

CHENEY TESTING COMPANY

P. O. BOX 3

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	A.L. Abercrombie Inc.	Test No.	1
Well Name & Number	Jerel # 1	Zone Tested	Lansing
Company Address	Wichita, Kan.	Date	4-3-79
Comp. Rep.	Greg Cheney	Tester	Bud O'Dell
Contractor	Abercrombie Drlg. Inc.	Elevation	1973 K.B.
Location: Sec. 3 Twp. 24S Rge. 14W Co. Stafford State Kan.		Est. Feet of Pay	

Recorder No. 10290 Type AK-1 Range 4250 PSI

Recorder Depth 3710

(A) Initial Hydrostatic Mud 1983 PSI

(B) First Initial Flow Pressure 54 PSI

(C) First Final Flow Pressure 109 PSI

(D) Initial Closed-in Pressure 1105 PSI

(E) Second Initial Flow Pressure 152 PSI

(F) Second Final Flow Pressure 261 PSI

(G) Final Closed-in Pressure 1030 PSI

(H) Final Hydrostatic Mud 1919 PSI

Temperature 108

Mud Weight 9.5 Viscosity 46

Fluid Loss 10.6 cc

Interval Tested 3691-3718

Anchor Length 27

Top Packer Depth 3688

Bottom Packer Depth 3691

Total Depth 3718

Drill Pipe Size 4½ EX.H. & I.F.

Wt. Pipe I. D. 2.7 Ft. Run 400

Recovery—Total Feet 495

Recovered 15 Feet Of Slightly oil cut thin mud. (10% oil 15% wtr. 75% mud)

Recovered 480 Feet Of Water with scum of oil 76,000 PPM

Recovered Feet Of

Recovered Feet Of

Extra Equipment None Price of Job \$440.00

Recorder No. 7437 Type AK-1 Range 4200 PSI

Recorder Depth 3713

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

Initial Shut-in 45 Mins.

Flow Period 60 Mins.

Final Shut-in 45 Mins.

Surface Choke Size 1"

Bottom Choke Size ¾"

Main Hole Size 7 7/8"

Rubber Size 6 ¾"

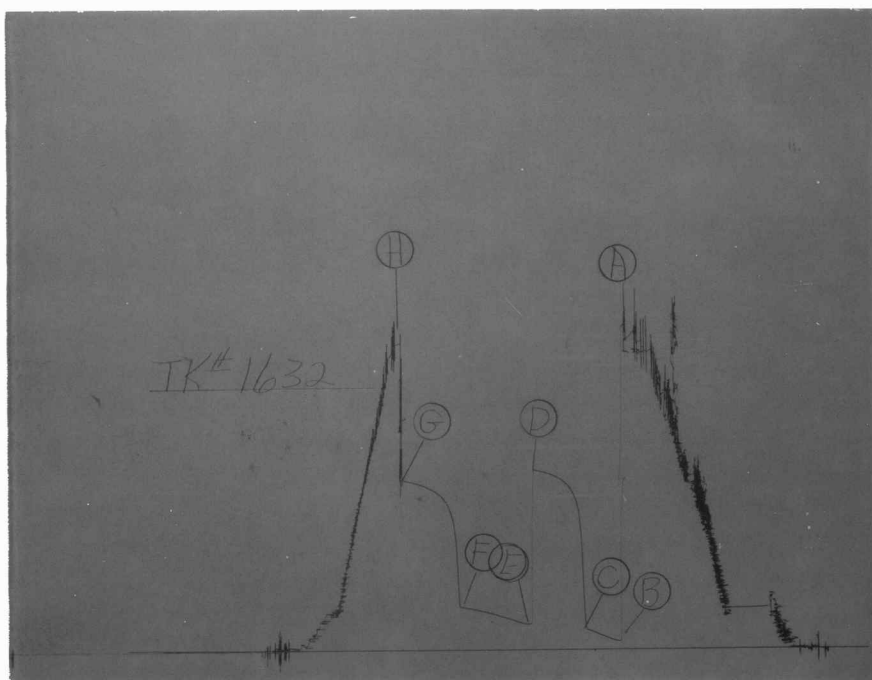
Tool Open @ 6:20 A.M.

