

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Landmark Resources, Inc.
Well Name	GERSTBERGER UNIT 1-20
Doc ID	1455992

All Electric Logs Run

Gamma Ray/ Caliper
Dual Induction
Dual Comp Porosity
Microresistivity
Radial Bond with Gamma Ray
Borehole Compensated Sonic

Form	ACO1 - Well Completion
Operator	Landmark Resources, Inc.
Well Name	GERSTBERGER UNIT 1-20
Doc ID	1455992

Tops

Name	Top	Datum
Anhydrite	2373	857
B/Anhydrite	2390	839
Topeka	3626	-395
Heebner	3962	-635
Toronto	3876	-648
Lansing	3905	-677
C	3946	-721
D	3960	-736
E	3996	-771
F	4006	-779
G	4019	-793
Munice Creek	4084	-861
H	4092	-869
I	4127	-908
J	4166	-933
Stark Shale	4188	-959
K	4196	-969
L	4235	-1008
BKC	4281	-1053
Marmaton	4348	-1119
Altamont	4373	-1145
Pawnee	4423	-1192
Myrick Station	4454	-1229
Fort Scott	4471	-1242

Form	ACO1 - Well Completion
Operator	Landmark Resources, Inc.
Well Name	GERSTBERGER UNIT 1-20
Doc ID	1455992

Tops

Name	Top	Datum
Cherokee	4499	-1270
Johnson Zone	4592	-1365
Morrow Shale	4654	-1428
Upper Morrow Sd	4718	-1491
Missippian	4729	-1507



HURRICANE SERVICES INC

Remit To: Hurricane Services, Inc.
250 N. Water, Suite 200
Wichita, KS 67202
316-303-9515

Customer:

LANDMARK RESOURCES INC
4900 WOODWAY DR
SUITE 880
HOUSTON, TX 77056

71730

Invoice Date: 3/20/2019
Invoice #: 0340978
Lease Name: Gerstberger Unit
Well #: 1-20 (New)
County: Wichita
Job Number: ICT1852

Date/Description	HRS/QTY	Rate	Total
Surface-New well	0.000	0.000	0.00
Heavy Eq Mileage	85.000	3.600	306.00
Light Eq Mileage	85.000	1.800	153.00
Ton Mileage	845.000	1.350	1,140.75
Cement Pump 230	1.000	675.000	675.00
H-325	200.000	18.000	3,600.00

RECEIVED
APR 01 ENT'D

Pa.
54481
\$36,467.27

Total 5,874.75

TERMS: Net 30 days. Interest may be charged on past due invoice at rate of 1 1/2% per month or maximum allowed by applicable state or federal laws. HSI has right to revoke any discounts applied in arriving at net invoice price if invoice is past due. If revoked, full invoice price without discount plus additional sales tax, as applicable, is due immediately and subject to interest charges. Customer agrees to pay all collection costs directly or indirectly incurred by HSI in the event HSI engages a third party to pursue collection of past due invoice.

SALES TAX: Services performed on oil, gas and water wells in Kansas are subject to sales tax, with certain exceptions. HSI relies on the well information provided by the customer in identifying whether the services performed on wells qualify for exemption.

WE APPRECIATE YOUR BUSINESS!



DRILL STEM TEST REPORT

Prepared For: **Landmark Resources**

4900 Woodway Dr Suite 880
Houston, TX 77056

ATTN: Terry Mcleod

20-17-36w Wichita,KS

Gerstberger Unit #1-20

Start Date: 2019.03.24 @ 16:24:29

End Date: 2019.03.24 @ 23:36:29

Job Ticket #: 65160 DST #: 1

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

Printed: 2019.03.29 @ 15:01:46



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Landmark Resources
4900 Woodway Dr Suite 880
Houston, TX 77056
ATTN: Terry Mcleod

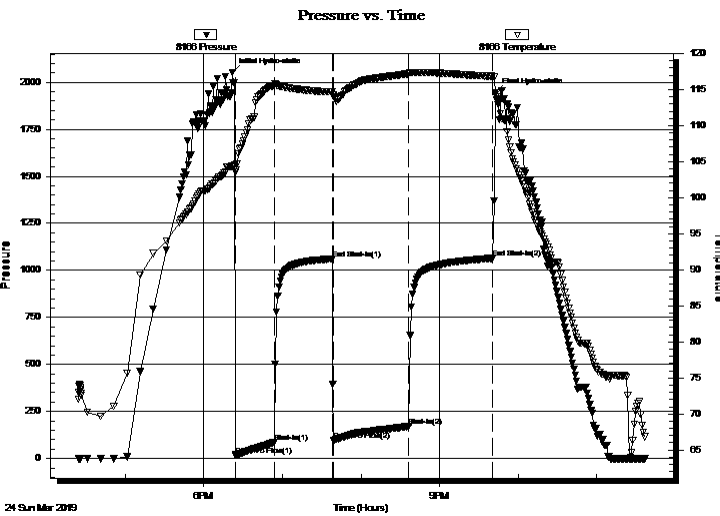
Gerstberger Unit #1-20
20-17-36w Wichita,KS
Job Ticket: 65160 **DST#: 1**
Test Start: 2019.03.24 @ 16:24:29

GENERAL INFORMATION:

Formation: **LKC F**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:23:59
Time Test Ended: 23:36:29
Interval: **3982.00 ft (KB) To 4018.00 ft (KB) (TVD)**
Total Depth: 4018.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Brandon Turley
Unit No: 79
Reference Elevations: 3231.00 ft (KB)
3220.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8166 Outside
Press@RunDepth: 170.08 psig @ 3983.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2019.03.24 End Date: 2019.03.24 Last Calib.: 2019.03.24
Start Time: 16:24:34 End Time: 23:36:28 Time On Btm: 2019.03.24 @ 18:21:59
Time Off Btm: 2019.03.24 @ 21:42:29

TEST COMMENT: IF: 1/4" blow built to 5 1/2"
IS: No return.
FF: 1/4" blow built to 9"
FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2052.24	104.44	Initial Hydro-static
2	18.09	103.51	Open To Flow (1)
32	87.28	115.58	Shut-In(1)
76	1060.74	114.67	End Shut-In(1)
77	97.13	114.25	Open To Flow (2)
135	170.08	117.18	Shut-In(2)
199	1064.34	116.85	End Shut-In(2)
201	1946.50	114.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
335.00	mcw 95%w 5%m	2.22

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Landmark Resources

Gerstberger Unit #1-20

4900 Woodway Dr Suite 880
Houston, TX 77056

20-17-36w Wichita,KS

ATTN: Terry Mcleod

Job Ticket: 65160

DST#: 1

Test Start: 2019.03.24 @ 16:24:29

Tool Information

Drill Pipe:	Length: 3698.00 ft	Diameter: 3.80 inches	Volume: 51.87 bbl	Tool Weight:	2000.00 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: 272.00 ft	Diameter: 2.25 inches	Volume: 1.34 bbl	Weight to Pull Loose:	75000.00 lb
			<u>Total Volume: 53.21 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	66000.00 lb
Depth to Top Packer:	3982.00 ft			Final	66000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	36.00 ft				
Tool Length:	63.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Stubb	1.00			3956.00	
Shut In Tool	5.00			3961.00	
Hydraulic tool	5.00			3966.00	
Jars	5.00			3971.00	
Safety Joint	2.00			3973.00	
Packer - Shale	5.00			3978.00	
Packer	4.00			3982.00	27.00 Bottom Of Top Packer
Stubb	1.00			3983.00	
Recorder	0.00	6651	Inside	3983.00	
Recorder	0.00	8166	Outside	3983.00	
Perforations	30.00			4013.00	
Bullnose	5.00			4018.00	36.00 Anchor Tool

Total Tool Length: 63.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Landmark Resources
4900 Woodway Dr Suite 880
Houston, TX 77056
ATTN: Terry Mcleod

Gerstberger Unit #1-20
20-17-36w Wichita,KS
Job Ticket: 65160 **DST#: 1**
Test Start: 2019.03.24 @ 16:24:29

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: 26000 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.19 in ³	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

