

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	LOGAN 1-33
Doc ID	1400867

All Electric Logs Run

Dual Induction
Sonic
Mirco
Compensated Density/Neutron
Borehole Volume
Temperature Survey

Form	ACO1 - Well Completion
Operator	Landmark Resources, Inc.
Well Name	LOGAN 1-33
Doc ID	1400867

Tops

Name	Top	Datum
Anhydrite	2452	694
B/Anhydrite	2472	674
Topeka	3768	-623
Heebner	4004	-861
Toronto	4020	-877
Lansing	4050	-903
C	4090	-944
D	4105	-961
E	4148	-1005
F	4158	-1017
G	4178	-1034
Muncie Creek	4233	-1088
H	4245	-1097
I	4280	-1135
J	4309	-1161
Stark Shale	4329	-1184
K	4348	-1197
L	4393	-1245
BKC	4420	-1274
Marmaton	4475	-1331
Altamont	4504	-1359
Pawnee	4554	-1409
Myrick Station	4597	-1450
Fort Scott	4607	-1463

Form	ACO1 - Well Completion
Operator	Landmark Resources, Inc.
Well Name	LOGAN 1-33
Doc ID	1400867

Tops

Name	Top	Datum
Cherokee	4635	-1488
Johnson	4675	-1535
Morrow Shale	4759	-1612
Upper Morrow Sd	4807	-1661
Missippian	4813	-1666

Terry McLeod Consulting Geologist P.O. Box 503 Wichita, Kansas 67201 316-640-2440

GEOLOGIST'S REPORT LOG DRILLING TIME AND SAMPLE LOG

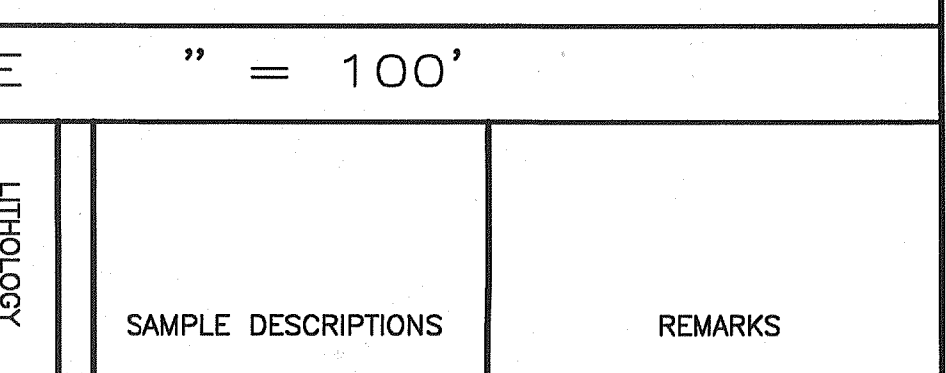
OPERATOR Landmark Resources, Inc LEASE Logan Well No. 1-33 FIELD Logan West

LOCATION 33S ENL & 230S FEL SEC 33 TWP 16S RGE 34M COUNTY Scott STATE KANSAS

MEASUREMENTS ARE IN FEET AND DECIMALS THEREOF

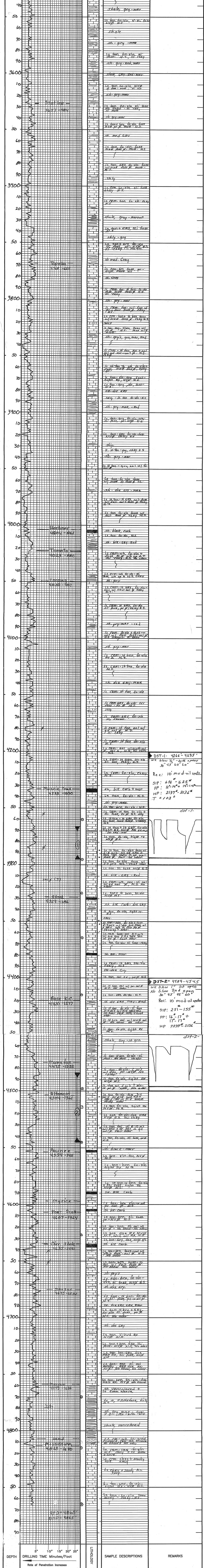
FORMATION LOG TABLE with columns: FORMATION, TOP LOG, ANNUAL TOP, ANNUAL BOTTOM, SURFACE, DISTANCE FROM SURFACE

DRILL STEEL TESTS TABLE with columns: No., Interval, Depth, GPR/ft, RFR/ft, HRR/ft, REMARKS



LEGEND: Anhydrite, Salt, Sandstone, Shale, Carb sh, Limestone, Oil.Lime, Chert, Dolomite

SCALE: 1 inch = 100 feet



COMPANY Landmark Resources, Inc LEASE Logan #33 LOCATION 33S ENL & 230S FEL SEC 33 TWP 16S RNG. 34W COUNTY Scott STATE Kansas ELEVATION: 3143 K.B.



