

32-15s-17w

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KCC WICHITA

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TRILOBITE
TESTING, INC.

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RELEASED

DRILL STEM TEST REPORT

JAN 14 2005

Prepared For: Lario Oil & Gas CO

301 S. Market
Wichita, Ks 67202

FROM CONFIDENTIAL

ATTN: John Hastings

32-15-17-Ellis-Ks

Errol Engel # 1-32

Start Date: 2003.01.29 @ 05:27:05

End Date: 2003.01.29 @ 11:57:35

Job Ticket #: 17412

DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Lario Oil & Gas CO

Errol Engel # 1-32

32-15-17-Ellis-Ks

DST # 1

Oread

2003.01.29

CONFIDENTIAL

ORIGINAL

101763


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Lario Oil & Gas CO.

301 S. Market
Wichita, Ks 67202

ATTN: John Hastings

Errol Engel # 1-32

32-15-17-Ellis-Ks

Job Ticket: 17412

DST#: 1

Test Start: 2003.01.29 @ 05:27:05

GENERAL INFORMATION:

Formation: Oread

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:03:35

Time Test Ended: 11:57:35

Interval: 3025.00 ft (KB) To 3060.00 ft (KB) (TVD)

Total Depth: 3060.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Reference Elevations: 1887.00 ft (KB)

1882.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 2357

Inside

Press@RunDepth: 31.96 psig @ 3026.00 ft (KB)

Start Date: 2003.01.29

End Date:

2003.01.29

Start Time: 05:27:10

End Time:

11:57:34

Capacity: 7000.00 psig

Last Calib.: 2003.01.29

Time On Btm: 2003.01.29 @ 07:00:50

Time Off Btm: 2003.01.29 @ 10:48:35

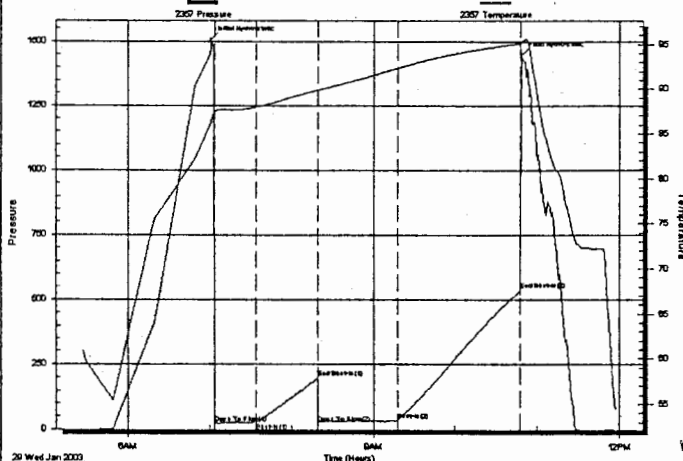
TEST COMMENT: IF-Weak building to 4 1/4"
FF-Strong BOB in 25 min
Times-30-45-60-90

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Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1506.79	86.43	Initial Hydro-static
3	21.87	87.48	Open To Flow (1)
34	25.17	87.96	Shut-In(1)
79	197.15	89.89	End Shut-In(1)
79	22.11	89.91	Open To Flow (2)
137	31.96	92.35	Shut-In(2)
227	535.67	95.11	End Shut-In(2)
228	1447.43	95.21	Final Hydro-static

RELEASED

JAN 17 2005

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Gsy M w/few oil spots in tool	0.07
0.00	372 GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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CONFIDENTIAL

ORIGINAL


**TRILOBITE
TESTING, INC.**
DRILL STEM TEST REPORT
TOOL DIAGRAM

Lario, Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17412

DST#: 1

ATTN: John Hastings

Test Start: 2003.01.29 @ 05:27:05

Tool Information

Drill Pipe:	Length: 2897.00 ft	Diameter: 3.80 inches	Volume: 40.64 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 45000.00 lb
		Total Volume: 41.25 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3025.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3005.00	
S.I. Tool	5.00			3010.00	
HMV	5.00			3015.00	
Packer	5.00			3020.00	21.00 Bottom Of Top Packer
Packer	5.00			3025.00	
Stubb	1.00			3026.00	
Recorder	0.00	2357	Inside	3026.00	
Perforations	31.00			3057.00	
Recorder	0.00	13254	Outside	3057.00	
Bullnose	3.00			3060.00	35.00 Bottom Packers & Anchor
Total Tool Length:		56.00			

RELEASED

JAN 04 2005

FROM CONFIDENTIAL

 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT		FLUID SUMMARY
	Lario Oil & Gas CO 301 S. Market Wichita, Ks 67202 ATTN: John Hastings		Errol Engel # 1-32 32-15-17-Ellis-Ks Job Ticket: 17412 DST#: 1 Test Start: 2003.01.29 @ 05:27:05

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:
Mud Weight: 9.00 lb/gal	Cushion Length: ft	deg API
Viscosity: 48.00 sec/qt	Cushion Volume: bbl	Water Salinity: ppm
Water Loss: 10.35 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 5000.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table		
Length ft	Description	Volume bbl
15.00	Gsy M w/few oil spots in tool	0.074
0.00	372 GP	0.000

Total Length: 15.00 ft
 Num Fluid Samples: 0
 Laboratory Name:
 Recovery Comments:

Total Volume: 0.074 bbl
 Num Gas Bombs: 0
 Laboratory Location:

Serial #:



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Lario Oil & Gas CO**

301 S. Market
Wichita, Ks 67202

ATTN: John Hastings

32-15-17-Ellis-Ks

Errol Engel # 1-32

Start Date: 2003.01.30 @ 00:39:53

End Date: 2003.01.30 @ 07:34:08

Job Ticket #: 17413

DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2003.02.03 @ 10:45:20 Page 1

Lario Oil & Gas CO

Errol Engel # 1-32

32-15-17-Ellis-Ks

DST # 2

A-B

LKC

2003.01.30

DST Test Number: 1

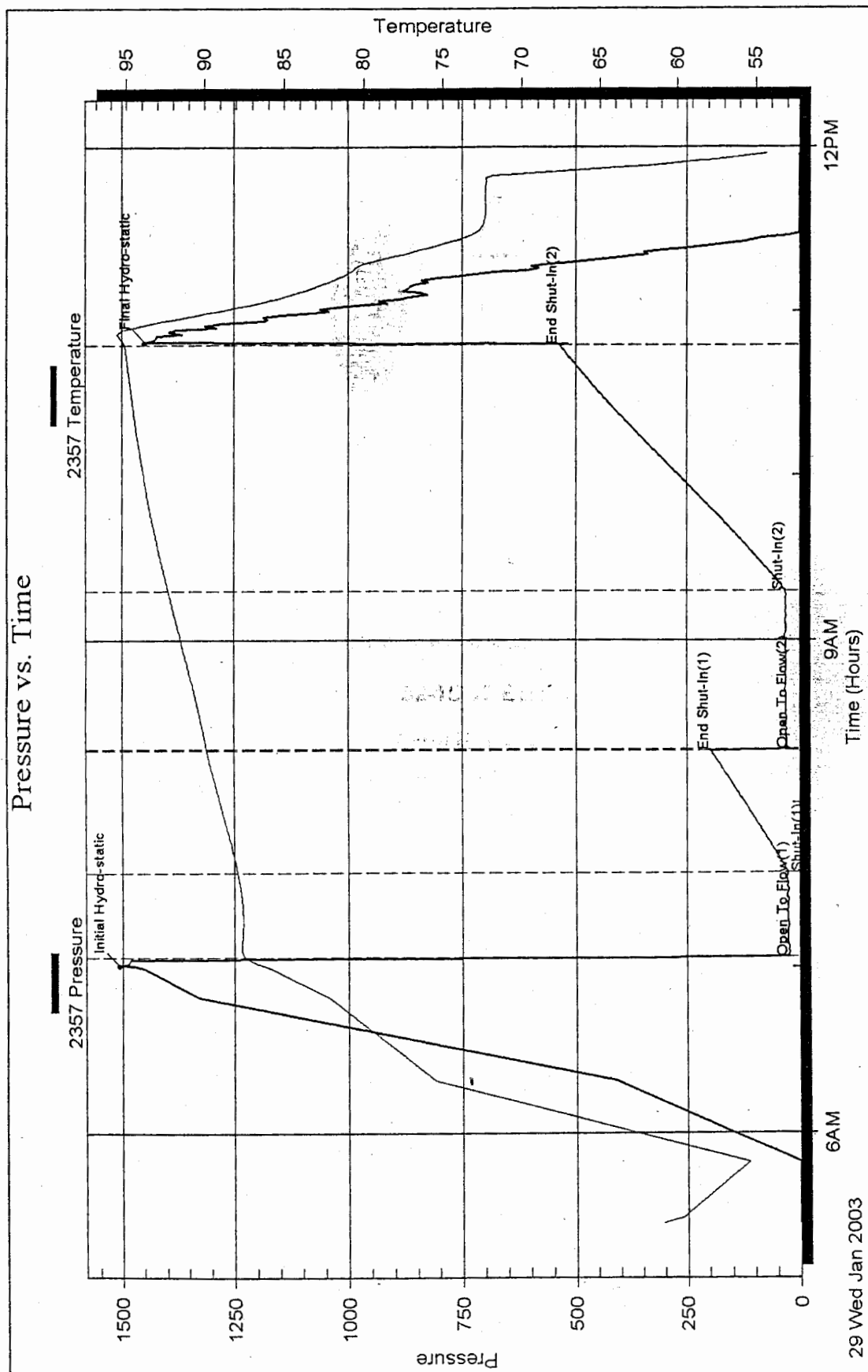
32-15-17-Ellis-Ks

Lario Oil & Gas CO

Inside

Serial #: 2357

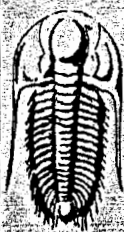
Pressure vs. Time



Ref. No: 17412

Trilobite Testing, Inc

Printed: 2003.02.03 @ 10:30:01 Page 5



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Lario Oil & Gas CO

301 S. Market
Wichita, Ks 67202

ATTN: John Hastings

Errol Engel # 1-32

32-15-17-Ellis-Ks

Job Ticket: 17413

DST#: 2

Test Start: 2003.01.30 @ 00:39:53

GENERAL INFORMATION:

Formation: A-B LKC

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:09:08

Time Test Ended: 07:34:08

Interval: 3170.00 ft (KB) To 3205.00 ft (KB) (TVD)

Total Depth: 3205.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Reference Elevations: 1887.00 ft (KB)

1882.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 2357

Inside

Press@RunDepth: 59.08 psig @ 3171.00 ft (KB)

Start Date: 2003.01.30 End Date: 2003.01.30

Start Time: 00:39:58 End Time: 07:34:07

Capacity: 7000.00 psig

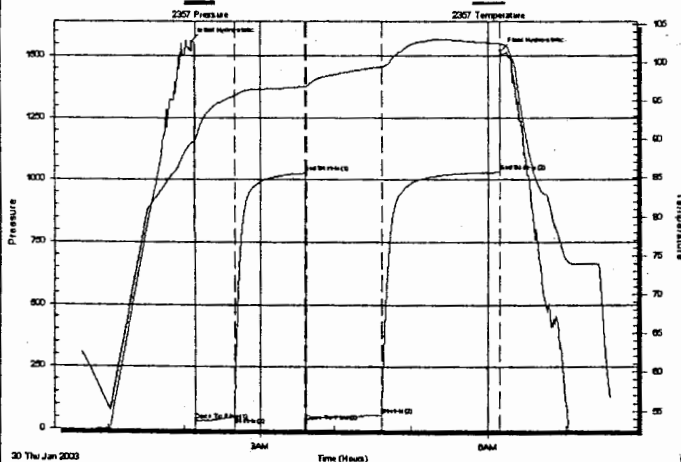
Last Calib.: 2003.01.30

Time On Btmr: 2003.01.30 @ 02:06:23

Time Off Btmr: 2003.01.30 @ 06:09:23

TEST COMMENT: FF-Strong BOB in 1 min-Gas to surface in 17 min-Gauged
FF-Strong BOB as soon as tool opened-Gas sample taken
Times-30-60-60-90

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1558.62	89.59	Initial Hydro-static
3	32.84	89.88	Open To Flow (1)
33	49.37	95.66	Shut-In(1)
90	1027.44	96.87	End Shut-In(1)
91	31.90	96.91	Open To Flow (2)
151	59.08	99.44	Shut-In(2)
243	1031.06	102.43	End Shut-In(2)
243	1520.27	102.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
165.00	Gsy Mud	1.18

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	3.00	27.60
Last Gas Rate	0.25	6.00	32.36
Max. Gas Rate	0.25	8.00	35.54