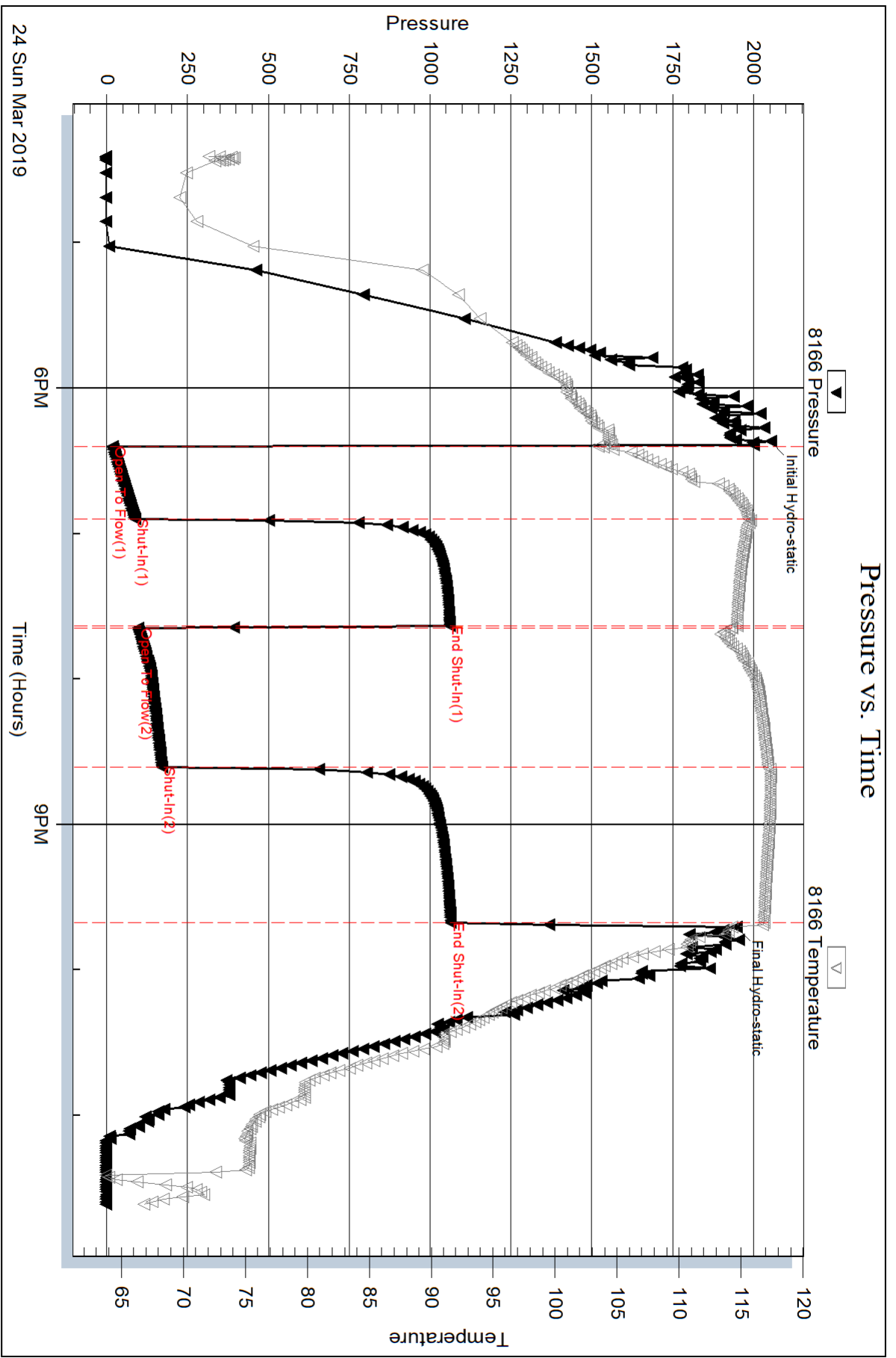
Length ft	Description	Volume bbl
335.00	mcw 95%w 5%m	2.221

Total Length: 335.00 ft Total Volume: 2.221 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: .37@48=26000



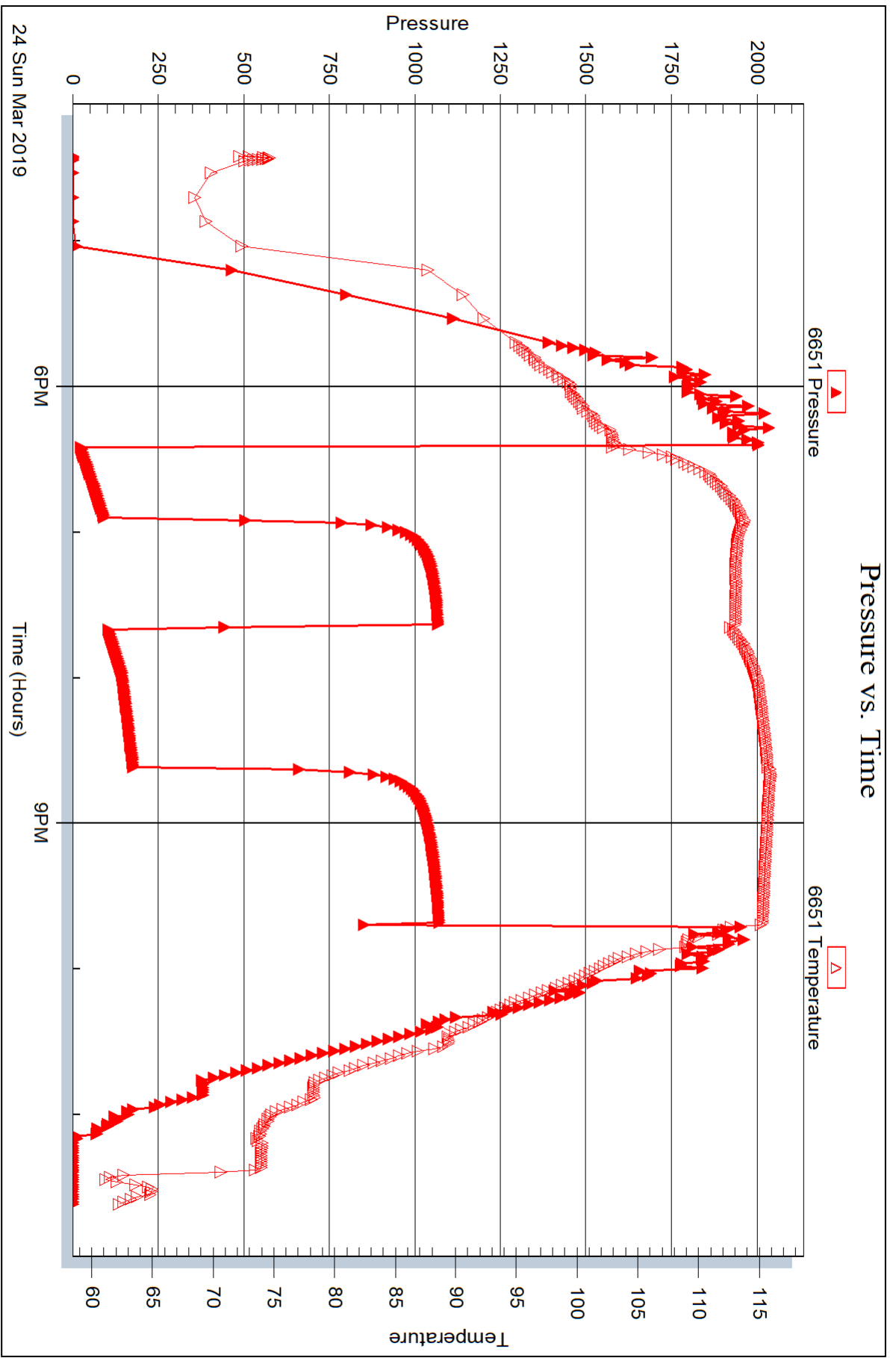
Serial #: 6651

Inside

Landmark Resources

20-17-36w Wichita, KS

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Landmark Resources**

4900 Woodway Dr Suite 880
Houston, TX 77056

ATTN: Terry Mcleod

20-17-36w Wichita,KS

Gerstberger Unit #1-20

Start Date: 2019.03.25 @ 13:14:12

End Date: 2019.03.25 @ 21:37:12

Job Ticket #: 65161 DST #: 2

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

Printed: 2019.03.29 @ 15:01:15

Landmark Resources

Gerstberger Unit #1-20

20-17-36w Wichita,KS

DST # 2

LKC I

2019.03.25



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Landmark Resources
 4900 Woodway Dr Suite 880
 Houston, TX 77056
 ATTN: Terry Mcleod

Gerstberger Unit #1-20
20-17-36w Wichita,KS
 Job Ticket: 65161 **DST#: 2**
 Test Start: 2019.03.25 @ 13:14:12

GENERAL INFORMATION:

Formation: **LKC I**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 15:03:12 Tester: Brandon Turley
 Time Test Ended: 21:37:12 Unit No: 79
 Interval: **4105.00 ft (KB) To 4145.00 ft (KB) (TVD)** Reference Elevations: 3231.00 ft (KB)
 Total Depth: 4145.00 ft (KB) (TVD) 3220.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 11.00 ft

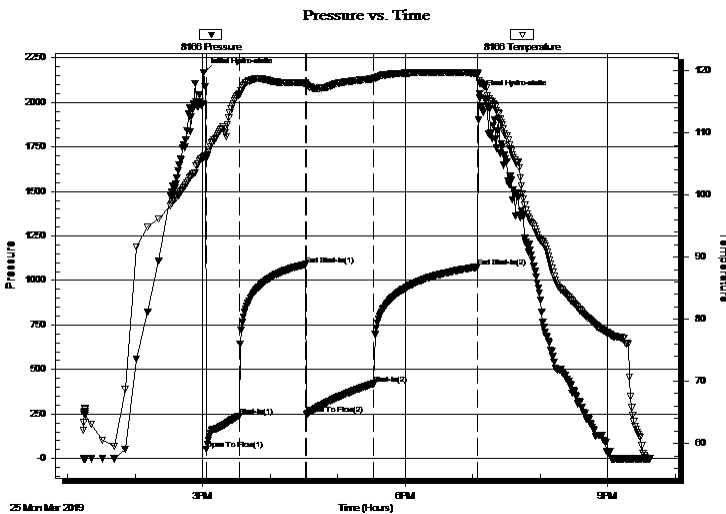
Serial #: 8166

Outside

Press@RunDepth: 420.34 psig @ 4106.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2019.03.25 End Date: 2019.03.25 Last Calib.: 2019.03.25
 Start Time: 13:14:17 End Time: 21:37:11 Time On Btm: 2019.03.25 @ 15:01:12
 Time Off Btm: 2019.03.25 @ 19:05:42