Blow Fair steady blow.

Remarks

Drill Collar I. D. 2¼ Ft. Run 57

3-245-14w



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1983	PSI
(B) First Initial Flow Pressure	54	PSI
(C) First Final Flow Pressure	109	PSI
(D) Initial Closed-in Pressure	1105	PSI
(E) Second Initial Flow Pressure	152	PSI
(F) Second Final Flow Pressure	261	PSI
(G) Final Closed-in Pressure	1030	PSI
(H) Final Hydrostatic Mud	1919	PSI

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DRILL-STEM TEST DATA

Company	A. L. Abercrombie Inc.	Test No.	2
Well Name & Number	Jerel # 1	Zone Tested	120'
Company Address	Wichita, Kan.	Date	4-3-79
Comp. Rep.	Greg Cheney	Tester	Bud O'Dell
Contractor	Co. Tools	Elevation	1973 K.B.
Location: Sec. 3 Twp. 24S Rge. 14W Co. Stafford State Kan.		Est. Feet of Pay	

Recorder No. 10290 Type AK-1 Range 4250 PSI

Recorder Depth 3770

(A) Initial Hydrostatic Mud 2004 PSI

(B) First Initial Flow Pressure 43 PSI

(C) First Final Flow Pressure 33 PSI

(D) Initial Closed-in Pressure 109 PSI

(E) Second Initial Flow Pressure 43 PSI

(F) Second Final Flow Pressure 43 PSI

(G) Final Closed-in Pressure 87 PSI

(H) Final Hydrostatic Mud 2004 PSI

Temperature 110

Mud Weight 9.5 Viscosity 45

Fluid Loss 11.5 cc

Interval Tested 3753-3778

Anchor Length 25

Top Packer Depth 3748

Bottom Packer Depth 3753

Total Depth 3778

Drill Pipe Size 4 1/2 EX.H. & I.F.

Wt. Pipe I. D. 2.7 Ft. Run 400

Recovery—Total Feet 15

Recovered 15 Feet Of Drlg. Mud w/few oil spots

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment None Price of Job \$440.00

Recorder No. 7437 Type AK-1 Range 4200 PSI

Recorder Depth 3773

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

Initial Shut-in 45 Mins.

Flow Period 60 Mins.

Final Shut-in 45 Mins.

Surface Choke Size 1"

Bottom Choke Size 3/4"

Main Hole Size 7 7/8"

Rubber Size 6 3/4"

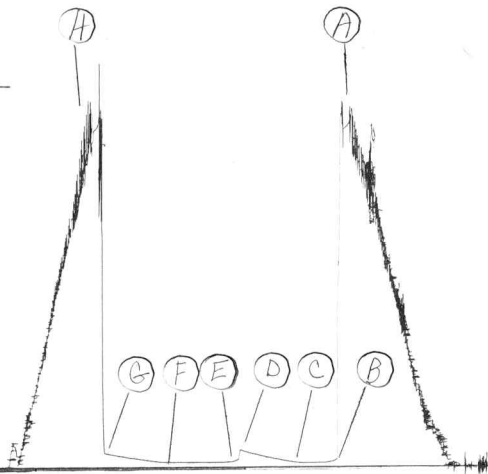
Tool Open @ 11:10 P.M.

Blow Weak steady blow.

Remarks

Drill Collar I. D. 2.25 Ft. Run 57

TK # 1633



CHENEY TESTING COMPANY

P. O. BOX 3

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	A.L. Abercrombie Inc.	Test No.	3
Well Name & Number	Jerel # 1	Zone Tested	140'
Company Address	Wichita, Kan.	Date	4-4-79
Comp. Rep.	Greg Cheney	Tester	Bud O'Dell
Contractor	Co. Tools	Elevation	1973 K.B.
Location: Sec. 3	Twp. 24S Rge. 14W Co. Stafford State Kan.	Est. Feet of Pay	6

Recorder No. 10290 Type AK-1 Range 4250 PSI

Recorder Depth 3804

(A) Initial Hydrostatic Mud 2015 PSI

(B) First Initial Flow Pressure 43 PSI

(C) First Final Flow Pressure 65 PSI

(D) Initial Closed-in Pressure 1298 PSI

(E) Second Initial Flow Pressure 76 PSI

(F) Second Final Flow Pressure 87 PSI

(G) Final Closed-in Pressure 1266 PSI

(H) Final Hydrostatic Mud 1951 PSI

Temperature 112

Mud Weight 9.5 Viscosity 45

Fluid Loss 11.5 cc

Interval Tested 3795-3812

Anchor Length 17

Top Packer Depth 3790

Bottom Packer Depth 3795

Total Depth 3812

Drill Pipe Size 4 1/2 EX.H. & I.F.

