

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	Cozad #2	Zone Tested	Kansas City
Company Address	801 Union Center	Date	6-26-76
Comp. Rep.	Jack Wharton	Tester	Kenneth Cheney
Contractor	Abercrombie Drlg. Inc.	Elevation	2373 K.B.
Location: Sec. 14 Twp. 1S Rge. 26W Co. Decatur State Kan		Est. Feet of Pay	

Recorder No. 1760 Type Kuster Range 3500 PSI

Recorder Depth 3225

(A) Initial Hydrostatic Mud 1666 PSI

(B) First Initial Flow Pressure 25 PSI

(C) First Final Flow Pressure 25 PSI

(D) Initial Closed-in Pressure 617 PSI

(E) Second Initial Flow Pressure 30 PSI

(F) Second Final Flow Pressure 34 PSI

(G) Final Closed-in Pressure 385 PSI

(H) Final Hydrostatic Mud 1639 PSI

Temperature 101

Mud Weight 9.8 Viscosity 42

Fluid Loss 10.0

Interval Tested 3207-3234

Anchor Length 27

Top Packer Depth 3202

Bottom Packer Depth 3207

Total Depth 3234

Drill Pipe Size 3 1/2 I.F.

Wt. Pipe I. D. 2.7 Ft. Run 824

Recovery—Total Feet 30

Recovered 30 Feet Of mud with oil spots.

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment Price of Job \$340.00

Recorder No. 2836 Type Kuster Range 3550 PSI

Recorder Depth 3228

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 1/2"

Main Hole Size 7 7/8"

Rubber Size 6 3/4"

Tool Open @ 7:25 A.M.

Blow weak for 25 minutes.

Remarks

Drill Collar I. D. Ft. Run

THIS ORDER MUST BE SIGNED BEFORE WORK IS COMMENCED.

CONDITIONS: It is expressly understood and agreed that the above described work shall be done under the exclusive control, direction and supervision of the owner or contractor. As a part of the consideration for this agreement, it is expressly understood and agreed that Cheney Testing Company shall not be responsible for damages or losses of any kind whatsoever occasioned by or incident to the use of the above described Tools, whether run or operated by customer, or by anyone employed directly or indirectly by Cheney Testing Company, nor whether resulting from

the acts or omissions of Cheney Testing Company, or any of its agents, servants or employees in any way connected with or related to the use of such Tools.

It is expressly understood and agreed that Cheney Testing Company, shall not be bound by any agreement, not herein contained, and no agent or representative connected with or employed by Cheney Testing Company has authority to alter or extend the terms of this agreement. I have read and understand the terms of this agreement and represent that I am authorized to sign the same as agent of customer.

By _____
Owner, Operator or his Agent



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1666	PSI
(B) First Initial Flow Pressure	25	PSI
(C) First Final Flow Pressure	25	PSI
(D) Initial Closed-in Pressure	617	PSI
(E) Second Initial Flow Pressure	30	PSI
(F) Second Final Flow Pressure	34	PSI
(G) Final Closed-in Pressure	385	PSI
(H) Final Hydrostatic Mud	1639	PSI

CHENEY TESTING COMPANY

P. O. BOX 3

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	A.L. Abercrombie Inc.	Test No.	2
Well Name & Number	Cozad #2	Zone Tested	Kansas City
Company Address	801 Union Center	Date	6-26-76
Comp. Rep.	Jack Wharton	Tester	Kenneth Cheney
Contractor	Abercrombie Drlg. Inc.	Elevation	2373 K.B.
Location: Sec. 14 Twp. 1S Rge. 26W Co. Decatur State Kan		Est. Feet of Pay	

Recorder No. 1760 Type Kuster Range 3500 PSI

Recorder Depth 3238

(A) Initial Hydrostatic Mud 1683 PSI

(B) First Initial Flow Pressure 25 PSI

(C) First Final Flow Pressure 42 PSI

(D) Initial Closed-in Pressure 901 PSI

(E) Second Initial Flow Pressure 59 PSI

(F) Second Final Flow Pressure 85 PSI

(G) Final Closed-in Pressure 841 PSI

(H) Final Hydrostatic Mud 1660 PSI

Temperature 101

Mud Weight 9.9 Viscosity 45

Fluid Loss 10.6 C.C.

Interval Tested 3207-3248

Anchor Length 47

Top Packer Depth 3202

Bottom Packer Depth 3207

Total Depth 3248

Drill Pipe Size 4 1/2 F.H. & 3 1/2 I.F.