DRILL STEM TEST REPORT

Prepared For: **Landmark Resources, LLC**

4900 Woodway Dr Ste 880
Houston, TX 77056

ATTN: Terry McLeod

Logan #1-33

33-16s-34w Scott,KS

Start Date: 2018.01.11 @ 21:46:00

End Date: 2018.01.12 @ 07:24:30

Job Ticket #: 64387 DST #: 1

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

Printed: 2018.01.16 @ 13:29:47



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Landmark Resources, LLC
 4900 Woodway Dr Ste 880
 Houston, TX 77056
 ATTN: Terry McLeod

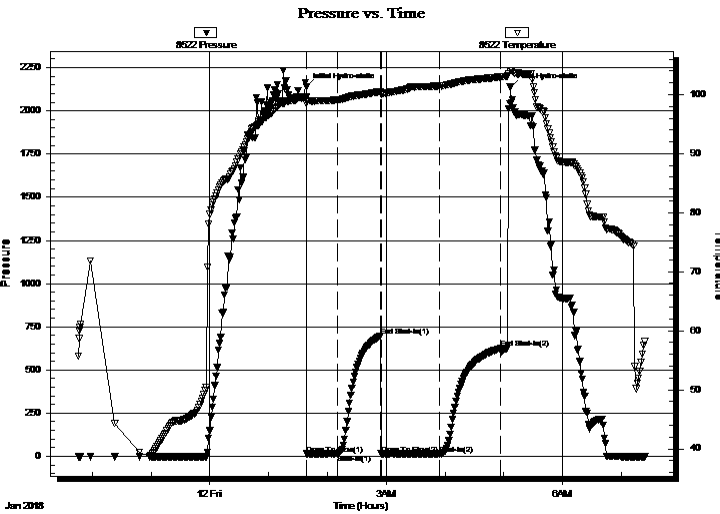
33-16s-34w Scott,KS
Logan #1-33
 Job Ticket: 64387 **DST#: 1**
 Test Start: 2018.01.11 @ 21:46:00

GENERAL INFORMATION:

Formation: **LKC I**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:39:00
 Time Test Ended: 07:24:30
 Interval: **4266.00 ft (KB) To 4295.00 ft (KB) (TVD)**
 Total Depth: 4295.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Bradley Walter
 Unit No: 78
 Reference Elevations: 3143.00 ft (KB)
 3138.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8522 Outside
 Press@RunDepth: 13.79 psig @ 4267.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.01.11 End Date: 2018.01.12 Last Calib.: 2018.01.12
 Start Time: 21:46:05 End Time: 07:24:30 Time On Btm: 2018.01.12 @ 01:38:30
 Time Off Btm: 2018.01.12 @ 05:06:30

TEST COMMENT: IF: 1/2" blow.
 IS: No return.
 FF: 1/2" blow.
 FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2137.33	99.55	Initial Hydro-static
1	11.75	98.98	Open To Flow (1)
32	14.36	99.11	Shut-In(1)
76	696.15	100.49	End Shut-In(1)
77	13.99	100.06	Open To Flow (2)
136	13.79	101.43	Shut-In(2)
199	625.17	102.98	End Shut-In(2)
208	2136.30	104.08	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud 100m (oil spots in tool)	0.14

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Landmark Resources, LLC
 4900 Woodway Dr Ste 880
 Houston, TX 77056
 ATTN: Terry McLeod

