

TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Pioneer Oil Co. Inc.**

400 Main St. PO Box 237
Vincennes, IN 47501

ATTN: Jim Musgrove

Clark Unit #1-5

5-9s-28w Sheridan,KS

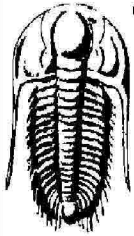
Start Date: 2018.03.04 @ 14:04:00

End Date: 2018.03.04 @ 21:30:45

Job Ticket #: 63364 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.03.14 @ 10:18:55



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Pioneer Oil Co. Inc.
 400 Main St. PO Box 237
 Vincennes, IN 47501
 ATTN: Jim Musgrove

5-9s-28w Sheridan, KS
Clark Unit #1-5
 Job Ticket: 63364 **DST#: 1**
 Test Start: 2018.03.04 @ 14:04:00

GENERAL INFORMATION:

Formation: **Elmont**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:51:30
 Time Test Ended: 21:30:45
 Interval: **3464.00 ft (KB) To 3512.00 ft (KB) (TVD)**
 Total Depth: 3512.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 2738.00 ft (KB)
 2730.00 ft (CF)
 KB to GR/CF: 8.00 ft

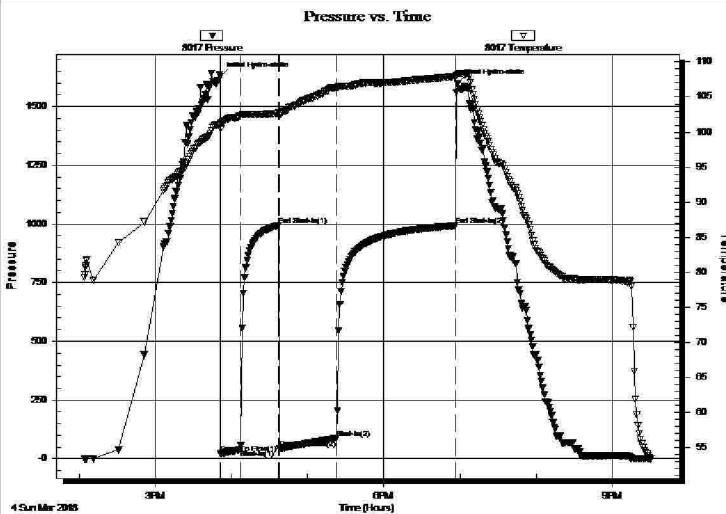
Serial #: 8017

Outside

Press@RunDepth: 87.21 psig @ 3465.00 ft (KB)
 Start Date: 2018.03.04 End Date: 2018.03.04
 Start Time: 14:04:05 End Time: 21:30:44
 Capacity: 8000.00 psig
 Last Calib.: 2018.03.04
 Time On Btm: 2018.03.04 @ 15:51:15
 Time Off Btm: 2018.03.04 @ 18:58:15

TEST COMMENT: 15 - IF: 3/4" Blow at open, built to 4 1/4"
 30 - IS: No blow back (Blow stayed at 4 1/4")
 45 - FF: Blow built to 7"
 90 - FS: No blow back (Blow slowly decreased)

PRESSURE SUMMARY



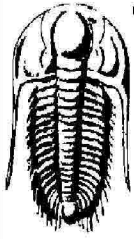
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1627.33	101.33	Initial Hydro-static
1	22.98	100.50	Open To Flow (1)
16	39.81	102.32	Shut-In(1)
46	994.24	102.71	End Shut-In(1)
47	42.86	102.38	Open To Flow (2)
92	87.21	106.26	Shut-In(2)
186	992.61	107.92	End Shut-In(2)
187	1597.86	108.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	SO/WCM 80% m, 18% w, 2% o	0.46
83.00	SOCM 95% m, 5% o	0.61
0.00	A few inches of Oil on top	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pioneer Oil Co. Inc.

5-9s-28w Sheridan,KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

Job Ticket: 63364

DST#: 1

ATTN: Jim Musgrove

Test Start: 2018.03.04 @ 14:04:00

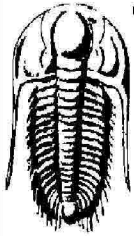
Tool Information

Drill Pipe:	Length: 3147.00 ft	Diameter: 3.80 inches	Volume: 44.14 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 2.75 inches	Volume: 2.28 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: 54000.00 lb
			<u>Total Volume: 46.42 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3464.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	79.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3434.00	
Shut In Tool	5.00			3439.00	
Sampler	2.00			3441.00	
Hydraulic tool	5.00			3446.00	
Jars	5.00			3451.00	
Safety Joint	3.00			3454.00	
Packer	5.00			3459.00	31.00 Bottom Of Top Packer
Packer	5.00			3464.00	
Stubb	1.00			3465.00	
Recorder	0.00	6625	Inside	3465.00	
Recorder	0.00	8017	Outside	3465.00	
Perforations	10.00			3475.00	
Blank Spacing	34.00			3509.00	
Bullnose	3.00			3512.00	48.00 Bottom Packers & Anchor
Total Tool Length:	79.00				



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Oil Co. Inc.

5-9s-28w Sheridan,KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

Job Ticket: 63364

DST#: 1

ATTN: Jim Musgrove

Test Start: 2018.03.04 @ 14:04:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 55.00 sec/qt
Water Loss: 7.53 in³
Resistivity: ohm.m
Salinity: 750.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 20.4 deg API
Water Salinity: 25000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	SO/WCM 80%m, 18%w , 2%o	0.455
83.00	SOCM 95%m, 5%o	0.610
0.00	A few inches of Oil on top	0.000

Total Length: 145.00 ft Total Volume: 1.065 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

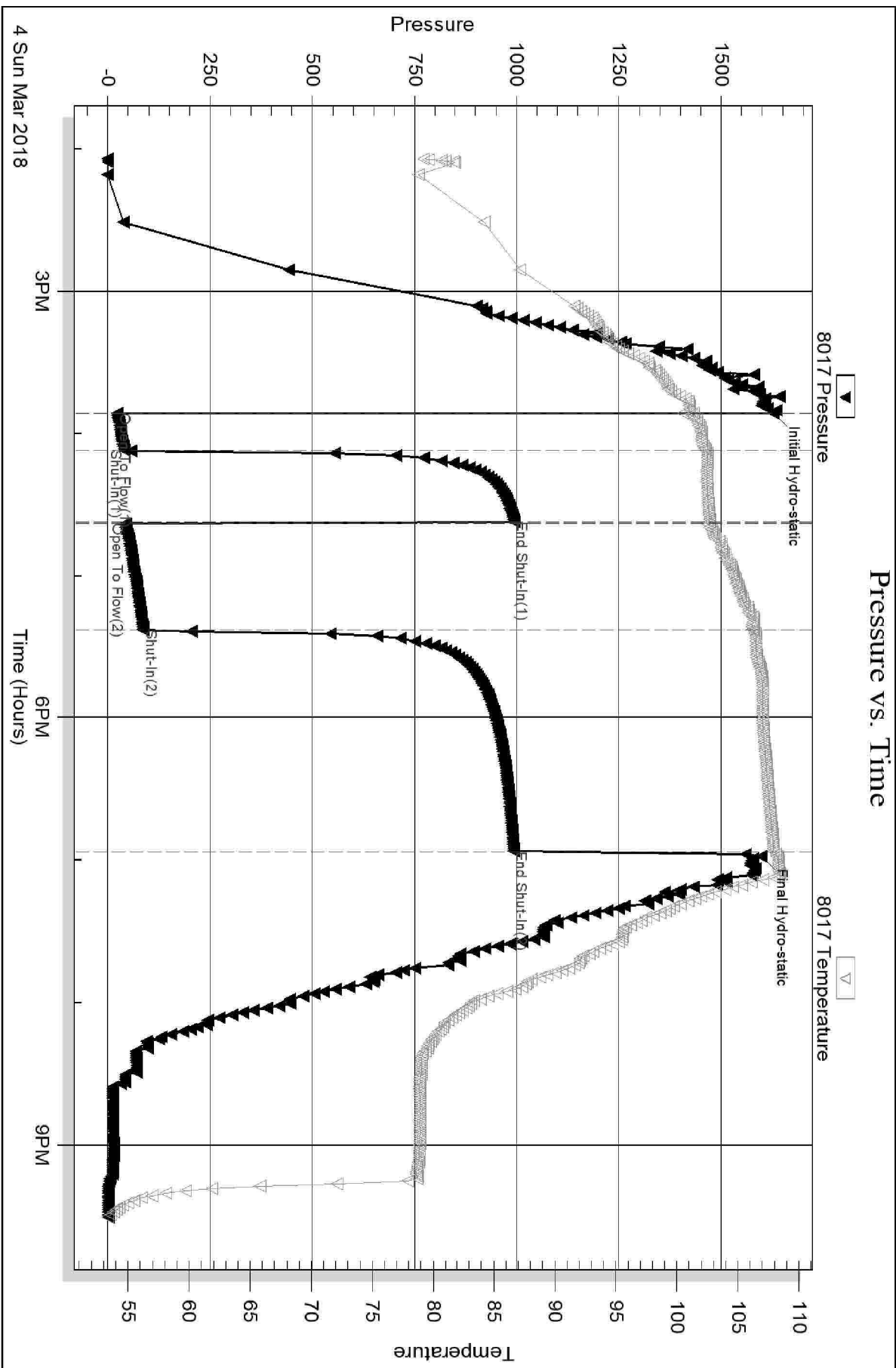
Laboratory Location:

Recovery Comments: Gravity = 20.4 api @ 60 deg F

RW = .345 ohms @ 55 deg F Chlorides = 25,000 ppm

Sampler = 170 PSI, 2200 mL SO/WCM 58%m, 38%w , 4%o RW = .330 ohms @ 53 deg F

Chlorides = 27,000 ppm



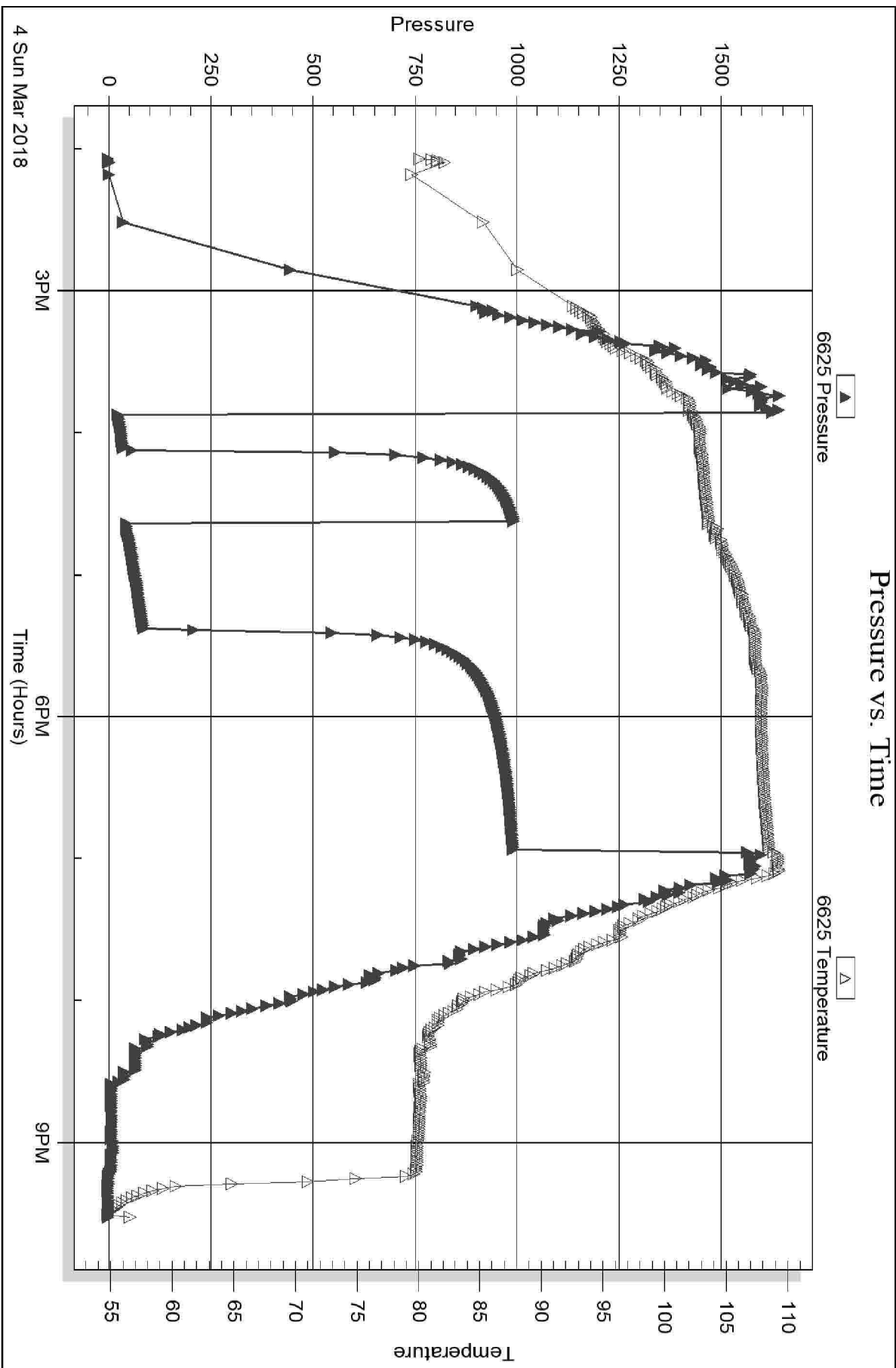
Serial #: 6625

Inside

Pioneer Oil Co. Inc.

Clark Unit #1-5

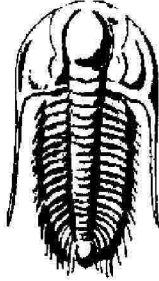
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 63364

Printed: 2018.03.14 @ 10:18:56



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Pioneer Oil Co. Inc.**

400 Main St. PO Box 237
Vincennes, IN 47501

ATTN: Jim Musgrove

Clark Unit #1-5

5-9s-28w Sheridan,KS

Start Date: 2018.03.05 @ 09:40:00

End Date: 2018.03.05 @ 18:14:15

Job Ticket #: 63365 DST #: 2

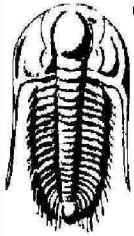
Trilobite Testing, Inc

1515 Commerce Parkway Hays, KS 67601

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

Printed: 2018.03.14 @ 10:18:30

Pioneer Oil Co. Inc. 5-9s-28w Sheridan,KS Clark Unit #1-5 DST # 2 Howard "C" 2018.03.05



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Pioneer Oil Co. Inc.
400 Main St. PO Box 237
Vincennes, IN 47501
ATTN: Jim Musgrove

5-9s-28w Sheridan,KS
Clark Unit #1-5
Job Ticket: 63365 **DST#: 2**
Test Start: 2018.03.05 @ 09:40:00

GENERAL INFORMATION:

Formation: **Howard "C"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:41:00
Time Test Ended: 18:14:15
Interval: **3566.00 ft (KB) To 3584.00 ft (KB) (TVD)**
Total Depth: 3584.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 2738.00 ft (KB)
2730.00 ft (CF)
KB to GR/CF: 8.00 ft
Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 83

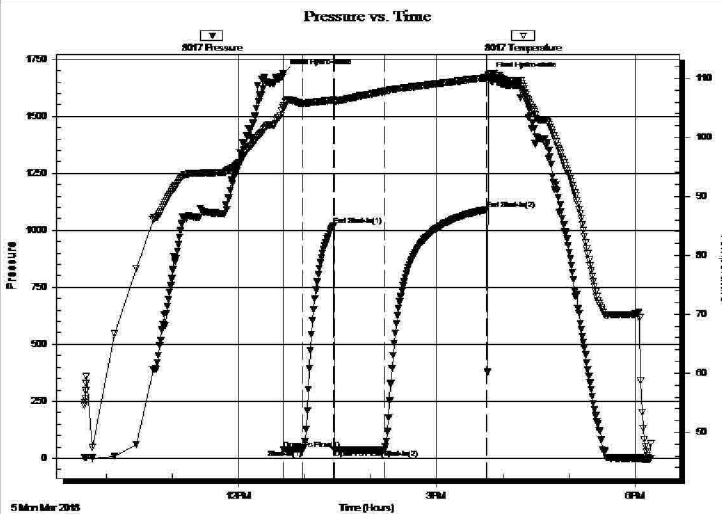
Serial #: 8017

Outside

Press@RunDepth: 37.87 psig @ 3567.00 ft (KB)
Start Date: 2018.03.05 End Date: 2018.03.05
Start Time: 09:40:05 End Time: 18:14:15
Capacity: 8000.00 psig
Last Calib.: 2018.03.05
Time On Btm: 2018.03.05 @ 12:40:30
Time Off Btm: 2018.03.05 @ 15:47:30

TEST COMMENT: 15 - IF: 2 3/4" Blow at open, built to 3 1/2"
30 - ISI: No blow back
45 - FF: Weak surface blow, built to 1/8"
90 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1687.81	105.10	Initial Hydro-static
1	40.75	105.01	Open To Flow (1)
18	38.65	105.76	Shut-In(1)
46	1022.77	106.34	End Shut-In(1)
47	39.97	105.98	Open To Flow (2)
92	37.87	107.78	Shut-In(2)
185	1091.23	110.13	End Shut-In(2)
187	1672.16	110.68	Final Hydro-static

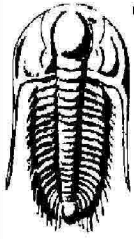
Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%	0.22

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pioneer Oil Co. Inc.

