

CHENEY TESTING COMPANY

P. O. BOX 3

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company <u>F & M Oil Co., Inc.</u>	Test No. <u>1</u>
Well Name & Number <u>Bieler #1</u>	Zone Tested <u>Regan Sand</u>
Company Address <u>505 Union Center</u>	Date <u>11-17-77</u>
Comp. Rep. <u>Jay Dirks</u>	Tester <u>Marvin Printz</u>
Contractor <u>L.D. Drilling</u>	Elevation <u>1993 KB</u>
Location: Sec. <u>20</u> Twp. <u>15</u> Rge. <u>19w</u> Co. <u>Ellis</u> State <u>KS</u>	Est. Feet of Pay _____

Recorder No. 7437 Type Kuster Range 4200 PSI

Recorder Depth 3632

(A) Initial Hydrostatic Mud 2054 PSI

(B) First Initial Flow Pressure 65 PSI

(C) First Final Flow Pressure 240 PSI

(D) Initial Closed-in Pressure 1180 PSI

(E) Second Initial Flow Pressure 283 PSI

(F) Second Final Flow Pressure 349 PSI

(G) Final Closed-in Pressure 1180 PSI

(H) Final Hydrostatic Mud 2023 PSI

Temperature 109

Mud Weight 10.2 Viscosity 39

Fluid Loss 15.5

Interval Tested 3614-3638

Anchor Length 24

Top Packer Depth 3609

Bottom Packer Depth 3614

Total Depth 3638

Drill Pipe Size 4 1/2 FH

Wt. Pipe I. D. 2.7 Ft. Run 445

Recovery—Total Feet 570

Recovered 570 Feet Of muddy salt water

Recovered _____ Feet Of _____

Recovered _____ Feet Of _____

Recovered _____ Feet Of _____

Extra Equipment None

Recorder No. 3695 Type Kuster Range 5300 PSI

Recorder Depth 3635

Tool Open Before I. S. I. 30 Mins.

Initial Shut-in 30 Mins.

Flow Period 30 Mins.

Final Shut-in 30 Mins.

Surface Choke Size 1"

Bottom Choke Size 3/4"

Main Hole Size 7 7/8"

Rubber Size 6 3/4"

Tool Open @ 9:25 P.M.

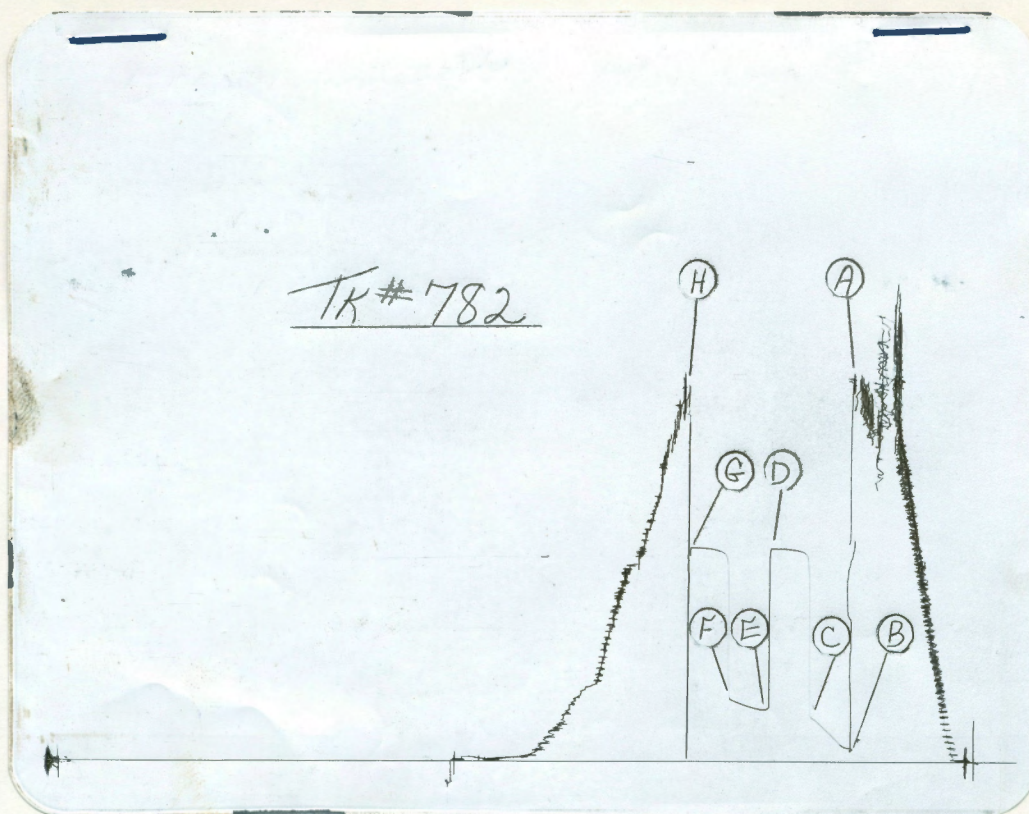
Blow Tool opened with weak blow increasing

Remarks to medium to strong blow

Medium blow FFP

Drill Collar I. D. _____ Ft. Run _____

Price of Job \$380.00



Actual recorder chart

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	2054	PSI
(B) First Initial Flow Pressure	65	PSI
(C) First Final Flow Pressure	240	PSI
(D) Initial Closed-in Pressure	1180	PSI
(E) Second Initial Flow Pressure	283	PSI
(F) Second Final Flow Pressure	349	PSI
(G) Final Closed-in Pressure	1180	PSI
(H) Final Hydrostatic Mud	2023	PSI

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b¹	= Approximate Radius of Investigation (Net Pay Zone h¹)	Feet
D.R.	= Damage Ratio	—
EI	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h¹	= Net Pay Thickness	Feet
K	= Permeability	md
K¹	= Permeability (From Net Pay Zone h¹)	md
m	= Slope Extrapolated Pressure Plot (Psi²/cycle Gas)	psi/cycle
OF¹	= Maximum Indicated Flow Rate	MCF/D
OF²	= Minimum Indicated Flow Rate	MCF/D
OF³	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF⁴	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P^S	= Extrapolated Static Pressure	Psig.
P^F	= Final Flow Pressure	Psig.
P^{WT}	= Potentiometric Surface (Fresh Water*)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q¹	= Theoretical Production w/Damage Removed	bbls/day
Q^g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r^w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t^o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	—
u	= Viscosity Gas or Liquid	CP
Log	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.