Wt. Pipe I. D. 2.7 Ft. Run 400

Recovery—Total Feet 200

Recovered 80 Feet Of Heavy Oil Cut Mud (35% Oil 50% Mud 15% Gas)

Recovered 120 Feet Of Clean Gassy Oil

Recovered Feet Of

Recovered Feet Of

Extra Equipment Price of Job \$440.00

Recorder No. 7347 Type AK-1 Range 4200 PSI

Recorder Depth 3807

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

Initial Shut-in 45 Mins.

Flow Period 60 Mins.

Final Shut-in 45 Mins.

Surface Choke Size 1"

Bottom Choke Size 3/4"

Main Hole Size 7 7/8"

Rubber Size 6 3/4"

Tool Open @ 2:10 P.M.

Blow Good steady blow. Gas to surface

Remarks in 35 minutes, on final shut in.

Drill Collar I. D. 2.25 Ft. Run 57

CHENEY TESTING CO.

FIELD EVALUATIONS

Ticket No. 1634

Date 4-4-79

To A. L. Abercrombie Drlg. Inc.

801 Union Center

Wichita, Kan. 67202

These calculations are based upon information furnished by you and taken from drill stem test pressure charts and are furnished for your information. In furnishing such calculations and evaluations, Cheney Testing Co. is merely expressing its opinion. You agree that The Testing Company makes no warranty as to the accuracy of such calculations or opinions and the Testing Company shall not be liable for any loss or damage, whether due to negligence or otherwise in connection with such calculations and opinions.

We Give Below Results of Drill Stem Evaluation

Lease Jerel # 1 Sec. 3 Twp. 24S Rge. 14W

County Stafford Test Interval 3795-3812

FINAL

P.S.I. Slope Cycle
$$M = \frac{P_{isi} - P_{fsi}}{\log \frac{T + t}{t}}$$
 50

Damage Ratio
$$DR = .183 \frac{P_s - P_f}{M}$$
 4.39

Production
$$Q = \frac{1440 R}{t}$$
 1.66 Bbls./Hr.
40 Bbls./Day

Effective Pay
$$K_1 = \frac{K_h}{h_l}$$
 500 Md. Ft.