5-9s-28w Sheridan,KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

Job Ticket: 63365

DST#: 2

ATTN: Jim Musgrove

Test Start: 2018.03.05 @ 09:40:00

Tool Information

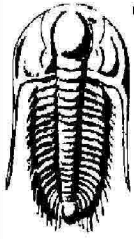
Drill Pipe:	Length: 3243.00 ft	Diameter: 3.80 inches	Volume: 45.49 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 2.75 inches	Volume: 2.28 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 47.77 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3566.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	49.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Tool chased 2' - 3' to bottom at open, lost 5' of mud - 2 3/4" surge blow at open

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3536.00	
Shut In Tool	5.00			3541.00	
Sampler	2.00			3543.00	
Hydraulic tool	5.00			3548.00	
Jars	5.00			3553.00	
Safety Joint	3.00			3556.00	
Packer	5.00			3561.00	31.00 Bottom Of Top Packer
Packer	5.00			3566.00	
Stubb	1.00			3567.00	
Recorder	0.00	6625	Inside	3567.00	
Recorder	0.00	8017	Outside	3567.00	
Perforations	14.00			3581.00	
Bullnose	3.00			3584.00	18.00 Bottom Packers & Anchor

Total Tool Length: 49.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Oil Co. Inc.

5-9s-28w Sheridan,KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

Job Ticket: 63365

DST#: 2

ATTN: Jim Musgrove

Test Start: 2018.03.05 @ 09:40:00

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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.53 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 750.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
30.00	Mud 100%	0.220

Total Length: 30.00 ft Total Volume: 0.220 bbl

Num Fluid Samples: 0

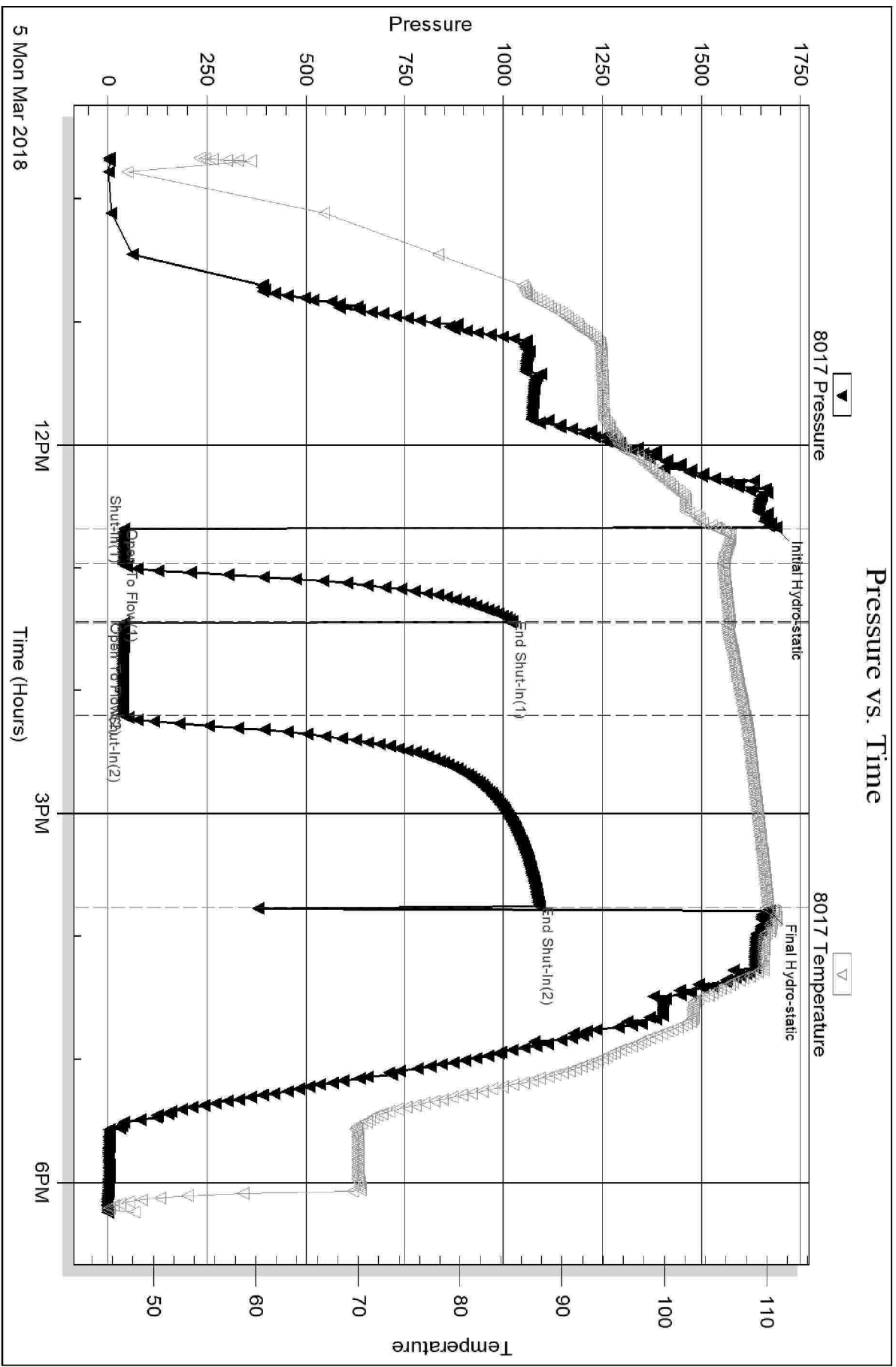
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler = 130 PSI 2000 mL Mud w /trace oil



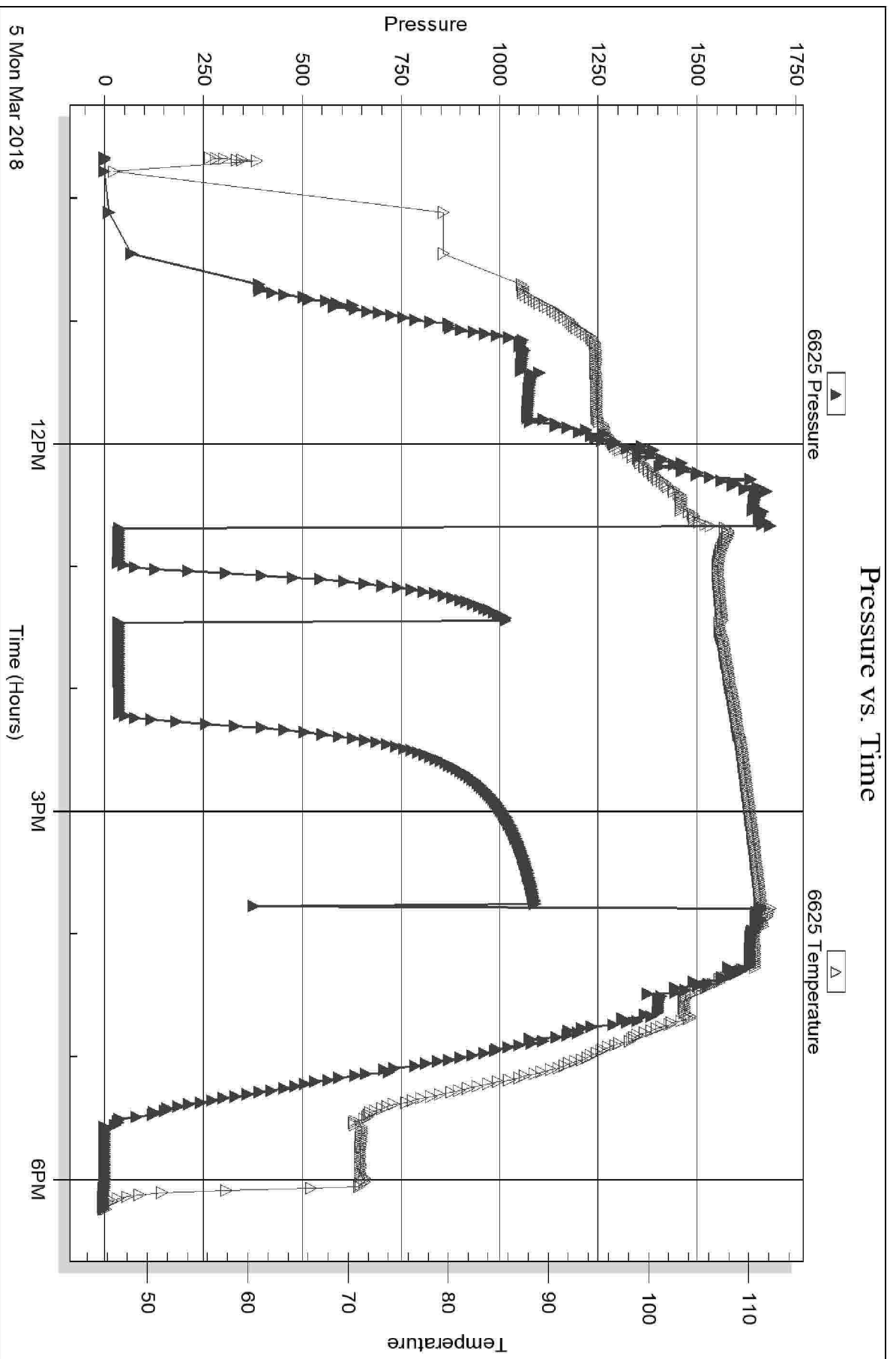
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Inside

Pioneer Oil Co. Inc.

Clark Unit #1-5

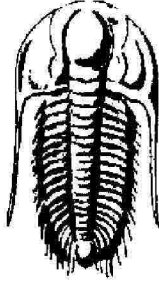
DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 63365

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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Pioneer Oil Co. Inc.**

400 Main St. PO Box 237
Vincennes, IN 47501

ATTN: Jim Musgrove

Clark Unit #1-5

5-9s-28w Sheridan,KS

Start Date: 2018.03.06 @ 08:44:00

End Date: 2018.03.06 @ 21:04:45

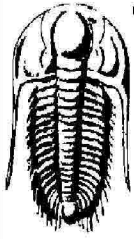
Job Ticket #: 63366 DST #: 3

Trilobite Testing, Inc

1515 Commerce Parkway Hays, KS 67601

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

Printed: 2018.03.14 @ 10:18:07



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Pioneer Oil Co. Inc.
 400 Main St. PO Box 237
 Vincennes, IN 47501
 ATTN: Jim Musgrove

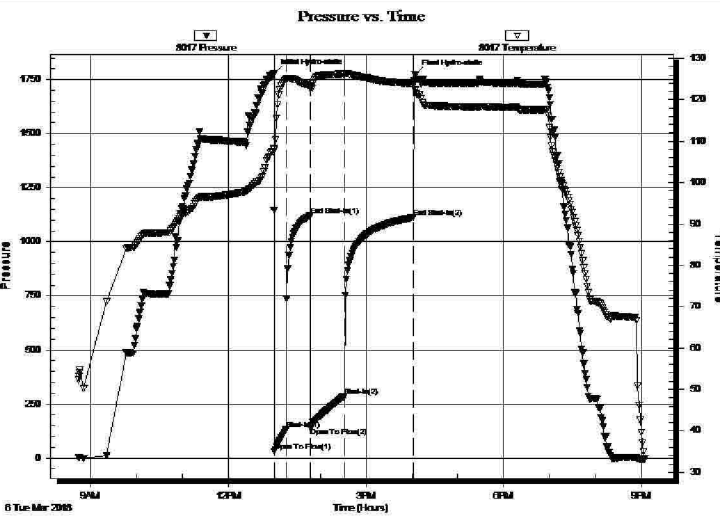
5-9s-28w Sheridan,KS
Clark Unit #1-5
 Job Ticket: 63366 **DST#: 3**
 Test Start: 2018.03.06 @ 08:44:00

GENERAL INFORMATION:

Formation: **Plattsmouth**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:00:00
 Time Test Ended: 21:04:45
 Interval: **3754.00 ft (KB) To 3772.00 ft (KB) (TVD)**
 Total Depth: 3772.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 2738.00 ft (KB)
 2730.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8017 Outside
 Press@RunDepth: 285.42 psig @ 3755.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.03.06 End Date: 2018.03.06 Last Calib.: 2018.03.06
 Start Time: 08:44:05 End Time: 21:04:45 Time On Btm: 2018.03.06 @ 12:59:30
 Time Off Btm: 2018.03.06 @ 16:04:00

TEST COMMENT: 15 - IF: Blow built to BOB (11") at 9 1/4 min. - Built to 17"
 30 - IS: Pressure held steady to slight increase
 45 - FF: Blow built to BOB at 11 min., Built to 36"
 90 - FS: Pressure held steady



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1779.47	107.90	Initial Hydro-static
1	29.20	107.90	Open To Flow (1)
16	131.21	124.91	Shut-In(1)
48	1121.39	123.27	End Shut-In(1)
48	141.41	122.75	Open To Flow (2)
92	285.42	126.26	Shut-In(2)
183	1112.70	123.85	End Shut-In(2)
185	1775.55	122.53	Final Hydro-static

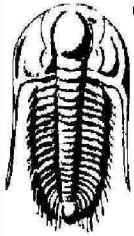
Recovery

Length (ft)	Description	Volume (bbl)
500.00	SMCW w /trace oil 96%w , 4%m	4.94
90.00	MCW w /trace oil 84%w , 16%m	1.26

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Pioneer Oil Co. Inc.
400 Main St. PO Box 237
Vincennes, IN 47501
ATTN: Jim Musgrove

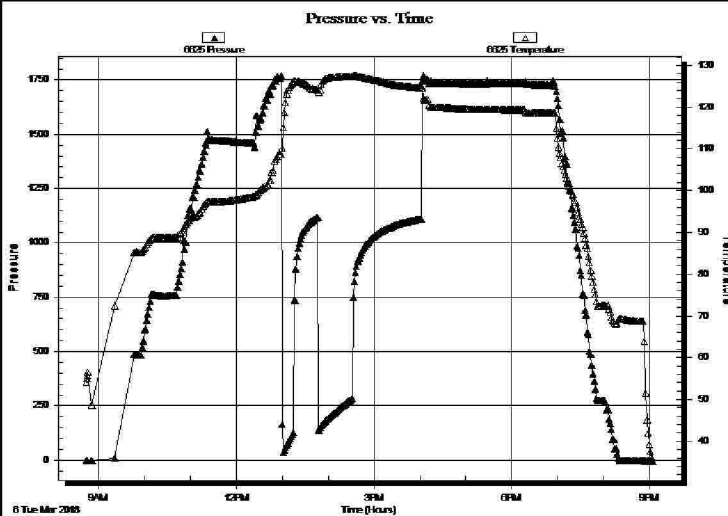
5-9s-28w Sheridan, KS
Clark Unit #1-5
Job Ticket: 63366 **DST#: 3**
Test Start: 2018.03.06 @ 08:44:00

GENERAL INFORMATION:

Formation: **Plattsmouth**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:00:00
Time Test Ended: 21:04:45
Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 83
Interval: **3754.00 ft (KB) To 3772.00 ft (KB) (TVD)**
Reference Elevations: 2738.00 ft (KB)
Total Depth: 3772.00 ft (KB) (TVD)
2730.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair
KB to GR/CF: 8.00 ft

Serial #: 6625 Inside
Press@RunDepth: psig @ 3755.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.03.06 End Date: 2018.03.06 Last Calib.: 2018.03.06
Start Time: 08:44:05 End Time: 21:05:00 Time On Btm:
Time Off Btm:

TEST COMMENT: 15 - IF: Blow built to BOB (11") at 9 1/4 min. - Built to 17"
30 - IS: Pressure held steady to slight increase
45 - FF: Blow built to BOB at 11 min., Built to 36"
90 - FS: Pressure held steady



PRESSURE SUMMARY

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

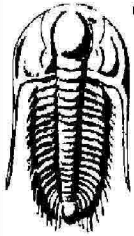
Recovery

Length (ft)	Description	Volume (bbl)
500.00	SMCW w /trace oil 96%w , 4%m	4.94
90.00	MCW w /trace oil 84%w , 16%m	1.26

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pioneer Oil Co. Inc.