TEST COMMENT: IF: BOB in 5 min. 42"
 IS: 2"
 FF: BOB in 7 min. 47"
 FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2168.32	106.10	Initial Hydro-static
2	49.67	105.80	Open To Flow (1)
32	238.07	116.13	Shut-In(1)
90	1089.62	118.03	End Shut-In(1)
91	248.80	117.74	Open To Flow (2)
151	420.34	118.70	Shut-In(2)
243	1074.65	119.63	End Shut-In(2)
245	2045.97	118.39	Final Hydro-static

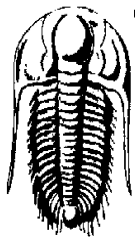
Recovery

Length (ft)	Description	Volume (bbl)
315.00	gocm 10%g 40%o 50%m	1.94
189.00	go 30%g 70%o	2.65
535.00	go 10%g 90%o	7.50
0.00	94 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Landmark Resources
4900 Woodway Dr Suite 880
Houston, TX 77056
ATTN: Terry Mcleod

Gerstberger Unit #1-20
20-17-36w Wichita, KS
Job Ticket: 65161 **DST#: 2**
Test Start: 2019.03.25 @ 13:14:12

GENERAL INFORMATION:

Formation: **LKC I**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:03:12
Time Test Ended: 21:37:12

Test Type: Conventional Bottom Hole (Reset)
Tester: Brandon Turley
Unit No: 79

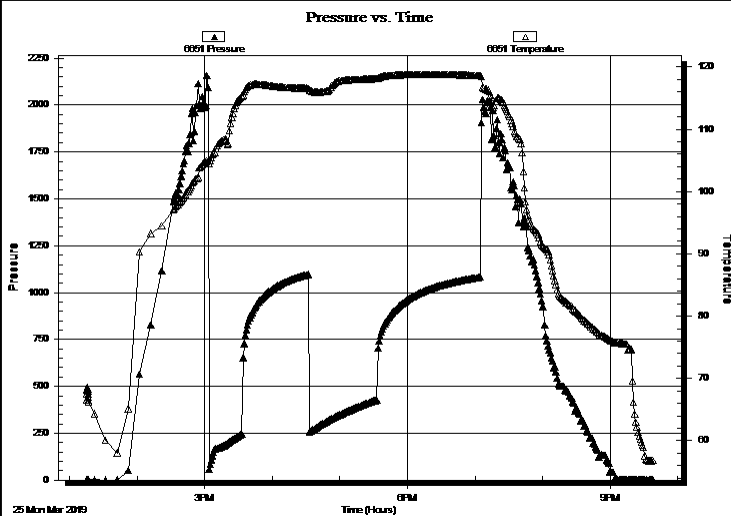
Interval: **4105.00 ft (KB) To 4145.00 ft (KB) (TVD)**
Total Depth: 4145.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3231.00 ft (KB)
3220.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 6651 **Inside**

Press@RunDepth: psig @ 4106.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2019.03.25 End Date: 2019.03.25 Last Calib.: 2019.03.25
Start Time: 13:14:56 End Time: 21:37:50 Time On Btm:
Time Off Btm:

TEST COMMENT: IF: BOB in 5 min. 42"
IS: 2"
FF: BOB in 7 min. 47"
FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
315.00	gocm 10%g 40%o 50%m	1.94
189.00	go 30%g 70%o	2.65
535.00	go 10%g 90%o	7.50
0.00	94 GIP	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

Landmark Resources

Gerstberger Unit #1-20

4900 Woodway Dr Suite 880
Houston, TX 77056

20-17-36w Wichita,KS

Job Ticket: 65161

DST#: 2

ATTN: Terry Mcleod

Test Start: 2019.03.25 @ 13:14:12

Tool Information

Drill Pipe:	Length: 3825.00 ft	Diameter: 3.80 inches	Volume: 53.65 bbl	Tool Weight: 2000.00 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: 272.00 ft	Diameter: 2.25 inches	Volume: 1.34 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 54.99 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4105.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	67.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Stubb	1.00			4079.00	
Shut In Tool	5.00			4084.00	
Hydraulic tool	5.00			4089.00	
Jars	5.00			4094.00	
Safety Joint	2.00			4096.00	
Packer - Shale	5.00			4101.00	
Packer	4.00			4105.00	27.00 Bottom Of Top Packer
Stubb	1.00			4106.00	
Recorder	0.00	6651	Inside	4106.00	
Recorder	0.00	8166	Outside	4106.00	
Perforations	1.00			4107.00	
Change Over Sub	1.00			4108.00	
Drill Pipe	31.00			4139.00	
Change Over Sub	1.00			4140.00	
Bullnose	5.00			4145.00	40.00 Anchor Tool

Total Tool Length: 67.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Landmark Resources
4900 Woodway Dr Suite 880
Houston, TX 77056
ATTN: Terry Mcleod

Gerstberger Unit #1-20
20-17-36w Wichita,KS
Job Ticket: 65161 **DST#: 2**
Test Start: 2019.03.25 @ 13:14:12

Mud and Cushion Information

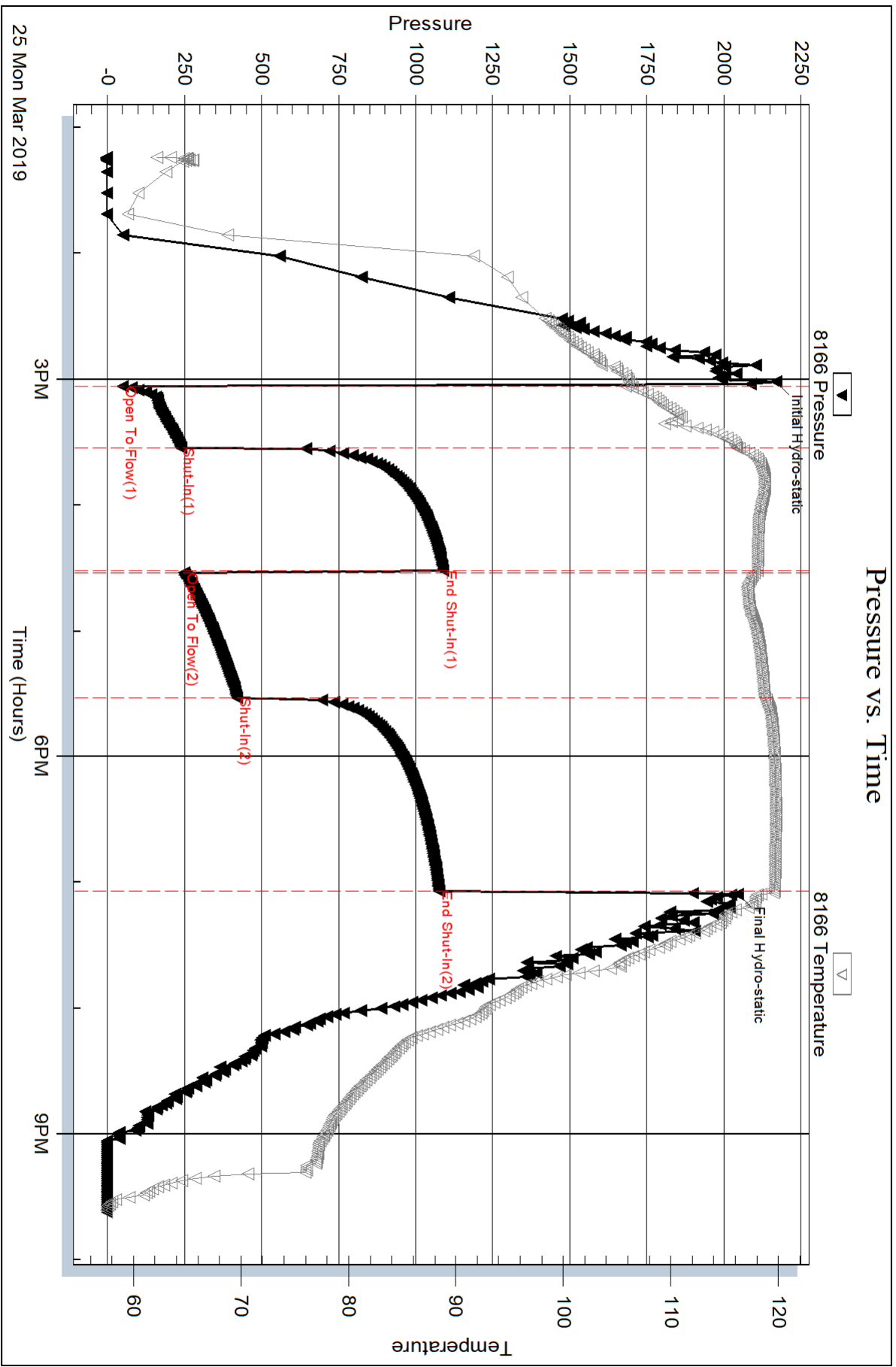
Mud Type: Gel Chem	Cushion Type:	Oil API: 22 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 0 ppm
Viscosity: 71.00 sec/qt	Cushion Volume: bbl	
Water Loss: 9.59 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 10000.00 ppm		
Filter Cake: 1.00 inches		