Theoretical Potential With Damage Removed
$$Q_1 = Q DR$$
 175.6 Bbls./Day

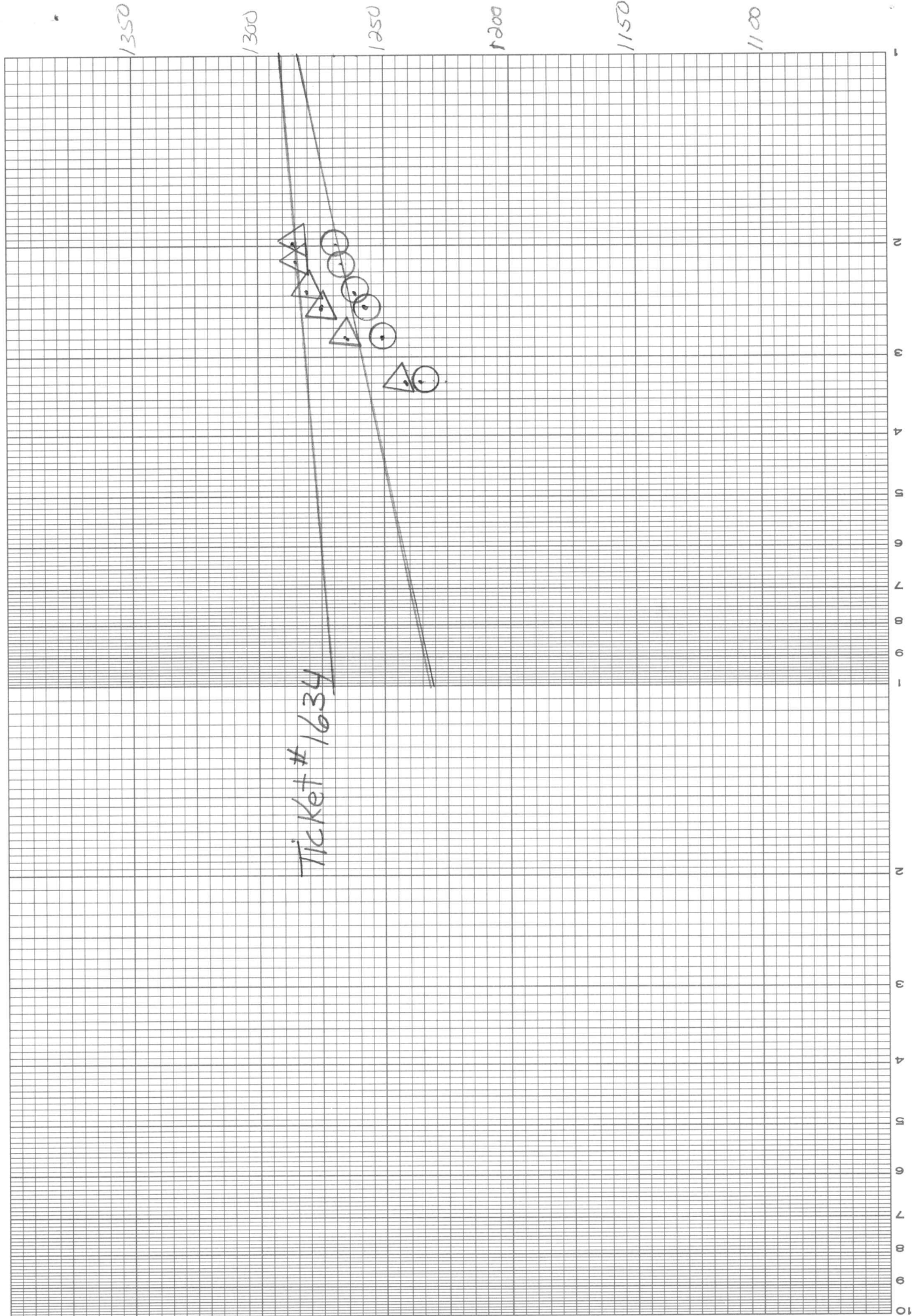
Pressure Data

Clock No. 7069 Elevation 1973 K.B. Well Temperature 112 °F

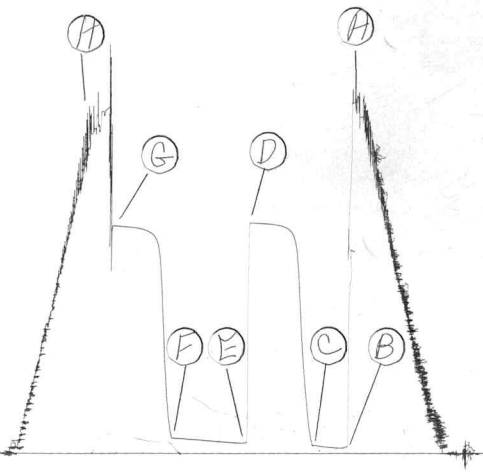
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2007 P.S.I.	Open Tool	2:10 P. M.	
B First Initial Flow Pressure	34 P.S.I.	First Flow Pressure	30 Mins.	Mins.
C First Final Flow Pressure	47 P.S.I.	Initial Closed-in Pressure	45 Mins.	Mins.
D Initial Closed-in Pressure	1286 P.S.I.	Second Flow Pressure	60 Mins.	Mins.
E Second Initial Flow Pressure	60 P.S.I.	Final Closed-in Pressure	45 Mins.	Mins.
F Second Final Flow Pressure	85 P.S.I.			
G Final Closed-in Pressure	1269 P.S.I.			
H Final Hydrostatic Mud	2001 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 6 Inc.		Breakdown: 9 Inc.		Breakdown: 12 Inc.		Breakdown: 9 Inc.	
of 5 mins. and a		of 5 mins. and a		of 5 mins. and a		of 5 mins. and a	
final inc. of Min.		final inc. of Min.		final inc. of Min.		final inc. of Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	34	0	47	0	60	0	85
P 2 5	34	5	239	5	60	5	355
P 3 10	34	10	636	10	60	10	904
P 4 15	34	15	1126	15	62	15	1190
P 5 20	37	20	1242	20	63	20	1236
P 6 25	45	25	1266	25	65	25	1251
P 7 30	47	30	1274	30	69	30	1259
P 8		35	1281	35	72	35	1261
P 9		40	1285	40	76	40	1264
P10		45	1286	45	79	45	1269
P11				50	81		
P12				55	83		
P13				60	85		
P14							
P15							
P16							
P17							
P18							
P19							
P20							