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17413

DST#: 2

ATTN: John Hastings

Test Start: 2003.01.30 @ 00:39:53

Tool Information

Drill Pipe:	Length: 3055.00 ft	Diameter: 3.80 inches	Volume: 42.85 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 45000.00 lb
			Total Volume: 43.46 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3170.00 ft			Final: 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3150.00	
S.I. Tool	5.00			3155.00	
HMV	5.00			3160.00	
Packer	5.00			3165.00	21.00 Bottom Of Top Packer
Packer	5.00			3170.00	
Stubb	1.00			3171.00	
Recorder	0.00	2357	inside	3171.00	
Perforations	31.00			3202.00	
Recorder	0.00	13254	Outside	3202.00	
Bullnose	3.00			3205.00	35.00 Bottom Packers & Anchor
Total Tool Length:		56.00			



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market

32-15-17-Ellis-Ks

Wichita, Ks 67202

Job Ticket: 17413

DST#: 2

ATTN: John Hastings

Test Start: 2003.01.30 @ 00:39:53

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type: Gel Chem

Oil API:

deg API:

Mud Weight: 9.00 lb/gal

Cushion Length: 165.00 ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume: 1.185 bbl

Water Loss: 9.57 in³

Gas Cushion Type: V

Resistivity: 6000 ohm-m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
165.00	Gsy Mud	1.185

Total Length: 165.00 ft

Total Volume: 1.185 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

101763

**TRILOBITE
TESTING, INC.****DRILL STEM TEST REPORT****GAS RATES**

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17413

DST#: 2

ATTN: John Hastings

Test Start: 2003.01.30 @ 00:39:53

Gas Rates Information

Temperature: 59 deg C

Relative Density: 0.65

Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
1	20	0.25	3.00	27.60
1	20	0.25	3.00	27.60
1	30	0.25	8.00	35.54
2	10	0.25	6.00	32.36
2	20	0.25	6.00	32.36
2	30	0.25	6.00	32.36
2	40	0.25	6.00	32.36
2	50	0.25	6.00	32.36

Serial #: 2357

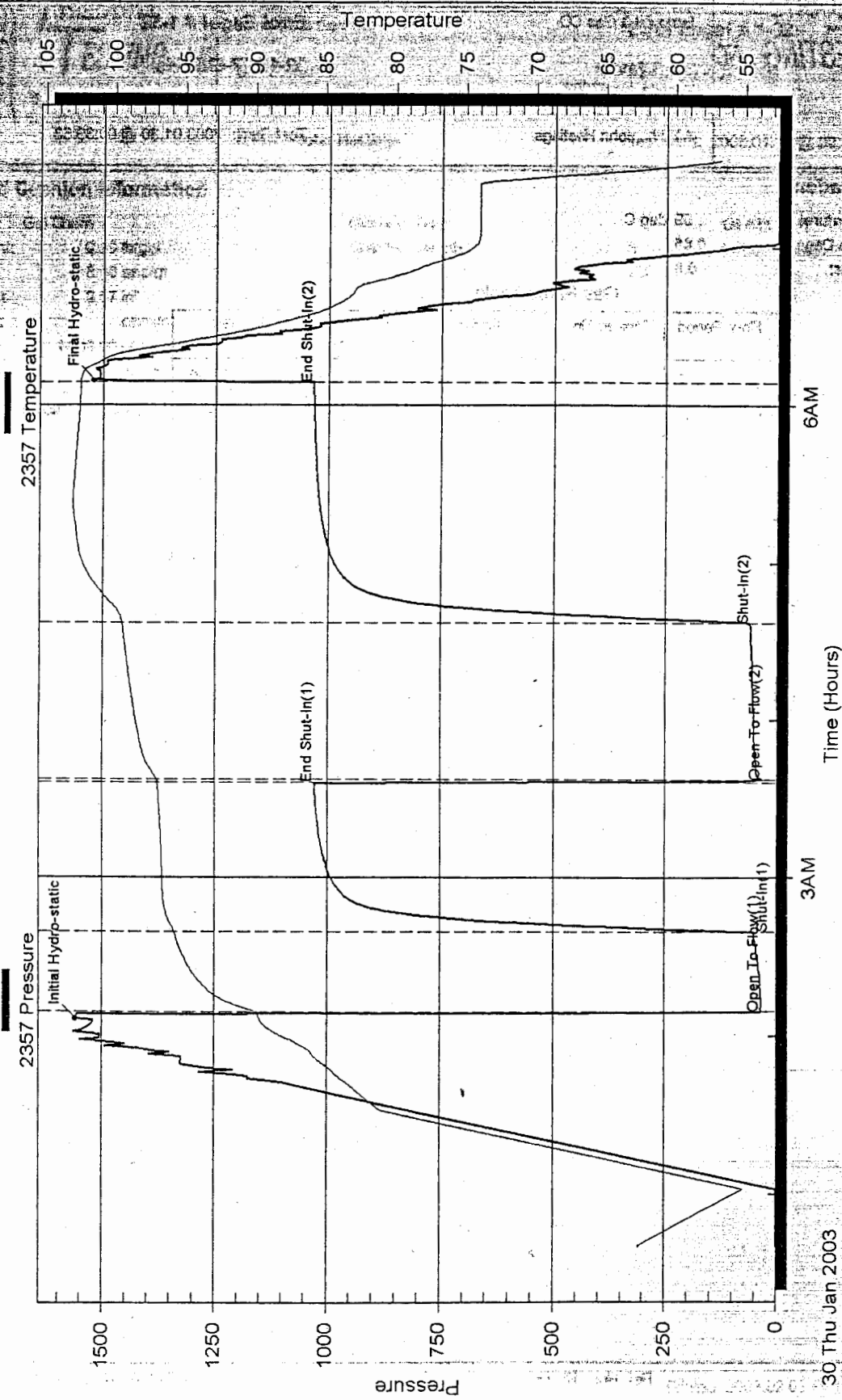
Inside

Lario Oil & Gas CO

32-15-17-Elis-Ks

DST Test Number: 2

Pressure vs. Time



30 Thu Jan 2003

Trilobite Testing, Inc

Ref. No: 17413

Printed: 2003.02.03 @ 10:45:23 Page 6

101763



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Lario Oil & Gas CO**

301 S. Market
Wichita, Ks 67202

ATTN: John Hastings

32-15-17-Ellis-Ks

Errol Engel # 1-32

Start Date: 2003.01.30 @ 13:58:20

End Date: 2003.01.30 @ 20:49:35

Job Ticket #: 17414

DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Lario Oil & Gas CO

Errol Engel # 1-32

32-15-17-Ellis-Ks

DST # 3

C LKC

2003.01.30



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

ATTN: John Hastings

Job Ticket: 17414 DST#: 3

Test Start: 2003.01.30 @ 13:58:20

GENERAL INFORMATION:

Formation: C LKC

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:24:35

Time Test Ended: 20:49:35

Interval: 3205.00 ft (KB) To 3225.00 ft (KB) (TVD)

Total Depth: 3225.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Reference Elevations: 1887.00 ft (KB)

1882.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 2357

Inside

Press@RunDepth: 32.12 psig @ 3206.00 ft (KB)

Start Date: 2003.01.30

End Date:

2003.01.30

Start Time: 13:58:25

End Time:

20:49:34

Capacity: 7000.00 psig

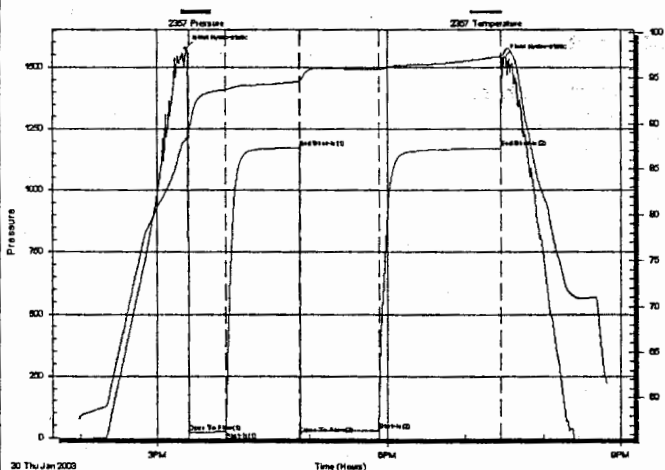
Last Calib.: 2003.01.30

Time On Btm: 2003.01.30 @ 15:22:05

Time Off Btm: 2003.01.30 @ 19:29:35

TEST COMMENT: F-Strong BOB in 1 min-GTS in 25 min-TSTM
FF-Strong BOB as soon as tool opened-Gauged-Took gas sample
Times-30-60-60-90

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1575.28	88.31	Initial Hydro-static
3	22.67	89.18	Open To Flow (1)
32	27.64	93.75	Shut-in (1)
90	1173.34	94.67	End Shut-in (1)
91	15.08	94.74	Open To Flow (2)
151	32.12	95.97	Shut-in (2)
246	1170.93	97.45	End Shut-in (2)
248	1537.17	97.73	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	Gsy M	0.32

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	3.00	27.60
Last Gas Rate	0.25	3.00	27.60
Max. Gas Rate	0.25	3.00	27.60



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17414

DST#: 3

ATTN: John Hastings

Test Start: 2003.01.30 @ 13:58:20

Tool Information

Drill Pipe:	Length: 3086.00 ft	Diameter: 3.80 inches	Volume: 43.29 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose:	60000.00 lb
		Total Volume:	43.90 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial	42000.00 lb
Depth to Top Packer:	3205.00 ft			Final	42000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	20.00 ft				
Tool Length:	41.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3185.00	
S.I. Tool	5.00			3190.00	
HMV	5.00			3195.00	
Packer	5.00			3200.00	21.00 Bottom Of Top Packer
Packer	5.00			3205.00	
Stubb	1.00			3206.00	
Recorder	0.00	2357	Inside	3206.00	
Perforations	16.00			3222.00	
Recorder	0.00	13254	Outside	3222.00	
Bullnose	3.00			3225.00	20.00 Bottom Packers & Anchor
Total Tool Length:	41.00				



**TRILOBITE
TESTING, INC.**

01/10/03

DRILL STEM TEST REPORT

FLUID SUMMARY

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market

32-15-17-Ellis-Ks

Wichita, Ks 67202

Job Ticket: 17414

DST#: 3

ATTN: John Hastings

Test Start: 2003.01.30 @ 13:58:20

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type: Water

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length: 65.00 ft

Water Salinity:

ppm

Viscosity: 47.00 sec/qt

Cushion Volume: 0.320 bbl

Water Loss: 8.76 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	Gsy M	0.320

Total Length: 65.00 ft

Total Volume: 0.320 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17414

DST#: 3

ATTN: John Hastings

Test Start: 2003.01.30 @ 13:58:20

Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
2	10	0.25	3.00	27.60
2	10	0.25	3.00	27.60
2	20	0.25	3.00	27.60
2	30	0.25	3.00	27.60
2	40	0.25	3.00	27.60
2	50	0.25	3.00	27.60