5-9s-28w Sheridan,KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

Job Ticket: 63366

DST#: 3

ATTN: Jim Musgrove

Test Start: 2018.03.06 @ 08:44:00

Tool Information

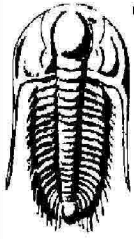
Drill Pipe:	Length: 3432.00 ft	Diameter: 3.80 inches	Volume: 48.14 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 2.75 inches	Volume: 2.28 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 50.42 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3754.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	49.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3724.00	
Shut In Tool	5.00			3729.00	
Sampler	2.00			3731.00	
Hydraulic tool	5.00			3736.00	
Jars	5.00			3741.00	
Safety Joint	3.00			3744.00	
Packer	5.00			3749.00	31.00 Bottom Of Top Packer
Packer	5.00			3754.00	
Stubb	1.00			3755.00	
Recorder	0.00	6625	Inside	3755.00	
Recorder	0.00	8017	Outside	3755.00	
Perforations	14.00			3769.00	
Bullnose	3.00			3772.00	18.00 Bottom Packers & Anchor

Total Tool Length: 49.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Oil Co. Inc.

5-9s-28w Sheridan,KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

Job Ticket: 63366

DST#: 3

ATTN: Jim Musgrove

Test Start: 2018.03.06 @ 08:44:00

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:

71000 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.17 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
500.00	SMCW w /trace oil 96%w , 4%m	4.936
90.00	MCW w /trace oil 84%w , 16%m	1.262

Total Length: 590.00 ft Total Volume: 6.198 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

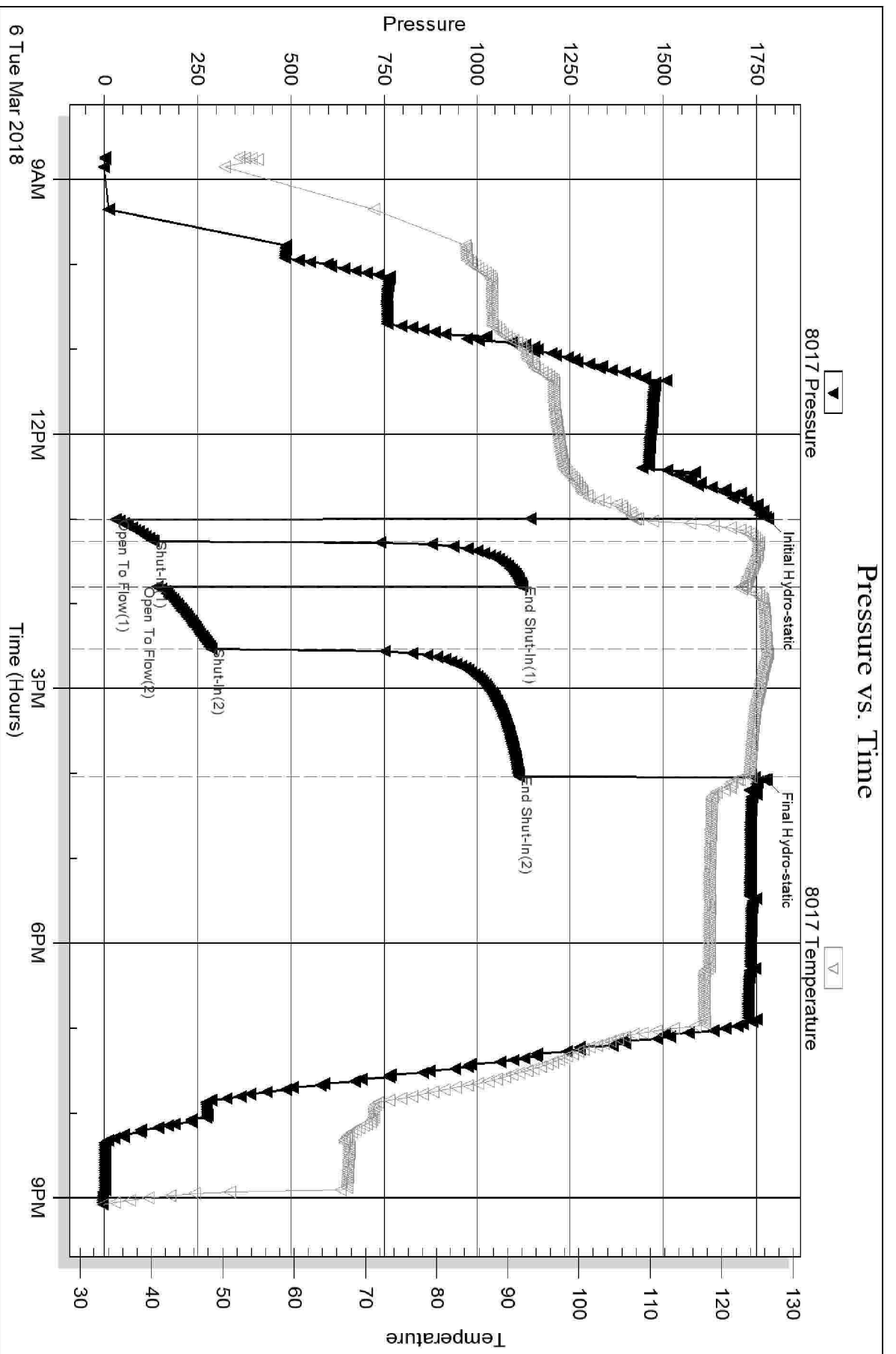
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .238 ohms @ 31.7 deg F Chlorides = 71,000 ppm

Sampler = 270 PSI, 2300 mL Water 99%w , 1%o w /trace of oil RW = .226 @ 33.9 deg F Chlorides = 70,000 ppm



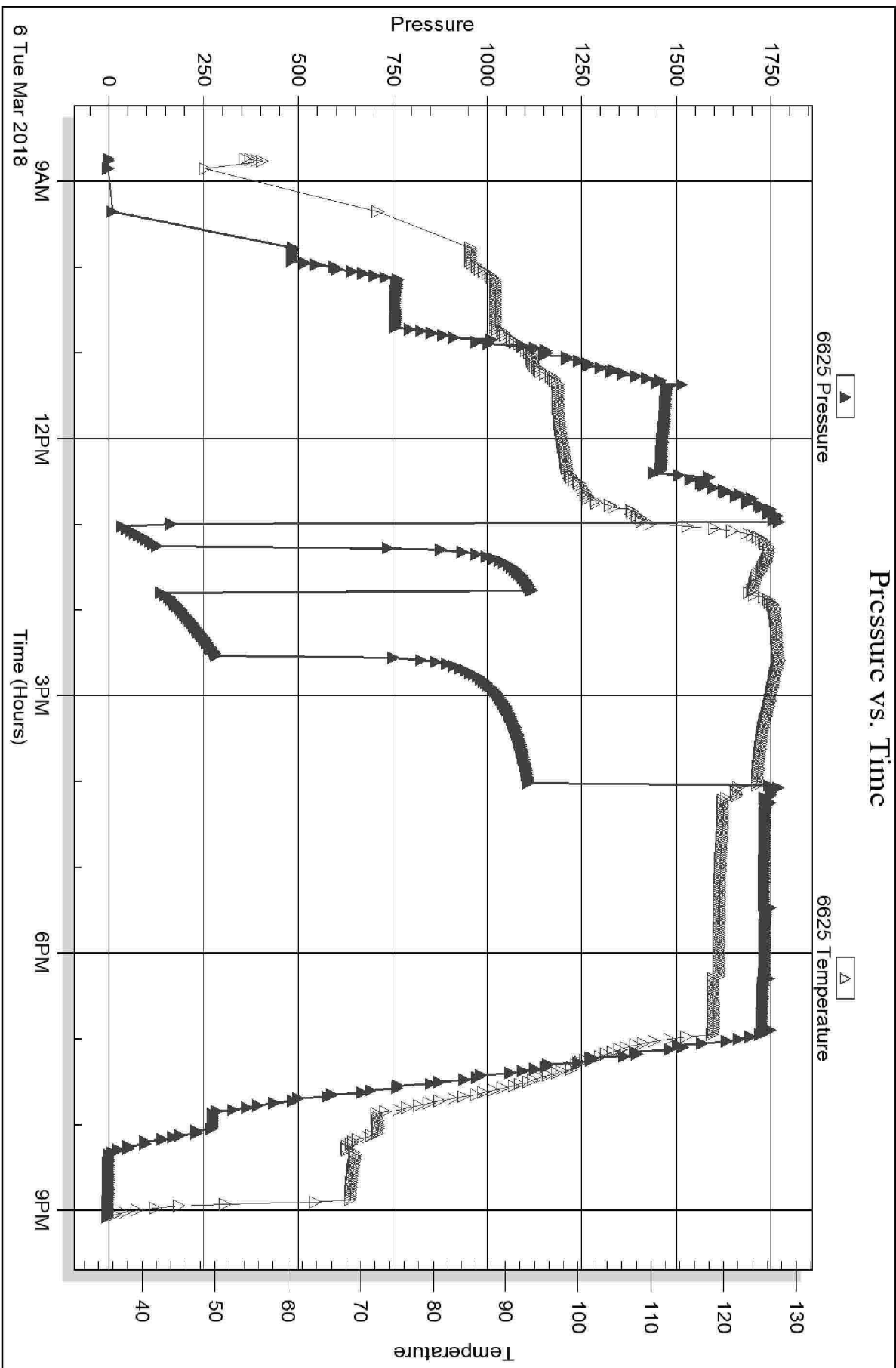
Serial #: 6625

Inside

Pioneer Oil Co. Inc.

Clark Unit #1-5

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 63366

Printed: 2018.03.14 @ 10:18:08



DRILL STEM TEST REPORT

Prepared For: **Pioneer Oil Co. Inc.**

400 Main St. PO Box 237
Vincennes, IN 47501

ATTN: Jim Musgrove

Clark Unit #1-5

5-9s-28w Sheridan,KS

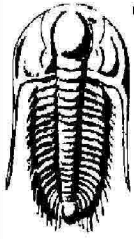
Start Date: 2018.03.07 @ 03:55:00

End Date: 2018.03.07 @ 10:34:45

Job Ticket #: 63367 DST #: 4

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.03.14 @ 10:17:35



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Pioneer Oil Co. Inc.
 400 Main St. PO Box 237
 Vincennes, IN 47501
 ATTN: Jim Musgrove

5-9s-28w Sheridan,KS
Clark Unit #1-5
 Job Ticket: 63367 **DST#: 4**
 Test Start: 2018.03.07 @ 03:55:00

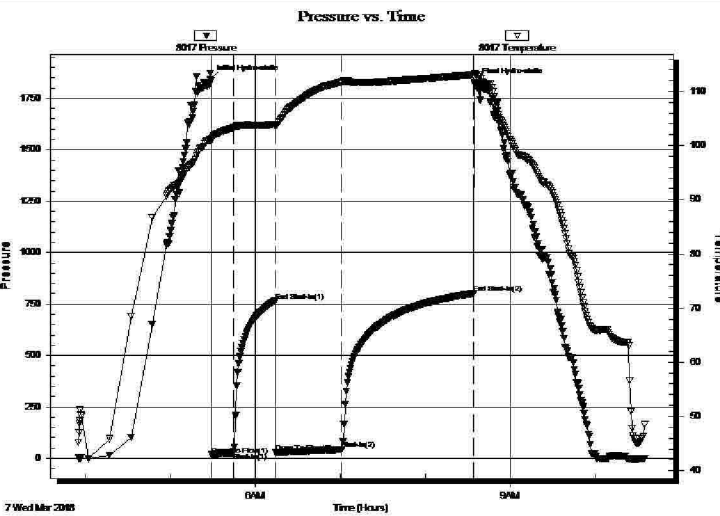
GENERAL INFORMATION:

Formation: **Toronto**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:29:00
 Time Test Ended: 10:34:45
 Interval: **3810.00 ft (KB) To 3830.00 ft (KB) (TVD)**
 Total Depth: 3830.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 2738.00 ft (KB)
 2730.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8017 Outside

Press@RunDepth: 43.13 psig @ 3811.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.03.07 End Date: 2018.03.07 Last Calib.: 2018.03.07
 Start Time: 03:55:05 End Time: 10:34:44 Time On Btm: 2018.03.07 @ 05:28:15
 Time Off Btm: 2018.03.07 @ 08:35:00

TEST COMMENT: 15 - IF: Blow built to 2 1/2"
 30 - IS: Blow back built to 1/2"
 45 - FF: Blow built to 2 1/2"
 90 - FS: Blow back built to about 1/2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1840.87	101.09	Initial Hydro-static
1	16.43	100.75	Open To Flow (1)
17	26.72	103.26	Shut-In(1)
46	765.10	103.96	End Shut-In(1)
46	27.13	103.55	Open To Flow (2)
93	43.13	111.76	Shut-In(2)
186	801.28	113.12	End Shut-In(2)
187	1828.83	113.27	Final Hydro-static

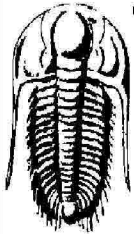
Recovery

Length (ft)	Description	Volume (bbl)
56.00	MCW w /trace oil 90% m, 10% w	0.41

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Pioneer Oil Co. Inc.