Wt. Pipe I. D. 2.7 Ft. Run 824

Recovery—Total Feet 130

Recovered 1 Feet Of free oil.

Recovered 129 Feet Of slightly oil cut heavy mud

Recovered Feet Of

Recovered Feet Of

Extra Equipment

Recorder No. 2836 Type Kuster Range 3550 PSI

Recorder Depth 3241

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 1/2"

Main Hole Size 7 & 7/8"

Rubber Size 6 & 3/4"

Tool Open @ 5:10 P.M.

Blow weak for 1 hour & 30 minutes

Remarks

Drill Collar I. D. Ft. Run

Price of Job \$340.00

THIS ORDER MUST BE SIGNED BEFORE WORK IS COMMENCED.

CONDITIONS: It is expressly understood and agreed that the above described work shall be done under the exclusive control, direction and supervision of the owner or contractor. As a part of the consideration for this agreement, it is expressly understood and agreed that Cheney Testing Company shall not be responsible for damages or losses of any kind whatsoever occasioned by or incident to the use of the above described Tools, whether run or operated by customer, or by anyone employed directly or indirectly by Cheney Testing Company, nor whether resulting from

the acts or omissions of Cheney Testing Company, or any of its agents, servants or employees in any way connected with or related to the use of such Tools.

It is expressly understood and agreed that Cheney Testing Company, shall not be bound by any agreement, not herein contained, and no agent or representative connected with or employed by Cheney Testing Company has authority to alter or extend the terms of this agreement. I have read and understand the terms of this agreement and represent that I am authorized to sign the same as agent of customer.

By _____
Owner, Operator or his Agent

CHENEY TESTING COMPANY

Pressure Data

Date 6-26-76

Test Ticket No. 263

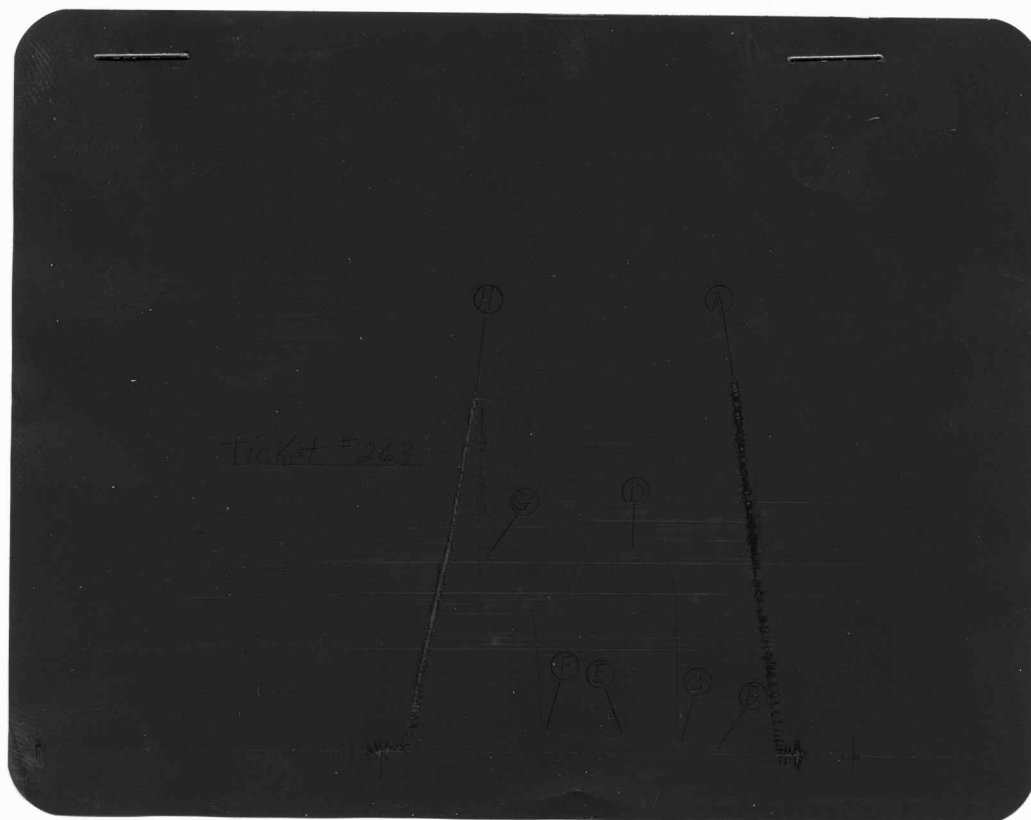
Recorder No. 1760 Capacity 3500 Location 3238 Ft.