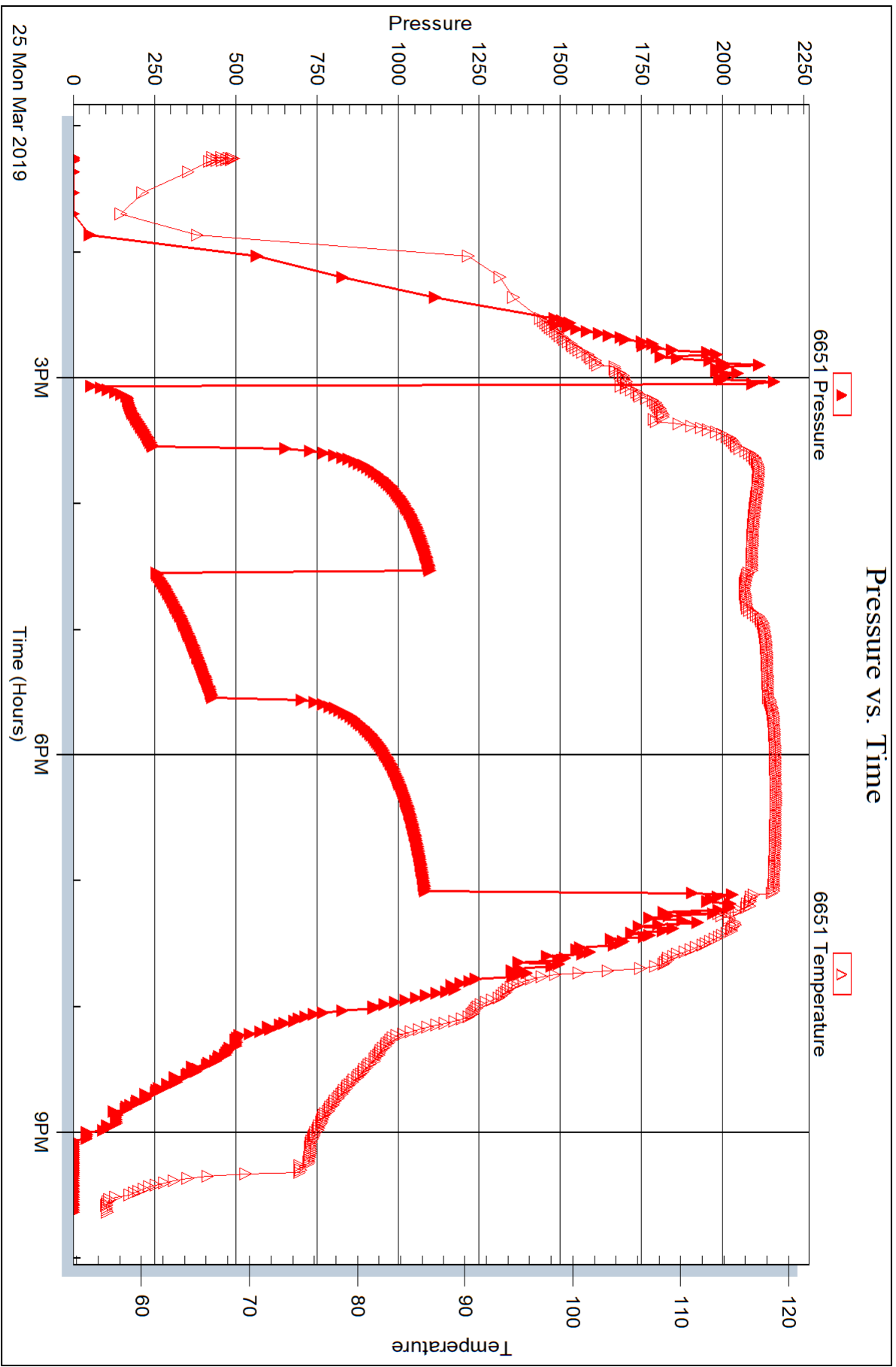
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
315.00	gocm 10%g 40%o 50%m	1.941
189.00	go 30%g 70%o	2.651
535.00	go 10%g 90%o	7.505
0.00	94 GIP	0.000

Total Length: 1039.00 ft Total Volume: 12.097 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: 22@60=22







DRILL STEM TEST REPORT

Prepared For: **Landmark Resources**

4900 Woodway Dr Suite 880
Houston, TX 77056

ATTN: Terry Mcleod

20-17-36w Wichita,KS

Gerstberger Unit #1-20

Start Date: 2019.03.26 @ 19:45:11

End Date: 2019.03.27 @ 03:14:41

Job Ticket #: 65162 DST #: 3

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

Printed: 2019.03.29 @ 14:59:53

Landmark Resources
Gerstberger Unit #1-20
20-17-36w Wichita,KS
DST # 3
Marmaton Altamont
2019.03.26



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Landmark Resources
 4900 Woodway Dr Suite 880
 Houston, TX 77056
 ATTN: Terry Mcleod

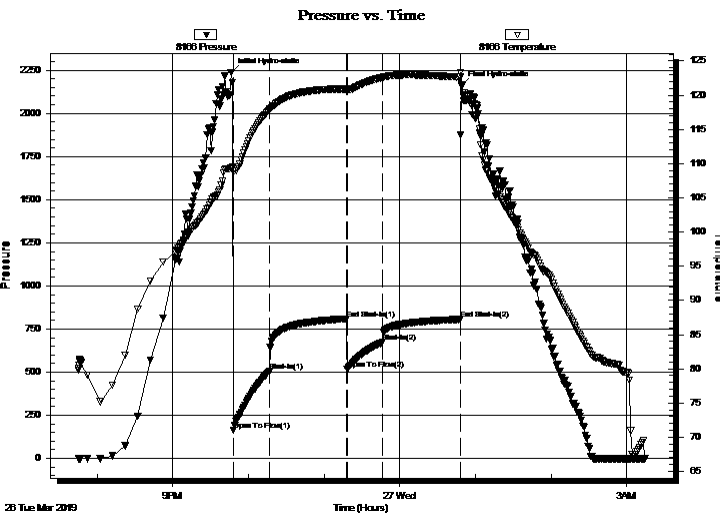
Gerstberger Unit #1-20
20-17-36w Wichita,KS
 Job Ticket: 65162 **DST#: 3**
 Test Start: 2019.03.26 @ 19:45:11

GENERAL INFORMATION:

Formation: **Marmaton Altamont**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:48:11
 Time Test Ended: 03:14:41
 Interval: **4333.00 ft (KB) To 4382.00 ft (KB) (TVD)**
 Total Depth: 4382.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brandon Turley
 Unit No: 79
 Reference Elevations: 3231.00 ft (KB)
 3220.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8166 Outside
 Press@RunDepth: 673.44 psig @ 4334.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2019.03.26 End Date: 2019.03.27 Last Calib.: 2019.03.27
 Start Time: 19:45:16 End Time: 03:14:40 Time On Btm: 2019.03.26 @ 21:46:11
 Time Off Btm: 2019.03.27 @ 00:49:11

TEST COMMENT: IF: BOB in 2 min. 94"
 IS: No return.
 FF: BOB in 5 min. 43"
 FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2237.08	109.34	Initial Hydro-static
2	161.76	108.98	Open To Flow (1)
31	504.44	117.87	Shut-In(1)
92	809.64	120.91	End Shut-In(1)
92	519.04	120.82	Open To Flow (2)
120	673.44	122.59	Shut-In(2)
182	806.05	122.63	End Shut-In(2)
183	2158.70	121.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1197.00	mcw 95%w 5%m	14.31
262.00	nw oil spots 50%w 50%m	3.68

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Landmark Resources

Gerstberger Unit #1-20

4900 Woodway Dr Suite 880
Houston, TX 77056

20-17-36w Wichita,KS

ATTN: Terry Mcleod

Job Ticket: 65162

DST#: 3

Test Start: 2019.03.26 @ 19:45:11

Tool Information

Drill Pipe:	Length: 4046.00 ft	Diameter: 3.80 inches	Volume: 56.75 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 272.00 ft	Diameter: 2.25 inches	Volume: 1.34 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 58.09 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4333.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	49.00 ft			
Tool Length:	76.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Stubb	1.00			4307.00	
Shut In Tool	5.00			4312.00	
Hydraulic tool	5.00			4317.00	
Jars	5.00			4322.00	
Safety Joint	2.00			4324.00	
Packer - Shale	5.00			4329.00	
Packer	4.00			4333.00	27.00 Bottom Of Top Packer
Stubb	1.00			4334.00	
Recorder	0.00	6651	Inside	4334.00	
Recorder	0.00	8166	Outside	4334.00	
Perforations	9.00			4343.00	
Change Over Sub	1.00			4344.00	
Drill Pipe	32.00			4376.00	
Change Over Sub	1.00			4377.00	
Bullnose	5.00			4382.00	49.00 Anchor Tool