Serial #: 2357

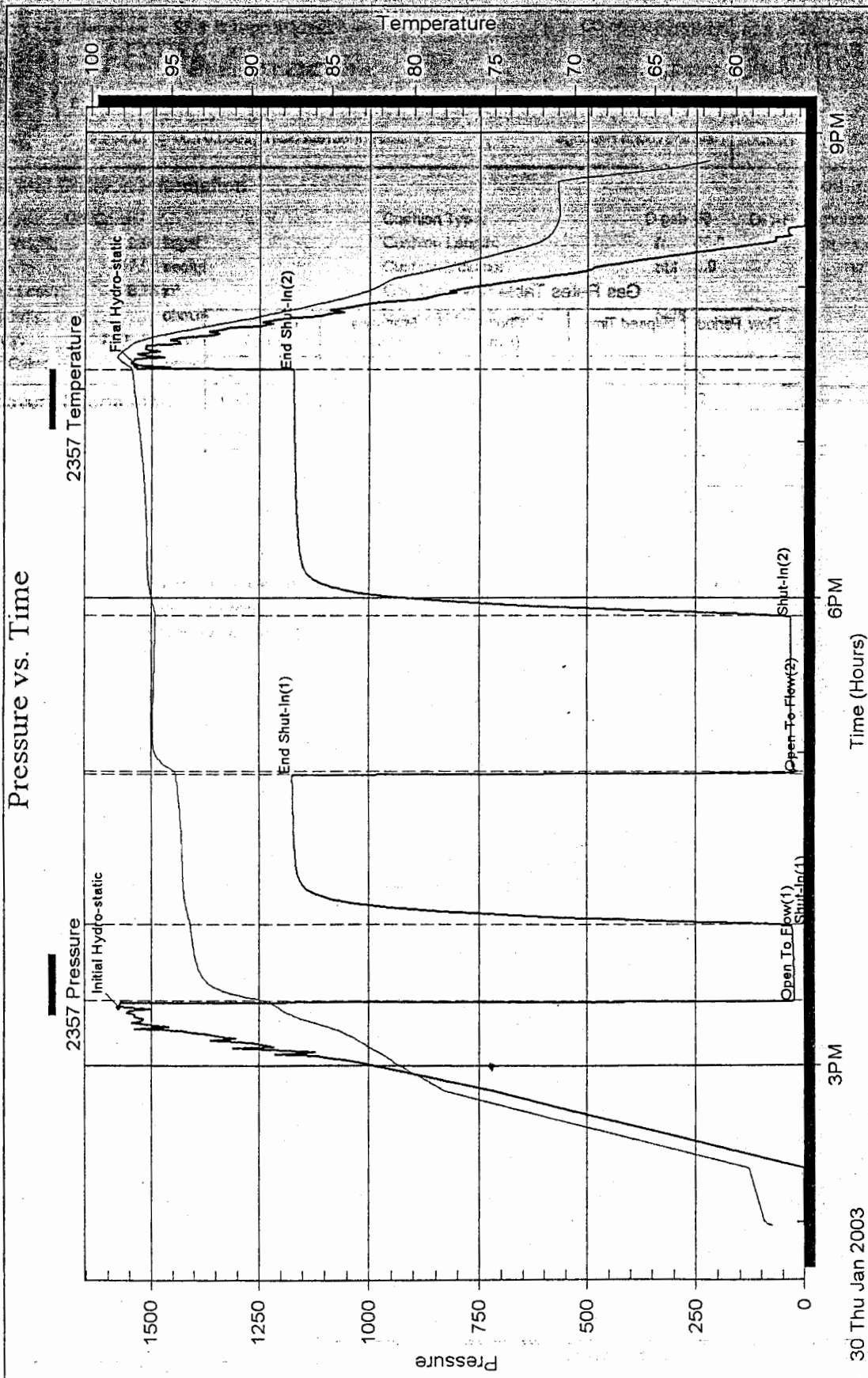
Inside

Lario Oil & Gas CO

32-15-17-Elis-Ks

DST Test Number: 3

Pressure vs. Time

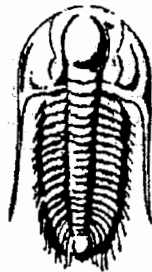


Trilobite Testing, Inc

Ref. No: 17414

Printed: 2003.02.03 @ 10:46:14 Page: 6

10763



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Lario Oil & Gas CO**

301 S. Market
Wichita, Ks 67202

ATTN: John Hastings

32-15-17-Ellis-Ks

Errol Engel # 1-32

Start Date: 2003.01.31 @ 03:21:54

End Date: 2003.01.31 @ 10:50:54

Job Ticket #: 17415

DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Lario Oil & Gas CO

Errol Engel # 1-32

32-15-17-Ellis-Ks

DST # 4

F LKC

2003.01.31



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17415

DST#: 4

ATTN: John Hastings

Test Start: 2003.01.31 @ 03:21:54

GENERAL INFORMATION:

Formation: F LKC

Deviated: No Whipstock

ft (KB)

Time Tool Opened: 04:55:24

Time Test Ended: 10:50:54

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Interval: 3225.00 ft (KB) To 3250.00 ft (KB) (TVD)

Total Depth: 3250.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1887.00 ft (KB)

1882.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 2357

Inside

Press@RunDepth: 177.46 psig @ 3226.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2003.01.31

End Date:

2003.01.31

Last Calib.: 2003.01.31

Start Time: 03:21:59

End Time:

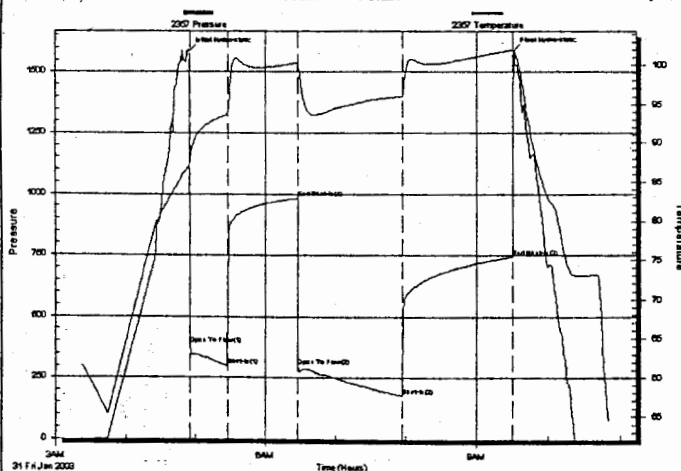
10:50:53

Time On Btm: 2003.01.31 @ 04:54:24

Time Off Btm: 2003.01.31 @ 09:30:54

TEST COMMENT: F-Strong BOB as soon as tool opened-GTS in 2 min-Gauged
FFStrong BOB as soon as tool opened-Gas sample taken
Times-30-60-90-90

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1585.82	87.21	Initial Hydro-static
1	385.34	87.94	Open To Flow (1)
33	297.70	93.67	Shut-In (1)
94	981.49	100.30	End Shut-In (1)
94	296.90	99.89	Open To Flow (2)
183	177.46	96.01	Shut-In (2)
276	744.23	101.99	End Shut-In (2)
277	1586.86	101.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	Gsy M	0.34

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.00	60.00	2138.91
Last Gas Rate	1.00	35.00	1420.19
Max. Gas Rate	1.00	60.00	2138.91



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larjo Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17415

DST#: 4

ATTN: John Hastings

Test Start: 2003.01.31 @ 03:21:54

Tool Information

Drill Pipe:	Length: 3087.00 ft	Diameter: 3.80 inches	Volume: 43.30 bbl	Tool Weight: 2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 45000.00 lb
			Total Volume: 43.91 bbl	Tool Chased: 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3225.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	46.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	Notes
C.O. Sub	1.00			3205.00		
S.I. Tool	5.00			3210.00		
HMV	5.00			3215.00		
Packer	5.00			3220.00	21.00	Bottom Of Top Packer
Packer	5.00			3225.00		
Stubb	1.00			3226.00		
Recorder	0.00	2357	Inside	3226.00		
Perforations	21.00			3247.00		
Recorder	0.00	13254	Outside	3247.00		
Bullnose	3.00			3250.00	25.00	Bottom Packers & Anchor
Total Tool Length:		46.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17415

DST#: 4

ATTN: John Hastings

Test Start: 2003.01.31 @ 03:21:54

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type: Gel Chem

Oil API: deg API

Mud Weight: 9.00 lb/gal

Cushion Length: 70.00 ft

Water Salinity: ppm

Viscosity: 47.00 sec/qt

Cushion Volume: 0.344 bbl

Gas Cushion Type:

Water Loss: 8.78 in

Gas Cushion Pressure:

psig

Resistivity: ohm.m

Salinity: 7000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	Gsy M	0.344

Total Length: 70.00 ft Total Volume: 0.344 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Lario Oil & Gas CO

SUBSISTENT

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17415 DST#: 4

ATTN: John Hastings

Test Start: 2003.01.31 @ 03:21:54

Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m³/d)
1	10	1.00	60.00	2138.91
1	10	1.00	60.00	2138.91
1	20	1.00	55.00	1995.17
1	30	1.00	50.00	1851.42
2	10	1.00	55.00	1995.17
2	20	1.00	50.00	1851.42
2	30	1.00	45.00	1707.68
2	40	1.00	40.00	1563.93
2	50	1.00	40.00	1563.93
2	60	1.00	40.00	1563.93
2	70	1.00	35.00	1420.19
2	80	1.00	35.00	1420.19

Serial #: 2357

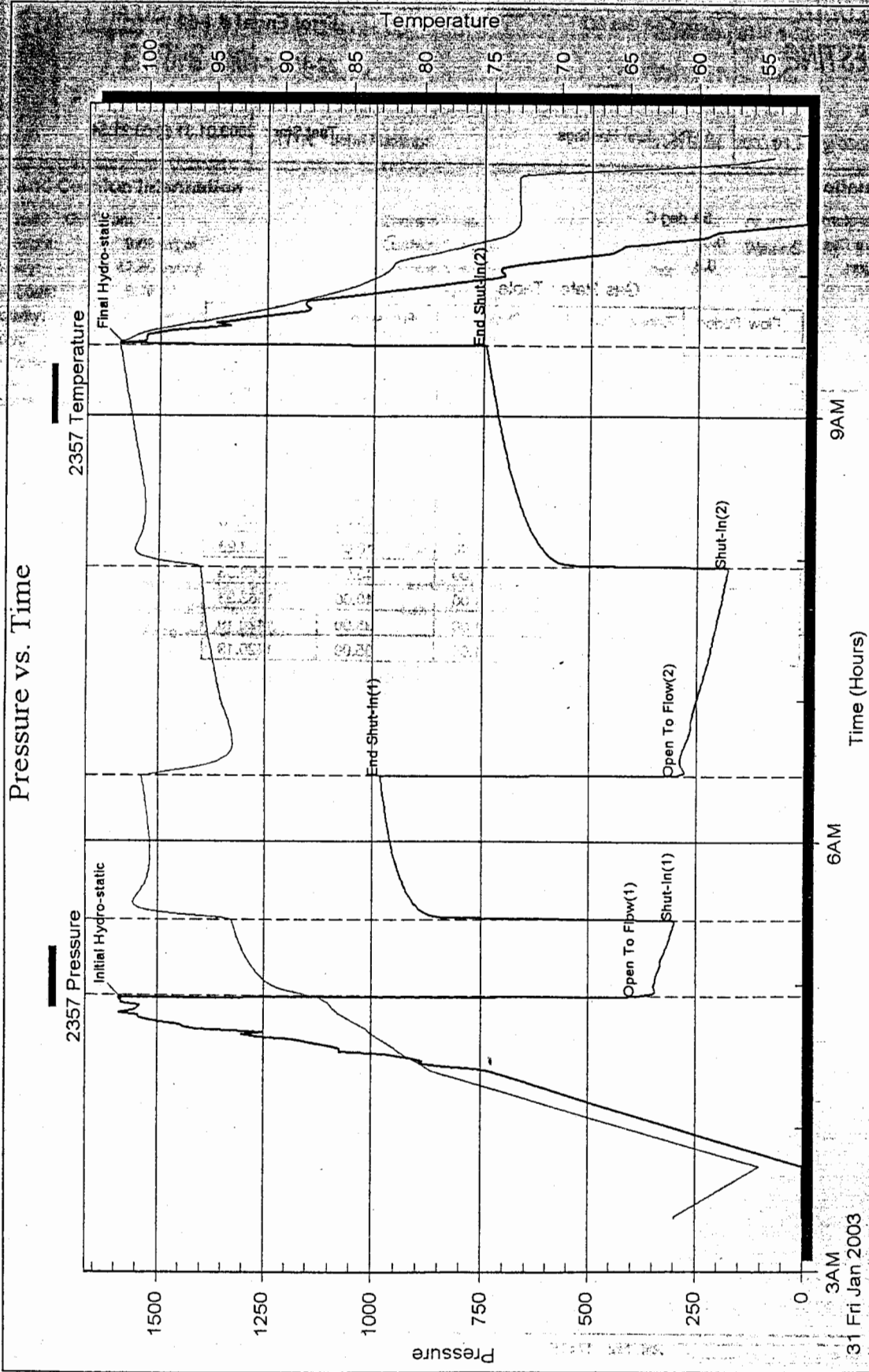
Inside

Lario Oil & Gas CO

32-15-17-Ellis-Ks

DST Test Number 4

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 17415

Printed: 2003.02.03 @ 10:46:33 Page 6

101763

DRILLSTEM TEST REPORT



**TRILOBITE
TESTING, INC.**

DRILL-STEM TEST REPORT

Prepared For: **Lario Oil & Gas CO**

301 S. Market
Wichita, Ks 67202

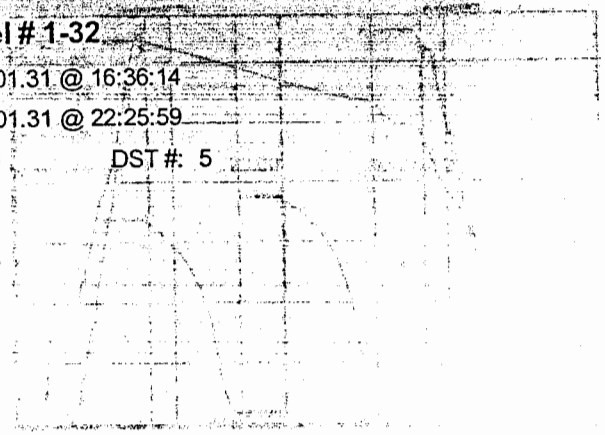
ATTN: John Hastings

32-15-17-Ellis-Ks

Errol Engel # 1-32

Start Date: 2003.01.31 @ 16:36:14
End Date: 2003.01.31 @ 22:25:59
Job Ticket #: 17416

DST #: 5



Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Lario Oil & Gas CO
Errol Engel # 1-32
32-15-17-Ellis-Ks
DST # 5
G LKC
2003.01.31



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

ATTN: John Hastings

Job Ticket: 17416

DST#: 5

Test Start: 2003.01.31 @ 16:36:14

GENERAL INFORMATION:

Formation: G LKC

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:15:14

Time Test Ended: 22:25:59

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Interval: 3250.00 ft (KB) To 3270.00 ft (KB) (TVD)

Total Depth: 3270.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1887.00 ft (KB)

1882.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 2357

Inside

Press@RunDepth: 30.38 psig @ 3251.00 ft (KB)

Start Date: 2003.01.31

End Date:

2003.01.31

Start Time: 16:36:19

End Time:

22:25:58

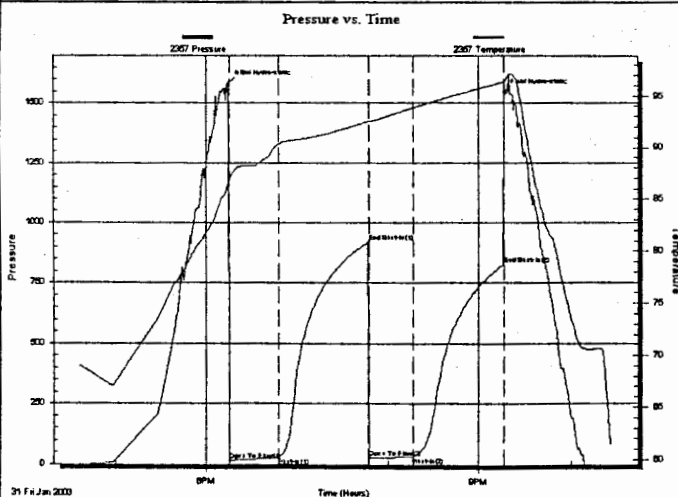
Capacity: 7000.00, psig

Last Calib.: 2003.01.31

Time On Btm: 2003.01.31 @ 18:14:44

Time Off Btm: 2003.01.31 @ 21:16:29

TEST COMMENT: IF-Weak steady 1/4" blow
FF-Weak steady 1/4" blow
Times-30-60-30-60



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1580.35	86.57	Initial Hydro-static
1	13.68	86.82	Open To Flow (1)
33	25.61	90.36	Shut-In(1)
92	919.01	92.52	End Shut-In(1)
93	26.34	92.54	Open To Flow (2)
122	30.38	93.82	Shut-In(2)
182	826.88	96.31	End Shut-In(2)
182	1543.66	96.33	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	DM	0.07

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
--	----------------	-----------------	------------------



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17416

DST#: 5

ATTN: John Hastings

Test Start: 2003.01.31 @ 16:36:14

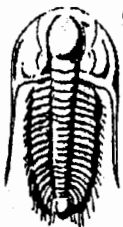
Tool Information

Drill Pipe:	Length: 3119.00 ft	Diameter: 3.80 inches	Volume: 43.75 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 48000.00 lb
		Total Volume:	44.36 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3250.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	41.00 ft			
Number of Packers:	2	Diameter:	6.75 inches	

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3230.00	
S.I. Tool	5.00			3235.00	
HMV	5.00			3240.00	
Packer	5.00			3245.00	21.00 Bottom Of Top Packer
Packer	5.00			3250.00	
Stubb	1.00			3251.00	
Recorder	0.00	2357	Inside	3251.00	
Perforations	16.00			3267.00	
Recorder	0.00	13254	Outside	3267.00	
Bullnose	3.00			3270.00	20.00 Bottom Packers & Anchor
Total Tool Length:	41.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17416

DST #: 5

ATTN: John Hastings

Test Start: 2003.01.31 @ 16:36:14

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API: 7.4

deg API: 11.7

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity: 8500 ppm

ppm: 8500

Viscosity: 49.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	DM	0.074

Total Length: 15.00 ft

Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

101763

DST Test Number: 5

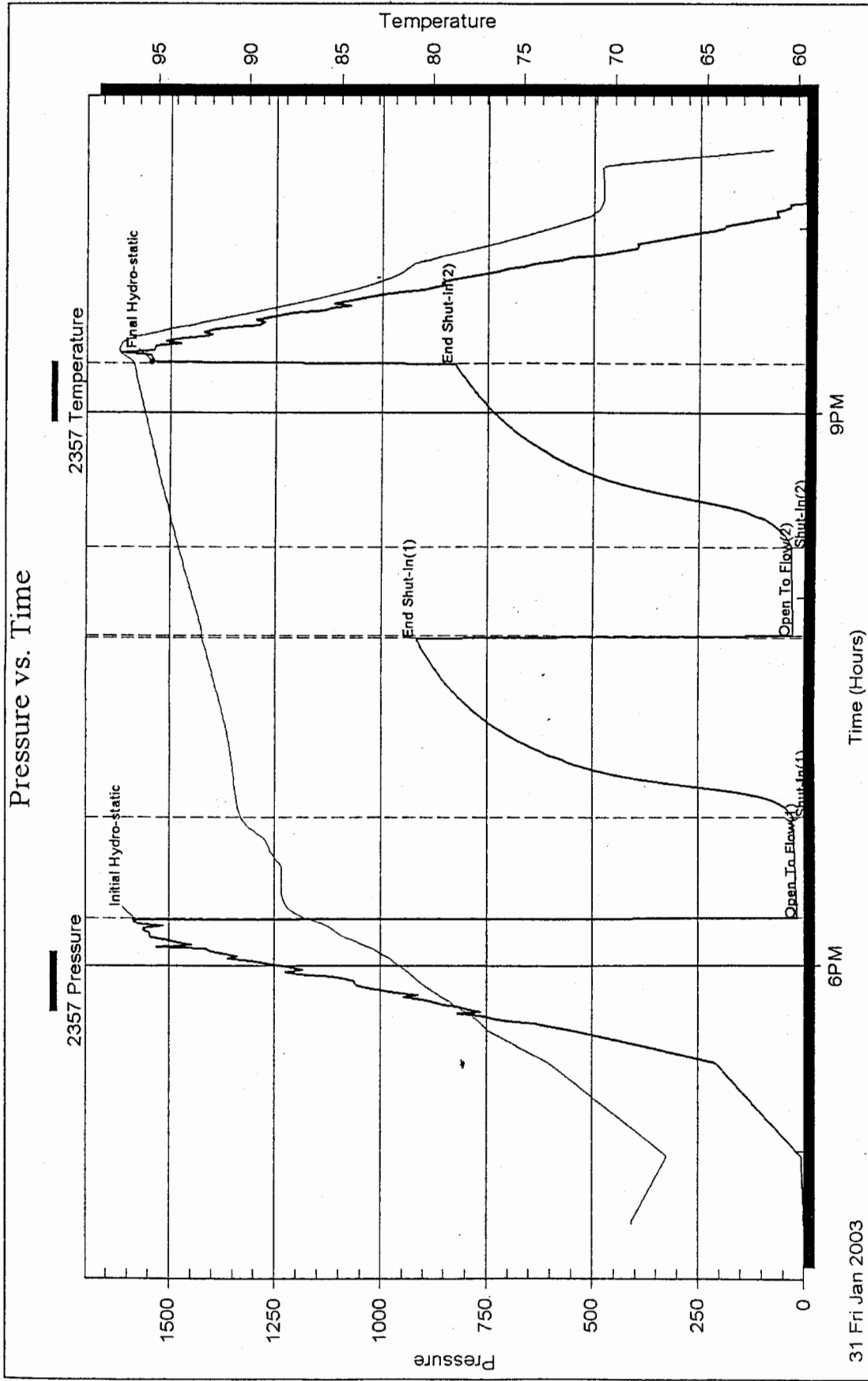
32-15-17-Elis-Ks

Lario Oil & Gas CO

Inside

Serial #: 2357

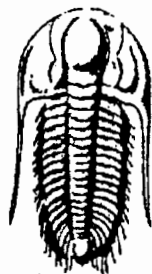
Pressure vs. Time



Ref. No: 17416

Trilobite Testing, Inc

Printed: 2003.02.03 @ 10:46:50 Page 5



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Lario Oil & Gas CO**

301 S. Market
Wichita, Ks 67202

ATTN: John Hastings

32-15-17-Ellis-Ks

Errol Engel # 1-32

Start Date: 2003.02.01 @ 16:38:40

End Date: 2003.02.02 @ 00:54:55

Job Ticket #: 17417 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17417

DST#: 6

ATTN: John Hastings

Test Start: 2003.02.01 @ 16:38:40

GENERAL INFORMATION:

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

Time Tool Opened: 18:08:40

Time Test Ended: 00:54:55

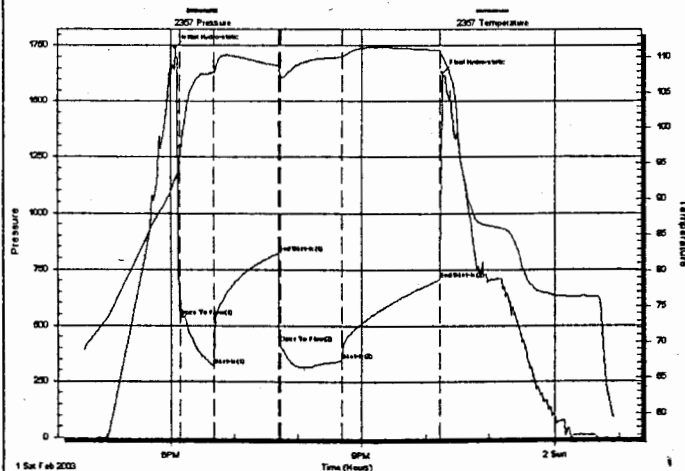
Test Type: **Conventional Bottom Hole**Tester: **Dan Bangle**Unit No: **21**Interval: **3396.00 ft (KB) To 3440.00 ft (KB) (TVD)**Total Depth: **3440.00 ft (KB) (TVD)**Hole Diameter: **7.88 inches** Hole Condition: **Good**Reference Elevations: **1887.00 ft (KB)****1882.00 ft (CF)**KB to GR/CF: **5.00 ft**Serial #: **2357**

Inside

Press@RunDepth: **343.05 psig @ 3397.00 ft (KB)**Capacity: **7000.00 psig**Start Date: **2003.02.01**End Date: **2003.02.02**Last Calib.: **2003.02.02**Start Time: **16:38:45**End Time: **00:54:54**Time On Btm: **2003.02.01 @ 18:04:25**Time Off Btm: **2003.02.01 @ 22:15:55**

TEST COMMENT: IF-Strong BOB as soon as tool opened-GTS in 2 min-Gauged
 FF-Strong BOB as soon as tool opened-Gas sample taken
 Times-30-60-60-90

Pressure vs. Time



PRESSURE SUMMARY

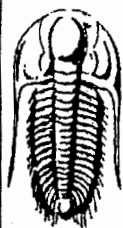
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1739.65	92.85	Initial Hydro-static
5	535.49	94.96	Open To Flow (1)
36	317.31	107.84	Shut-In(1)
97	820.58	108.83	End Shut-In(1)
99	422.43	107.49	Open To Flow (2)
157	343.05	110.07	Shut-In(2)
250	704.88	110.97	End Shut-In(2)
252	1627.89	110.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	MCGsyO 10% m 30% g 60% o	1.48
1364.00	CGsyO 40% g 60% o	19.13

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.00	50.00	1851.42
Last Gas Rate	0.50	12.00	178.09
Max. Gas Rate	1.00	50.00	1851.42



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17417

DST#: 6

ATTN: John Hastings

Test Start: 2003.02.01 @ 16:38:40

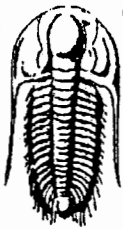
Tool Information

Drill Pipe:	Length: 3274.00 ft	Diameter: 3.80 inches	Volume: 45.93 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose:	60000.00 lb
			Total Volume: 46.54 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial	43000.00 lb
Depth to Top Packer:	3396.00 ft			Final	47000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	44.00 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
C.O. Sub	1.00			3376.00	
S.I. Tool	5.00			3381.00	
HMV	5.00			3386.00	
Packer	5.00			3391.00	21.00 Bottom Of Top Packer
Packer	5.00			3396.00	
Stubb	1.00			3397.00	
Recorder	0.00	2357	Inside	3397.00	
Perforations	40.00			3437.00	
Recorder	0.00	13254	Outside	3437.00	
Bullnose	3.00			3440.00	44.00 Bottom Packers & Anchor
Total Tool Length:		65.00			

101763


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17417

DST#: 6

ATTN: John Hastings

Test Start: 2003.02.01 @ 16:38:40

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	MCGsyO 10%m 30%g 60%o	1.480
1364.00	CGsyO 40%g 60%o	19.133

Total Length: 1550.00 ft

Total Volume: 20.613 bbl

Num Fluid Samples: 0

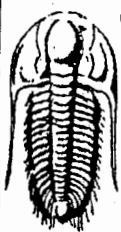
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17417

DST#: 6

ATTN: John Hastings

Test Start: 2003.02.01 @ 16:38:40

Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m³/d)
1	10	1.00	50.00	1851.42
1	10	1.00	50.00	1851.42
1	20	1.00	30.00	1276.45
1	30	1.00	20.00	988.96
2	10	1.00	30.00	1276.45
2	20	1.00	20.00	988.96
2	30	1.00	10.00	701.47
2	40	0.50	25.00	265.78
2	50	0.50	12.00	178.09