Clock No. 10314 Elevation 2373 K.B. Well Temperature 101 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1690</u> P.S.I.	Open Tool	<u>5:10 P.M.</u>	
B First Initial Flow Pressure	<u>34</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	
C First Final Flow Pressure	<u>35</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	
D Initial Closed-in Pressure	<u>899</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	
E Second Initial Flow Pressure	<u>61</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins.	
F Second Final Flow Pressure	<u>85</u> P.S.I.			
G Final Closed-in Pressure	<u>832</u> P.S.I.			
H Final Hydrostatic Mud	<u>1684</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>15</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>15</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> 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 <u>0</u>	<u>34</u>	<u>0</u>	<u>48</u>	<u>0</u>	<u>61</u>	<u>0</u>	<u>85</u>
P 2 <u>5</u>	<u>35</u>	<u>3</u>	<u>205</u>	<u>5</u>	<u>61</u>	<u>3</u>	<u>140</u>
P 3 <u>10</u>	<u>35</u>	<u>6</u>	<u>646</u>	<u>10</u>	<u>61</u>	<u>6</u>	<u>354</u>
P 4 <u>15</u>	<u>38</u>	<u>9</u>	<u>781</u>	<u>15</u>	<u>63</u>	<u>9</u>	<u>548</u>
P 5 <u>20</u>	<u>41</u>	<u>12</u>	<u>825</u>	<u>20</u>	<u>65</u>	<u>12</u>	<u>620</u>
P 6 <u>25</u>	<u>44</u>	<u>15</u>	<u>846</u>	<u>25</u>	<u>69</u>	<u>15</u>	<u>649</u>
P 7 <u>30</u>	<u>48</u>	<u>18</u>	<u>863</u>	<u>30</u>	<u>71</u>	<u>18</u>	<u>677</u>
P 8 _____		<u>21</u>	<u>872</u>	<u>35</u>	<u>73</u>	<u>21</u>	<u>705</u>
P 9 _____		<u>24</u>	<u>881</u>	<u>40</u>	<u>75</u>	<u>24</u>	<u>724</u>
P 10 _____		<u>27</u>	<u>885</u>	<u>45</u>	<u>78</u>	<u>27</u>	<u>744</u>
P 11 _____		<u>30</u>	<u>887</u>	<u>50</u>	<u>81</u>	<u>30</u>	<u>758</u>
P 12 _____		<u>33</u>	<u>893</u>	<u>55</u>	<u>83</u>	<u>33</u>	<u>775</u>
P 13 _____		<u>36</u>	<u>895</u>	<u>60</u>	<u>85</u>	<u>36</u>	<u>793</u>
P 14 _____		<u>39</u>	<u>897</u>			<u>39</u>	<u>808</u>
P 15 _____		<u>42</u>	<u>899</u>			<u>42</u>	<u>820</u>
P 16 _____		<u>45</u>	<u>899</u>			<u>45</u>	<u>832</u>
P 17 _____							
P 18 _____							
P 19 _____							
P 20 _____							



This is an actual photograph of recorder chart.

POINT	PRESSURE		
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	1683	1690	PSI
(B) First Initial Flow Pressure	25	34	PSI
(C) First Final Flow Pressure	42	35	PSI
(D) Initial Closed-in Pressure	901	899	PSI
(E) Second Initial Flow Pressure	59	61	PSI
(F) Second Final Flow Pressure	85	85	PSI
(G) Final Closed-in Pressure	841	832	PSI
(H) Final Hydrostatic Mud	1660	1684	PSI

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	Cozad #2	Zone Tested	Kansas City
Company Address	801 Union Center	Date	6-27-76
Comp. Rep.	Jack Wharton	Tester	Kenneth Cheney
Contractor	Abercrombie Drlg. Inc.	Elevation	2373 K.B.
Location: Sec. 14 Twp. 1S Rge. 26W Co. Decatur State Kan		Est. Feet of Pay	

Recorder No. 1760 Type Kuster Range 3500 PSI

Recorder Depth 3396

(A) Initial Hydrostatic Mud 1763 PSI

(B) First Initial Flow Pressure 470 PSI

(C) First Final Flow Pressure 781 PSI

(D) Initial Closed-in Pressure 1160 PSI

(E) Second Initial Flow Pressure 875 PSI

(F) Second Final Flow Pressure 1117 PSI

(G) Final Closed-in Pressure 1143 PSI

(H) Final Hydrostatic Mud 1727 PSI

Temperature 102

Mud Weight 9.7 Viscosity 42

Fluid Loss 10.0 C.C.