Total Tool Length: 76.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Landmark Resources
4900 Woodway Dr Suite 880
Houston, TX 77056
ATTN: Terry Mcleod

Gerstberger Unit #1-20
20-17-36w Wichita,KS
Job Ticket: 65162 **DST#: 3**
Test Start: 2019.03.26 @ 19:45:11

Mud and Cushion Information

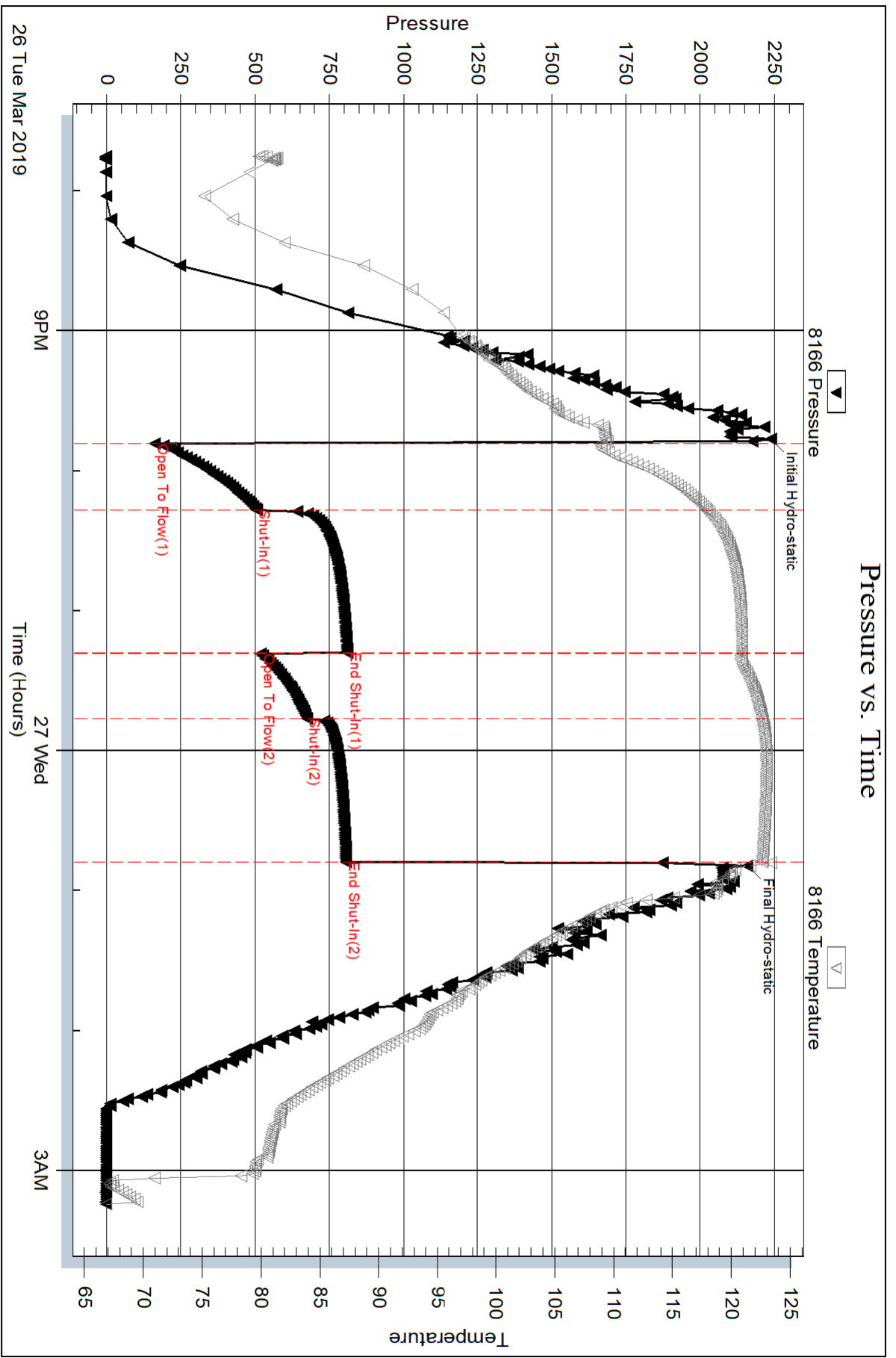
Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 50000 ppm
Viscosity: 66.00 sec/qt	Cushion Volume: bbl	
Water Loss: 11.18 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 9000.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1197.00	mcw 95%w 5%m	14.313
262.00	mw oil spots 50%w 50%m	3.675

Total Length: 1459.00 ft Total Volume: 17.988 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: .2-@53=50000



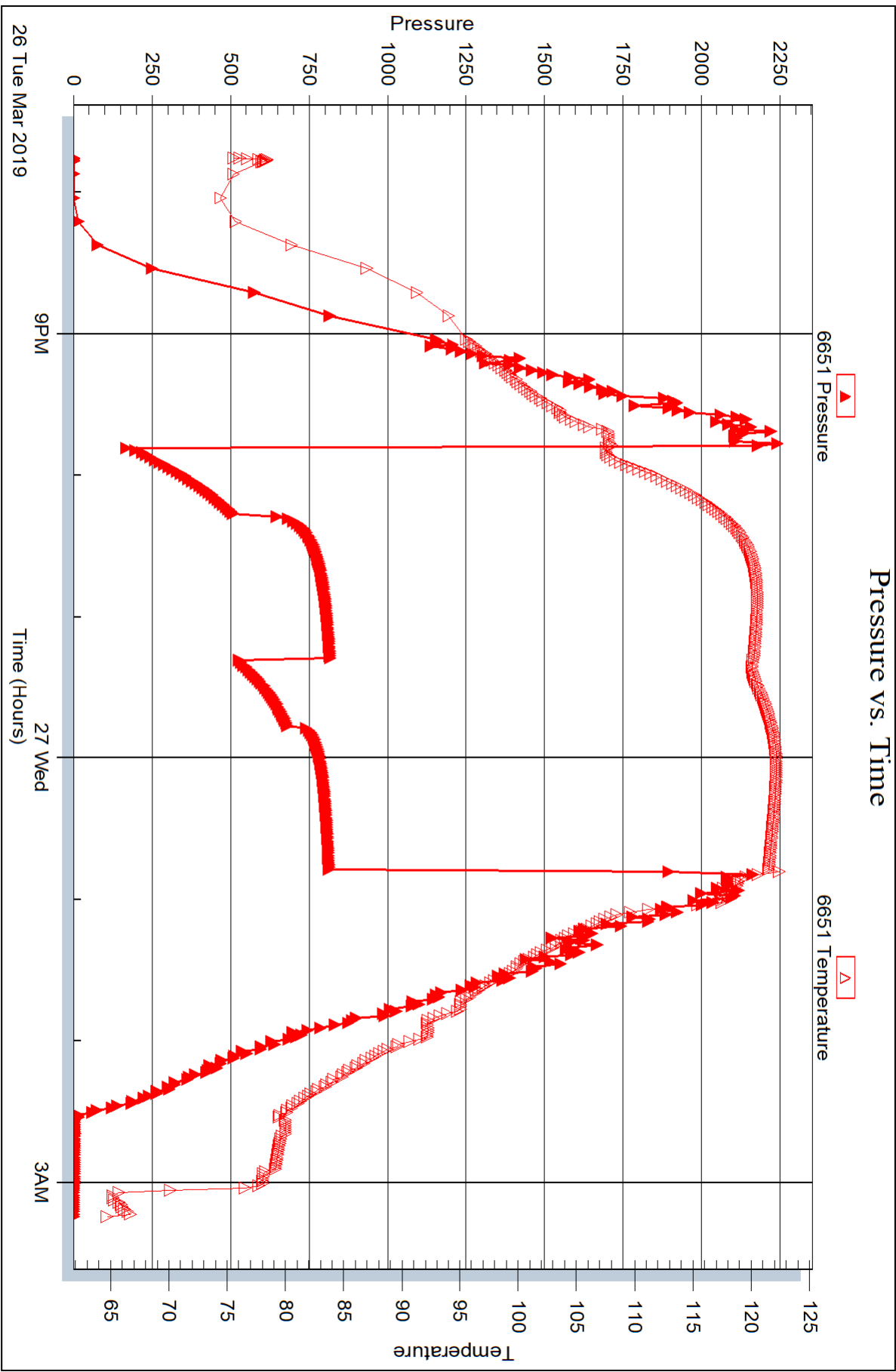
Serial #: 6651

Inside

Landmark Resources

20-17-36w Wichita, KS

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Landmark Resources**

4900 Woodway Dr Suite 880
Houston, TX 77056

ATTN: Terry Mcleod

20-17-36w Wichita,KS

Gerstberger Unit #1-20

Start Date: 2019.03.27 @ 14:50:54

End Date: 2019.03.27 @ 23:11:54

Job Ticket #: 65163 DST #: 4

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

Printed: 2019.03.29 @ 14:59:31

Landmark Resources

Gerstberger Unit #1-20

20-17-36w Wichita,KS

DST # 4

Pawnee - Myrick Stati

2019.03.27



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Landmark Resources
4900 Woodway Dr Suite 880
Houston, TX 77056
ATTN: Terry Mcleod