TK # 1634



CHENEY TESTING COMPANY

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DRILL-STEM TEST DATA

Company <u>A. L. Abercrombie Inc.</u>	Test No. <u>4</u>
Well Name & Number <u>Jerel # 1</u>	Zone Tested _____
Company Address <u>Wichita, Kan.</u>	Date <u>4-5-79</u>
Comp. Rep. <u>Greg Cheney</u>	Tester <u>Bud O'Dell</u>
Contractor <u>Co. Tools</u>	Elevation <u>1973 K.B.</u>
Location: Sec. <u>3</u> Twp. <u>24S</u> Rge. <u>14W</u> Co. <u>Stafford</u> State <u>Kan.</u>	Est. Feet of Pay <u>6</u>

Recorder No. 10290 Type AK-1 Range 4250 PSI

Recorder Depth 3847

(A) Initial Hydrostatic Mud 2015 PSI

(B) First Initial Flow Pressure 65 PSI

(C) First Final Flow Pressure 76 PSI

(D) Initial Closed-in Pressure 1084 PSI

(E) Second Initial Flow Pressure 109 PSI

(F) Second Final Flow Pressure 120 PSI

(G) Final Closed-in Pressure 1041 PSI

(H) Final Hydrostatic Mud 2004 PSI

Temperature 115

Mud Weight 9.5 Viscosity 45

Fluid Loss 11.8 cc

Interval Tested 3830-3855

Anchor Length 25

Top Packer Depth 3825

Bottom Packer Depth 3830

Total Depth 3855

Drill Pipe Size 4½ EX.H. & I.F.

Wt. Pipe I. D. 2.7 Ft. Run 400

Recovery—Total Feet 660' Gas & 360' Fluid

Recovered 180 Feet Of Heavy Oil & Gas Cut Mud (55% Mud 8% Wtr. 15% Wtr. 12% Oil)

Recovered 180 Feet Of Muddy Gassy Oil (10% Mud 20% Wtr. 35% Oil 35% Gas)

Recovered _____ Feet Of _____

Recovered _____ Feet Of _____

Extra Equipment _____ Price of Job \$440.00

Recorder No. 7437 Type AK-1 Range 4200 PSI

Recorder Depth 3850

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

Initial Shut-in 45 Mins.

Flow Period 60 Mins.

Final Shut-in 45 Mins.

Surface Choke Size 1"

Bottom Choke Size 3/4"

Main Hole Size 7 7/8"

Rubber Size 6 3/4"

Tool Open @ 7:45 A.M.

Blow Good steady blow

Remarks _____

Drill Collar I. D. 2.25 Ft. Run 57

CHENEY TESTING CO.

FIELD EVALUATIONS

Ticket No. 1635

Date 4-5-79

To A. L. Abercrombie Inc.

801 Union Center

Wichita, Kan.