Interval Tested 3318-3405

Anchor Length 87'

Top Packer Depth 3313

Bottom Packer Depth 3318

Total Depth 3405

Drill Pipe Size 3 1/2 I.F. & 4 1/2 F.H.

Wt. Pipe I. D. 2.7 Ft. Run 825

Recovery—Total Feet 2350

Recovered 2350 Feet Of salt water

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment

Recorder No. 2836 Type Kuster Range 3550 PSI

Recorder Depth 3399

Tool Open Before I. S. I. 10 Mins.

Initial Shut-in 45 Mins.

Flow Period 60 Mins.

Final Shut-in 45 Mins.

Surface Choke Size 1"

Bottom Choke Size 1/2"

Main Hole Size 7 7/8"

Rubber Size 6 3/4"

Tool Open @ 1:55 P.M.

Blow strong for 60 minutes and died.

Remarks Reversed out water.

Drill Collar I. D. Ft. Run

THIS ORDER MUST BE SIGNED BEFORE WORK IS COMMENCED.

CONDITIONS: It is expressly understood and agreed that the above described work shall be done under the exclusive control, direction and supervision of the owner or contractor. As a part of the consideration for this agreement, it is expressly understood and agreed that Cheney Testing Company shall not be responsible for damages or losses of any kind whatsoever occasioned by or incident to the use of the above described Tools, whether run or operated by customer, or by anyone employed directly or indirectly by Cheney Testing Company, nor whether resulting from

the acts or omissions of Cheney Testing Company, or any of its agents, servants or employees in any way connected with or related to the use of such Tools.

It is expressly understood and agreed that Cheney Testing Company, shall not be bound by any agreement, not herein contained, and no agent or representative connected with or employed by Cheney Testing Company has authority to alter or extend the terms of this agreement. I have read and understand the terms of this agreement and represent that I am authorized to sign the same as agent of customer.

By

Owner, Operator or his Agent



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1763	PSI
(B) First Initial Flow Pressure	470	PSI
(C) First Final Flow Pressure	781	PSI
(D) Initial Closed-in Pressure	1160	PSI
(E) Second Initial Flow Pressure	875	PSI
(F) Second Final Flow Pressure	1117	PSI
(G) Final Closed-in Pressure	1143	PSI
(H) Final Hydrostatic Mud	1727	PSI

CHENEY TESTING COMPANY

P. O. BOX 3

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	A.L. Abercrombie Inc.	Test No.	4
Well Name & Number	Cozad #2	Zone Tested	Sand
Company Address	801 Union Center	Date	6-28-76
Comp. Rep.	Jack Wharton	Tester	Kirk Cheney
Contractor	Abercrombie Drlg. Inc.	Elevation	
Location: Sec.14 Twp. 1S Rge.26W Co. Decatur State Kan		Est. Feet of Pay	

Recorder No. 1760 Type Kuster Range 3500 PSI

Recorder Depth 3492

(A) Initial Hydrostatic Mud 1825 PSI

(B) First Initial Flow Pressure 42 PSI

(C) First Final Flow Pressure 51 PSI

(D) Initial Closed-in Pressure 660 PSI

(E) Second Initial Flow Pressure 51 PSI

(F) Second Final Flow Pressure 51 PSI

(G) Final Closed-in Pressure 479 PSI

(H) Final Hydrostatic Mud 1816 PSI

Temperature 110

Mud Weight 9.8 Viscosity 40

Fluid Loss 10.0

Interval Tested 3468-3495

Anchor Length 27'

Top Packer Depth 3463

Bottom Packer Depth 3468

Total Depth 3495

Drill Pipe Size 4 1/2 F.H.

Wt. Pipe I. D. 2.7 Ft. Run 826

Recovery—Total Feet 5

Recovered 5 Feet Of mud with oil specks.

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment Price of Job \$340.00

Recorder No. 2836 Type Kuster Range 3550 PSI

Recorder Depth 3489

Tool Open Before I. S. I. 15 Mins.

Initial Shut-in 30 Mins.

Flow Period 30 Mins.

Final Shut-in 30 Mins.

