



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **King Oil Operation**

1746 150th Ave.
Ellis KS 67637

ATTN: Charlie Sturdavant

Weiland Weber #1 36

36-12s-32w Logan,KS

Start Date: 2015.11.14 @ 16:25:15

End Date: 2015.11.15 @ 00:39:15

Job Ticket #: 64486 DST #: 1

Trilobite Testing, Inc

1515 Commerce Parkway Hays, KS 67601

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

Printed: 2015.11.16 @ 15:03:38

King Oil Operation
36-12s-32w Logan,KS
Weiland Weber #1 36
DST # 1
Johnson
2015.11.14



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

King Oil Operation

36-12s-32w Logan,KS

1746 150th Ave.
Ellis KS 67637

Weiland Weber #1 36

Job Ticket: 64486

DST#: 1

ATTN: Charlie Sturdavant

Test Start: 2015.11.14 @ 16:25:15

GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:08:15

Time Test Ended: 00:39:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 65

Interval: **4500.00 ft (KB) To 4581.00 ft (KB) (TVD)**

Reference Elevations: 2984.00 ft (KB)

Total Depth: 4581.00 ft (KB) (TVD)

2976.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8846

Inside

Press@RunDepth: 197.57 psig @ 4505.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.11.14

End Date:

2015.11.15

Last Calib.: 2015.11.15

Start Time: 16:25:15

End Time:

00:39:15

Time On Btm: 2015.11.14 @ 19:07:15

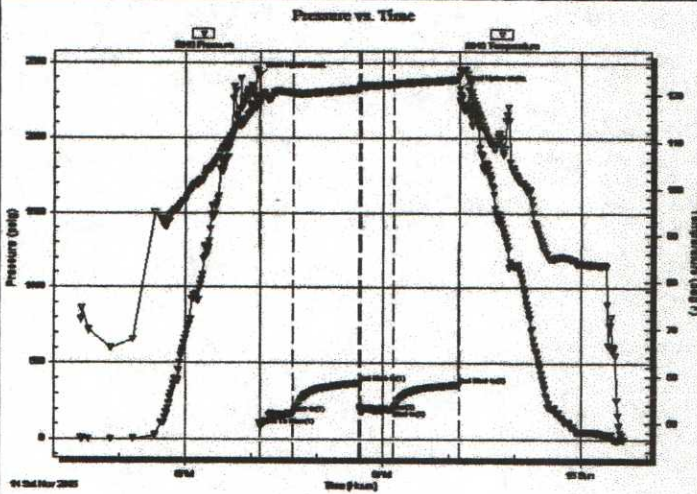
Time Off Btm: 2015.11.14 @ 22:10:30

TEST COMMENT: IF:BOB in 3 min.

IS:Built to 3" blow and died in 27 min.

FF:BOB in 1 min.

FS:Bu and died in 19 min.ilt to 1 1/4" blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2408.21	117.98	Initial Hydro-static
1	90.65	119.49	Open To Flow (1)
31	170.71	120.45	Shut-In(1)
91	373.42	121.28	End Shut-In(1)
92	187.07	121.94	Open To Flow (2)
122	197.57	122.27	Shut-In(2)
182	362.15	123.31	End Shut-In(2)
184	2323.90	125.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
102.00	ocm 100%o trace of oil	1.28
62.00	gcom 10g 30%o 60%m	0.78
62.00	mcgo 20%m 40%g 40%o	0.78
124.00	ocg 40%o 60%g	1.60

Gas Rates

	Choke (Inches)	Pressure (psig)	Gas Rate (MMcf/d)



