

DRILL STEM TEST REPORT

Prepared For: **Raney Oil Co.**

3425 Tam O'Shanter
Lawrence KS 66047

ATTN: Thomas Raney

20--12s--20w

Erbert # 3

Start Date: 2005.02.08 @ 18:02:19

End Date: 2005.02.09 @ 04:38:19

Job Ticket #: 21217 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



Raney Oil Co.

ATTN: Thomas Raney

Erbert # 3

20-12s-20w

Job Ticket: 21217

DST#: 1

Test Start: 2005.02.08 @ 18:02:19

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:50:49
Time Test Ended: 04:38:19

Test Type: Conventional Bottom Hole
Tester: John Schmidt
Unit No: 31

Interval: 3786.00 ft (KB) To 3870.00 ft (KB) (TVD)
Total Depth: 3870.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2238.00 ft (KB)
2230.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6672

Inside

Press@RunDepth: 242.23 psig @ 3790.00 ft (KB)

Start Date: 2005.02.08

End Date:

2005.02.09

Start Time: 18:02:20

End Time:

04:38:19

Capacity: 7000.00 psig

Last Calib.: 2005 02 09

Time On Btm: 2005.02.08 @ 20:49:49

Time Off Btm: 2005.02.08 @ 23:51:19

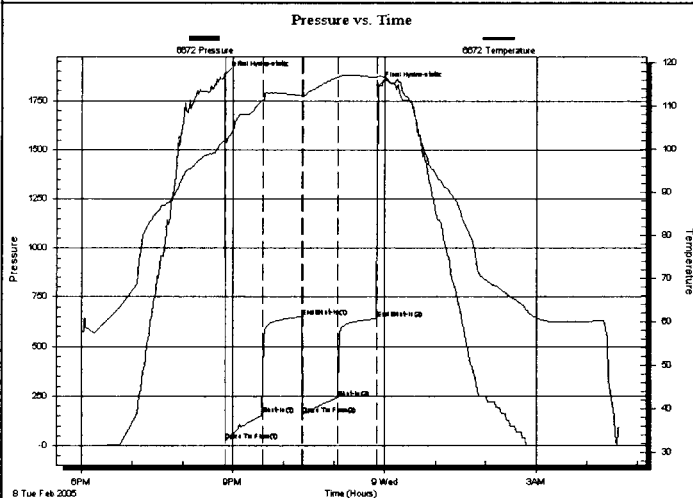
TEST COMMENT:

F-Strong B.O.B. 10 min.

FF-Strong B.O.B. 16 min.

ISL-Dead

FSI-Weak blow back 1" in.



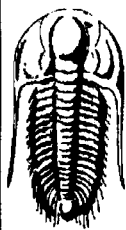
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1880.77	101.90	Initial Hydro-static
1	22.50	101.63	Open To Flow (1)
46	155.33	111.32	Shut-In(1)
92	649.88	112.35	End Shut-In(1)
93	154.93	112.27	Open To Flow (2)
135	242.23	116.67	Shut-In(2)
181	640.48	116.53	End Shut-In(2)
182	1828.01	116.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
200.00	Salt water	2.81
110.00	MOCW-20%M-20%O-60%W	1.54
120.00	OVCM-30%O-30%W-40%M	1.68
80.00	MCO40%M-60%O	1.12
0.00	110 gas in pipe	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raney Oil Co.

Erbert # 3

3425 Tam O'Shanter
Lawrence KS 66047

20-12s-20w

Job Ticket: 21217

DST#: 1

ATTN: Thomas Raney

Test Start: 2005.02.08 @ 18:02:19

Tool Information

Drill Pipe:	Length: 3796.00 ft	Diameter: 3.80 inches	Volume: 53.25 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	60000.00 lb
			Total Volume: 53.25 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	3786.00 ft			Final	48000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	84.00 ft				
Tool Length:	104.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3767.00	
Shut In Tool	5.00			3772.00	
Hydraulic tool	5.00			3777.00	
Packer	4.00			3781.00	20.00 Bottom Of Top Packer
Packer	5.00			3786.00	
Stubb	1.00			3787.00	
Perforations	2.00			3789.00	
Change Over Sub	1.00			3790.00	
Recorder	0.00	6672	Inside	3790.00	
Blank Spacing	63.00			3853.00	
Change Over Sub	1.00			3854.00	
Recorder	0.00	11084	Outside	3854.00	
Perforations	13.00			3867.00	
Bullnose	3.00			3870.00	84.00 Bottom Packers & Anchor

Total Tool Length: 104.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Raney Oil Co.