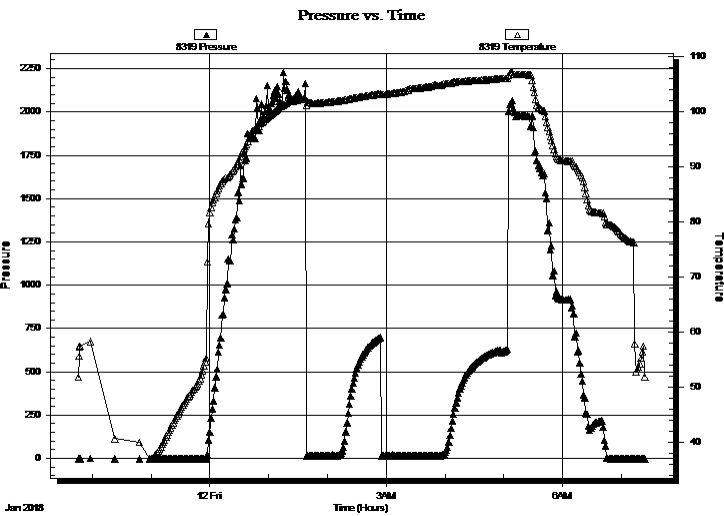
33-16s-34w Scott,KS
Logan #1-33
 Job Ticket: 64387 **DST#: 1**
 Test Start: 2018.01.11 @ 21:46:00

GENERAL INFORMATION:

Formation: **LKC I**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:39:00
 Time Test Ended: 07:24:30
Interval: 4266.00 ft (KB) To 4295.00 ft (KB) (TVD)
 Total Depth: 4295.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Bradley Walter
 Unit No: 78
 Reference Elevations: 3143.00 ft (KB)
 3138.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8319 Inside
 Press@RunDepth: psig @ 4267.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.01.11 End Date: 2018.01.12 Last Calib.: 2018.01.12
 Start Time: 21:46:05 End Time: 07:24:30 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: 1/2" blow.
 IS: No return.
 FF: 1/2" blow.
 FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud 100m (oil spots in tool)	0.14

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Landmark Resources, LLC

33-16s-34w Scott,KS

4900 Woodway Dr Ste 880
Houston, TX 77056

Logan #1-33

Job Ticket: 64387

DST#: 1

ATTN: Terry McLeod

Test Start: 2018.01.11 @ 21:46:00

Tool Information

Drill Pipe:	Length: 4280.00 ft	Diameter: 3.80 inches	Volume: 60.04 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 60.04 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	36.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4266.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	29.00 ft			
Tool Length:	51.00 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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Change Over Sub	1.00			4245.00	
Shut In Tool	5.00			4250.00	
Hydraulic tool	5.00			4255.00	
Safety Joint	2.00			4257.00	
Packer	5.00			4262.00	22.00 Bottom Of Top Packer
Packer	4.00			4266.00	
Stubb	1.00			4267.00	
Recorder	0.00	8319	Inside	4267.00	
Recorder	0.00	8522	Outside	4267.00	
Perforations	25.00			4292.00	
Bullnose	3.00			4295.00	29.00 Bottom Packers & Anchor

Total Tool Length: 51.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Landmark Resources, LLC

33-16s-34w Scott, KS

4900 Woodway Dr Ste 880
Houston, TX 77056

Logan #1-33

Job Ticket: 64387

DST#: 1

ATTN: Terry McLeod

Test Start: 2018.01.11 @ 21:46:00

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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud 100m (oil spots in tool)	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