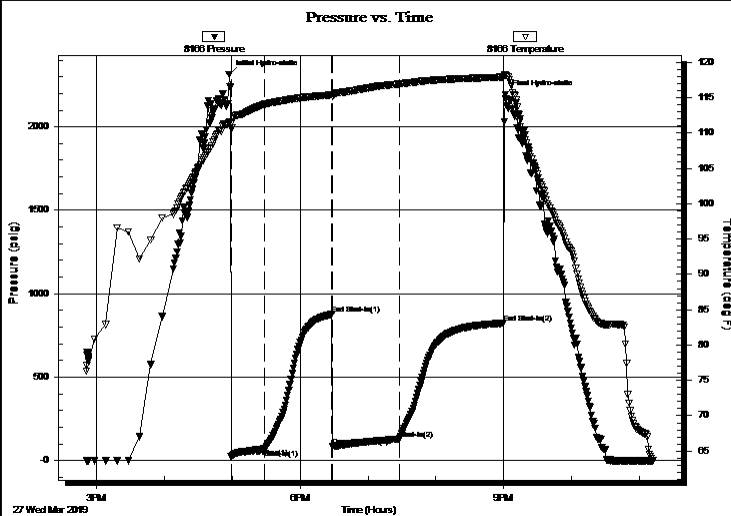
Gerstberger Unit #1-20
20-17-36w Wichita,KS
Job Ticket: 65163 **DST#: 4**
Test Start: 2019.03.27 @ 14:50:54

GENERAL INFORMATION:

Formation: **Pawnee- Myrick Stati**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:58:54
Time Test Ended: 23:11:54
Interval: **4406.00 ft (KB) To 4465.00 ft (KB) (TVD)**
Total Depth: 4465.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Reset)
Tester: Brandon Turley
Unit No: 79
Reference Elevations: 3231.00 ft (KB)
3220.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8166 Outside
Press@RunDepth: 127.69 psig @ 4407.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2019.03.27 End Date: 2019.03.27 Last Calib.: 2019.03.27
Start Time: 14:50:59 End Time: 23:11:53 Time On Btm: 2019.03.27 @ 16:56:54
Time Off Btm: 2019.03.27 @ 21:01:24

TEST COMMENT: IF: 1/4" blow BOB in 25 min. 11 1/2"
IS: Surface blow built to 1/2 died in 17 min.
FF: 1/2" blow BOB in 23 min. 17"
FS: Surface blow built to 2 1/2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2314.02	111.38	Initial Hydro-static
2	21.80	110.68	Open To Flow (1)
32	70.04	114.06	Shut-In(1)
91	875.98	115.41	End Shut-In(1)
92	83.44	115.25	Open To Flow (2)
151	127.69	116.94	Shut-In(2)
243	822.80	117.92	End Shut-In(2)
245	2191.48	118.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	gocm 10%g 20%o 70%m	0.61
62.00	mogo 10%g 60%o 30%m	0.30
82.00	go 10%g 90%o	0.40
0.00	488 GIP	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

Landmark Resources

Gerstberger Unit #1-20

4900 Woodway Dr Suite 880
Houston, TX 77056

20-17-36w Wichita,KS

ATTN: Terry Mcleod

Job Ticket: 65163

DST#: 4

Test Start: 2019.03.27 @ 14:50:54

Tool Information

Drill Pipe:	Length: 4138.00 ft	Diameter: 3.80 inches	Volume: 58.05 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 272.00 ft	Diameter: 2.25 inches	Volume: 1.34 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 59.39 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4406.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	59.00 ft			
Tool Length:	86.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Stubb	1.00			4380.00	
Shut In Tool	5.00			4385.00	
Hydraulic tool	5.00			4390.00	
Jars	5.00			4395.00	
Safety Joint	2.00			4397.00	
Packer - Shale	5.00			4402.00	
Packer	4.00			4406.00	27.00 Bottom Of Top Packer
Stubb	1.00			4407.00	
Recorder	0.00	6651	Inside	4407.00	
Recorder	0.00	8166	Outside	4407.00	
Perforations	20.00			4427.00	
Change Over Sub	1.00			4428.00	
Drill Pipe	31.00			4459.00	
Change Over Sub	1.00			4460.00	
Bullnose	5.00			4465.00	59.00 Anchor Tool

Total Tool Length: 86.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Landmark Resources
4900 Woodway Dr Suite 880
Houston, TX 77056
ATTN: Terry Mcleod

Gerstberger Unit #1-20
20-17-36w Wichita,KS
Job Ticket: 65163 **DST#: 4**
Test Start: 2019.03.27 @ 14:50:54

Mud and Cushion Information

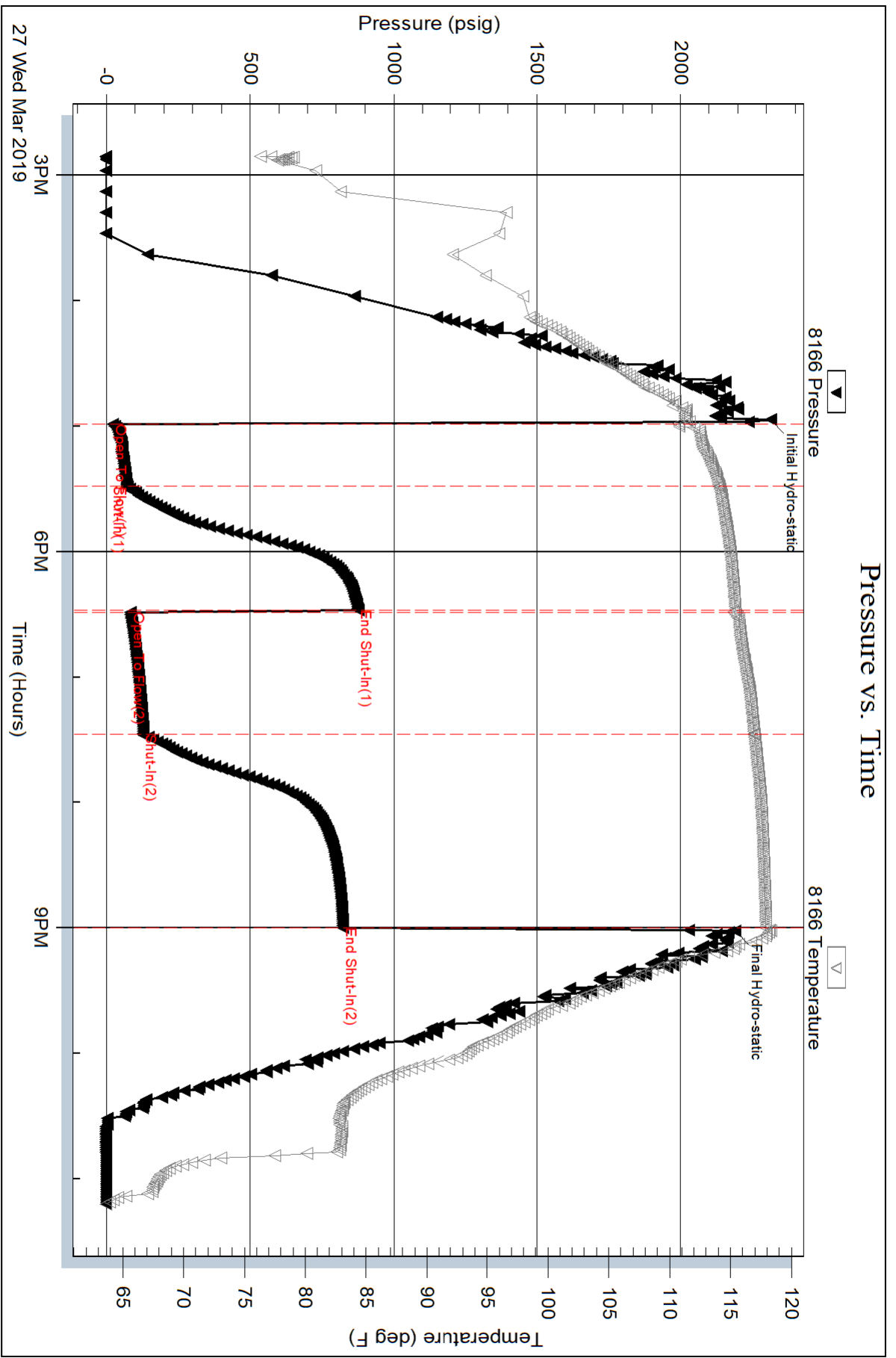
Mud Type: Gel Chem	Cushion Type:	Oil API: 29 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 0 ppm
Viscosity: 75.00 sec/qt	Cushion Volume: bbl	
Water Loss: 10.38 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 8500.00 ppm		
Filter Cake: 1.00 inches		