Surface Choke Size 1"

Bottom Choke Size 1 1/2"

Main Hole Size 7 7/8"

Rubber Size 6 3/4"

Tool Open @ 9:30 A.M.

Blow weak for 15 minutes

Remarks Dead on second opening.

Drill Collar I. D. Ft. Run

THIS ORDER MUST BE SIGNED BEFORE WORK IS COMMENCED.

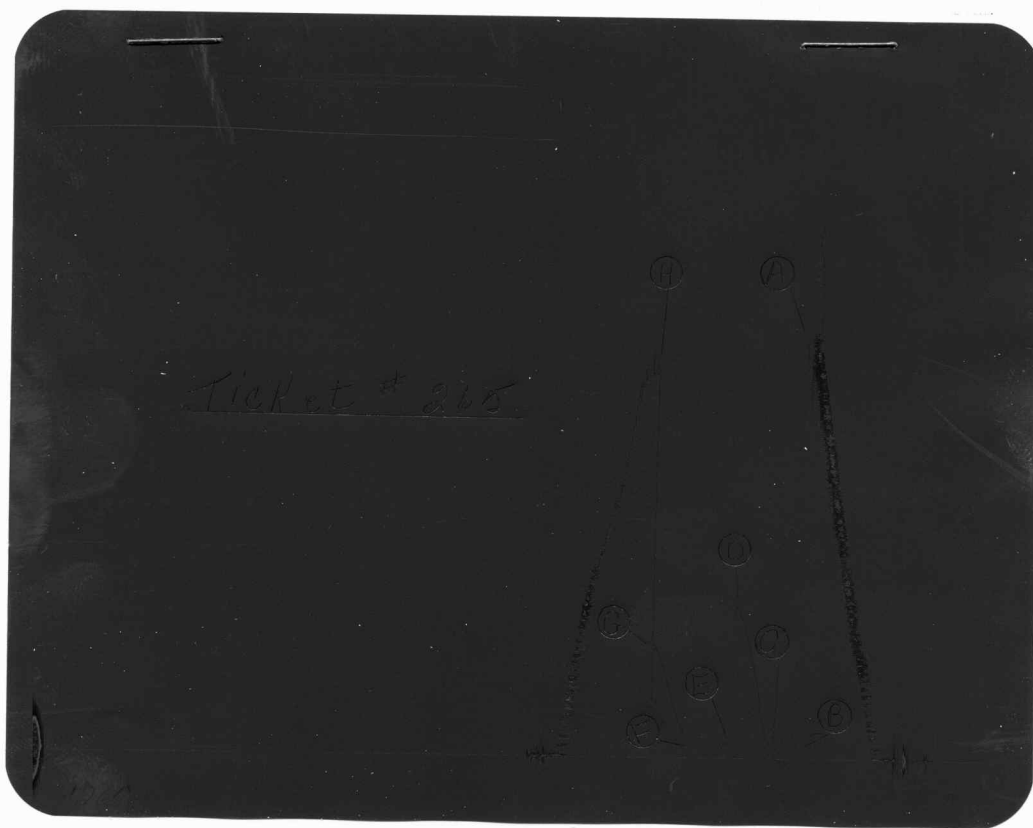
CONDITIONS: It is expressly understood and agreed that the above described work shall be done under the exclusive control, direction and supervision of the owner or contractor. As a part of the consideration for this agreement, it is expressly understood and agreed that Cheney Testing Company shall not be responsible for damages or losses of any kind whatsoever occasioned by or incident to the use of the above described Tools, whether run or operated by customer, or by anyone employed directly or indirectly by Cheney Testing Company, nor whether resulting from

the acts or omissions of Cheney Testing Company, or any of its agents, servants or employees in any way connected with or related to the use of such Tools.

It is expressly understood and agreed that Cheney Testing Company, shall not be bound by any agreement, not herein contained, and no agent or representative connected with or employed by Cheney Testing Company has authority to alter or extend the terms of this agreement. I have read and understand the terms of this agreement and represent that I am authorized to sign the same as agent of customer.

By _____

Owner, Operator or his Agent



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1825	PSI
(B) First Initial Flow Pressure	42	PSI
(C) First Final Flow Pressure	51	PSI
(D) Initial Closed-in Pressure	660	PSI
(E) Second Initial Flow Pressure	51	PSI
(F) Second Final Flow Pressure	51	PSI
(G) Final Closed-in Pressure	479	PSI
(H) Final Hydrostatic Mud	1816	PSI