Erbert # 3

3425 Tam O'Shanter
Lawrence KS 66047

20-12s-20w

Job Ticket: 21217

DST#: 1

ATTN: Thomas Raney

Test Start: 2005.02.08 @ 18:02:19

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity: 55000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	Salt water	2.805
110.00	MOCW-20%M-20%O-60%W	1.543
120.00	OWCM-30%O-30%W-40%M	1.683
80.00	MCO40%M-60%O	1.122
0.00	110 gas in pipe	0.000

Total Length: 510.00 ft

Total Volume: 7.153 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

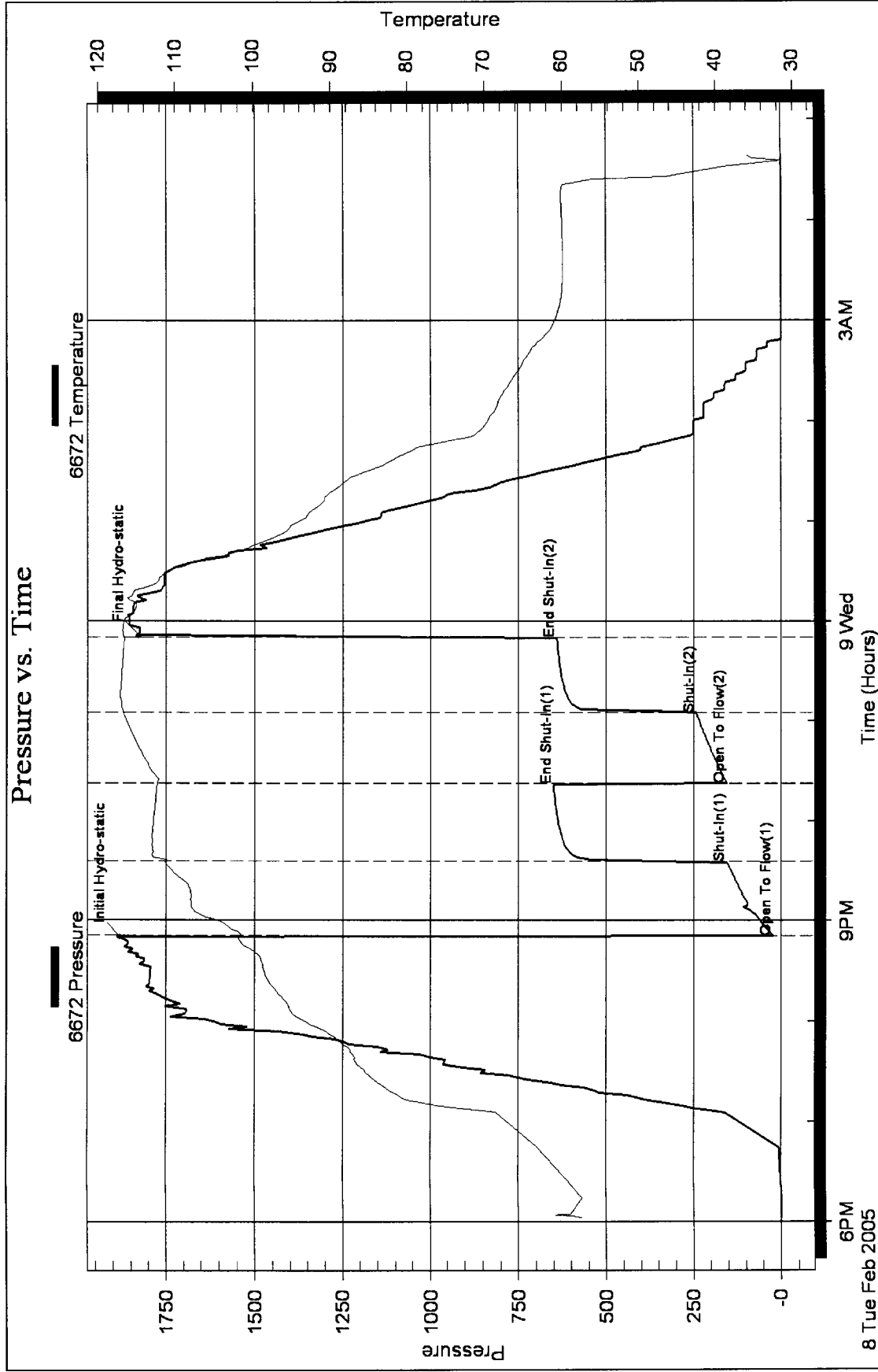
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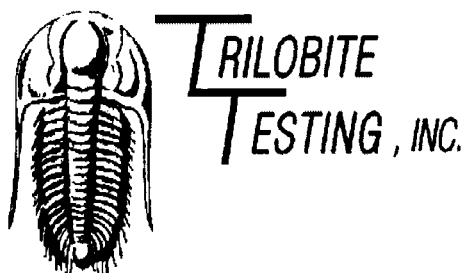
Serial #: 6672