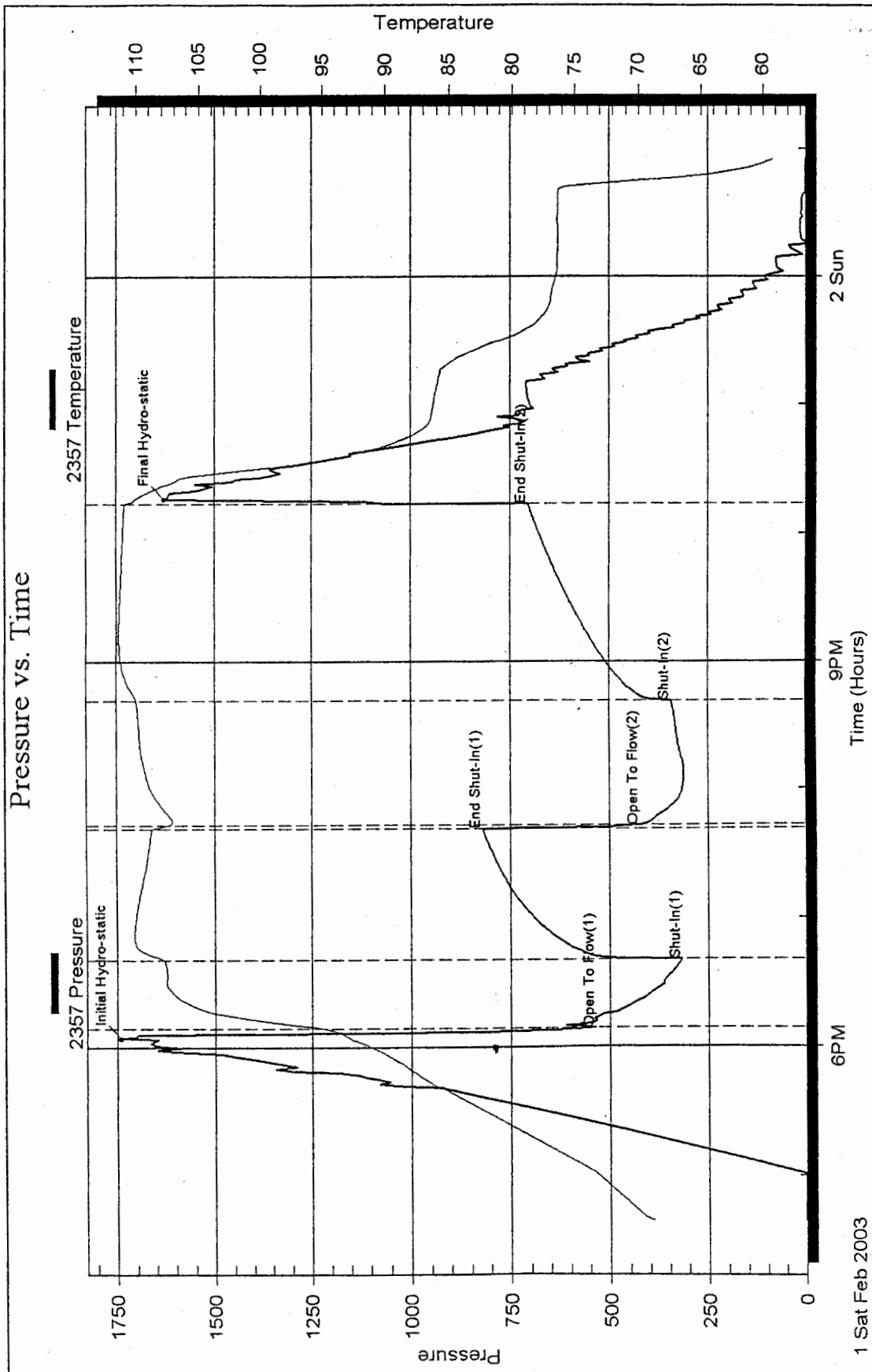
Serial #: 2357

Inside

Lario Oil & Gas CO

32-15-17-Ellis-Ks

DST Test Number: 6

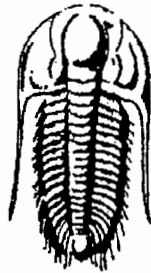


Trilobite Testing, Inc

Ref. No: 17417

Printed: 2003 02 03 @ 10:47 AM Page 6

101763



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Lario Oil & Gas CO**

301 S. Market
Wichita, Ks 67202

ATTN: John Hastings

32-15-17-Ellis-Ks

Errol Engel # 1-32

Start Date: 2003.02.02 @ 08:47:32

End Date: 2003.02.02 @ 17:18:32

Job Ticket #: 17418 DST #: 7

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


TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17418

DST#: 7

ATTN: John Hastings

Test Start: 2003.02.02 @ 08:47:32

GENERAL INFORMATION:

Formation: Arbuckle

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:22:47

Time Test Ended: 17:18:32

Interval: 3440.00 ft (KB) To 3455.00 ft (KB) (TVD)

Total Depth: 3455.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Reference Elevations: 1887.00 ft (KB)

1882.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 2357

Inside

Press@RunDepth: 325.86 psig @ 3441.00 ft (KB)

Start Date: 2003.02.02

End Date:

2003.02.02

Capacity: 7000.00 psig

Last Calib.:

2003.02.02

Start Time: 08:47:37

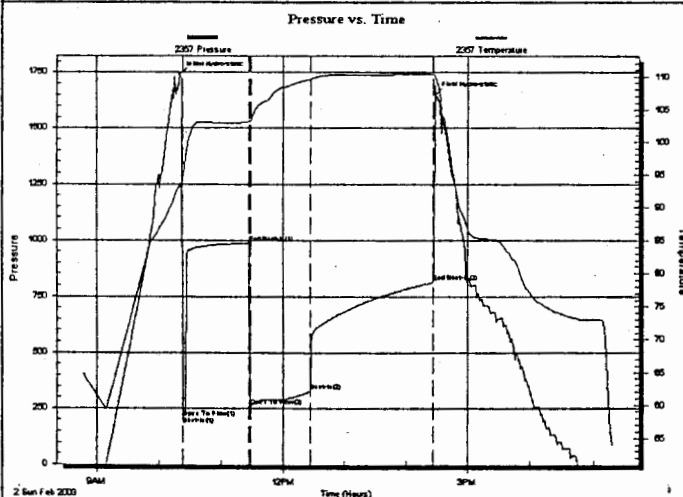
End Time:

17:18:31

Time On Btm: 2003.02.02 @ 10:20:17

Time Off Btm: 2003.02.02 @ 14:28:32

TEST COMMENT: IF-Strong BOB as soon as tool opened
 IS-GTS in 2 min
 FF-Strong BOB as soon as tool opened-Gauged gas-sample taken
 Times-4-60-60-120



PRESSURE SUMMARY

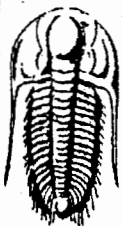
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1739.75	93.21	Initial Hydro-static
3	203.86	93.72	Open To Flow (1)
3	212.75	94.23	Shut-In (1)
67	987.24	103.13	End Shut-In (1)
69	255.77	103.20	Open To Flow (2)
127	325.86	109.58	Shut-In (2)
247	811.86	110.39	End Shut-In (2)
249	1649.44	109.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
178.00	MC frothyO 10% m 20% g 70% o	1.37
1302.00	CGsyO 40% g 60% o	18.26
3.00	Water	0.04

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	45.00	400.69
Last Gas Rate	0.50	20.00	232.05
Max. Gas Rate	0.50	45.00	400.69



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17418

DST#: 7

ATTN: John Hastings

Test Start: 2003.02.02 @ 08:47:32

Tool Information

Drill Pipe:	Length: 3305.00 ft	Diameter: 3.80 inches	Volume: 46.36 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose:	50000.00 lb
		Total Volume:	46.97 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	43000.00 lb
Depth to Top Packer:	3440.00 ft			Final	48000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	15.00 ft				
Tool Length:	36.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3420.00	
S.I. Tool	5.00			3425.00	
HMV	5.00			3430.00	
Packer	5.00			3435.00	21.00 Bottom Of Top Packer
Packer	5.00			3440.00	
Stubb	1.00			3441.00	
Recorder	0.00	2357	Inside	3441.00	
Perforations	11.00			3452.00	
Recorder	0.00	13254	Outside	3452.00	
Bullnose	3.00			3455.00	15.00 Bottom Packers & Anchor
Total Tool Length:	36.00				

101763


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17418

DST#: 7

ATTN: John Hastings

Test Start: 2003.02.02 @ 08:47:32

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 10.35 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
178.00	MC frothyO 10%m 20%g 70%o	1.367
1302.00	CGsyO 40%g 60%o	18.264
3.00	Water	0.042

Total Length: 1483.00 ft

Total Volume: 19.673 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Lario Oil & Gas CO

Errol Engel # 1-32

301 S. Market
Wichita, Ks 67202

32-15-17-Ellis-Ks

Job Ticket: 17418

DST#: 7

ATTN: John Hastings

Test Start: 2003.02.02 @ 08:47:32

Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
2	10	0.50	45.00	400.69
2	10	0.50	45.00	400.69
2	20	0.50	45.00	400.69
2	30	0.50	35.00	333.24
2	40	0.50	25.00	265.78
2	50	0.50	20.00	232.05

Serial #: 2357

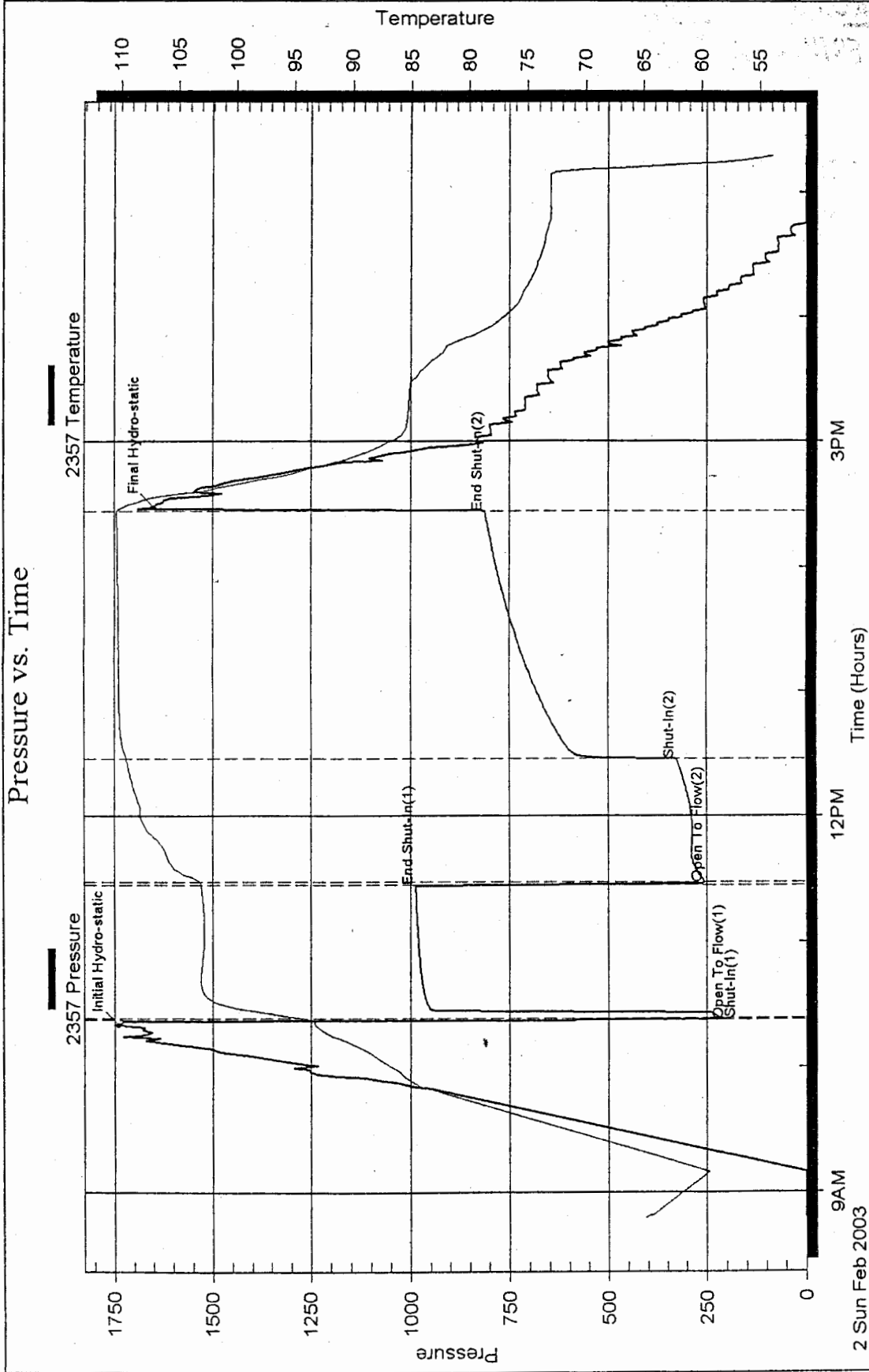
Inside

Lario Oil & Gas CO

32-15-17-Elis-Ks

DST Test Number: 7

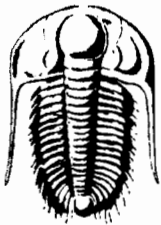
Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 17418

Printed: 2003.02.03 @ 10:47:32 Page 6



TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 17412

12/02

Test Ticket

Well Name & No. Errol Engel #1-32 Test No. 1 Date 1-29-03
Company Lario Oil & Gas Co. Zone Tested Oread
Address 301 S. Market, Wichita, Ks. 67202 Elevation 1887 KB 1882 GL
Co. Rep / Geo. Tim Lauer Cont. Murfin #8 Est. Ft. of Pay _____ Por. _____ %
Location: Sec. 32 Twp. 15 Rge. 17 Co. Ellis State Ks
No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3025 — 3060 Initial Str Wt./Lbs. 42,000 Unseated Str Wt./Lbs. 42,000
Anchor Length 35 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 45,000
Top Packer Depth 3020 Tool Weight _____
Bottom Packer Depth 3025 Hole Size 7 7/8" Rubber Size 6 3/4"
Total Depth 3060 Wt. Pipe Run _____ Drill Collar Run 124
Mud Wt. 8.6 LCM _____ Vis. 48 WL 10.4 Drill Pipe Size 4.5 XH Ft. Run 2897
Blow Description I.F. Weak-building to 4 1/4"

E.F. Strong - B.O.B. in 25 min.