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TOOL DIAGRAM

King Oil Operation

36-12s-32w Logan, KS

1746 150th Ave.
Ellis KS 67637

Weiland Weber #1 36

Job Ticket: 64486

DST#: 1

ATTN: Charlie Sturdavant

Test Start: 2015.11.14 @ 16:25:15

Tool Information

Drill Pipe:	Length: 4170.00 ft	Diameter: 3.80 inches	Volume: 58.49 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 320.00 ft	Diameter: 3.60 inches	Volume: 4.03 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 85000.00 lb
		Total Volume:	62.52 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4500.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	81.00 ft			
Tool Length:	109.00 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			4473.00	
Shut In Tool	5.00			4478.00	
Hydraulic tool	5.00			4483.00	
Jars	5.00			4488.00	
Safety Joint	3.00			4491.00	
Packer	5.00			4496.00	28.00 Bottom Of Top Packer
Packer	4.00			4500.00	
Stubb	1.00			4501.00	
Perforations	4.00			4505.00	
Recorder	0.00	8846	Inside	4505.00	
Recorder	0.00	8737	Outside	4505.00	
Change Over Sub	1.00			4506.00	
Drill Pipe	64.00			4570.00	
Change Over Sub	1.00			4571.00	
Perforations	5.00			4576.00	
Bullnose	5.00			4581.00	81.00 Bottom Packers & Anchor
Total Tool Length:	109.00				



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FLUID SUMMARY

King Oil Operation

36-12s-32w Logan,KS

1746 150th Ave.
Ellis KS 67637

Weiland Weber #1 36

Job Ticket: 64486

DST#: 1

ATTN: Charlie Sturdavant

Test Start: 2015.11.14 @ 16:25:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
102.00	ocm 100%o trace of oil	1.284
62.00	gcom 10g 30%o 60%m	0.781
62.00	mcgo 20%m 40%g 40%o	0.781
124.00	ocg 40%o 60%g	1.604