Inside Raney Oil Co.

20--12s--20w

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Raney Oil Co.**

3425 Tam O'Shanter
Lawrence KS 66047

ATTN: Thomas Raney

20-12s-20w

Erbert # 3

Start Date: 2005.02.09 @ 18:02:19

End Date: 2005.02.09 @ 00:00:00

Job Ticket #: 21218 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

Raney Oil Co.

3425 Tam O'Shanter
Lawrence KS 66047

ATTN: Thomas Raney

Erbert # 3

20-12s-20w

Job Ticket: 21218

DST#: 2

Test Start: 2005.02.09 @ 18:02:19

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: **Conventional Bottom Hole**

Tester: **John Schmidt**

Unit No: **31**

Interval: **3870.00 ft (KB) To 3915.00 ft (KB) (TVD)**

Total Depth: **3915.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2238.00 ft (KB)**

2230.00 ft (CF)

KB to GR/CF: **8.00 ft**

Serial #: 6672 **Inside**

Press@RunDepth: **psig @ 3874.00 ft (KB)**

Start Date: **2005.02.09**

End Date:

2005.02.09

Capacity: **7000.00 psig**

Last Calib.: **2005.02.09**

Start Time: **18:35:01**

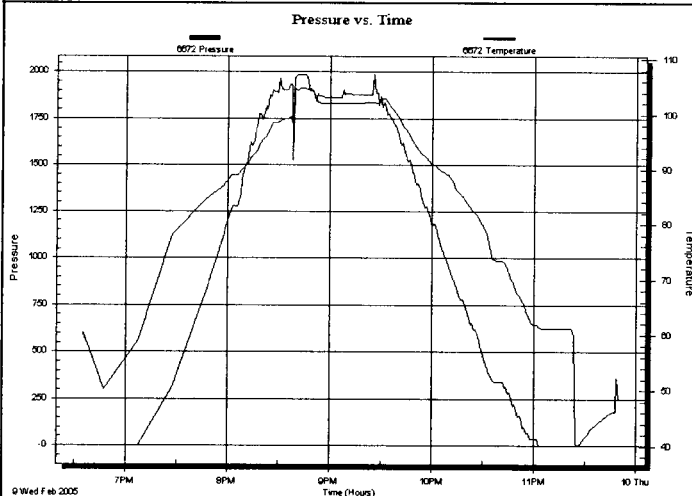
End Time:

23:50:00

Time On Btm:

Time Off Btm:

TEST COMMENT: **F-** **Packer failure**



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raney Oil Co.