5-9s-28w Sheridan, KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

ATTN: Jim Musgrove

Job Ticket: 63367

DST#: 4

Test Start: 2018.03.07 @ 03:55:00

GENERAL INFORMATION:

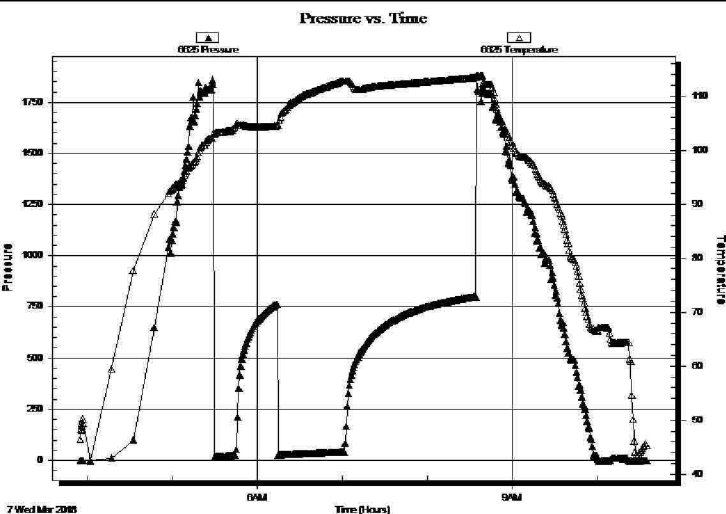
Formation: **Toronto**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:29:00
 Time Test Ended: 10:34:45
 Interval: **3810.00 ft (KB) To 3830.00 ft (KB) (TVD)**
 Total Depth: 3830.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 2738.00 ft (KB)
 2730.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 6625

Inside

Press@RunDepth: psig @ 3811.00 ft (KB)
 Start Date: 2018.03.07 End Date: 2018.03.07
 Start Time: 03:55:05 End Time: 10:35:14
 Capacity: 8000.00 psig
 Last Calib.: 2018.03.07
 Time On Btm:
 Time Off Btm:

TEST COMMENT: 15 - IF: Blow built to 2 1/2"
 30 - ISI: Blow back built to 1/2"
 45 - FF: Blow built to 2 1/2"
 90 - FS: Blow back built to about 1/2"



PRESSURE SUMMARY

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

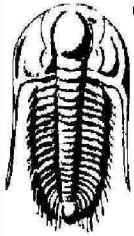
Recovery

Length (ft)	Description	Volume (bbl)
56.00	MCW w /trace oil 90%w, 10%w	0.41

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pioneer Oil Co. Inc.

5-9s-28w Sheridan,KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

Job Ticket: 63367

DST#: 4

ATTN: Jim Musgrove

Test Start: 2018.03.07 @ 03:55:00

Tool Information

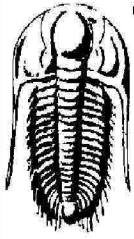
Drill Pipe:	Length: 3497.00 ft	Diameter: 3.80 inches	Volume: 49.05 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 2.75 inches	Volume: 2.28 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 51.33 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	3810.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	51.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: had a hammer union come loose after turning tool for final shut in

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3780.00	
Shut In Tool	5.00			3785.00	
Sampler	2.00			3787.00	
Hydraulic tool	5.00			3792.00	
Jars	5.00			3797.00	
Safety Joint	3.00			3800.00	
Packer	5.00			3805.00	31.00 Bottom Of Top Packer
Packer	5.00			3810.00	
Stubb	1.00			3811.00	
Recorder	0.00	6625	Inside	3811.00	
Recorder	0.00	8017	Outside	3811.00	
Perforations	16.00			3827.00	
Bullnose	3.00			3830.00	20.00 Bottom Packers & Anchor

Total Tool Length: 51.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Oil Co. Inc.

5-9s-28w Sheridan,KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

Job Ticket: 63367

DST#: 4

ATTN: Jim Musgrove

Test Start: 2018.03.07 @ 03:55:00

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:

40000 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.17 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
56.00	MCW w /trace oil 90%m, 10%w	0.411

Total Length: 56.00 ft Total Volume: 0.411 bbl

Num Fluid Samples: 0

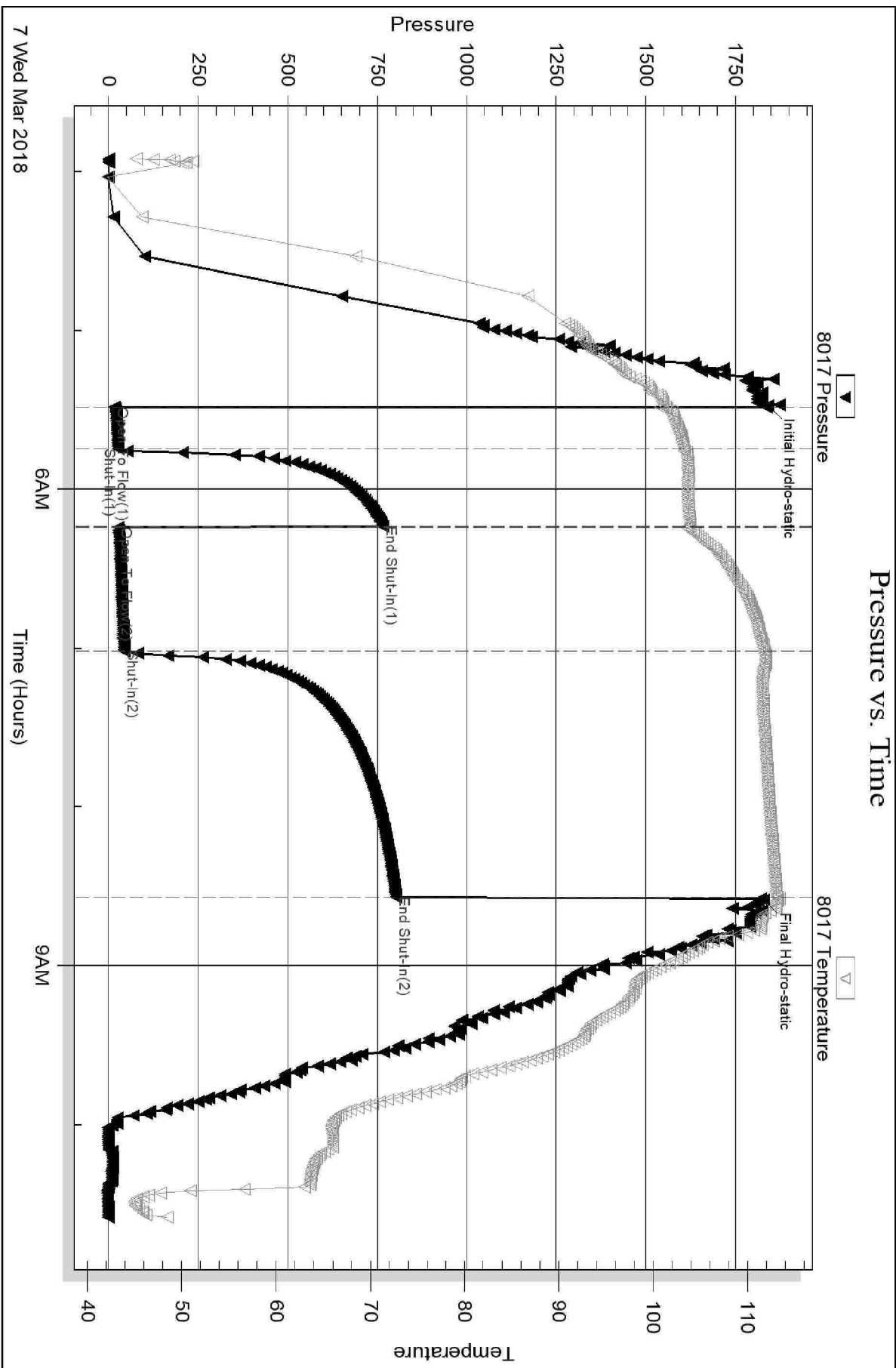
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler = 185 PSI, 1500 mL Water 96%w , 4%m, 800 mL MCW w /trace oil 75%w , 25%m RW = .325 ohms @ 39.5 deg F Chlorides = 40000



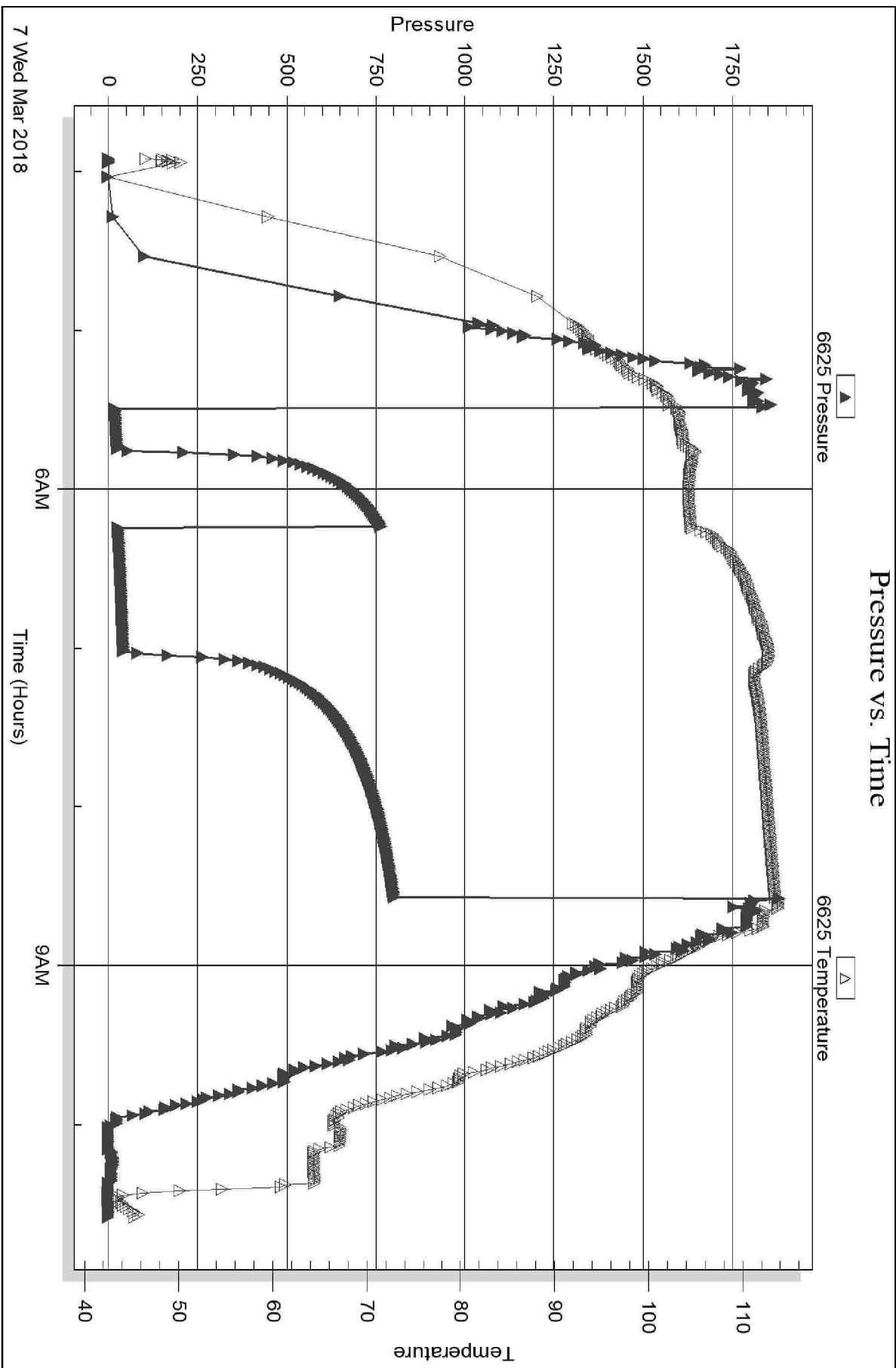
Serial #: 6625

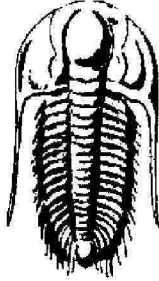
Inside

Pioneer Oil Co. Inc.

Clark Unit #1-5

DST Test Number: 4





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Pioneer Oil Co. Inc.**

400 Main St. PO Box 237
Vincennes, IN 47501

ATTN: Jim Musgrove

Clark Unit #1-5

5-9s-28w Sheridan,KS

Start Date: 2018.03.07 @ 17:26:00

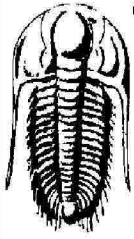
End Date: 2018.03.08 @ 00:46:00

Job Ticket #: 63368 DST #: 5

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.03.14 @ 10:17:00

Pioneer Oil Co. Inc.
5-9s-28w Sheridan,KS
Clark Unit #1-5
DST # 5
LKC "A"
2018.03.07



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Pioneer Oil Co. Inc.
400 Main St. PO Box 237
Vincennes, IN 47501
ATTN: Jim Musgrove

5-9s-28w Sheridan,KS
Clark Unit #1-5
Job Ticket: 63368 **DST#: 5**
Test Start: 2018.03.07 @ 17:26:00

GENERAL INFORMATION:

Formation: **LKC "A"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:28:30
Time Test Ended: 00:46:00
Interval: **3832.00 ft (KB) To 3845.00 ft (KB) (TVD)**
Total Depth: 3845.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 83
Reference Elevations: 2738.00 ft (KB)
2730.00 ft (CF)
KB to GR/CF: 8.00 ft

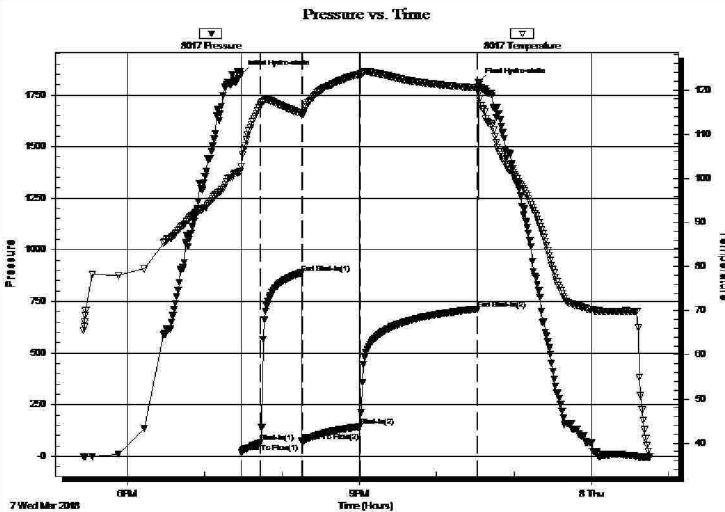
Serial #: 8017

Outside

Press@RunDepth: 143.79 psig @ 3833.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.03.07 End Date: 2018.03.08 Last Calib.: 2018.03.08
Start Time: 17:26:05 End Time: 00:45:59 Time On Btm: 2018.03.07 @ 19:28:15
Time Off Btm: 2018.03.07 @ 22:32:45

TEST COMMENT: 15 - IF: Blow built to BOB (11") at 7 min. (Blow built to 21 1/2")
30 - IS: Blow back built to 4"
45 - FF: Blow built to BOB at 10 min. (Blow built to 38")
90 - FS: Blow back built to 6 1/2"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1850.39	102.75	Initial Hydro-static
1	20.67	102.82	Open To Flow (1)
16	67.15	116.68	Shut-In(1)
47	887.87	114.79	End Shut-In(1)
48	72.61	114.48	Open To Flow (2)
93	143.79	123.58	Shut-In(2)
183	713.21	120.54	End Shut-In(2)
185	1808.78	119.38	Final Hydro-static

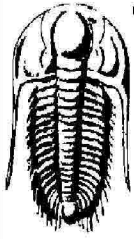
Recovery

Length (ft)	Description	Volume (bbl)
40.00	GOCM 52% m, 28% o, 20% g	0.29
310.00	CGO 86% o, 13% g, 1% m	2.54
0.00	GIP = 410'	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pioneer Oil Co. Inc.