Total Length: 350.00 ft

Total Volume: 4.450 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

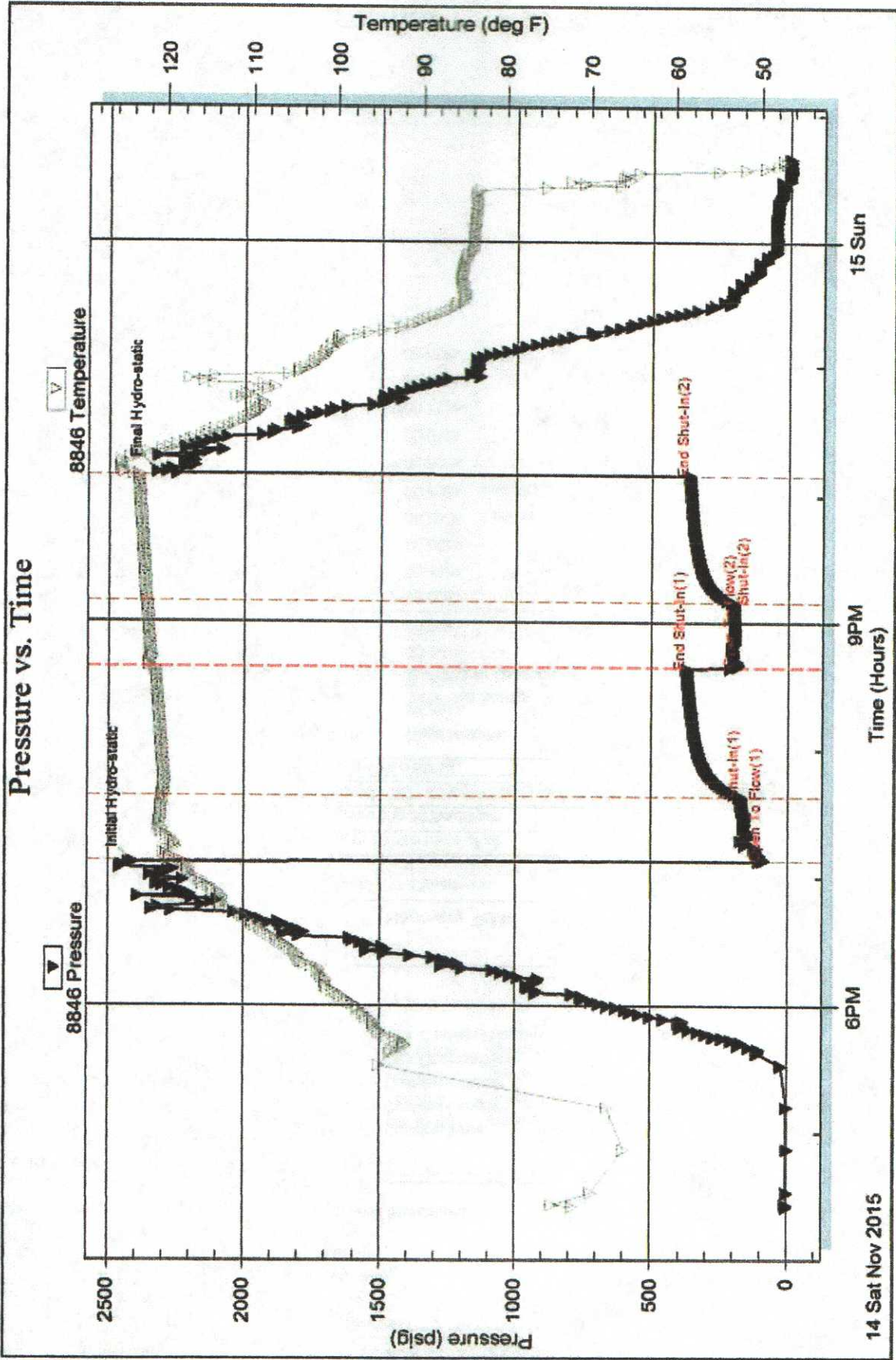
Serial #: 8846

Inside

King Oil Operation

Welland Weber #1 36

DST Test Number: 1

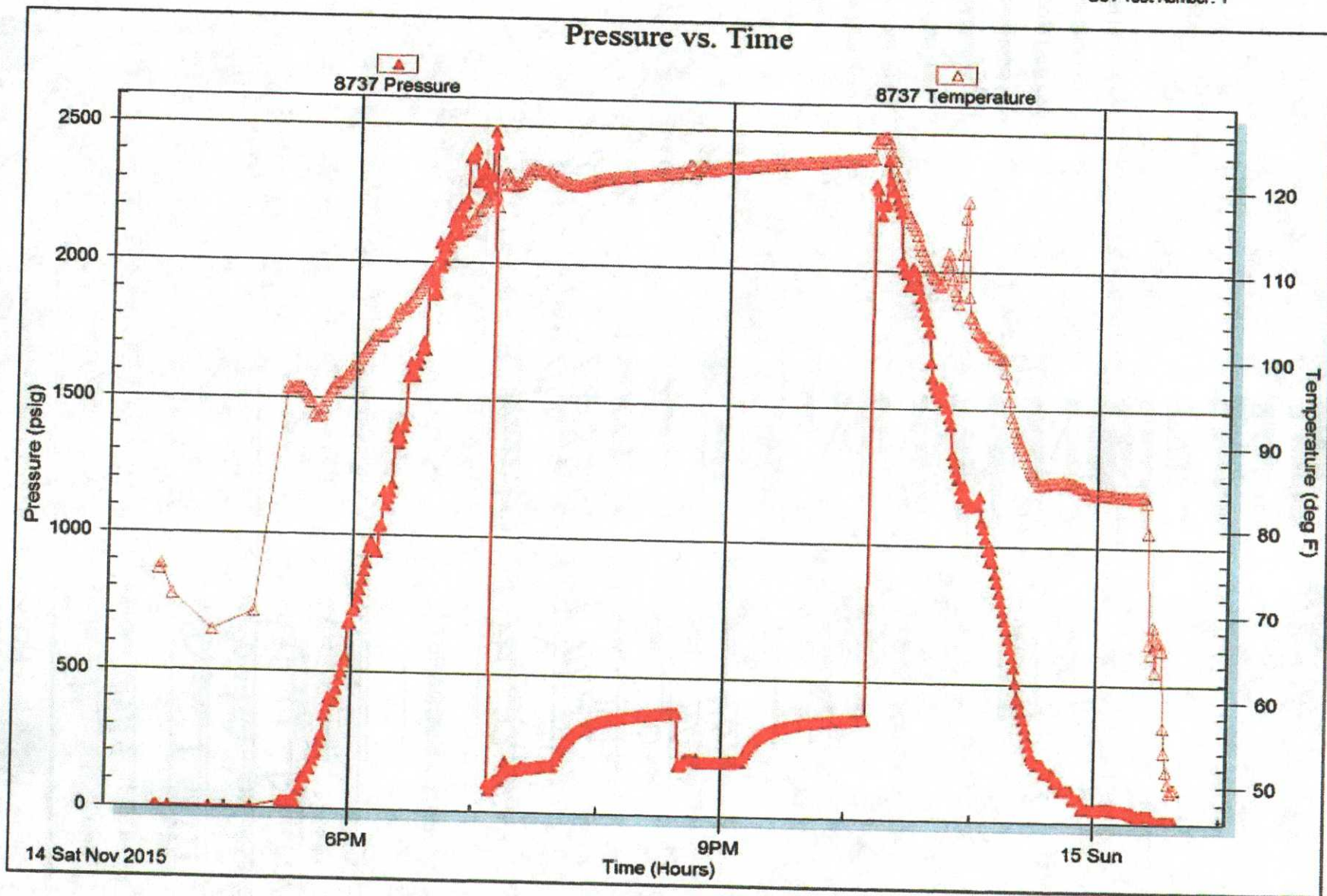


Serial #: 8737

Outside King Oil Operation

Weiland Weber #1 36

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64486

Well Name & No. Weiland - Weber #1-36 Test No. 1 Date 11-14-15
 Company King Oil Operation Elevation 2984 KB 2976 GL
 Address 1746 150th Ave Ellis KS 67637
 Co. Rep / Geo. Charlie Sturdavant Rig Disco 1
 Location: Sec. 36 Twp. 12 Rge. 32 Co. Logan State KS

Interval Tested 4500-4581 Zone Tested Johnson
 Anchor Length 81 Drill Pipe Run 4170 Mud Wt. 9.4
 Top Packer Depth 4495 Drill Collars Run φ Vis 50
 Bottom Packer Depth 4500 Wt. Pipe Run 320 WL 8.8
 Total Depth 4581 Chlorides 3000 ppm System LCM 1.5

Blow Description IF: BOB in 3 Min
IS: Built to 3" Blow & Died in 27 Min
FF: BOB in 1 Min
FS: Built to 1 1/4 & Died in 19 Min

Rec	Feet of	%gas	%oil	%water	%mud
<u>102</u>	<u>DCM trace of oil</u>			<u>100</u>	
<u>62</u>	<u>GCOM</u>	<u>10</u>	<u>30</u>	<u>60</u>	
<u>62</u>	<u>MCGO</u>	<u>40</u>	<u>40</u>	<u>20</u>	
<u>124</u>	<u>OCG</u>	<u>60</u>	<u>40</u>		
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total BHT 123 Gravity API RW @ °F Chlorides ppm
 (A) Initial Hydrostatic 2408 Test \$1150.⁰⁰ T-On Location 13:00