Erbert # 3

3425 Tam O'Shanter
Lawrence KS 66047

20-12s-20w

Job Ticket: 21218

DST#: 2

ATTN: Thomas Raney

Test Start: 2005.02.09 @ 18:02:19

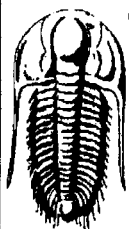
Tool Information

Drill Pipe:	Length: 3870.00 ft	Diameter: 3.80 inches	Volume: 54.29 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	lb
			<u>Total Volume: 54.29 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	lb
Depth to Top Packer:	3870.00 ft			Final	lb
Depth to Bottom Packer:	ft				
Interval between Packers:	45.00 ft				
Tool Length:	65.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3851.00	
Shut In Tool	5.00			3856.00	
Hydraulic tool	5.00			3861.00	
Packer	4.00			3865.00	20.00 Bottom Of Top Packer
Packer	5.00			3870.00	
Stubb	1.00			3871.00	
Perforations	2.00			3873.00	
Change Over Sub	1.00			3874.00	
Recorder	0.00	6672	Inside	3874.00	
Blank Spacing	31.00			3905.00	
Change Over Sub	1.00			3906.00	
Perforations	6.00			3912.00	
Recorder	0.00	13308	Outside	3912.00	
Bullnose	3.00			3915.00	45.00 Bottom Packers & Anchor

Total Tool Length: 65.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Raney Oil Co.

Erbert # 3

3425 Tam O'Shanter
Lawrence KS 66047

20-12s-20w

Job Ticket: 21218

DST#: 2

ATTN: Thomas Raney

Test Start: 2005.02.09 @ 18:02:19

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl

Total Length: ft

Total Volume: bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6672

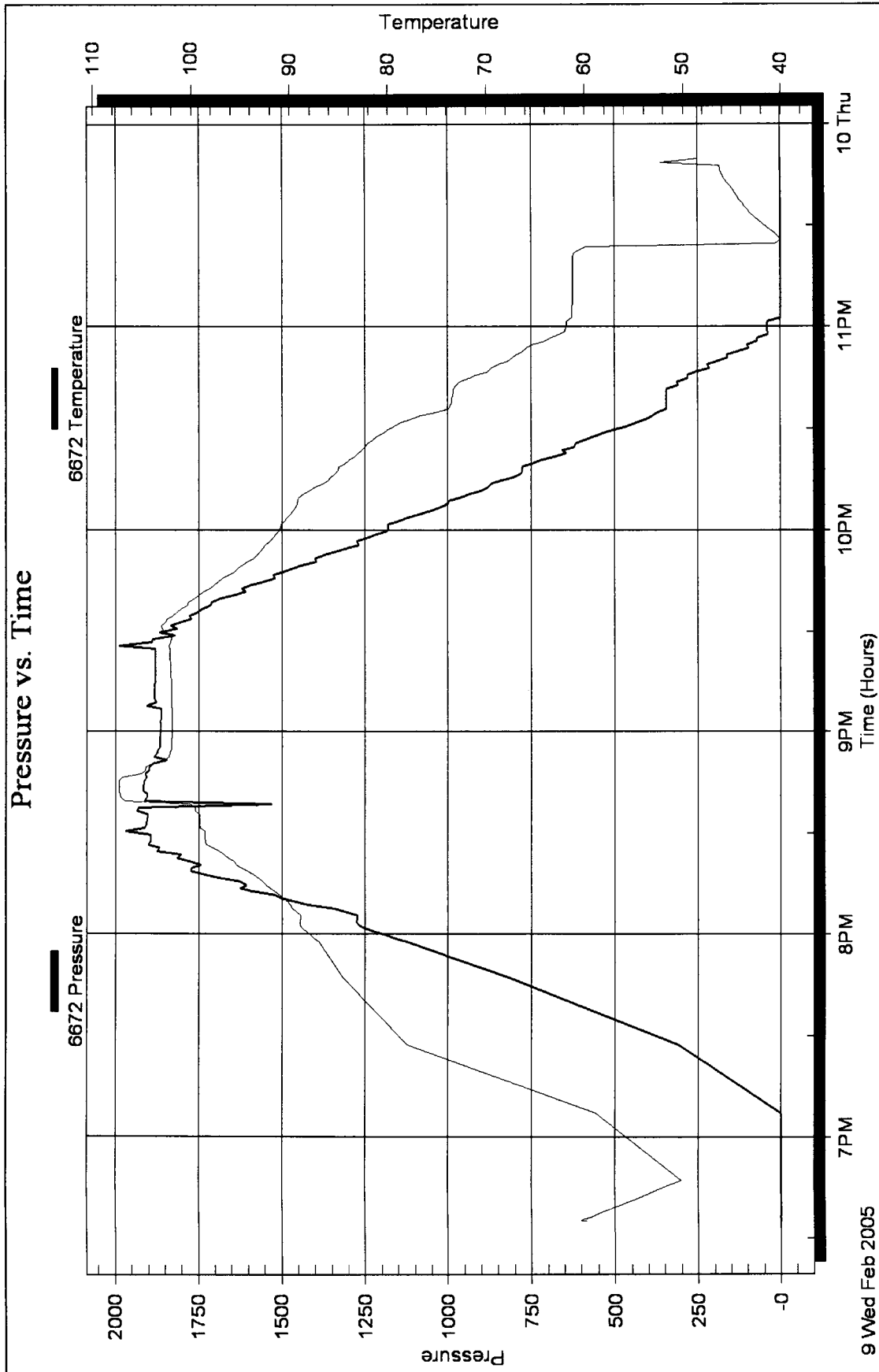
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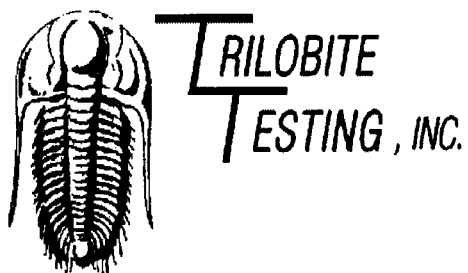
Raney Oil Co.