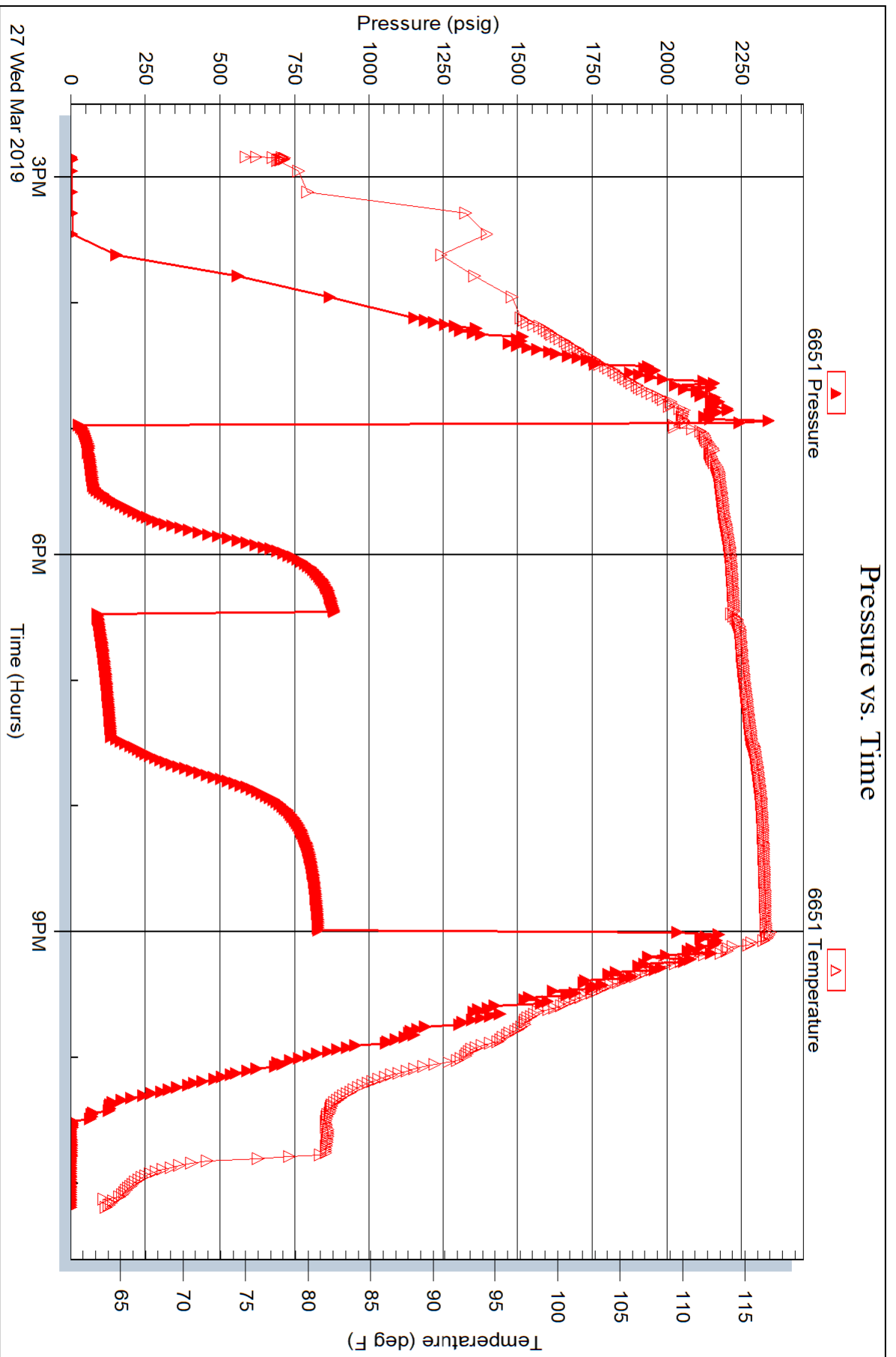
Recovery Information

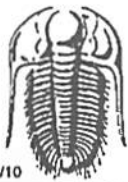
Recovery Table

Length ft	Description	Volume bbl
124.00	gocm 10%g 20%o 70%m	0.610
62.00	mcgo 10%g 60%o 30%m	0.305
82.00	go 10%g 90%o	0.403
0.00	488 GIP	0.000

Total Length: 268.00 ft Total Volume: 1.318 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: 29@60=29







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65160

Well Name & No. Gerstberger 1-2B Test No. 1 Date 3-24-19
 Company LandMark Elevation 3231 KB 3220 GL
 Address 4906 Woodway Dr suite 880 Houston, TX 77056
 Co. Rep / Geo. Ferry McLeod Rig Murfin 21
 Location: Sec. 20 Twp 17 Rge. 36 Co. Wichita State KS

Interval Tested 3982 4018 Zone Tested Lansing F
 Anchor Length 36 Drill Pipe Run 3698 Mud Wt. 8.9
 Top Packer Depth 3977 Drill Collars Run 272 Vis 56
 Bottom Packer Depth 3982 Wt. Pipe Run WL 7.2
 Total Depth 4018 Chlorides 3000 ppm System LCM 3
 Blow Description IF: 1/4 blow built to 5 1/2.
IS: No return.
FF: 1/4 blow built to 9.
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>335</u>	<u>WCM</u>		<u>95</u>	<u>5</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 335 BHT 116 Gravity API RW .37 @ 48 °F Chlorides 26,000 ppm

(A) Initial Hydrostatic <u>2052</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>14:45</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>16:24</u>
(C) First Final Flow <u>87</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>18:23</u>
(D) Initial Shut-In <u>1060</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/A</u>	T-Pulled <u>21:38</u>
(E) Second Initial Flow <u>97</u>	<input type="checkbox"/> Hourly Standby <u> </u>	T-Out <u>23:38</u>
(F) Second Final Flow <u>170</u>	<input checked="" type="checkbox"/> Mileage <u>82-82</u>	Comments <u> </u>
(G) Final Shut-In <u>1064</u>	<input type="checkbox"/> Sampler <u> </u>	<input type="checkbox"/> EM Tool <u> </u>
(H) Final Hydrostatic <u>1946</u>	<input type="checkbox"/> Straddle <u> </u>	<input type="checkbox"/> Ruined Shale Packer <u> </u>
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer <u> </u>
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer <u> </u>	<input type="checkbox"/> Extra Copies <u> </u>
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder <u> </u>	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby <u> </u>	Total <u>1957</u>
	<input type="checkbox"/> Accessibility <u> </u>	MP/DST Disc't <u> </u>
	Sub Total <u>1957</u>	

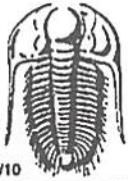
Approved By

Ferry McLeod

Our Representative

[Signature]

Tribolite 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. 65161

Well Name & No. Gerstberger 1-20 Test No. 2 Date 3-25-19
 Company Landmark Elevation 3231 KB 3220 GL
 Address _____
 Co. Rep / Geo. Terry McLeod Rig Murfin 21
 Location: Sec. 20 Twp 17 Rge. 36 Co. Wichita State KS

Interval Tested 4105 4145 Zone Tested Lynsing F
 Anchor Length 40 Drill Pipe Run 3825 Mud Wt. 9.1
 Top Packer Depth 4100 Drill Collars Run 272 Vis 71
 Bottom Packer Depth 4105 Wt. Pipe Run _____ WL 9.6
 Total Depth 4145 Chlorides 10,000 ppm System LCM 2
 Blow Description IF: BoB in 5 min. 42"
IS: 2"
FF: BoB in 7 min. 47"
FS: No return.

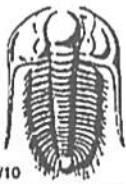
Rec	Feet of	%gas	%oil	%water	%mud
<u>535</u>	<u>90</u>	<u>10</u>	<u>90</u>		
<u>189</u>	<u>90</u>	<u>30</u>	<u>70</u>		
<u>315</u>	<u>90cm</u>	<u>10</u>	<u>40</u>	<u>50</u>	
Rec _____	Feet of <u>94 GIP</u>	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	<u>10</u> %gas	<u>40</u> %oil	%water <u>50</u>	%mud _____

Rec Total 1039 BHT 119 Gravity 22 API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2168</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>12:10</u>
(B) First Initial Flow <u>49</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>13:14</u>
(C) First Final Flow <u>238</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>15:03</u>
(D) Initial Shut-In <u>1089</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIL</u>	T-Pulled <u>19:03</u>
(E) Second Initial Flow <u>248</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>21:37</u>
(F) Second Final Flow <u>420</u>	<input checked="" type="checkbox"/> Mileage <u>82-82</u>	Comments _____
(G) Final Shut-In <u>1074</u>	<input type="checkbox"/> Sampler _____	<input type="checkbox"/> EM Tool _____
(H) Final Hydrostatic <u>2045</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby _____	Total <u>1957</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1957</u>	

Approved By Terry McLeod Our Representative [Signature]

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. 65162

Well Name & No. Gerstberger 1-20 Test No. 3 Date 3-26-19
 Company Landmark Elevation 3231 KB 3220 GL
 Address _____
 Co. Rep / Geo. Terry McLeod Rig Murfin 21
 Location: Sec. 20 Twp 17 Rge. 36 Co. Wichita State KS