5-9s-28w Sheridan,KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

Job Ticket: 63368

DST#: 5

ATTN: Jim Musgrove

Test Start: 2018.03.07 @ 17:26:00

Tool Information

Drill Pipe:	Length: 3497.00 ft	Diameter: 3.80 inches	Volume: 49.05 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 2.75 inches	Volume: 2.28 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: 58000.00 lb
			<u>Total Volume: 51.33 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3832.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	13.00 ft			
Tool Length:	44.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

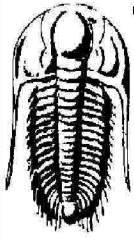
Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3802.00	
Shut In Tool	5.00			3807.00	
Sampler	2.00			3809.00	
Hydraulic tool	5.00			3814.00	
Jars	5.00			3819.00	
Safety Joint	3.00			3822.00	
Packer	5.00			3827.00	31.00 Bottom Of Top Packer
Packer	5.00			3832.00	
Stubb	1.00			3833.00	
Recorder	0.00	6625	Inside	3833.00	
Recorder	0.00	8017	Outside	3833.00	
Perforations	9.00			3842.00	
Bullnose	3.00			3845.00	13.00 Bottom Packers & Anchor

Total Tool Length: 44.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Oil Co. Inc.

5-9s-28w Sheridan,KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

Job Ticket: 63368

DST#: 5

ATTN: Jim Musgrove

Test Start: 2018.03.07 @ 17:26:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 47.00 sec/qt
Water Loss: 7.18 in³
Resistivity: ohm.m
Salinity: 500.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 35.8 deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	GOCM 52% <i>m</i> , 28% <i>o</i> , 20% <i>g</i>	0.294
310.00	CGO 86% <i>o</i> , 13% <i>g</i> , 1% <i>m</i>	2.538
0.00	GIP = 410'	0.000

Total Length: 350.00 ft Total Volume: 2.832 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

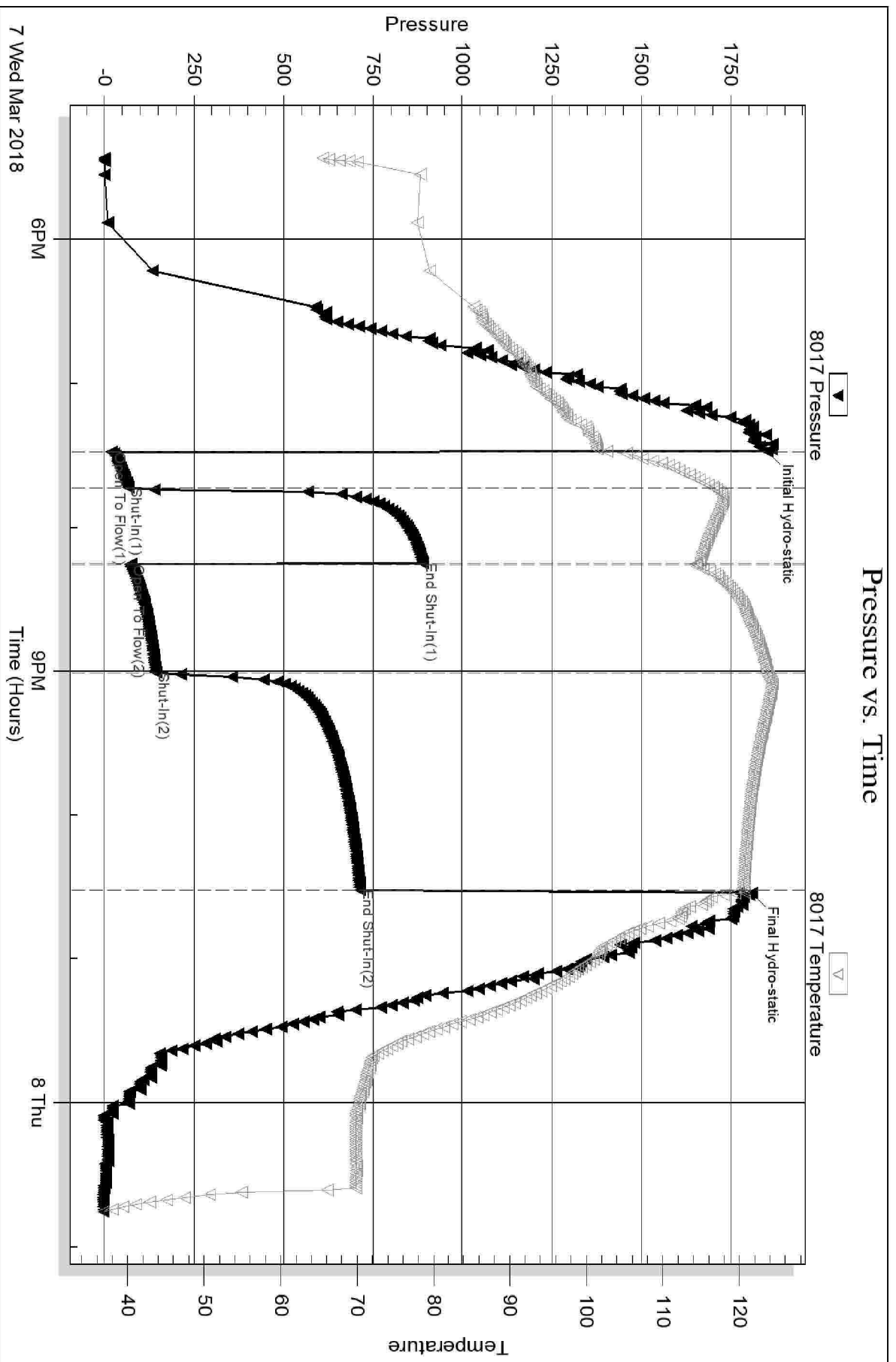
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 32.6 api @ 28 deg F Corrected Gravity = 35.8 api
Sampler = 300 PSI, 2200 mL CO 99%*o*, 1%*m*

Pressure vs. Time



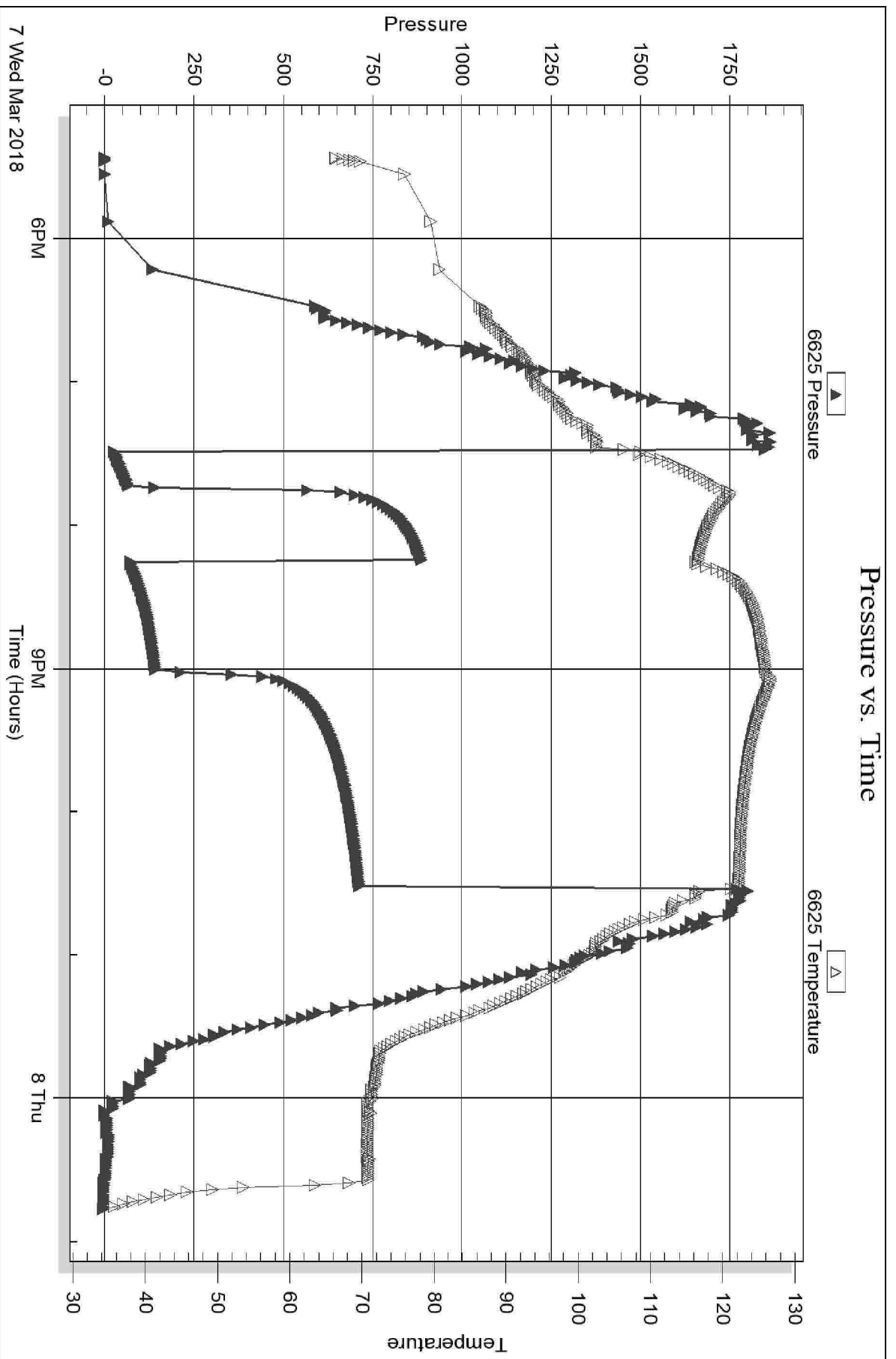
Serial #: 6625

Inside

Pioneer Oil Co. Inc.

Clark Unit #1-5

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 63368

Printed: 2018.03.14 @ 10:17:02



DRILL STEM TEST REPORT

Prepared For: **Pioneer Oil Co. Inc.**

400 Main St. PO Box 237
Vincennes, IN 47501

ATTN: Jim Musgrove

Clark Unit #1-5

5-9s-28w Sheridan,KS

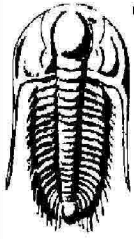
Start Date: 2018.03.08 @ 09:28:00

End Date: 2018.03.08 @ 16:48:00

Job Ticket #: 63369 DST #: 6

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.03.14 @ 10:16:24



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Pioneer Oil Co. Inc.
400 Main St. PO Box 237
Vincennes, IN 47501
ATTN: Jim Musgrove

5-9s-28w Sheridan,KS
Clark Unit #1-5
Job Ticket: 63369 **DST#: 6**
Test Start: 2018.03.08 @ 09:28:00

GENERAL INFORMATION:

Formation: **LKC "C"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:23:15
Time Test Ended: 16:48:00
Interval: **3861.00 ft (KB) To 3879.00 ft (KB) (TVD)**
Total Depth: 3879.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 2738.00 ft (KB)
2730.00 ft (CF)
KB to GR/CF: 8.00 ft
Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 83

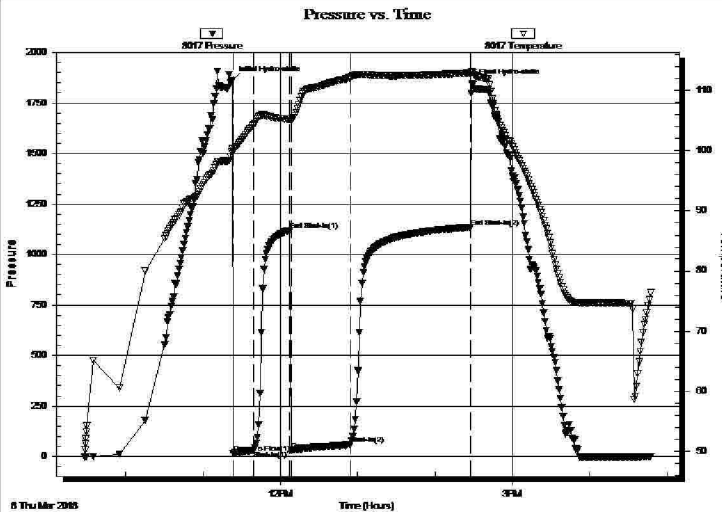
Serial #: 8017

Outside

Press@RunDepth: 59.13 psig @ 3862.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.03.08 End Date: 2018.03.08 Last Calib.: 2018.03.08
Start Time: 09:28:05 End Time: 16:47:59 Time On Btm: 2018.03.08 @ 11:23:00
Time Off Btm: 2018.03.08 @ 14:28:45

TEST COMMENT: 15 - IF: Blow built to 3 3/4"
30 - ISI: Blow back built to 1/2"
45 - FF: Blow built to 11 3/4"
90 - FS: Blow back built to 1 1/4"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1860.39	100.37	Initial Hydro-static
1	17.27	99.88	Open To Flow (1)
16	30.37	104.29	Shut-In(1)
45	1120.68	105.31	End Shut-In(1)
46	33.12	105.01	Open To Flow (2)
91	59.13	112.17	Shut-In(2)
185	1135.02	112.96	End Shut-In(2)
186	1845.37	113.22	Final Hydro-static

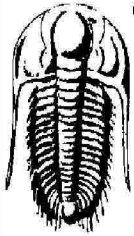
Recovery

Length (ft)	Description	Volume (bbl)
60.00	OM 55% m, 40% o, 5% g	0.44
40.00	SMCO 90% o, 8% m, 2% g	0.29
0.00	GIP = 100'	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pioneer Oil Co. Inc.

5-9s-28w Sheridan,KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

Job Ticket: 63369

DST#: 6

ATTN: Jim Musgrove

Test Start: 2018.03.08 @ 09:28:00

Tool Information

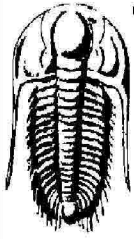
Drill Pipe:	Length: 3528.00 ft	Diameter: 3.80 inches	Volume: 49.49 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 2.75 inches	Volume: 2.28 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 51.77 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3861.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	49.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3831.00	
Shut In Tool	5.00			3836.00	
Sampler	2.00			3838.00	
Hydraulic tool	5.00			3843.00	
Jars	5.00			3848.00	
Safety Joint	3.00			3851.00	
Packer	5.00			3856.00	31.00 Bottom Of Top Packer
Packer	5.00			3861.00	
Stubb	1.00			3862.00	
Recorder	0.00	6625	Inside	3862.00	
Recorder	0.00	8017	Outside	3862.00	
Perforations	14.00			3876.00	
Bullnose	3.00			3879.00	18.00 Bottom Packers & Anchor

Total Tool Length: 49.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Oil Co. Inc.