20-12s-20w

DST Test Number: 2

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Raney Oil Co.**

3425 Tam O'Shanter
Lawrence KS 66047

ATTN: Thomas Raney

20--12s--20w

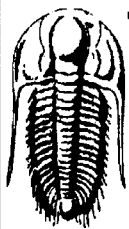
Erbert # 3

Start Date: 2005.02.10 @ 06:20:36

End Date: 2005.02.10 @ 14:01:36

Job Ticket #: 21219 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



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DRILL STEM TEST REPORT

Raney Oil Co.

3425 Tam O'Shanter
Lawrence KS 66047

ATTN: Thomas Raney

Erbert # 3

20-12s-20w

Job Ticket: 21219

DST#: 3

Test Start: 2005.02.10 @ 06:20:36

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 08:52:06

Time Test Ended: 14:01:36

Test Type: **Conventional Bottom Hole**

Tester: **John Schmidt**

Unit No: **31**

Interval: **3856.00 ft (KB) To 3918.00 ft (KB) (TVD)**

Total Depth: **3918.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2238.00 ft (KB)**

2230.00 ft (CF)

KB to GR/CF: **8.00 ft**

Serial #: 6672

Inside

Press@RunDepth: **44.97 psig @ 3860.00 ft (KB)**

Start Date: **2005.02.10**

End Date:

2005.02.10

Capacity: **7000.00 psig**

Last Calib.: **2005.02.10**

Start Time: **06:20:37**

End Time:

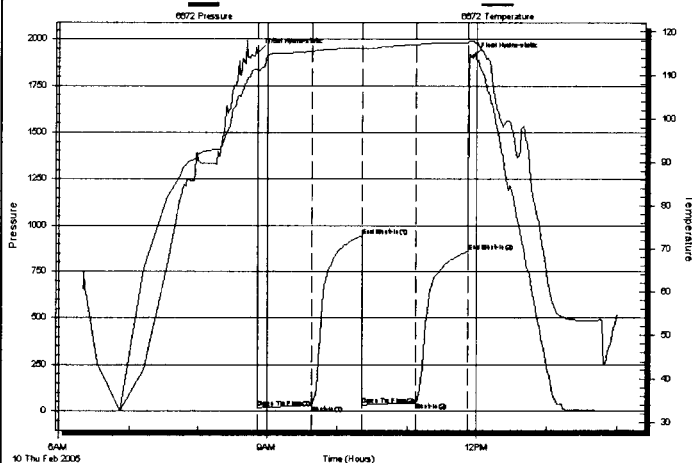
14:01:36

Time On Btm: **2005.02.10 @ 08:51:36**

Time Off Btm: **2005.02.10 @ 11:57:06**

TEST COMMENT: **IF-Weak to fair built 4" in. IS-Dead**
FF-Weak to fair built to 4" in. FSI-Dead