Recovery - Total Feet 15 GIP 372 Ft. in DC 15 Ft. in DP _____
Rec. 15 Feet of Gsy M w/few oil spots in Tool
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
BHT 95 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 5,000 ppm System

	AK-1	Alpine			
(A) Initial Hydrostatic Mud	<u>1506</u>	PSI	Recorder No.	<u>2357</u>	Test <u>700</u>
(B) First Initial Flow Pressure	<u>21</u>	PSI	(depth)	<u>3026</u>	Elec. Rec. <u>X</u> <u>150</u>
(C) First Final Flow Pressure	<u>25</u>	PSI	Recorder No.	<u>13254</u>	Jars _____
(D) Initial Shut-In Pressure	<u>197</u>	PSI	(depth)	<u>3057</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>22</u>	PSI	Recorder No.	_____	Circ Sub _____
(F) Second Final Flow Pressure	<u>31</u>	PSI	(depth)	_____	Sampler _____
(G) Final Shut-In Pressure	<u>535</u>	PSI	Initial Opening	<u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>1447</u>	PSI	Initial Shut-In	<u>45</u>	Ext. Packer _____
			Final Flow	<u>60</u>	Shale Packer _____
			Final Shut-In	<u>90</u>	Mileage <u>22</u>

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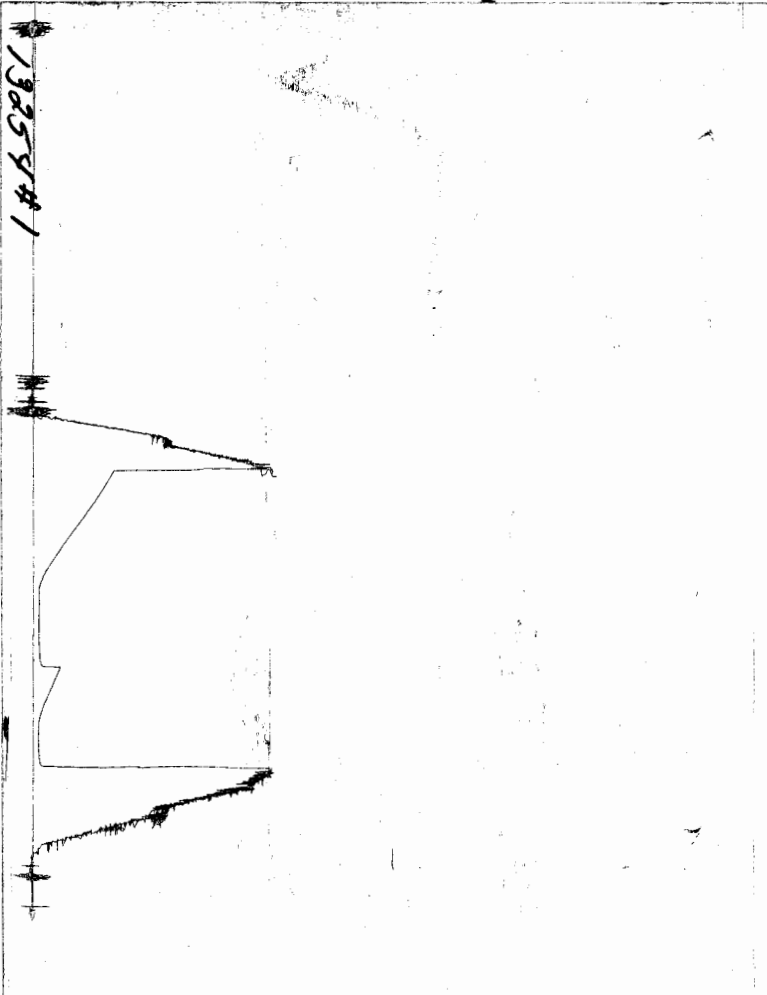
Approved By Tim J. Lauer

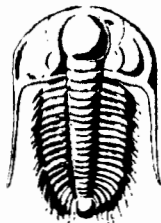
Our Representative Dan Kangle

T-On Location 05:15
T-Started 05:27
T-Open 07:02
T-Pulled 10:47
T-Out _____
Sub Total: 872
Std. By _____
Other _____
Total: 872

CHART PAGE

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





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 17413

12/02

Test Ticket

Well Name & No.	Enrol Engel #1-32	Test No.	2	Date	1-30-03
Company	Lario Oil & Gas Co.	Zone Tested	A-B	LKC	
Address		Elevation	1887	KB	1882
Co. Rep / Geo.	Tim Lauer	Cont.	Murfin #8	Est. Ft. of Pay	Por. %
Location: Sec.	32	Twp.	15	Rge.	17
		Co.	Ellis	State	KS
No. of Copies		Disbtribution Sheet (Y, N)		Turnkey (Y, N)	
		Evaluation (Y, N)			

Interval Tested	3170 — 3205	Initial Str Wt./Lbs.	42,000	Unseated Str Wt./Lbs.	42,000
Anchor Length	35	Wt. Set Lbs.	25,000	Wt. Pulled Loose/Lbs.	45,000
Top Packer Depth	3165	Tool Weight	2500		
Bottom Packer Depth	3170	Hole Size 7 7/8"		Rubber Size 6 3/4"	
Total Depth	3205	Wt. Pipe Run		Drill Collar Run	124
Mud Wt.	9	LCM		Vis.	48
		WL	9.6	Drill Pipe Size	4.5 XH
Blow Description	F.F. Strong - B.O.B in 1min - GTS in 17min.				
	Gauged - 2				
	F.F. Strong B.O.B as soon as tool opened -				
	Gas Sample Taken				
Recovery - Total Feet	165	GIP	GTS	Ft. in DC	124
		Ft. in DP	41		
Rec.	165	Feet of	Gsy M		
Rec.		Feet of			
Rec.		Feet of			
Rec.		Feet of			
Rec.		Feet of			
BHT	102	F Gravity		API D @	
		F Corrected Gravity		API	
RW		@		F Chlorides	ppm Recovery
				Chlorides	6,000
				ppm System	

	AK-1	Alpine			
(A) Initial Hydrostatic Mud	1558	PSI	Recorder No.	2357	Test
(B) First Initial Flow Pressure	33	PSI	(depth)	3171	Elec. Rec. x 150
(C) First Final Flow Pressure	49	PSI	Recorder No.	13254	Jars
(D) Initial Shut-In Pressure	1027	PSI	(depth)	3202	Safety Jt.
(E) Second Initial Flow Pressure	31	PSI	Recorder No.		Circ Sub
(F) Second Final Flow Pressure	59	PSI	(depth)		Sampler
(G) Final Shut-In Pressure	1031	PSI	Initial Opening	30	Straddle
(Q) Final Hydrostatic Mud	1520	PSI	Initial Shut-In	60	Ext. Packer
			Final Flow	60	Shale Packer
			Final Shut-In	90	Mileage 22

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Approved By Tim Lauer
Our Representative Dan Bangle

T-On Location

T-Started	00:15
T-Open	00:39
T-Pulled	02:06
T-Out	06:06

Sub Total:	872
Std. By	
Other	
Total:	872



GAS VOLUME REPORT

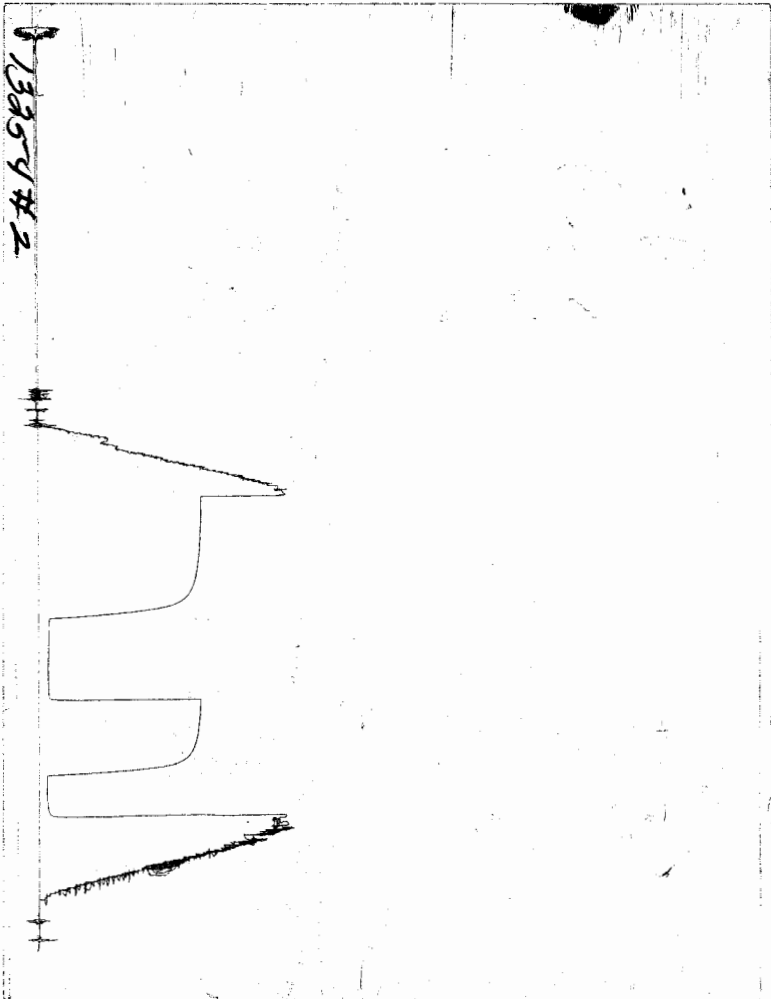
2
DST NO.