5-9s-28w Sheridan,KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

Job Ticket: 63369

DST#: 6

ATTN: Jim Musgrove

Test Start: 2018.03.08 @ 09:28:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 52.00 sec/qt
Water Loss: 6.39 in³
Resistivity: ohm.m
Salinity: 500.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 32.4 deg API
Water Salinity: 29000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	OM 55% <i>m</i> , 40% <i>o</i> , 5% <i>g</i>	0.441
40.00	SMCO 90% <i>o</i> , 8% <i>m</i> , 2% <i>g</i>	0.294
0.00	GIP = 100'	0.000

Total Length: 100.00 ft Total Volume: 0.735 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

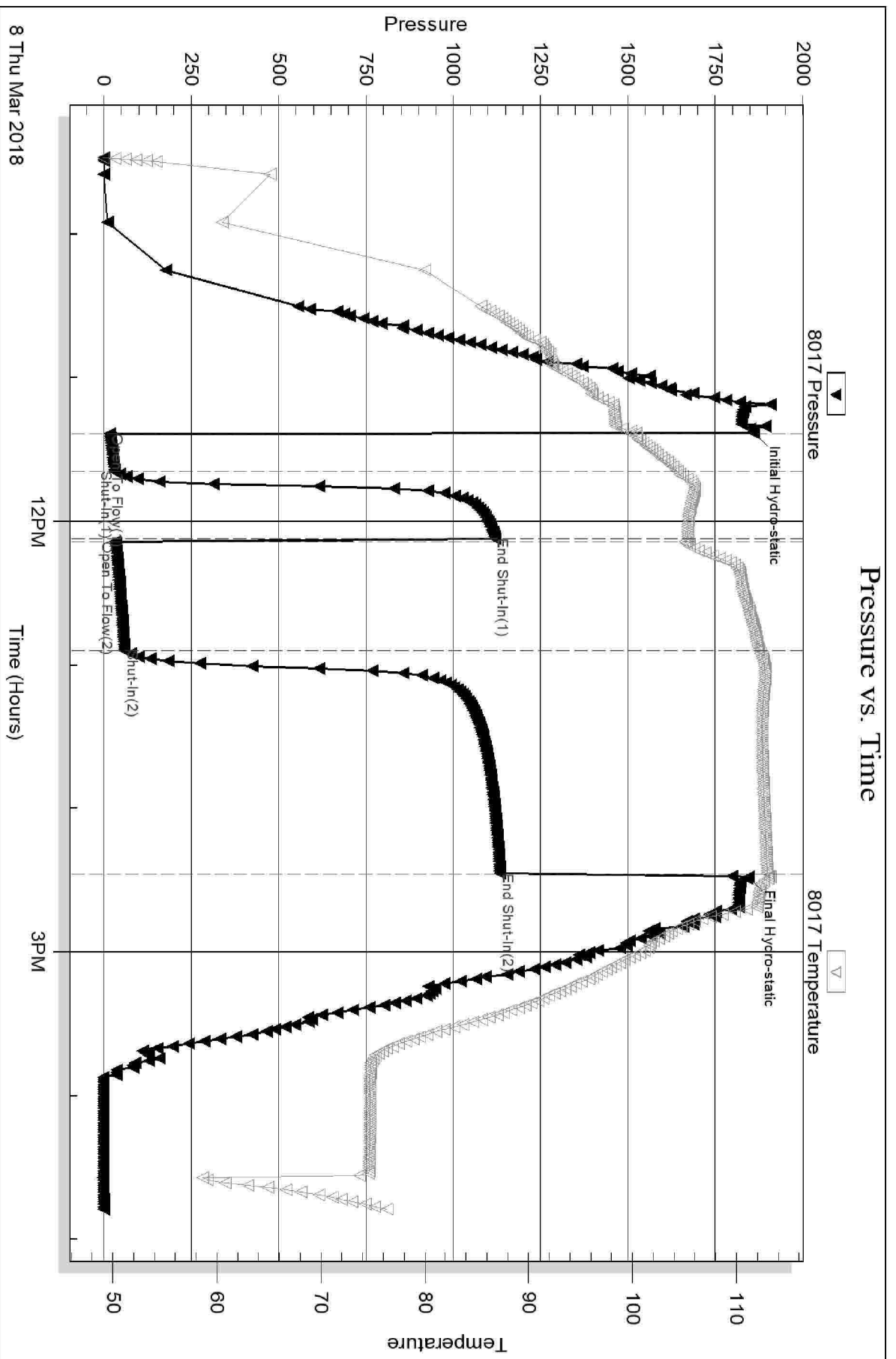
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 34 api @ 76 deg F Corrected Gravity = 32.4 api

Sampler = 320 PSI, 1100 mL Oil 97%*o*, 3%*m*, 1000 mL OWM 38%*m*, 37%*w*, 22%*o*, 3%*g* RW =
.242 ohms @ 73.4 deg F Chlorides = 29,000 ppm



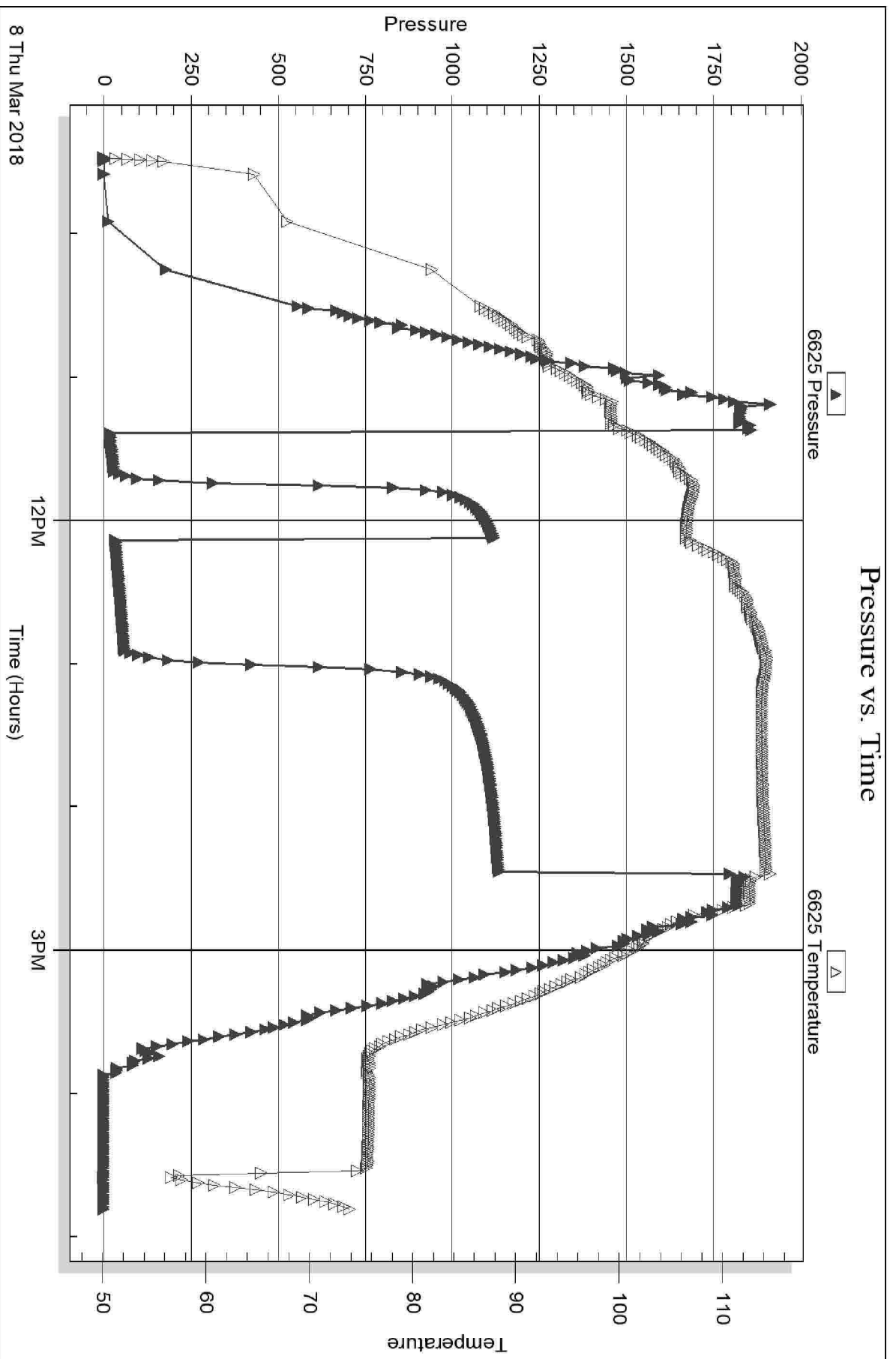
Serial #: 6625

Inside

Pioneer Oil Co. Inc.

Clark Unit #1-5

DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 63369

Printed: 2018.03.14 @ 10:16:25



DRILL STEM TEST REPORT

Prepared For: **Pioneer Oil Co. Inc.**

400 Main St. PO Box 237
Vincennes, IN 47501

ATTN: Jim Musgrove

Clark Unit #1-5

5-9s-28w Sheridan,KS

Start Date: 2018.03.11 @ 17:40:00

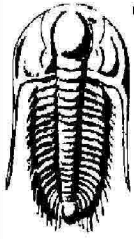
End Date: 2018.03.12 @ 02:10:00

Job Ticket #: 63370 DST #: 7

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.03.14 @ 10:14:12

Pioneer Oil Co. Inc.
5-9s-28w Sheridan,KS
Clark Unit #1-5
DST # 7
LKC "D"
2018.03.11



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Pioneer Oil Co. Inc.
400 Main St. PO Box 237
Vincennes, IN 47501
ATTN: Jim Musgrove

5-9s-28w Sheridan,KS
Clark Unit #1-5
Job Ticket: 63370 **DST#: 7**
Test Start: 2018.03.11 @ 17:40:00

GENERAL INFORMATION:

Formation: **LKC "D"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:28:00
Time Test Ended: 02:10:00
Interval: **3854.00 ft (KB) To 3890.00 ft (KB) (TVD)**
Total Depth: 4578.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Straddle (Reset)
Tester: James Winder
Unit No: 83
Reference Elevations: 2738.00 ft (KB)
2730.00 ft (CF)
KB to GR/CF: 8.00 ft

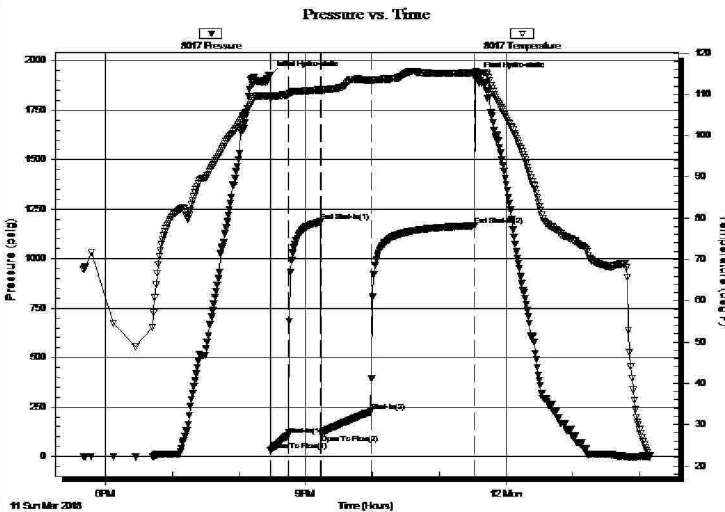
Serial #: 8017

Outside

Press@RunDepth: 226.69 psig @ 3855.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.03.11 End Date: 2018.03.12 Last Calib.: 2018.03.12
Start Time: 17:40:05 End Time: 02:09:59 Time On Btm: 2018.03.11 @ 20:27:45
Time Off Btm: 2018.03.11 @ 23:34:30

TEST COMMENT: 15 - IF: Blow built to BOB (11") at 6 1/4 min., Blow built to 28 1/2"
30 - IS: Blow back built to 5 1/2"
45 - FF: Blow built to BOB at 8 min., Blow built to 73"
90 - FS: Blow back built to 9 1/2"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1927.78	109.72	Initial Hydro-static
1	28.42	108.90	Open To Flow (1)
17	106.23	109.89	Shut-In(1)
46	1186.88	111.10	End Shut-In(1)
47	114.37	110.81	Open To Flow (2)
91	226.69	113.33	Shut-In(2)
185	1166.99	115.25	End Shut-In(2)
187	1923.60	114.64	Final Hydro-static

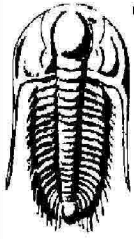
Recovery

Length (ft)	Description	Volume (bbl)
125.00	GOWCM 49% <i>m</i> , 20% <i>w</i> , 20% <i>g</i> , 11% <i>o</i>	0.92
10.00	SW/GOM 34% <i>m</i> , 32% <i>o</i> , 27% <i>g</i> , 7% <i>w</i>	0.07
415.00	CGO 88% <i>o</i> , 12% <i>g</i>	4.65
0.00	GIP = 640'	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pioneer Oil Co. Inc.

5-9s-28w Sheridan,KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

Job Ticket: 63370

DST#: 7

ATTN: Jim Musgrove

Test Start: 2018.03.11 @ 17:40:00

Tool Information

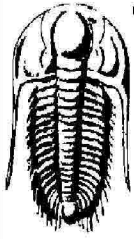
Drill Pipe:	Length: 3538.00 ft	Diameter: 3.80 inches	Volume: 49.63 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 2.75 inches	Volume: 2.28 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 51.91 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3854.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	3890.00 ft			
Interval between Packers:	36.00 ft			
Tool Length:	747.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		
Tool Comments:				

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			3832.00	
Shut In Tool	5.00			3837.00	
Sampler	2.00			3839.00	
Hydraulic tool	5.00			3844.00	
Packer	5.00			3849.00	23.00 Bottom Of Top Packer
Packer	5.00			3854.00	
Stubb	1.00			3855.00	
Recorder	0.00	6625	Inside	3855.00	
Recorder	0.00	8017	Outside	3855.00	
Perforations	30.00			3885.00	
Blank Off Sub	1.00			3886.00	
Blank spacing	4.00			3890.00	36.00 Tool Interval
Packer	0.00			3890.00	
Packer - Shale	0.00			3890.00	
Stubb	1.00			3891.00	
Recorder	0.00	8652	Below	3891.00	
Perforations	14.00			3905.00	
Drill Pipe	670.00			4575.00	
Bullnose	3.00			4578.00	688.00 Bottom Packers & Anchor

Total Tool Length: 747.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Oil Co. Inc.

5-9s-28w Sheridan,KS

400 Main St. PO Box 237
Vincennes, IN 47501

Clark Unit #1-5

Job Ticket: 63370

DST#: 7

ATTN: Jim Musgrove

Test Start: 2018.03.11 @ 17:40:00

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
125.00	GOWCM 49%m, 20%w, 20%g, 11%o	0.918
10.00	SW/GOM 34%m, 32%o, 27%g, 7%w	0.073
415.00	CGO 88%o, 12%g	4.646
0.00	GIP = 640'	0.000

Total Length: 550.00 ft Total Volume: 5.637 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

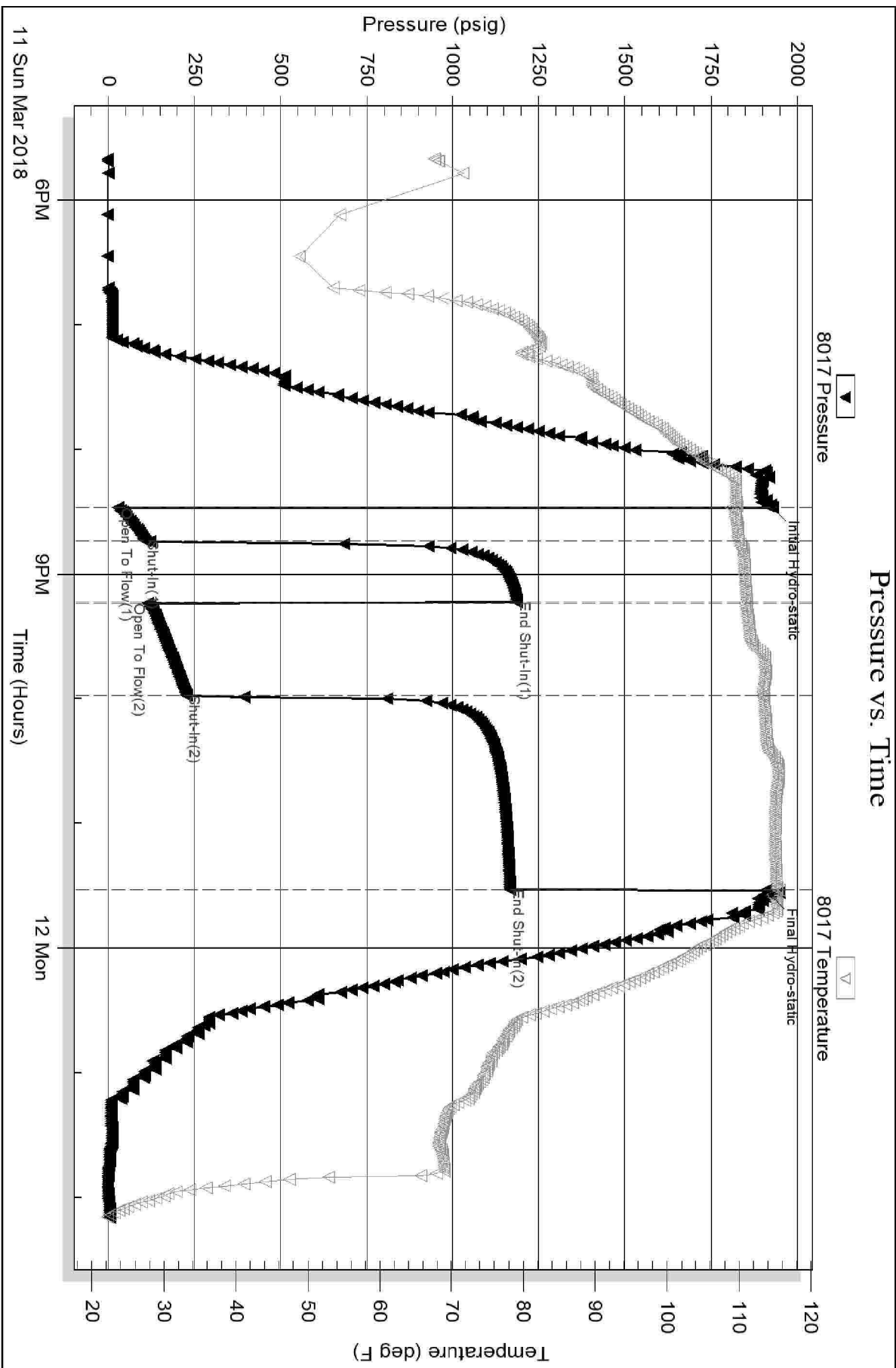
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 32.8 api @ 22 deg F Corrected Gravity = 36.6 api