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1928.39	111.34	Initial Hydro-static
1	15.94	111.11	Open To Flow (1)
47	32.91	115.49	Shut-In(1)
90	944.09	116.21	End Shut-In(1)
90	31.88	116.13	Open To Flow (2)
136	44.97	117.05	Shut-In(2)
181	859.49	117.48	End Shut-In(2)
186	1910.47	117.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	Clean oil	0.35
50.00	MCO-50% mud-50% oil	0.70

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raney Oil Co.

Erbert # 3

3425 Tam O'Shanter
Lawrence KS 66047

20-12s-20w

Job Ticket: 21219

DST#: 3

ATTN: Thomas Raney

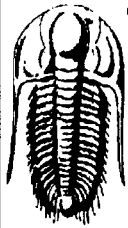
Test Start: 2005.02.10 @ 06:20:36

Tool Information

Drill Pipe:	Length: 3855.00 ft	Diameter: 3.80 inches	Volume: 54.08 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	62000.00 lb
			<u>Total Volume: 54.08 bbl</u>	Tool Chased	5.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial	43000.00 lb
Depth to Top Packer:	3856.00 ft			Final	44000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	62.00 ft				
Tool Length:	82.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3837.00	
Shut In Tool	5.00			3842.00	
Hydraulic tool	5.00			3847.00	
Packer	4.00			3851.00	20.00 Bottom Of Top Packer
Packer	5.00			3856.00	
Stubb	1.00			3857.00	
Perforations	2.00			3859.00	
Change Over Sub	1.00			3860.00	
Recorder	0.00	6672	Inside	3860.00	
Blank Spacing	31.00			3891.00	
Change Over Sub	1.00			3892.00	
Recorder	0.00	11084	Outside	3892.00	
Perforations	23.00			3915.00	
Bullnose	3.00			3918.00	62.00 Bottom Packers & Anchor
Total Tool Length:		82.00			



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DRILL STEM TEST REPORT

FLUID SUMMARY

Raney Oil Co.

Erbert # 3

3425 Tam O'Shanter
Lawrence KS 66047

20-12s-20w

Job Ticket: 21219

DST#: 3

ATTN: Thomas Raney

Test Start: 2005.02.10 @ 06:20:36

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	Clean oil	0.351
50.00	MCO-50%mud-50%oil	0.701

Total Length: 75.00 ft Total Volume: 1.052 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