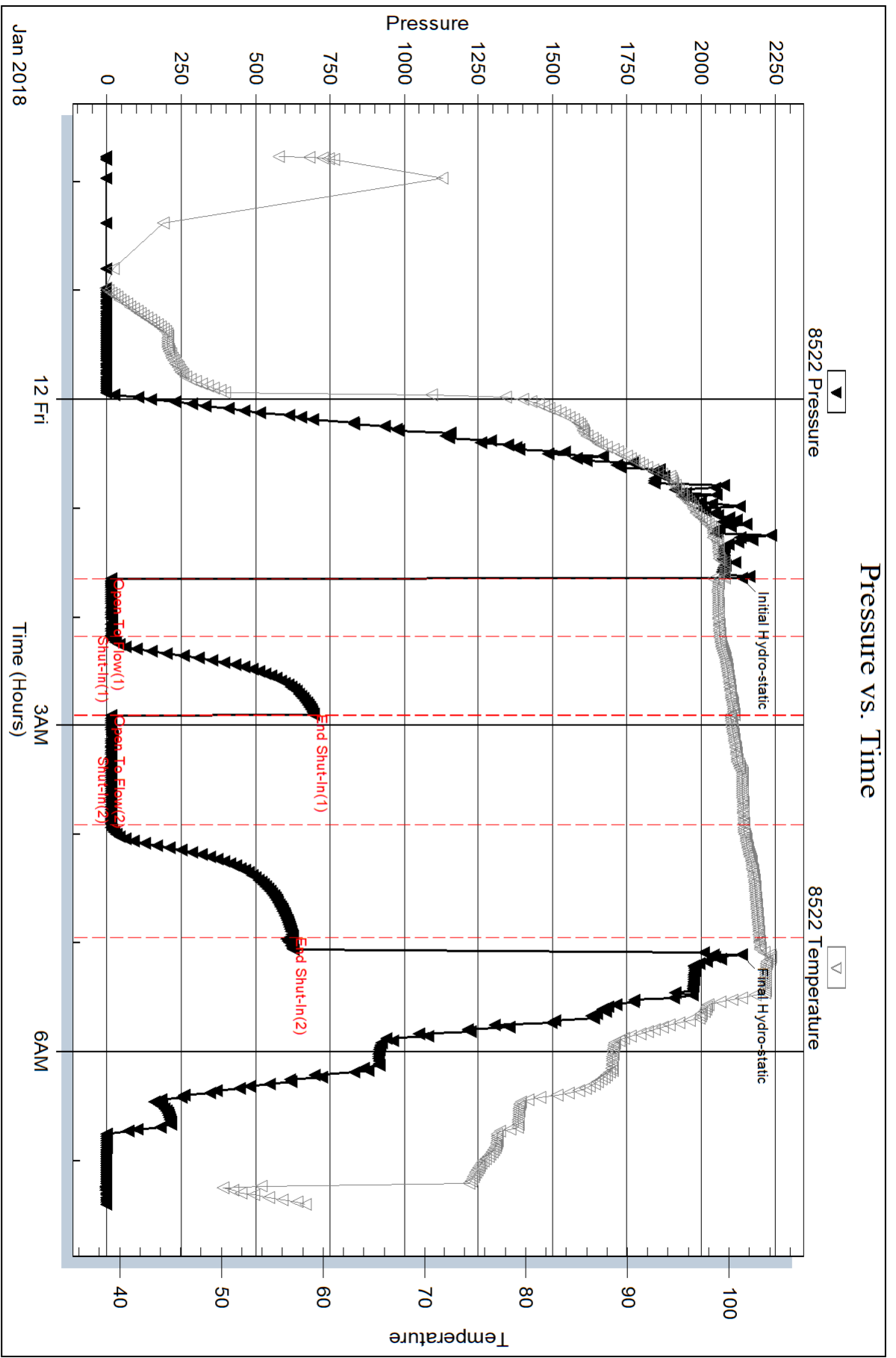
Num Gas Bombs: 0

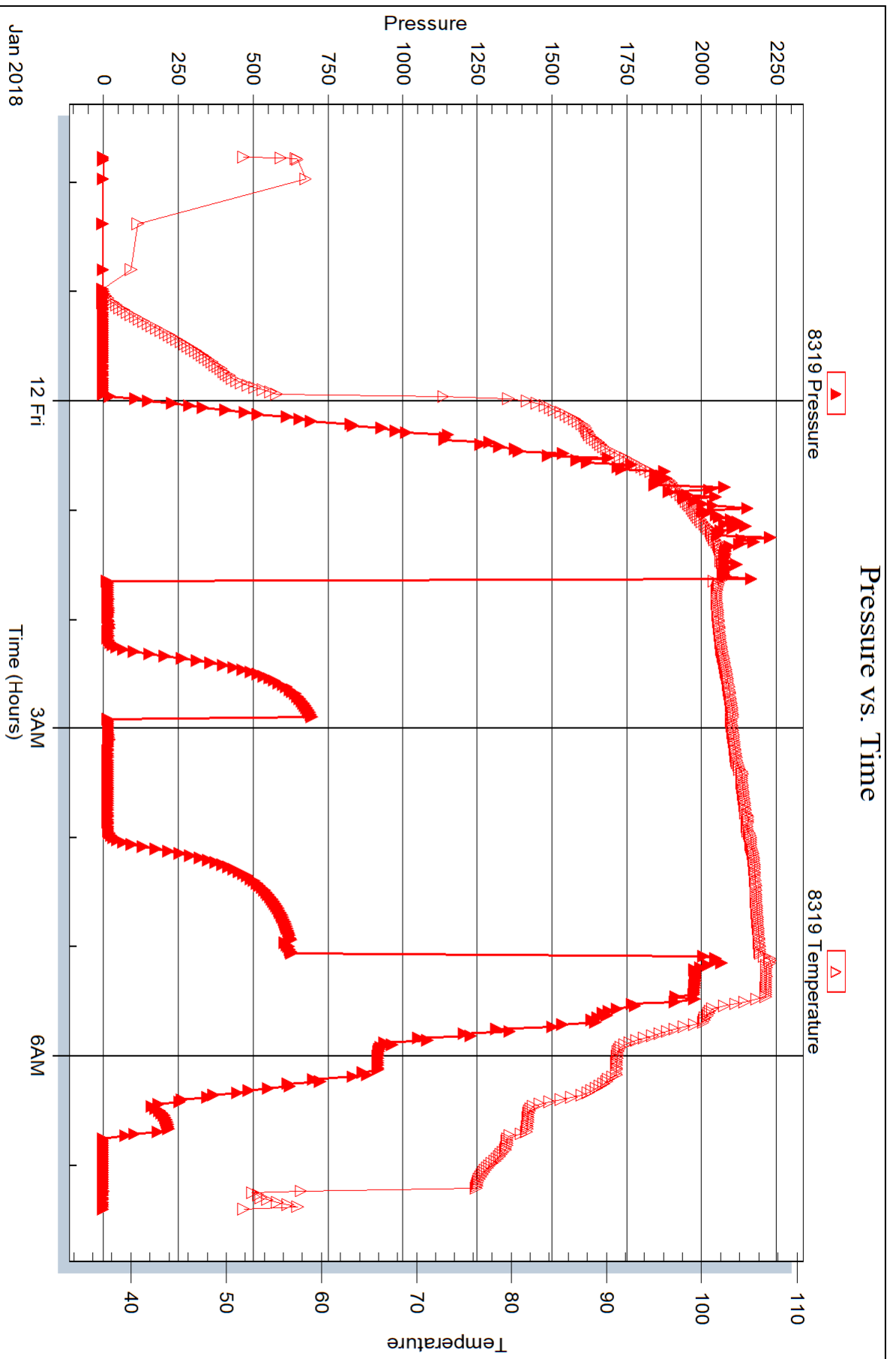
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Landmark Resources, LLC**

4900 Woodway Dr Ste 880
Houston, TX 77056

ATTN: Terry McLeod

Logan #1-33

33-16s-34w Scott,KS

Start Date: 2018.01.13 @ 14:46:00

End Date: 2018.01.13 @ 23:32:53

Job Ticket #: 64388 DST #: 2