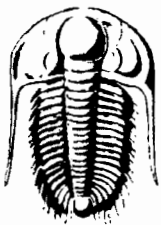
Remarks: *GTS in 18 min.*

101 NCR

CHART PAGE

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





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 17414

12/02

Test Ticket

Well Name & No. <u>Errol Engel #1-32</u>	Test No. <u>3</u>	Date <u>1-30-03</u>
Company <u>Harjo Oil & Gas Co.</u>	Zone Tested <u>C</u>	<u>LKC</u>
Address _____	Elevation <u>1887</u>	KB <u>1882</u> GL
Co. Rep / Geo. <u>Tim Lauer</u>	Cont. <u>Murfin #8</u>	Est. Ft. of Pay _____ Por. _____ %
Location: Sec. <u>32</u> Twp. <u>15</u> Rge. <u>17</u> Co. <u>Ellis</u>	State <u>KS</u>	
No. of Copies _____	Disbtribution Sheet (Y, N) _____	Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested <u>3205 - 3225</u>	Initial Str Wt./Lbs. <u>42,000</u>	Unseated Str Wt./Lbs. <u>42,000</u>
Anchor Length <u>20</u>	Wt. Set Lbs. <u>25,000</u>	Wt. Pulled Loose/Lbs. <u>69,000</u>
Top Packer Depth <u>3200</u>	Tool Weight <u>2200</u>	
Bottom Packer Depth <u>3205</u>	Hole Size <u>7 7/8"</u>	Rubber Size <u>6 3/4"</u>
Total Depth <u>3225</u>	Wt. Pipe Run _____	Drill Collar Run _____
Mud Wt. <u>9</u> LCM _____ Vis. <u>47</u> WL <u>8.8</u>	Drill Pipe Size <u>4.5x14</u>	Ft. Run <u>3086</u>
Blow Description <u>I.F. Strong Bob in 1min - Gas to Surface in 25 min.</u>		
<u>TSTM</u>		
<u>F.F. Strong - B.O.B as soon as tool opened - Gauged - took gas sample</u>		
Recovery - Total Feet <u>65</u>	GIP <u>GTS</u>	Ft. in DC <u>65</u> Ft. in DP _____
Rec. <u>65</u>	Feet of <u>Gsy M</u>	
Rec. _____	Feet of _____	
Rec. _____	Feet of _____	
Rec. _____	Feet of _____	
Rec. _____	Feet of _____	
BHT <u>97</u> °F Gravity _____	*API D @ _____	*F Corrected Gravity _____ *API
RW _____ @ _____ °F	Chlorides _____ ppm Recovery _____	Chlorides <u>7000</u> ppm System

AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud <u>1575</u> PSI	<u>2357</u>	<u>700</u>	
(B) First Initial Flow Pressure <u>22</u> PSI	(depth) <u>3206</u>	Elec. Rec. <u>X</u> <u>150</u>	
(C) First Final Flow Pressure <u>27</u> PSI	Recorder No. <u>13254</u>	Jars _____	
(D) Initial Shut-In Pressure <u>1173</u> PSI	(depth) <u>3222</u>	Safety Jt. _____	
(E) Second Initial Flow Pressure <u>15</u> PSI	Recorder No. _____	Circ Sub _____	
(F) Second Final Flow Pressure <u>32</u> PSI	(depth) _____	Sampler _____	
(G) Final Shut-In Pressure <u>1170</u> PSI	Initial Opening <u>30</u>	Straddle _____	
(Q) Final Hydrostatic Mud <u>1537</u> PSI	Initial Shut-In <u>60</u>	Ext. Packer _____	
	Final Flow <u>60</u>	Shale Packer _____	
	Final Shut-In <u>90</u>	Mileage <u>22</u>	
	T-On Location <u>13:40</u>	Sub Total: <u>872</u>	
	T-Started <u>13:58</u> ^{5:42}	Std. By <u>S</u>	
	T-Open <u>15:22</u>	Other _____	
	T-Pulled <u>19:22</u>	Total: <u>872</u>	
	T-Out <u>20:49</u>		

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Approved By Tim Lauer

Our Representative Dan Rangle



GAS VOLUME REPORT

Lario Oil & Gas Co
OPERATOR

OPERATOR

Froel Engel # 1-32
WELL NAME AND NO.

WELL NAME AND NO.

3

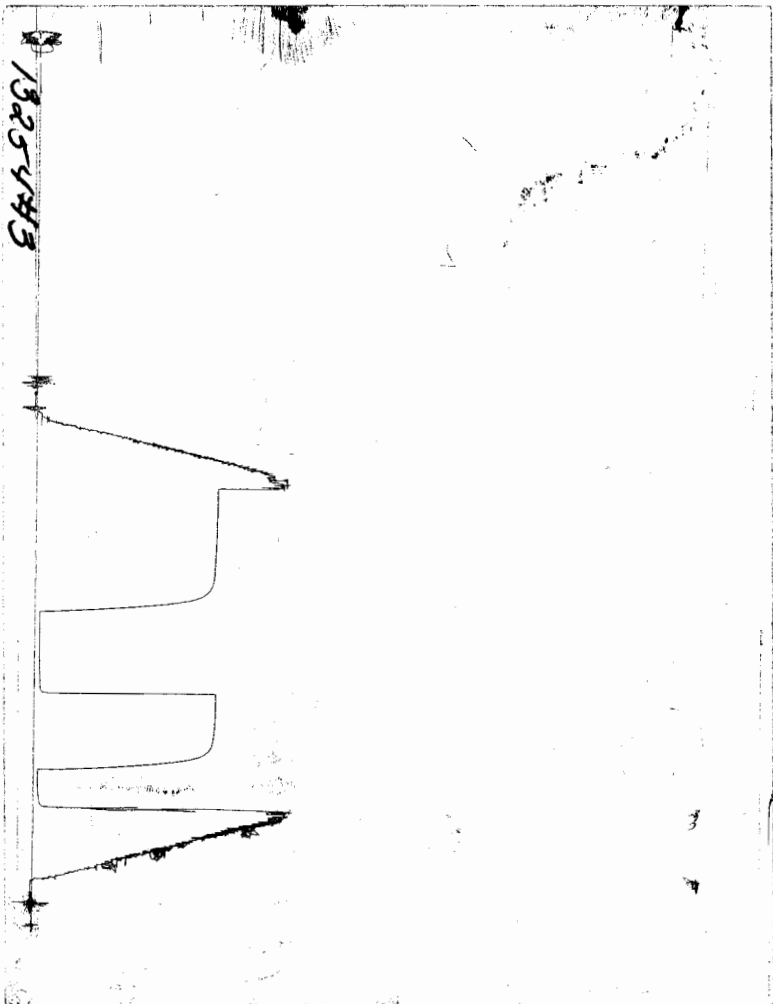
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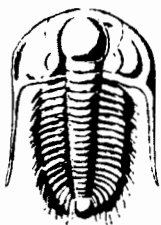
Remarks: GTS in 25 min IF-JSTM

Gauged gas FF - gas sample Taken

CHART PAGE

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TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 17415

12/02

Test Ticket

Well Name & No.	Enrol Engel #1-32	Test No.	4	Date	1-21-03
Company	hario Oil & Gas Co.	Zone Tested	F	LKC	
Address		Elevation	1887	KB	1882
Co. Rep / Geo.	Tim Haver	Cont.	Murfin #8	Est. Ft. of Pay	
Location: Sec.	32	Twp.	15	Rge.	17
No. of Copies		Distribution Sheet (Y, N)		Turnkey (Y, N)	
		Evaluation (Y, N)			

Interval Tested	3225 - 3250	Initial Str Wt./Lbs.	42,000	Unseated Str Wt./Lbs.	42,000
Anchor Length	25	Wt. Set Lbs.	25,000	Wt. Pulled Loose/Lbs.	15,000
Top Packer Depth	3220	Tool Weight	2300		
Bottom Packer Depth	3225	Hole Size 7 7/8"		Rubber Size 6 3/4"	
Total Depth	3250	Wt. Pipe Run		Drill Collar Run	124
Mud Wt.	9	LCM		Vis.	47
Blow Description	I.F. Strong - B.O.B as soon as tool opened - GTS in 2 min. Gauged				
	F.F. Strong - B.O.B as soon as tool opened - Gas sample Taken				

Recovery - Total Feet	70	GIP	GTS	Ft. in DC	70	Ft. in DP	
Rec.	70	Feet of	Gsy Mud				
Rec.		Feet of					
Rec.		Feet of					
Rec.		Feet of					
Rec.		Feet of					
BHT	101	°F Gravity		°API D @		°F Corrected Gravity	
RW		@		°F Chlorides		ppm Recovery	
				Chlorides	7,000	ppm System	

(A) Initial Hydrostatic Mud	AK-1	Alpine	1585	PSI	Recorder No.	2357	Test	700
(B) First Initial Flow Pressure			385	PSI	(depth)	3226	Elec. Rec.	X 150
(C) First Final Flow Pressure			297	PSI	Recorder No.	13254	Jars	
(D) Initial Shut-In Pressure			981	PSI	(depth)	3247	Safety Jt.	
(E) Second Initial Flow Pressure			296	PSI	Recorder No.		Circ Sub	
(F) Second Final Flow Pressure			177	PSI	(depth)		Sampler	
(G) Final Shut-In Pressure			744	PSI	Initial Opening	30	Straddle	
(Q) Final Hydrostatic Mud			1586	PSI	Initial Shut-In	60	Ext. Packer	

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Approved By

Our Representative

Dan Rangle

Final Flow	90	Shale Packer	
Final Shut-In	90	Mileage	22
T-On Location	02:45	Sub Total:	872
T-Started	03:21	Std. By	S
T-Open	04:55	Other	
T-Pulled	09:25	Total:	872
T-Out	10:50		

**TRILOBITE
TESTING L.L.C.**

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

Lario Oil & Gas Co.
OPERATOR

Errol Engel #1-32

4
DST NO

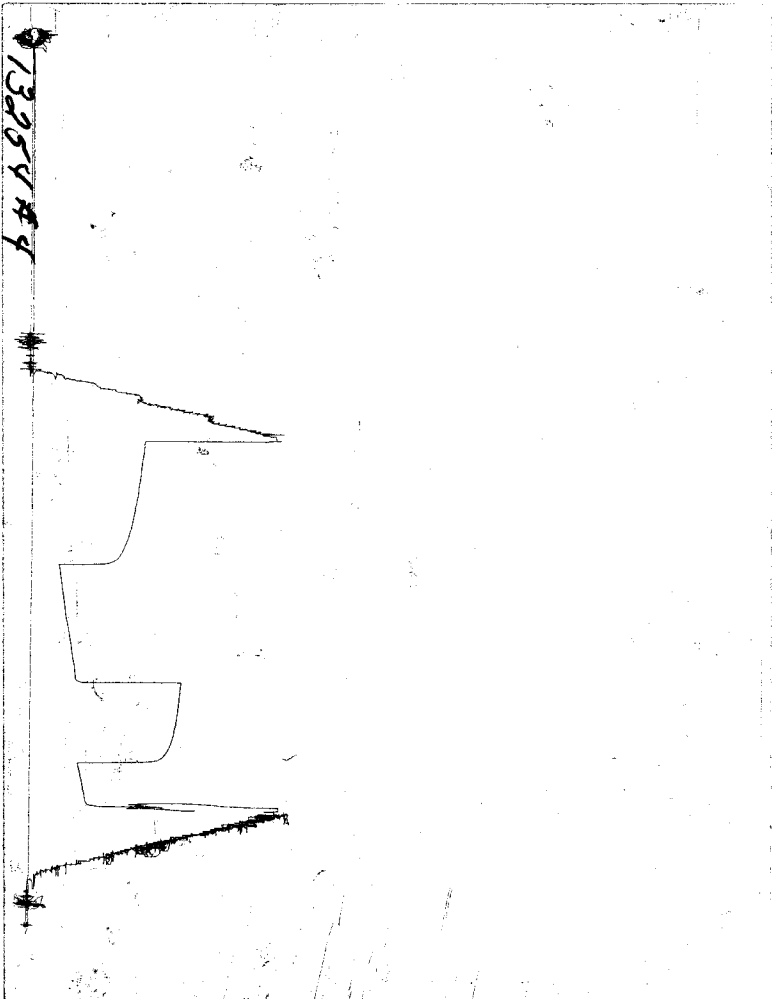
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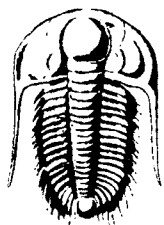
Remarks: GTS in 2 min.