 (B) First Initial Flow 90 Jars \$250.⁰⁰ T-Started 16:25
 (C) First Final Flow 170 Safety Joint \$75.⁰⁰ T-Open 19:08
 (D) Initial Shut-In 373 Circ Sub NC T-Pulled 22:08
 (E) Second Initial Flow 187 Hourly Standby _____ T-Out 00:39
 (F) Second Final Flow 197 Mileage 82RT = \$82.⁰⁰+82 Comments Lead tools
 (G) Final Shut-In 362 Sampler \$250.⁰⁰ 11-15-15 20:00
 (H) Final Hydrostatic 2323 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____
 Day Standby _____ 1889
 Accessibility _____
 Sub Total \$807.⁰⁰ MP/DST Disc't _____

Initial Open 30
 Initial Shut-In 60
 Final Flow 30
 Final Shut-In 60

Approved By _____ Our Representative M. Roberts
 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.

P.O. Box 362 • Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 64486 Date 11-14-15
 Company Name King Oil Operation
 Lease Weiland-Weber #1-36 Test No. 1
 County Logan Sec. 36 Twp. 12 Rng. 32

SAMPLER RECOVERY

Gas 1200 60% ML
 Oil 800 40% ML
 Mud — ML
 Water — ML
 Other — ML
 Pressure — ML
 Total 2000 ML

PIT MUD ANALYSIS

Chlorides 3000 ppm.
 Resistivity 0 ohms @ — F
 Viscosity 50
 Mud Weight 9.4
 Filtrate 8.8
 Other LCM 1.5

SAMPLER ANALYSIS

Resistivity — ohms @ — F
 Chlorides NA ppm.
 Gravity — corrected @60F

PIPE RECOVERY

~~TOP
 Resistivity — ohms @ — F
 Chlorides — ppm.
 MIDDLE
 Resistivity — ohms @ — F
 Chlorides — ppm.
 BOTTOM
 Resistivity — ohms @ — F
 Chlorides — ppm.~~