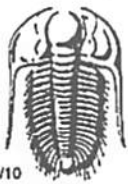
Interval Tested 4333 4382 Zone Tested Marmaton - Atgmont
 Anchor Length _____ 49 Drill Pipe Run 4046 Mud Wt. 9.3
 Top Packer Depth _____ 4328 Drill Collars Run 272 Vis 66
 Bottom Packer Depth _____ 4333 Wt. Pipe Run _____ WL 11.2
 Total Depth _____ 4382 Chlorides 9000 ppm System LCM 2
 Blow Description IF: BOB in 2 min. 94"
IS: No return.
FF: BOB in 5 min. 43"
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>262</u>	<u>MW oil spots</u>		<u>50</u>	<u>50</u>	
<u>1197</u>	<u>MCW</u>		<u>95</u>	<u>5</u>	
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Rec Total 21459 BHT 122 Gravity _____ API RW .20 @ 53° F Chlorides 50,000 ppm

(A) Initial Hydrostatic <u>2237</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>19:10</u>
(B) First Initial Flow <u>161</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>19:45</u>
(C) First Final Flow <u>504</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>21:47</u>
(D) Initial Shut-In <u>809</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>00:47</u>
(E) Second Initial Flow <u>519</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>3:15</u>
(F) Second Final Flow <u>673</u>	<input checked="" type="checkbox"/> Mileage <u>82</u> - 82	Comments _____
(G) Final Shut-In <u>806</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>2158</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> EM Tool _____
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility _____	Total <u>1957</u>
	Sub Total <u>1957</u>	MP/DST Disc't _____

Approved By Terry McLeod Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65163

Well Name & No. Gerstberger 1-20 Test No. 4 Date 3-27-18
 Company Landmark Elevation 3231 KB 3220 GL
 Address _____
 Co. Rep / Geo. Terry McLeod Rig Murfin 21
 Location: Sec. 20 Twp 17 Rge. 36 Co. Wichita State KS

Interval Tested 4406 4465 Zone Tested Pawnee - Myrick Station
 Anchor Length 59 Drill Pipe Run 4138 Mud Wt. 9.2
 Top Packer Depth 4401 Drill Collars Run 272 Vls 75
 Bottom Packer Depth 4406 Wt. Pipe Run _____ WL 10.4
 Total Depth 4465 Chlorides 8500 ppm System LCM 2
 Blow Description IFI 1/4 blow BoB in 25 min. 11 1/2"
FSI surface blow built to 1/2 died in 17 min.
FFI 1/2 blow BoB in 23 min.
FSI surface blow built to 2 1/2.

Rec	Feet of	%gas	%oil	%water	%mud
<u>82</u>	<u>90</u>	<u>10</u>	<u>90</u>		
<u>62</u>	<u>MC90</u>	<u>10</u>	<u>60</u>	<u>30</u>	
<u>124</u>	<u>90cm</u>	<u>10</u>	<u>20</u>	<u>70</u>	
<u>488 GIP</u>					

Rec Total 268 BHT 29 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2314</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>14:15</u>
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>14:50</u>
(C) First Final Flow <u>70</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>16:58</u>
(D) Initial Shut-In <u>875</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIL</u>	T-Pulled <u>20:58</u>
(E) Second Initial Flow <u>83</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>23:12</u>
(F) Second Final Flow <u>127</u>	<input checked="" type="checkbox"/> Mileage <u>82-x2</u> 82+82	Comments <u>10 added 3-28</u>
(G) Final Shut-In <u>822</u>	<input type="checkbox"/> Sampler _____	<u>9:30 pm</u>
(H) Final Hydrostatic <u>2191</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> EM Tool _____
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby _____	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility _____	Total <u>2039</u>
	Sub Total <u>2039</u>	MP/DST Disc't _____

Approved By Terry McLeod Our Representative _____

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.

PAGE	COST NO	LAB #	INVOICE DATE
1 of 2	1011026	1718	04/01/2019
INVOICE NUMBER			
92941731			

Pratt (620) 672-1201

B LANDMARK RESOURCES INC
I 1616 S VOSS RD, STE 600
L HOUSTON
L TX US 77057-2641
T
O ATTN:

J LEASE NAME GERSTBERGER 1-20
O LOCATION
B COUNTY WICHITA
S STATE KS
I JOB DESCRIPTION Cement-New Well Casing/Pi
T JOB CONTACT
E

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41168509	19570		Net - 30 days	05/01/2019

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 03/30/2019 to 03/30/2019</i>				
0041168509				
171819384L Cement-New Well Casing/Pi 03/30/2019 CEMENT PRODUCTION CASING				
170 SK AA2 Cement	1.00	SK	1,809.95	1,809.95 T
60/40 Poz	400.00	SK	6.96	2,784.00 T
C-17	80.00	LB	11.60	928.00 T
800 LBS Gypsum	1.00	LB	348.00	348.00 T
C-41P	40.00	LB	2.32	92.80 T
Salt	1,027.00	LB	0.29	297.83 T
850 LBS Gilsonite	1.00	LB	330.31	330.31 T
94 LBS Celloflake	1.00	LB	201.72	201.72 T
2064 LBS Cement Gel	1.00	LB	299.28	299.28 T
Auto Fill Float Shoe 5 1/2" (Blue)	1.00	EA	252.00	252.00 T
Two Stage Cement Collar, 5 1/2" (Blue)	1.00	EA	3,150.00	3,150.00 T
5 1/2" Basket (Blue)	4.00	EA	203.00	812.00 T
Turbolizer, 5 1/2" (Blue)	14.00	EA	77.00	1,078.00 T
Casing Swivel Rental	1.00	EA	116.00	116.00 T
Mud Flush	500.00	GAL	0.87	435.00 T
Heavy Equipment Mileage	300.00	MI	4.35	1,305.00 T
Blending & Mixing Service Charge	1.00	SK	462.84	462.84 T
Proppant and Bulk Delivery Charges	2,520.00	MI	1.45	3,654.00 T
Depth Charge, 4001'-5000'	1.00	HR	1,461.60	1,461.60 T
Additional Stage Charge	1.00	HR	1,252.80	1,252.80 T
Plug Container Utilization Charge	1.00	EA	145.00	145.00 T
Light Vehicle Mileage	100.00	MI	2.61	261.00 T
Service Supervisor	1.00	HR	101.50	101.50 T
Cement Data Acquisition Monitor / Strip	1.00	EA	319.00	319.00 T

73550

RECEIVED
APR 23 ENT'D

RECEIVED
APR 23 ENT'D

APR 23 2019

Handwritten signature and amount: \$54566 33499.40

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	21,897.63
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	639.79
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	22,537.42
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		



Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

PRESSURE PUMPING

Job Log

Customer:	Landmark Resources	Cement Pump No.:	38119-19570 <i>11.5 hrs</i>	Operator TRK No.:	96815
Address:		Ticket #:	1718-19384 L	Bulk TRK No.:	19827-19808 30464-37547
City, State, Zip:		Job Type:	Z42 - Cement Production Casing		
Service District:		Well Type:	OIL		
Well Name and No.:	Gerstberger 1-20	Well Location:	20,17,36	County:	Wichita State: Ks

Type of Cmt	Sacks	Additives	Truck Loaded On		
AA-2	170	10%GYPSUM, 10%SALT, 5#GILSONITE, .5%C-17, 1/4#DEFOAMER	19827-19808	Front	Back
60/40 POZ	400	8%GEL, 1/4#POLYFLAKE	30464-37547	Front	Back
				Front	Back

Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Lead:	14.5	1.59	7.24	270.3	Man Hours:	52
Tail:	12	2.2	12.53	880	# of Men on Job:	3

Time (am/pm)	(BPM)	Volume (BBLS)	Pumps		Pressure(PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
16:30							ON LOC, RUN F.E.
20:00							SPOT TRUCKS R.U.
9:43 PM						3000	TEST LINES
9:44 PM	7	10				360	PUMP MUD FLUSH
9:46 PM	7	5				360	H2O SPACER
21:49	7.3					270	START MIXING AA2 @ 14.5#
21:58		48					SHUT DOWN, DROP PLUG, WASHUP
10:04 PM	7					120	START DISPLACEMENT
22:15	6.6	57				140	ON MUD
22:19	3.2	94				210	SLOW RATE
22:26		114				570-1140	PLUG DOWN
22:31							DROP BOMB
22:46	4.5	10				780-140	OPEN TOOL, CLEAN MUD OUT OF PUMP
22:54							CIRC W/RIG 4 HRS
2:30							PLUG RAT AND MOUSE
2:48	7					210	START MIXING 60/40 @ 12#
3:10		137					SHUT DOWN, DROP CLOSING PLUG
							WASHUP
3:14	7					110	START DISPLACEMENT
3:23	3	47				470	SLOW RATE
3:27		57				500-1350	PLUG DOWN, CLOSED TOOL
3:30							RELEASE PSI, TOOL HELD
							JOB COMPLETE, THANK YOU FOR THE BUSINESS

Size Hole	7 7/8	Depth			TYPE	
Size & Wt. Csg.	5 1/2 15.5	Depth	4795'	New / Used	D.V.TOOL	YES Depth 2395'
tbg.		Depth			Retainer	Depth
Top Plugs		Type			Perfs	CIBP

Customer Signature:	Basic Representative:	CHAD HINZ
	Basic Signature:	
	Date of Service:	3/30/2019

LANDMARK

G.U. 1-20