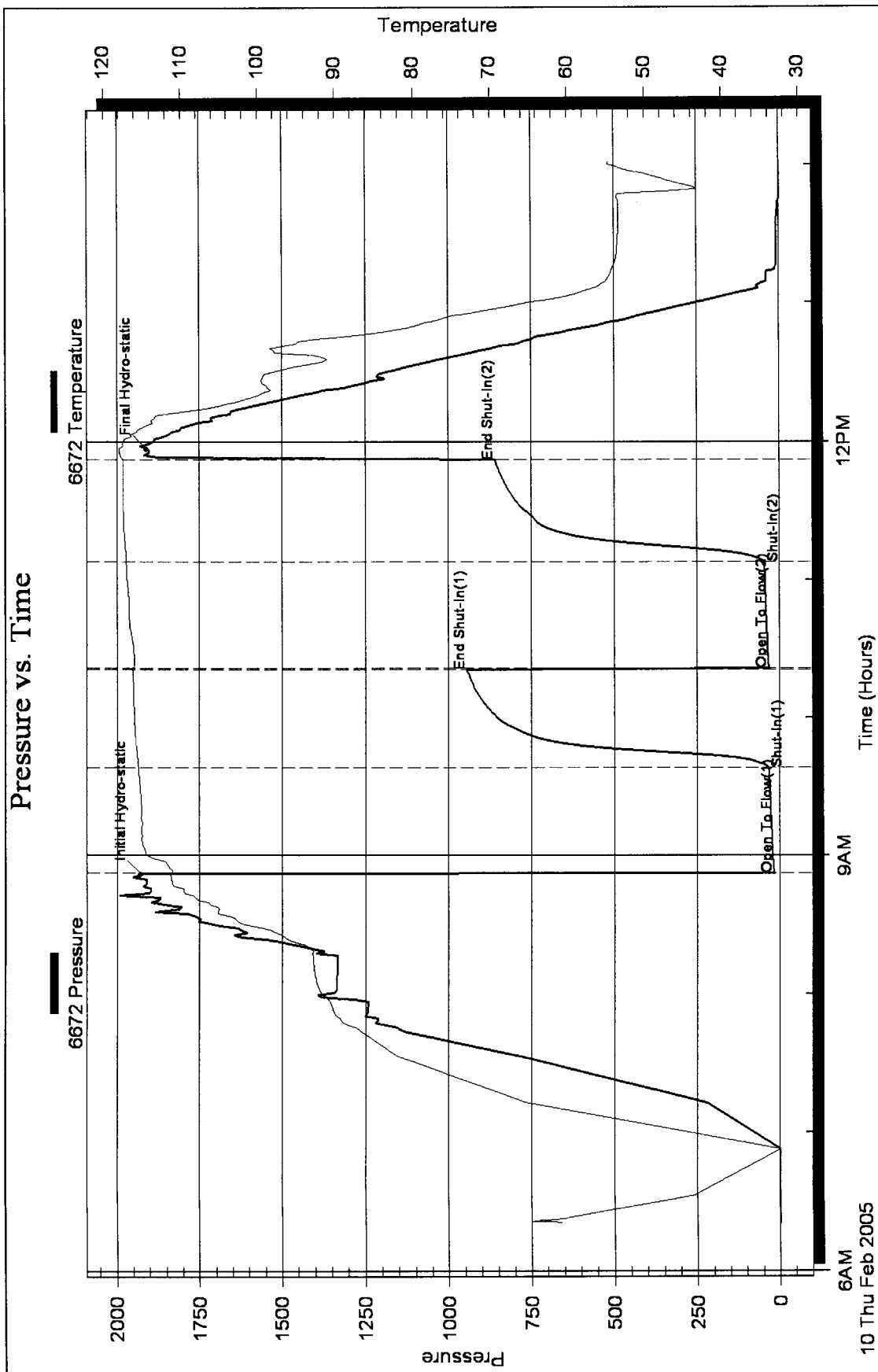


CHART PAGE

This is a photocopy of the actual AK-1 recorder chart.