Sampler = 370 PSI, 1100 mL CO 99%o, 1%m, 300 mL SWMCO 92%o, 6%m, 2%w
Unable to check chlorides



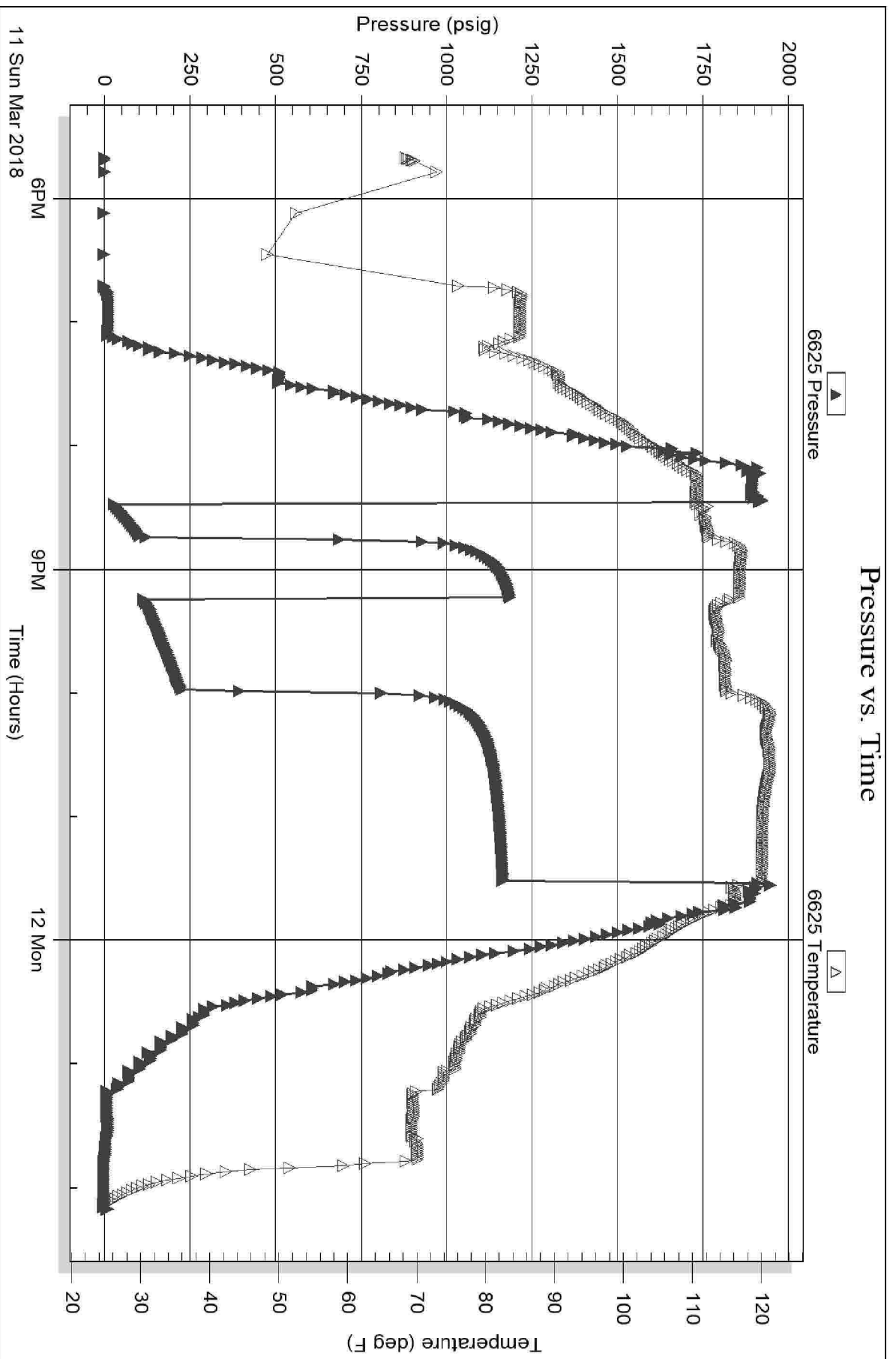
Serial #: 6625

Inside

Pioneer Oil Co. Inc.

Clark Unit #1-5

DST Test Number: 7

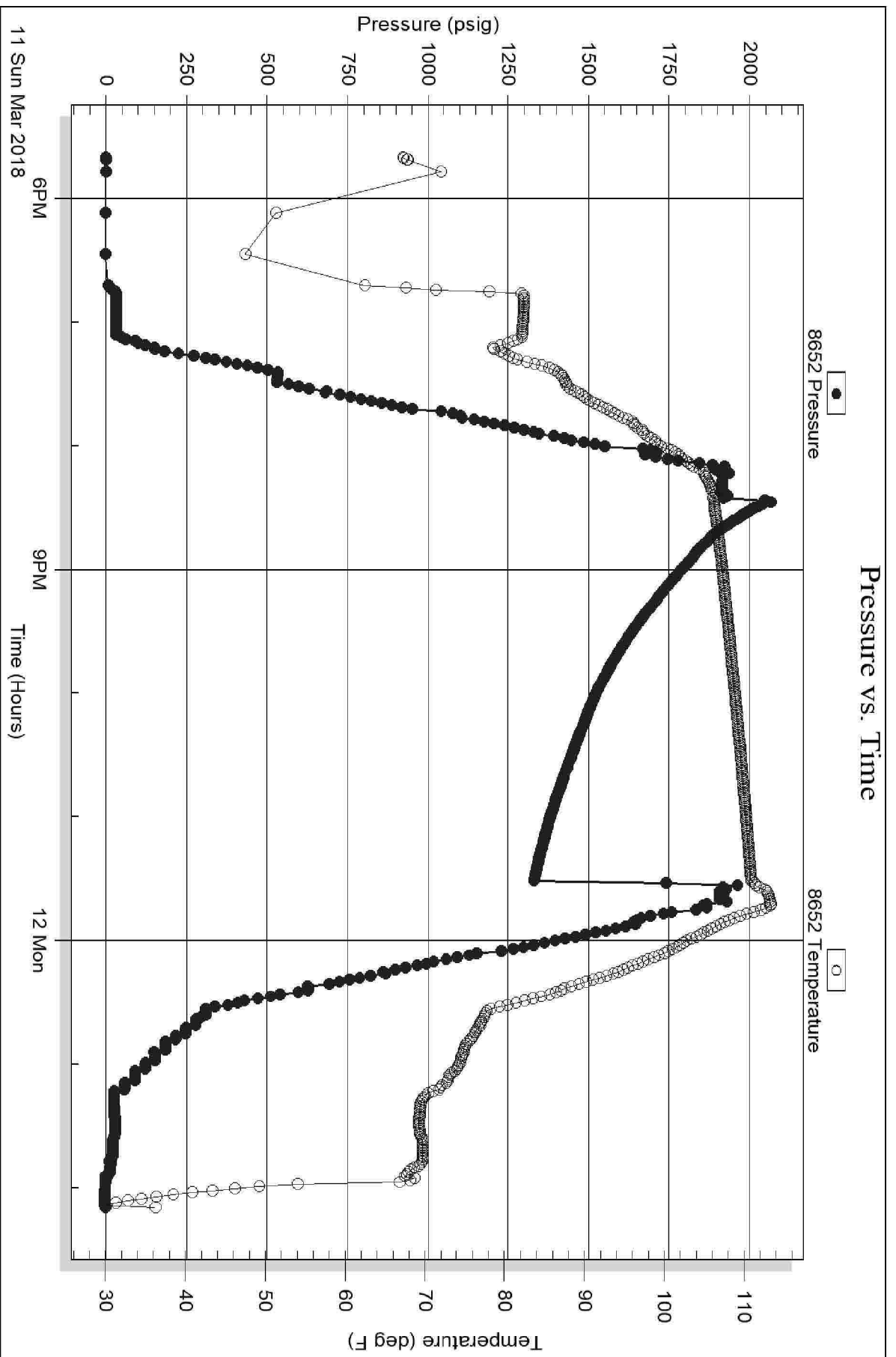


Serial #: 8652

Below (Stratton) Oil Co. Inc.

Clark Unit #1-5

DST Test Number: 7





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63364

Well Name & No. Clark Unit #1-5 Test No. 1 Date 3-4-18
 Company Pioneer Oil Co Inc Elevation 2738 KB 2730 GL
 Address 400 Main St PO Box 237 Vincennes IN 47501
 Co. Rep / Geo. Jim Musgrove Rig Discovery #1
 Location: Sec. 5 Twp. 9s Rge. 28w Co. Sheridan State KS

Interval Tested 3464 - 3512 Zone Tested Elmont
 Anchor Length 48 Drill Pipe Run 3147 Mud Wt. 8.7
 Top Packer Depth 3459 Drill Collars Run - Vis 55
 Bottom Packer Depth 3464 Wt. Pipe Run 311 WL 7.6
 Total Depth 3512 Chlorides 750 ppm System LCM 2 1/2

Blow Description IF: 3/4" Blow at open, built to 4 1/4"
ISI: No blowback (Blow stayed at 4 1/4")
FF: Blow built to 7"
FSI: No blowback (Blow slowly decreased)

Rec	Feet of	%gas	%oil	%water	%mud
<u>83</u>	<u>50cm</u>	<u>5</u>	<u>-</u>	<u>95</u>	<u>95</u>
<u>62</u>	<u>50/wcm</u>	<u>2</u>	<u>18</u>	<u>80</u>	<u>80</u>
<u> </u>	<u>A Few inches of oil on top</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Rec Total 145 BHT 108 Gravity 20.4 API RW .345 @ 55 °F Chlorides 25,000 ppm
 (A) Initial Hydrostatic 1627 Test 1050 T-On Location 12:35
 (B) First Initial Flow 23 Jars 250 T-Started 14:04
 (C) First Final Flow 40 Safety Joint 75 T-Open 15:51
 (D) Initial Shut-In 994 Circ Sub T-Pulled 18:56
 (E) Second Initial Flow 43 Hourly Standby T-Out 21:30
 (F) Second Final Flow 87 Mileage 86 RT 86
 (G) Final Shut-In 993 Sampler 250
 (H) Final Hydrostatic 1598 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer

Initial Open 15 Extra Packer Extra Copies
 Initial Shut-In 30 Extra Recorder Sub Total 0
 Final Flow 45 Day Standby Total 1711
 Final Shut-In 90 Accessibility MP/DST Disc't
 Sub Total 1711

Approved By _____ Our Representative James Winder

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING, INC.

1515 Commerce Parkway • Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 63364 Date 3-4-18
 Company Name Pioneer Oil Co Inc
 Lease Clark Unit #1-5 Test No. 1
 County Sheridan Sec. 5 Twp. 9s Rng. 28w

SAMPLER RECOVERY

Gas _____ ML
 Oil _____ ML
 Mud _____ ML
 Water _____ ML
 Other 2200mL WCM
50 / ~~3000~~ 58% m 38% w 4% o ML
 Pressure 170 PSI ML
 Total 2200 ML

PIT MUD ANALYSIS

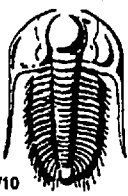
Chlorides 750 ppm.
 Resistivity _____ ohms @ _____ F
 Viscosity 55
 Mud Weight 8.7
 Filtrate 7.6
 Other _____

SAMPLER ANALYSIS

Resistivity 330 ohms @ 53 F
 Chlorides 27,000 ppm.
 Gravity _____ corrected @60F

PIPE RECOVERY

TOP
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.
MIDDLE
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.
BOTTOM
 Resistivity 345 ohms @ 55 F
 Chlorides 25,000 ppm.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63365

Well Name & No. Clark Unit #1-5 Test No. 2 Date 3-5-18
 Company Pioneer Oil Co. Inc Elevation 2738 KB 2730 GL
 Address 400 Main St PO Box 237 Vincennes IN 47501
 Co. Rep / Geo. Jim Musgrove Rig Discovery #1
 Location: Sec. 5 Twp. 9s Rge. 28w Co. Sheridan State KS

Interval Tested 3566-3584 Zone Tested Howard "C"
 Anchor Length 18 Drill Pipe Run 3243 Mud Wt. 8.8
 Top Packer Depth 3561 Drill Collars Run ~~3243~~ - Vis 52
 Bottom Packer Depth 3566 Wt. Pipe Run 311 WL 7.6
 Total Depth 3584 Chlorides 750 ppm System LCM 2 1/2

Blow Description IF: 2 3/4" ~~at~~ blow at open, built to 3 1/2"
ISI: No blowback
FF: Weak surface blow, built to 1/8"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30 BHT 110 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1688 Test 1050 T-On Location 7:45
 (B) First Initial Flow 41 Jars 250 T-Started 9:40
 (C) First Final Flow 39 Safety Joint 75 T-Open 12:41
 (D) Initial Shut-In 1022 Circ Sub _____ T-Pulled 15:45
 (E) Second Initial Flow 40 Hourly Standby 1.25h 100 T-Out 18:10
 (F) Second Final Flow 38 Mileage 86RT 86
 (G) Final Shut-In 1091 Sampler 250
 (H) Final Hydrostatic 1672 Straddle _____

Ruined Shale Packer _____
 Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Recorder _____
 Extra Copies _____
 Day Standby _____
 Accessibility _____
 Sub Total 1811 Sub Total _____
 Total 1811 MP/DST Disc't _____

Approved By _____ Our Representative James Winkler

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TRILOBITE TESTING, INC.

1515 Commerce Parkway • Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 63365 Date 3-5-18
 Company Name Pioneer Oil Co. Inc
 Lease Clark Unit #1-5 Test No. 2
 County Sheridan Sec. 5 Twp. 9s Rng. 28w

SAMPLER RECOVERY

Gas _____ ML
 Oil _____ ML
 Mud 2000 Mw/trace oil ML
 Water _____ ML
 Other _____ ML
 Pressure 130 ML
 Total 2000 ML

PIT MUD ANALYSIS

Chlorides 750 ppm.
 Resistivity _____ ohms @ _____ F
 Viscosity 52
 Mud Weight 8.8
 Filtrate 7.6
 Other _____

SAMPLER ANALYSIS

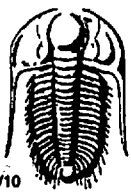
Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.
 Gravity _____ corrected @60F

PIPE RECOVERY

TOP
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.