Sample Taken on FF

CHART PAGE

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TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 17416

12/02

Test Ticket

Well Name & No.	Errol Engel #1-32	Test No.	5	Date	1-31-03
Company	hario Oil & Gas Co.	Zone Tested	G	LKC	
Address		Elevation	1887	KB	1882 GL
Co. Rep / Geo.	Tim Lauer	Cont.	Martin #8	Est. Ft. of Pay	Por. %
Location: Sec.	32	Twp.	15	Rge.	17 Co. Ellis State KS
No. of Copies		Disbtribution Sheet (Y, N)		Turnkey (Y, N)	Evaluation (Y, N)

Interval Tested 3250 — 3270 Initial Str Wt./Lbs. 12,000 Unseated Str Wt./Lbs. 12,000
Anchor Length 20 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 48,000
Top Packer Depth 3245 Tool Weight 2200
Bottom Packer Depth 3250 Hole Size 7 7/8" Rubber Size 6 3/4"
Total Depth 3270 Wt. Pipe Run Drill Collar Run 124
Mud Wt. 9.1 LCM Vis. 49 WL 8.8 Drill Pipe Size 4.5x14 Ft. Run 3119
Blow Description Weak steady 1/4" blow

F.F. Weak steady 1/4" blow

Recovery - Total Feet 15 GIP Ft. in DC 15 Ft. in DP
Rec. 15 Feet of D.M.
Rec. Feet of
Rec. Feet of
Rec. Feet of
Rec. Feet of
BHT 96 °F Gravity °API D @ °F Corrected Gravity °API
RW @ °F Chlorides ppm Recovery Chlorides 8500 ppm System

	AK-1	Alpine			
(A) Initial Hydrostatic Mud	1580	PSI	Recorder No.	2357	Test 700
(B) First Initial Flow Pressure	13	PSI	(depth)	3251	Elec. Rec. X 150
(C) First Final Flow Pressure	25	PSI	Recorder No.	13254	Jars
(D) Initial Shut-In Pressure	919	PSI	(depth)	3267	Safety Jt.
(E) Second Initial Flow Pressure	26	PSI	Recorder No.		Circ Sub
(F) Second Final Flow Pressure	30	PSI	(depth)		Sampler
(G) Final Shut-In Pressure	826	PSI	Initial Opening	30	Straddle
(Q) Final Hydrostatic Mud	1543	PSI	Initial Shut-In	60	Ext. Packer

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Approved By Tim Lauer
Our Representative Dan Rangle

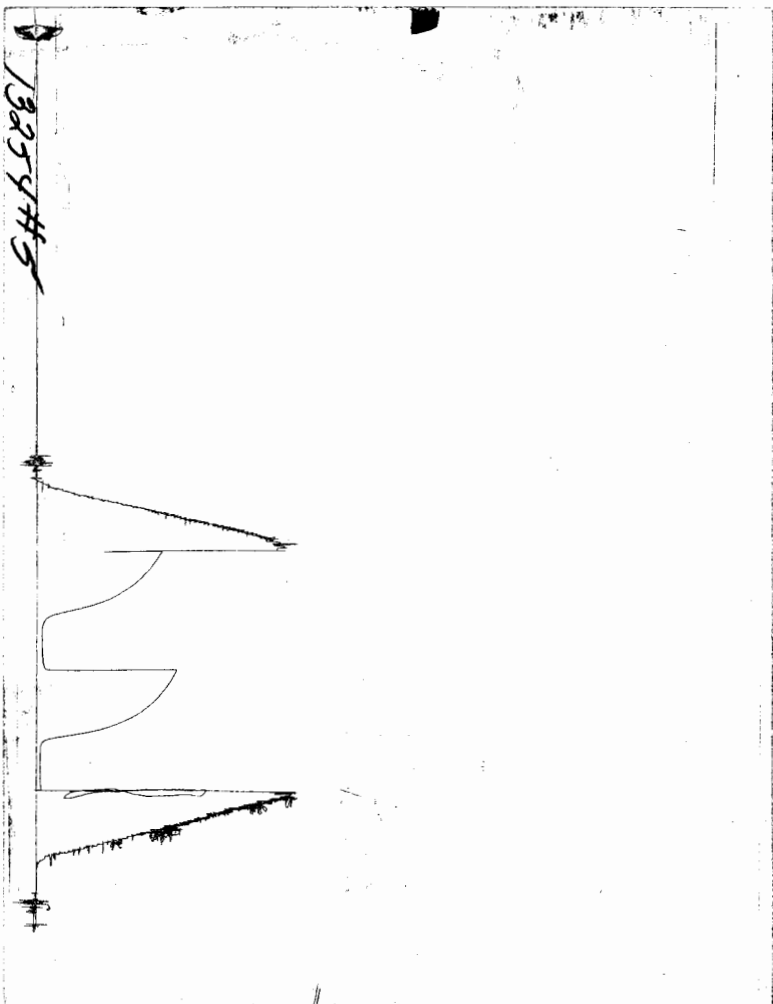
T-On Location

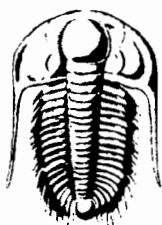
T-Started 16:15
T-Open 18:14
T-Pulled 21:14
T-Out 22:25

Mileage 22
Sub Total: 872
Std. By S
Other
Total: 872

CHART PAGE

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





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 17417

12/02

Test Ticket

Well Name & No.	Errol Engel #1-32	Test No.	6	Date	2-1-03
Company	Lario Oil & Gas Co	Zone Tested	Arbuckle		
Address		Elevation	1887	KB	1882
Co. Rep / Geo.	Tim Lauer	Cont.	Murfin #8	Est. Ft. of Pay	Por. %
Location: Sec.	32	Twp.	15	Rge.	17
		Co.	Ellis	State	KS
No. of Copies		Distribution Sheet (Y, N)		Turnkey (Y, N)	
		Evaluation (Y, N)			

Interval Tested 3396 — 3440 Initial Str Wt./Lbs. 43,000 Unseated Str Wt./Lbs. 47,000
Anchor Length 44 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 60,000
Top Packer Depth 3391 Tool Weight 3000
Bottom Packer Depth 3396 Hole Size 7 7/8" Rubber Size 6 3/4"
Total Depth 3440 Wt. Pipe Run 124 Drill Collar Run 124
Mud Wt. 9.1 LCM 48 Vis. 9.6 WL 4.5X4 Ft. Run 3274
Blow Description I.F. Strong B.O.B. as soon as Tool opened - GTS in 2 min
Gauged - IST - Bled off blow - B.O.B. in 10 min.
E.F. Strong B.O.B. as soon as Tool opened - Gas sample Taken

Recovery - Total Feet 1550 GIP GTS Ft. in DC 124 Ft. in DP 1426
Rec. 1364 Feet of CG 540 4070G 60700
Rec. 186 Feet of MC 6540 1070M 3070G 60700
Rec. Feet of
Rec. Feet of
Rec. Feet of
BHT 110 °F Gravity °API D @ °F Corrected Gravity 36 °API
RW @ °F Chlorides ppm Recovery Chlorides 2500 ppm System

	AK-1	Alpine			
(A) Initial Hydrostatic Mud	<u>1739</u>	PSI	Recorder No.	<u>2357</u>	Test <u>100</u>
(B) First Initial Flow Pressure	<u>535</u>	PSI	(depth)	<u>3397</u>	Elec. Rec. <u>X 150</u>
(C) First Final Flow Pressure	<u>317</u>	PSI	Recorder No.	<u>13254</u>	Jars <u> </u>
(D) Initial Shut-In Pressure	<u>820</u>	PSI	(depth)	<u>3437</u>	Safety Jt. <u> </u>
(E) Second Initial Flow Pressure	<u>422</u>	PSI	Recorder No.	<u> </u>	Circ Sub <u> </u>
(F) Second Final Flow Pressure	<u>343</u>	PSI	(depth)	<u> </u>	Sampler <u> </u>
(G) Final Shut-In Pressure	<u>704</u>	PSI	Initial Opening	<u>30</u>	Straddle <u> </u>
(Q) Final Hydrostatic Mud	<u>1627</u>	PSI	Initial Shut-In	<u>60</u>	Ext. Packer <u> </u>
			Final Flow	<u>60</u>	Shale Packer <u> </u>
			Final Shut-In	<u>90</u>	Mileage <u>22</u>
			T-On Location	<u>16:30</u>	Sub Total: <u>872</u>
			T-Started	<u>16:38 8:24</u>	Std. By <u> </u>
			T-Open	<u>18:10</u>	Other <u> </u>
			T-Pulled	<u>22:10</u>	Total: <u>872</u>
			T-Out	<u>06:54</u>	

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Approved By Tim Lauer
Our Representative Dan Rangle



GAS VOLUME REPORT

hario Oil & Gas Co

OPERATOR

Encl/Encl #1-32

WELL NAME AND NO.

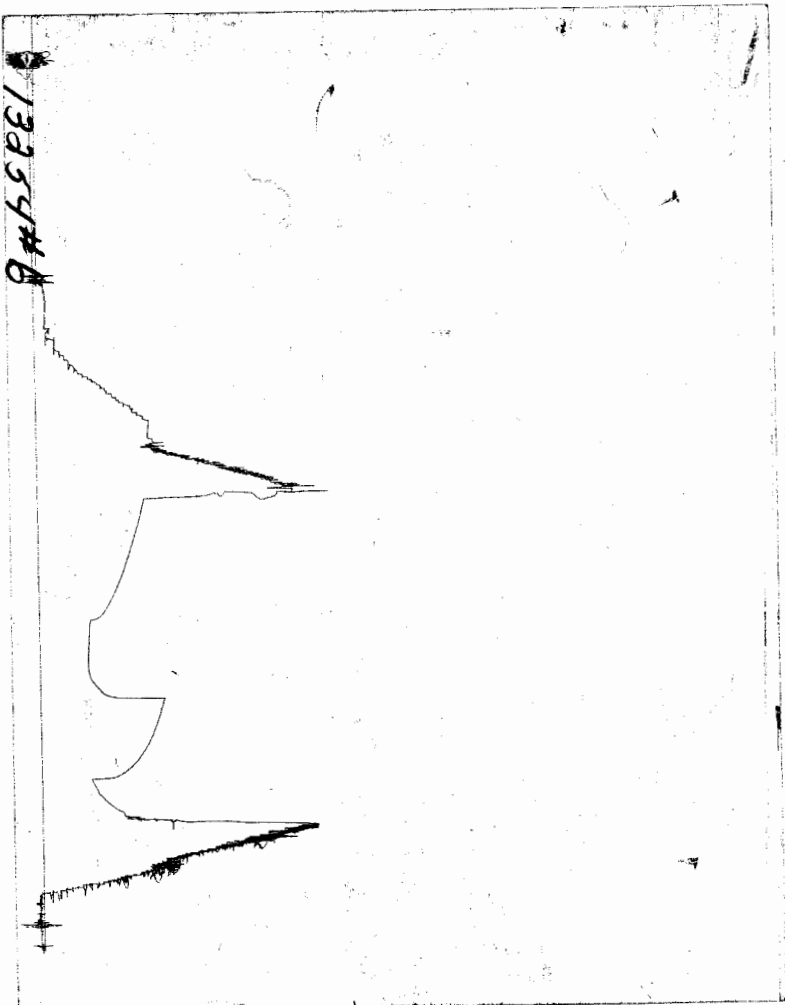
3

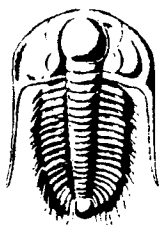
DST NO

Remarks: Gas to Surface in 2 min.
Gas sample Taken on FF

CHART PAGE

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





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 17418

12/02

Test Ticket

Well Name & No.	Errol Engel #1-32	Test No.	7	Date	3-2-03
Company	Harjo Oil & Gas Co.	Zone Tested	Arbuckle		
Address		Elevation	1887	KB	1882
Co. Rep / Geo.	Tim Haver	Cont.	Murfin #8	Est. Ft. of Pay	
Location: Sec.	32	Twp.	15	Rge.	17
		Co.	Ellis	State	KS
No. of Copies		Disbtribution Sheet (Y, N)		Turnkey (Y, N)	
		Evaluation (Y, N)			

Interval Tested	3440 — 3455	Initial Str Wt./Lbs.	43,000	Unseated Str Wt./Lbs.	48,000
Anchor Length	15	Wt. Set Lbs.	25,000	Wt. Pulled Loose/Lbs.	50,000
Top Packer Depth	3435	Tool Weight	1500		
Bottom Packer Depth	3440	Hole Size	7 7/8"	Rubber Size	6 3/4"
Total Depth	3455	Wt. Pipe Run		Drill Collar Run	124
Mud Wt.	9	LCM		Vis.	50
		WL	9.6	Drill Pipe Size	4.5XH
Blow Description	I.F. Strong - B.O.B. as soon as tool opened -				
	ISI - Gas to surface in 2 min.				
	F.F. Strong - B.O.B. as soon as tool opened - Gauged gas sample taken				

Recovery - Total Feet	1483	GIP	GTS	Ft. in DC	124	Ft. in DP	1356
Rec.	1302	Feet of	CG 5x0	40%G	60%G		
Rec.	178	Feet of	McFrothy 0	10%G	20%G	70%G	
Rec.	3	Feet of	WTR				
Rec.		Feet of					
Rec.		Feet of					
BHT	110	°F Gravity		°API D @		°F Corrected Gravity	36
RW		@		°F	Chlorides	ppm Recovery	ppm System

	AK-1	Alpine			
(A) Initial Hydrostatic Mud	1739	PSI	Recorder No.	2357	Test
(B) First Initial Flow Pressure	203	PSI	(depth)	3441	Elec. Rec. X 150
(C) First Final Flow Pressure	212	PSI	Recorder No.	13254	Jars
(D) Initial Shut-In Pressure	987	PSI	(depth)	3452	Safety Jt.
(E) Second Initial Flow Pressure	255	PSI	Recorder No.		Circ Sub
(F) Second Final Flow Pressure	325	PSI	(depth)		Sampler
(G) Final Shut-In Pressure	811	PSI	Initial Opening	34	Straddle
(Q) Final Hydrostatic Mud	1649	PSI	Initial Shut-In	60	Ext. Packer
			Final Flow	60	Shale Packer
			Final Shut-In	120	Mileage
			T-On Location	08:00	Sub Total:
			T-Started	08:47 9:18	Std. By
			T-Open	10:21	Other
			T-Pulled	14:26	Total:
			T-Out	17:18	

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Approved By: *Tim Haver*
Our Representative: *Dan Bangle*



GAS VOLUME REPORT

Lario Oil & Gas Co.

OPERATOR

Fred Engel #1-32

WELL NAME AND NO.

7

DST NO.

[illegible]

Remarks: GTS in 2 min on ISI
Gas sample taken

CHART PAGE

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