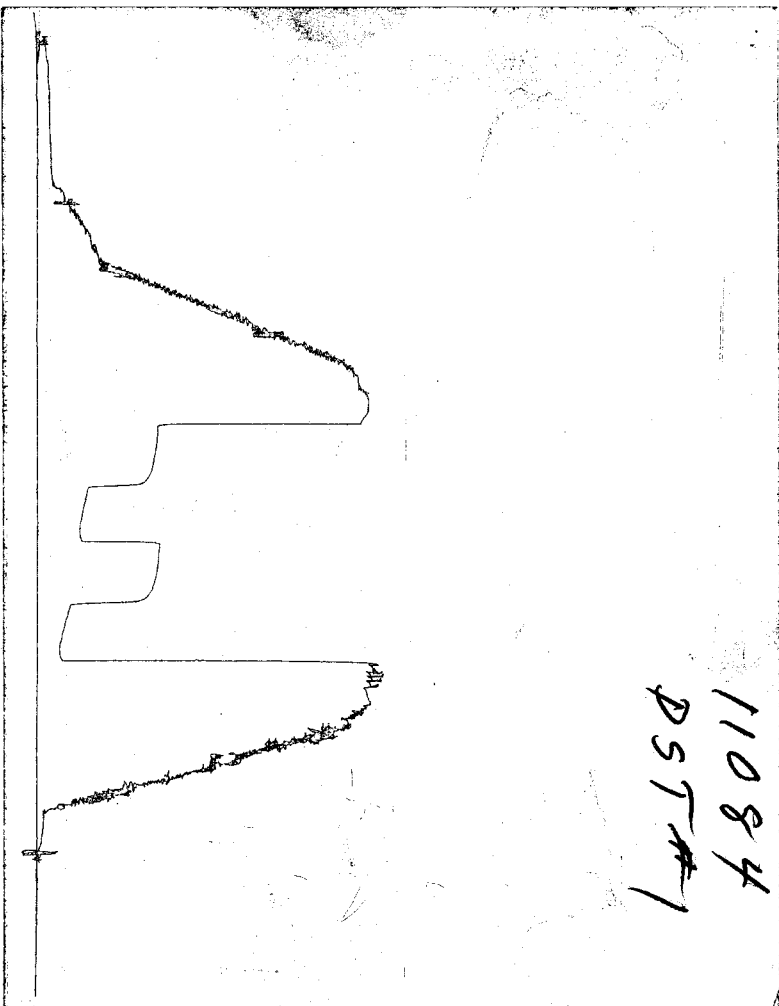


CHART PAGE

This is a photocopy of the actual AK-1 recorder chart.

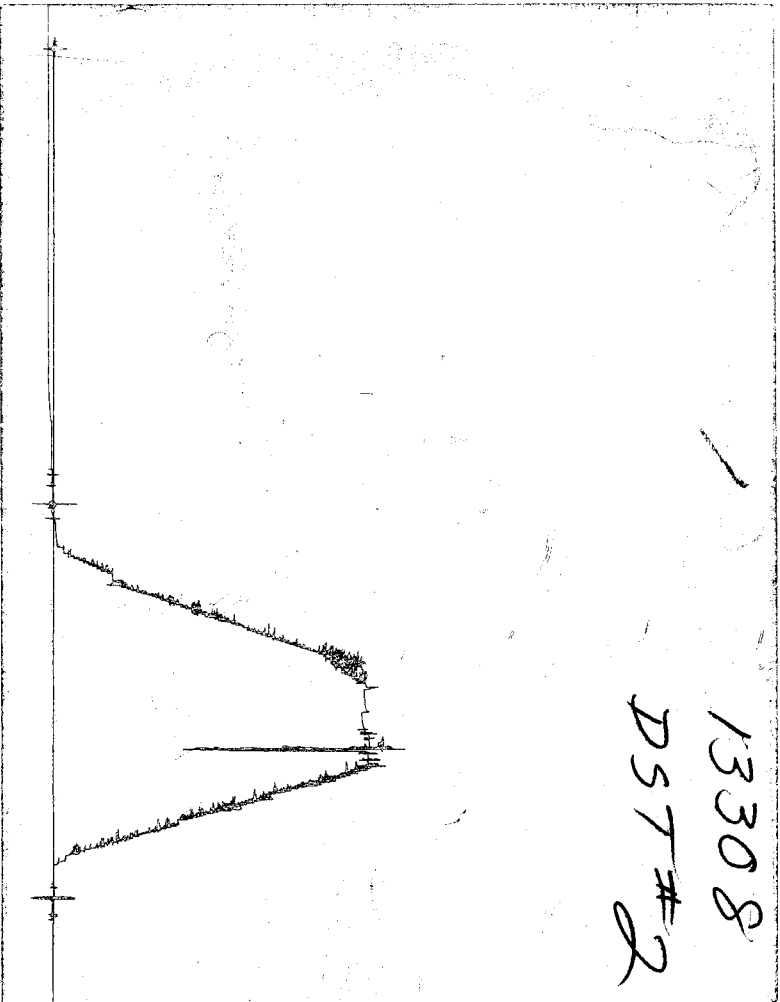


CHART PAGE
This is a photocopy of the actual AK-1 recorder chart.