MIDDLE
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.

BOTTOM
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63366

Well Name & No. Clark Unit #1-5 Test No. 3 Date 3-6-18
 Company Pioneer Oil Co. Inc Elevation 2738 KB 2730 GL
 Address 400 main St. PO Box 237 Vincennes IN 47501
 Co. Rep / Geo. Jim Musgrove Rig Discovery #1
 Location: Sec. 5 Twp. 9s Rge. 28w Co. Sheridan State KS

Interval Tested 3754 3772 Zone Tested Plattsmouth
 Anchor Length 18 Drill Pipe Run 3432 Mud Wt. 9.0
 Top Packer Depth 3749 Drill Collars Run - Vis 49
 Bottom Packer Depth 3754 Wt. Pipe Run 311 WL 7.2
 Total Depth 3772 Chlorides 500 ppm System LCM 2 1/2
 Blow Description IF: Blow built to BOB(11") at 9 1/4 min. - (Built to 17")
ISI: Pressure held steady to slight increase
OFF: Blow built to BOB(11") at 11 min - (Built to 36")
FSI: Pressure held steady

Rec	Feet of	%gas	%oil	%water	%mud
90	mcw w/trace oil	trace		84	16
500	smcw w/trace oil	trace		96	4

Rec Total 590 BHT 124 Gravity API RW .238 @ 31.7° F Chlorides 71,000 ppm

(A) Initial Hydrostatic <u>1779</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>7:15</u>
(B) First Initial Flow <u>29</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>8:44</u>
(C) First Final Flow <u>131</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>13:00</u>
(D) Initial Shut-In <u>1121</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>16:02</u>
(E) Second Initial Flow <u>141</u>	<input type="checkbox"/> Hourly Standby <u>?</u>	T-Out <u>21:00</u>
(F) Second Final Flow <u>285</u>	<input checked="" type="checkbox"/> Mileage <u>86 RT</u> 86	Comments <u>Big on hold due to wind - started out again around 19:00</u>
(G) Final Shut-In <u>1113</u>	<input checked="" type="checkbox"/> Sampler <u>250</u>	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>1776</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
Initial Open <u>15</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder	Total <u>1711</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1711</u>	

Approved By _____

Our Representative James Winder

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING, INC.

1515 Commerce Parkway • Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 63366 Date 3-6-18
 Company Name Pioneer Oil Co. Inc
 Lease Clark Unit #1-5 Test No. 3
 County Sheridan Sec. 5 Twp. 9s Rng. 28w

SAMPLER RECOVERY

Gas _____ ML
 Oil _____ ML
 Mud _____ ML
 Water 2300 mL 99%w 1%o ML
 Other Trace of oil ML
 Pressure 270 PSI ML
 Total 2300 ML

PIT MUD ANALYSIS

Chlorides 500 ppm.
 Resistivity _____ ohms @ _____ F
 Viscosity 49
 Mud Weight 9.0
 Filtrate 7.2
 Other _____

SAMPLER ANALYSIS

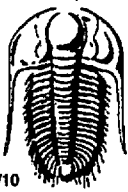
Resistivity .226 ohms @ 33.9 F
 Chlorides 70,000 ppm.
 Gravity _____ corrected @60F

PIPE RECOVERY

TOP
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.

MIDDLE
 Resistivity .238 ohms @ 31.7 F
 Chlorides _____ ppm.

BOTTOM
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63367

Well Name & No. ~~XXXX~~-Clark Unit #1-5 Test No. 4 Date 3-7-18
 Company Pioneer Oil Co Inc Elevation 2738 KB 2730 GL
 Address 400 Main St. PO Box 237 Vincennes IN 47501
 Co. Rep / Geo. Jim Musgrove Rig Discovery #1
 Location: Sec. 5 Twp. 9s Rge. 28w Co. Sheridan State KS

Interval Tested 3810-3830 Zone Tested Toronto
 Anchor Length 20 Drill Pipe Run 3497 Mud Wt. 9.0
 Top Packer Depth 3805 Drill Collars Run - Vis 49
 Bottom Packer Depth 3810 Wt. Pipe Run 311 WL 7.2
 Total Depth 3830 Chlorides 500 ppm System LCM 2 1/2

Blow Description IF: Blow built to 2 1/2"
 IST: Blowback built to 1/2"
 FF: Blow built to 2 1/2"
 FSI: Blowback built ~~to~~ about a 1/2"

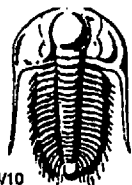
Rec	Feet of	%gas	%oil	%water	%mud
56	WCM w/trace oil	trace	10	90	

Rec Total 56 BHT 113 Gravity API RW 325 @ 39.5 °F Chlorides 40000 ppm

(A) Initial Hydrostatic 1841	<input checked="" type="checkbox"/> Test 1050	T-On Location 3:45
(B) First Initial Flow 16	<input checked="" type="checkbox"/> Jars 250	T-Started 3:55
(C) First Final Flow 27	<input checked="" type="checkbox"/> Safety Joint 75	T-Open 5:29
(D) Initial Shut-In 765	<input type="checkbox"/> Circ Sub	T-Pulled 8:34
(E) Second Initial Flow 27	<input type="checkbox"/> Hourly Standby	T-Out 10:30
(F) Second Final Flow 43	<input checked="" type="checkbox"/> Mileage 86RT 86	Comments Found loose hammer union on hose after 2nd closing
(G) Final Shut-In 801	<input checked="" type="checkbox"/> Sampler 250	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic 1829	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
Initial Open 15	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In 30	<input type="checkbox"/> Extra Packer	Sub Total 0
Final Flow 45	<input type="checkbox"/> Extra Recorder	Total 1711
Final Shut-In 90	<input type="checkbox"/> Day Standby	MP/DST Disc't
	<input type="checkbox"/> Accessibility	
	Sub Total 1711	

Approved By _____ Our Representative James Winder

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63368

Well Name & No. Clark Unit #1-5 Test No. 5 Date 3-7-18
 Company Pioneer Oil Co. Inc Elevation 2738 KB 2730 GL
 Address 400 main St PO Box 237 Vincennes IN 47501
 Co. Rep / Geo. Jim Musgrave Rig Discovery #1
 Location: Sec. 5 Twp. 9s Rge. 28w Co. Sheridan State KS

Interval Tested 3832 - 3845 Zone Tested LKC "A"
 Anchor Length 13 Drill Pipe Run 3497 Mud Wt. 9.1
 Top Packer Depth 3827 Drill Collars Run - Vis 47
 Bottom Packer Depth 3832 Wt. Pipe Run 311 WL 7.2
 Total Depth 3845 Chlorides 500 ppm System LCM 2 1/2

Blow Description IF: Blow built to BOB(11") at 7min. (Blow built to ~~21 1/2"~~)
ISI: Blowback built 4"
FF: Blow built to BOB at 10min (Blow built to 38")
FST: Blowback built to ~~6 1/2"~~

Rec	Feet of	%gas	%oil	%water	%mud
<u>310</u>	<u>CGO</u>	<u>13</u>	<u>86</u>	<u>-</u>	<u>1</u>
<u>40</u>	<u>GOCM</u>	<u>20</u>	<u>28</u>	<u>-</u>	<u>52</u>
<u> </u>	<u>GIP= 410'</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Rec Total 350 BHT 121 Gravity 35.8 API RW @ °F Chlorides ppm
 (A) Initial Hydrostatic 1850 Test 1050 T-On Location 16:35 27
 (B) First Initial Flow 21 Jars 250 T-Started 17:26
 (C) First Final Flow 67 Safety Joint 75 T-Open 19:28
 (D) Initial Shut-In 888 Circ Sub T-Pulled 22:31
 (E) Second Initial Flow 73 Hourly Standby T-Out 00:45 3/8
 (F) Second Final Flow 144 Mileage 86 RT 86
 (G) Final Shut-In 713 Sampler 250
 (H) Final Hydrostatic 1809 Straddle
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility
 Sub Total 1711

Initial Open 15
 Initial Shut-In 30
 Final Flow 45
 Final Shut-In 90

Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1711
 MP/DST Disc't

Approved By _____ Our Representative James Under

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TRILOBITE TESTING, INC.

1515 Commerce Parkway • Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 63368 Date 3-7-18
 Company Name Pioneer Oil Co. Inc
 Lease Clark Unit #1-5 Test No. 5
 County Sheridan Sec. 5 Twp. 9S Rng. 28W

SAMPLER RECOVERY

Gas _____ ML
 Oil 2200 99% 1% m ML
 Mud _____ ML
 Water _____ ML
 Other _____ ML
 Pressure 300 PSI ML
 Total 2200 ML

PIT MUD ANALYSIS

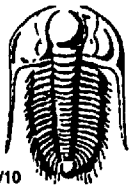
Chlorides 500 ppm.
 Resistivity _____ ohms @ _____ F
 Viscosity 47
 Mud Weight 9.1
 Filtrate 7.2
 Other _____

SAMPLER ANALYSIS

Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.
 Gravity 35.8 corrected @60F

PIPE RECOVERY

TOP
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.
MIDDLE
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.
BOTTOM
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63369

Well Name & No. Clark Unit #1-5 Test No. 6 Date 3-8-18
 Company Pioneer Oil Co. Inc Elevation 2738 KB 2730 GL
 Address 400 Main St PO Box 237 Vincennes IN 47501
 Co. Rep / Geo. Jim Musgrove Rig Discovery #1
 Location: Sec. 5 Twp. 9s Rge. 28w Co. Sheridan State KS

Interval Tested 3861 - 3879 Zone Tested LKC "C"
 Anchor Length 18 Drill Pipe Run 3528 Mud Wt. 9.0
 Top Packer Depth 3856 Drill Collars Run - Vis 52
 Bottom Packer Depth 3861 Wt. Pipe Run 311 WL 6.4
 Total Depth 3879 Chlorides 500 ppm System LCM 2

Blow Description IF: Blow built to 3 3/4"
ISI: Blowback built to 1/2"
FF: Blow built to 11 3/4"
FSI: Blowback built ~~10~~ 1 1/4"

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>SMCO</u>	<u>2</u>	<u>90</u>	<u>-</u>	<u>8</u>
<u>60</u>	<u>OM</u>	<u>5</u>	<u>40</u>	<u>-</u>	<u>55</u>
<u> </u>	<u>GIP=100'</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Rec Total 100 BHT 113 Gravity 32.4 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 1860 Test 1050 T-On Location 8:10
 (B) First Initial Flow 17 Jars 250 T-Started 9:28
 (C) First Final Flow 30 Safety Joint 75 T-Open 11:23
 (D) Initial Shut-In 1121 Circ Sub T-Pulled 14:27
 (E) Second Initial Flow 33 Hourly Standby T-Out 16:45
 (F) Second Final Flow 59 Mileage 86 RT X 2 172 Comments
 (G) Final Shut-In 1135 Sampler 250
 (H) Final Hydrostatic 1845 Straddle
 Ruined Shale Packer
 Ruined Packer
 Extra Copies

Initial Open 15 Extra Packer
 Initial Shut-In 30 Extra Recorder
 Final Flow 45 Day Standby
 Final Shut-In 90 Accessibility
 Sub Total 1797 Sub Total 1797 MP/DST Disc't

Approved By [Signature] Our Representative James Winder

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TRILOBITE TESTING, INC.

1515 Commerce Parkway • Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 63369 Date 3-8-18
 Company Name Pioneer Oil Co. Inc
 Lease Clark Unit #1-5 Test No. 6
 County Sheridan Sec. 5 Twp. 9s Rng. 28w

SAMPLER RECOVERY

Gas _____ ML
 Oil 1100ml 97%o 3%o ML
 Mud _____ ML
 Water _____ ML
 Other 1000ml OWM 38%o 37%ow 22%o ~~3%o~~ ML
 Pressure 320 ML
 Total 2100 ML

PIT MUD ANALYSIS

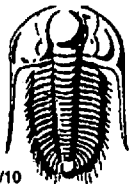
Chlorides 500 ppm.
 Resistivity _____ ohms @ _____ F
 Viscosity 52
 Mud Weight 9.0
 Filtrate 6.4
 Other _____

SAMPLER ANALYSIS

Resistivity 0.242 ohms @ 73.4 F
 Chlorides 29000 ppm.
 Gravity 32.4 corrected @60F

PIPE RECOVERY

TOP
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.
MIDDLE
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.
BOTTOM
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63370

Well Name & No. Clark Unit #1-5 Test No. 7 Date 3-11-18
 Company Pioneer Oil Co. Inc Elevation 2738 KB 2730 GL
 Address 400 Main St. PO Box 237 Vincennes IN 47501
 Co. Rep / Geo. Keith Reavis Rig Discovery #1
 Location: Sec. 5 Twp. 9S Rge. 28W Co. Sheridan State KS

Interval Tested 3854 - 3890 Zone Tested LKC "D"
 Anchor Length 36 Anchor 688 Tail Drill Pipe Run 3538 Mud Wt. 9.4
 Top Packer Depth 3849 - 3854 Drill Collars Run - Vis 53
 Bottom Packer Depth 3890 (shale) Wt. Pipe Run 311 WL 7.2
 Total Depth 4578 Chlorides 800 ppm System LCM 5
 Blow Description IF: Blow built to BOB (11") at 6 1/4 min. - Built to 28 1/2"
ISI: Blowback built about 5 1/2"
FF: Blow built to BOB at 8 min. - Built to 73"
FSI: Blowback built to 9 1/2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>415</u>	<u>CGO</u>	<u>12</u>	<u>88</u>		
<u>10</u>	<u>SW/GOM</u>	<u>27</u>	<u>32</u>	<u>7</u>	<u>34</u>
<u>125</u>	<u>GOWCM</u>	<u>20</u>	<u>11</u>	<u>20</u>	<u>49</u>
	<u>GIP = 640'</u>				

Rec Total 550 BHT 115 Gravity 36.6 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 1928 Test 1150 T-On Location ~~14:15~~ 3/11
 (B) First Initial Flow 28 Jars 250 T-Started ~~16:40~~ 17:40
 (C) First Final Flow 106 Safety Joint 75 T-Open 20:28
 (D) Initial Shut-In 1187 Circ Sub _____ T-Pulled 23:32
 (E) Second Initial Flow 114 Hourly Standby _____ T-Out 2:00 3/12
 (F) Second Final Flow 227 Mileage 86 RT 86 Comments I went to rig early
 (G) Final Shut-In 1167 Sampler 250 unable to check chlorides
 (H) Final Hydrostatic 1924 Straddle 600
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 15 Shale Packer _____
 Initial Shut-In 30 Extra Packer _____
 Final Flow 45 Extra Recorder _____
 Final Shut-In 90 Day Standby _____
 Accessibility _____
 Sub Total 2411 Sub Total 2411 MP/DST Disc't _____

Approved By _____ Our Representative James Windsor
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TRILOBITE TESTING, INC.

1515 Commerce Parkway • Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 63370 Date 3-11-18
 Company Name Pioneer Oil Co. Inc.
 Lease Clark Unit #1-5 Test No. 7
 County Sheridan Sec. 5 Twp. 9S Rng. 28W

SAMPLER RECOVERY

Gas _____ ML
 Oil 1100ml 99% 1%om ML
 Mud _____ ML
 Water _____ ML
 Other 300ml SMWCO 92% 6%om 2%ow ML
 Pressure 370 PSI ML
 Total 1400 ML

PIT MUD ANALYSIS

Chlorides 800 ppm.
 Resistivity _____ ohms @ _____ F
 Viscosity 53
 Mud Weight 9.4
 Filtrate 7.2
 Other _____

SAMPLER ANALYSIS

Resistivity _____ ohms @ _____ F
 Chlorides unable to check ppm.
 Gravity 3606 corrected @60F

PIPE RECOVERY

TOP
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.

MIDDLE
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.

BOTTOM
 Resistivity _____ ohms @ _____ F
 Chlorides _____ ppm.