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We Give Below Results of Drill Stem Evaluation

Lease Jerel # 1 Sec. 3 Twp. 24S Rge. 14W

County Stafford Test Interval 3830-3855

FINAL

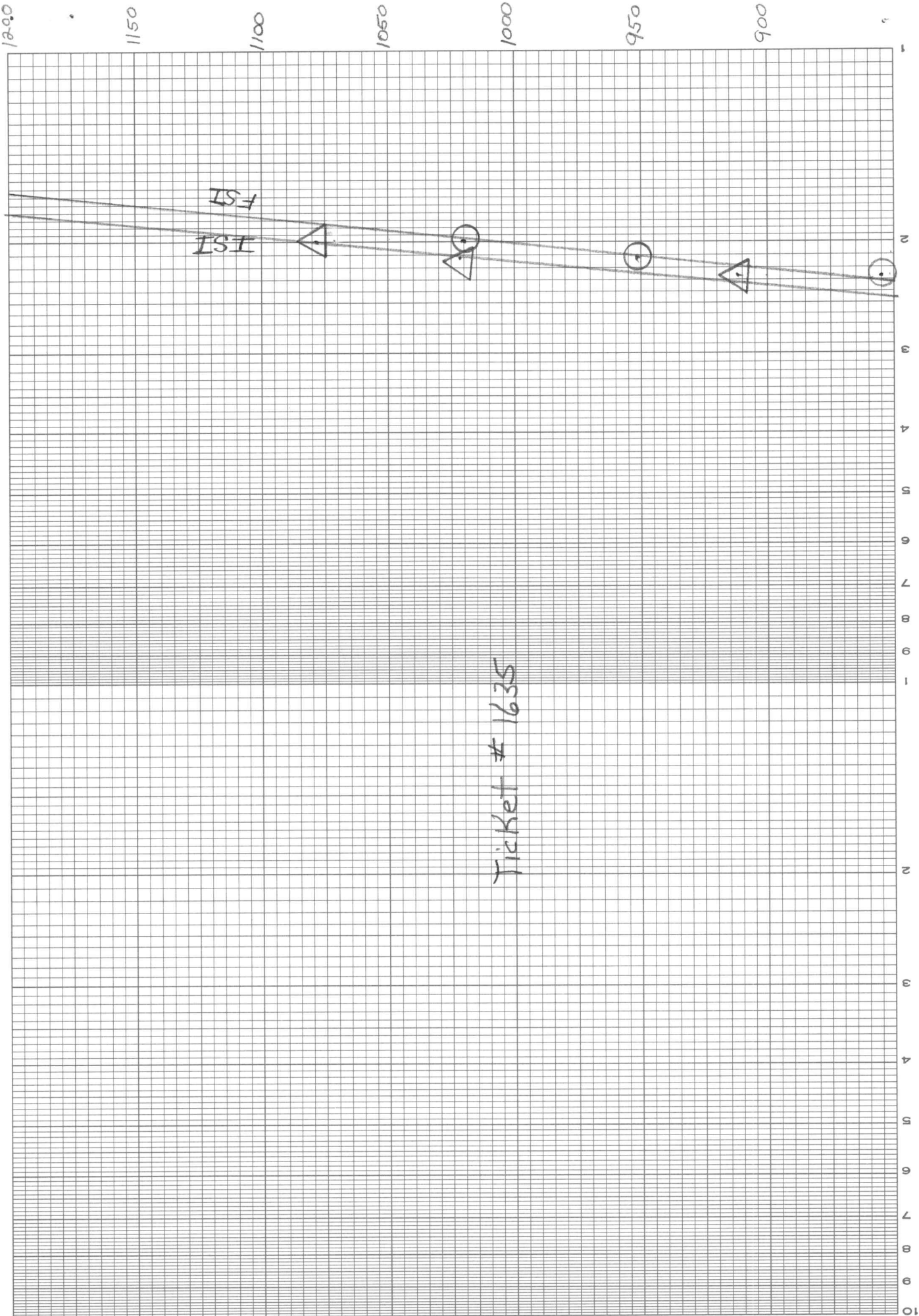
P.S.I. Slope Cycle
$$M = \frac{P_{isi} - P_{fsi}}{\log \frac{T + t}{t}}$$
 116

Damage Ratio
$$DR = .183 \frac{P_s - P_f}{M}$$
 1.51

Production
$$Q = \frac{1440 R}{t}$$
 3 Bbls./Hr.
72 Bbls./Day

Effective Pay
$$K_1 = \frac{K_h}{h_l}$$
 150 Md. Ft.

Theoretical Potential With Damage Removed
$$Q_1 = Q DR$$
 108.72 Bbls./Day



Ticket # 1635

TK # 1635

