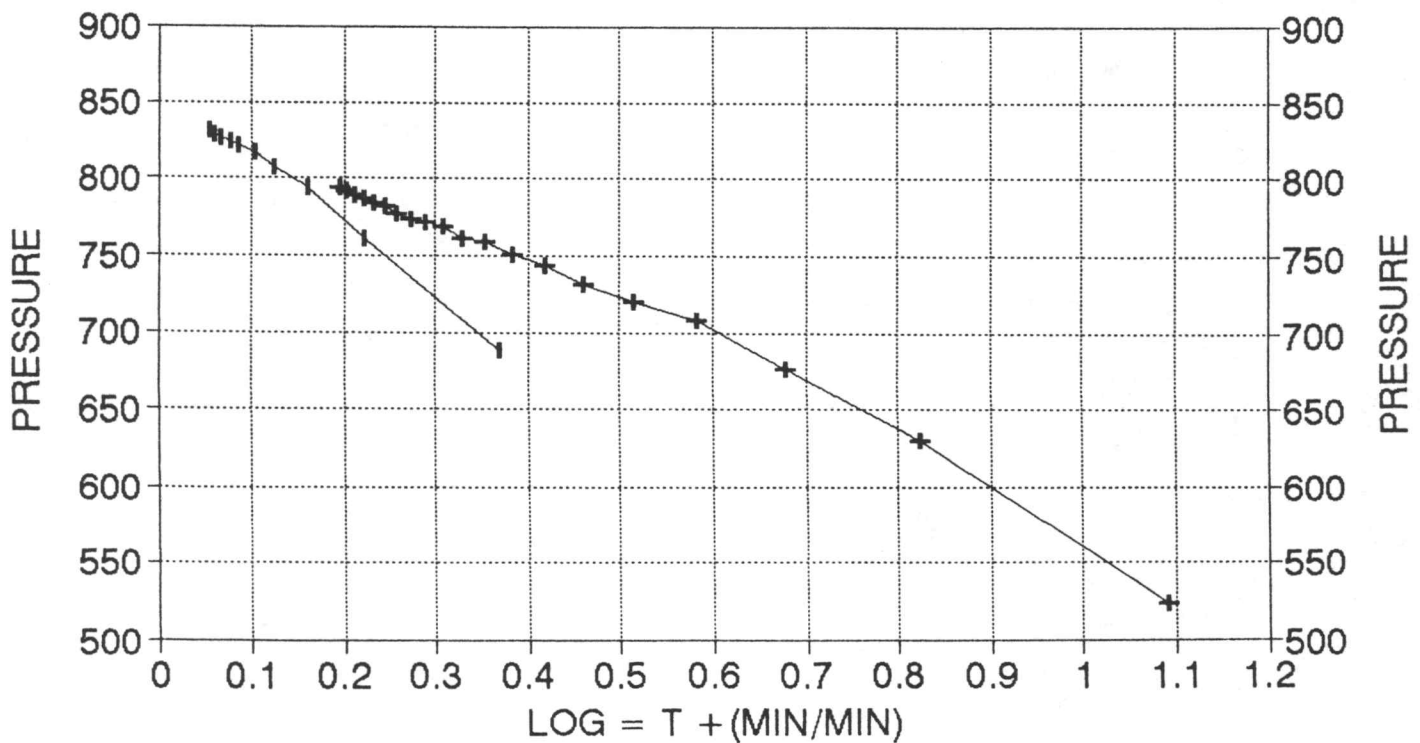
DST #1 / HERBERT #17-3A



—|— INITIAL —+— FINAL

HORNER PLOT

DST #1 / HERBERT #17-3A



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FLUID SAMPLER DATA

Ticket No. 4436 Date 3/8/92

Company Name NORTH AMERICAN RESOURCES CO.

Lease HERBERT #17-3A Test No. 1

County FINNEY Sec. 17 Twp. 23S Rng. 30W

SAMPLER RECOVERY

Gas _____ ML
Oil _____ ML
Mud 3200 ML
Water _____ ML
Other _____ ML
Pressure 80 PSI
Total 3200 ML

PIT MUD ANALYSIS

Chlorides 15000 ppm.
Resistivity _____ ohms @ _____ F
Viscosity 52
Mud Weight 9
Filtrate 10.4
Other _____

SAMPLER ANALYSIS

Resistivity 0.4 ohms @ 67 F
Chlorides 18000 ppm.
Gravity _____ corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
MIDDLE
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
BOTTOM
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.