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

Printed: 2018.01.16 @ 13:29:21



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Landmark Resources, LLC
 4900 Woodway Dr Ste 880
 Houston, TX 77056
 ATTN: Terry McLeod

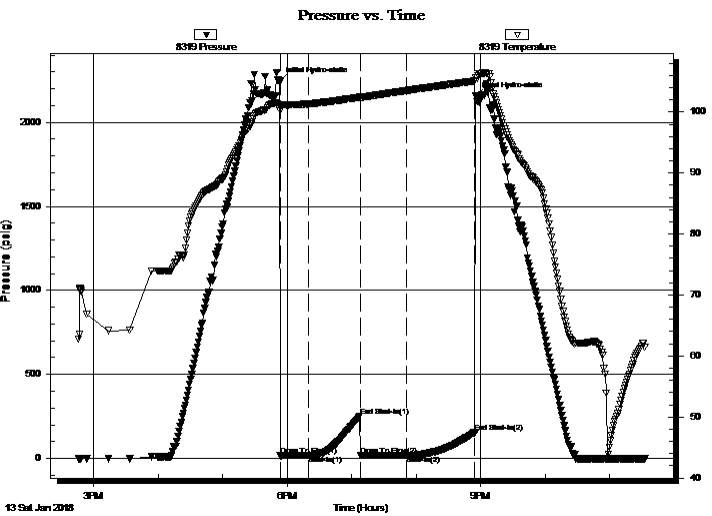
33-16s-34w Scott, KS
Logan #1-33
 Job Ticket: 64388 **DST#: 2**
 Test Start: 2018.01.13 @ 14:46:00

GENERAL INFORMATION:

Formation: **Altamont - Lwr Altam**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 17:53:23
 Time Test Ended: 23:32:53
 Interval: **4484.00 ft (KB) To 4585.00 ft (KB) (TVD)**
 Total Depth: 4295.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Bradley Walter
 Unit No: 78
 Reference Elevations: 3143.00 ft (KB)
 3138.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8319 Inside
 Press@RunDepth: 17.43 psig @ 4517.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.01.13 End Date: 2018.01.13 Last Calib.: 2018.01.13
 Start Time: 14:46:05 End Time: 23:32:52 Time On Btm: 2018.01.13 @ 17:53:08
 Time Off Btm: 2018.01.13 @ 20:55:23

TEST COMMENT: IF: 1" blow.
 IS: No return.
 FF: No blow.
 FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2239.33	101.25	Initial Hydro-static
1	16.09	100.19	Open To Flow (1)
27	17.42	101.32	Shut-In(1)
75	251.06	102.43	End Shut-In(1)
75	17.12	102.37	Open To Flow (2)
118	17.43	103.50	Shut-In(2)
181	155.47	105.07	End Shut-In(2)
183	2155.77	105.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud 100m (oil spots in tool)	0.14

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Landmark Resources, LLC
 4900 Woodway Dr Ste 880
 Houston, TX 77056
 ATTN: Terry McLeod

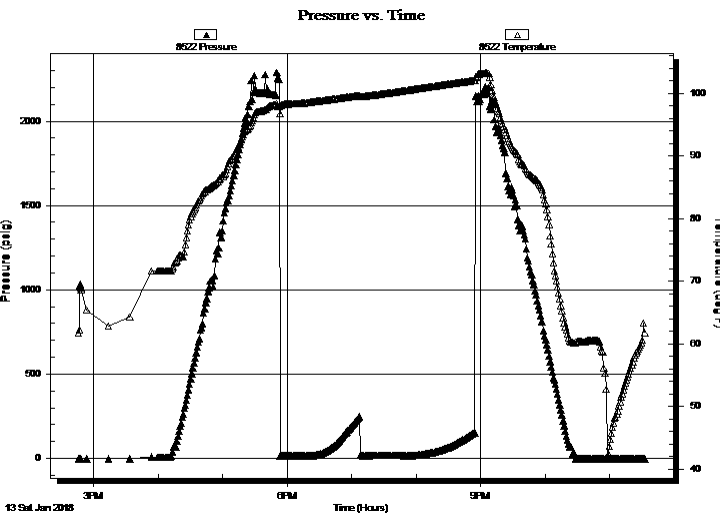
33-16s-34w Scott, KS
Logan #1-33
 Job Ticket: 64388 **DST#: 2**
 Test Start: 2018.01.13 @ 14:46:00

GENERAL INFORMATION:

Formation: **Altamont - Lwr Altam**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 17:53:23 Tester: Bradley Walter
 Time Test Ended: 23:32:53 Unit No: 78
 Interval: **4484.00 ft (KB) To 4585.00 ft (KB) (TVD)** Reference Elevations: 3143.00 ft (KB)
 Total Depth: 4295.00 ft (KB) (TVD) 3138.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

Serial #: 8522 Outside
 Press@RunDepth: psig @ 4517.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.01.13 End Date: 2018.01.13 Last Calib.: 2018.01.13
 Start Time: 14:46:05 End Time: 23:32:52 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: 1" blow.
 IS: No return.
 FF: No blow.
 FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud 100m (oil spots in tool)	0.14

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, LLC

33-16s-34w Scott,KS

4900 Woodway Dr Ste 880
Houston, TX 77056

Logan #1-33

Job Ticket: 64388

DST#: 2

ATTN: Terry McLeod

Test Start: 2018.01.13 @ 14:46:00

Tool Information

Drill Pipe:	Length: 4466.00 ft	Diameter: 3.80 inches	Volume: 62.65 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 62.65 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4484.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	83.00 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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Change Over Sub	1.00			4463.00	
Shut In Tool	5.00			4468.00	
Hydraulic tool	5.00			4473.00	
Safety Joint	2.00			4475.00	
Packer	5.00			4480.00	22.00 Bottom Of Top Packer
Packer	4.00			4484.00	
Stubb	1.00			4485.00	
Change Over Sub	1.00			4486.00	
Drill Pipe	30.00			4516.00	
Change Over Sub	1.00			4517.00	
Recorder	0.00	8319	Inside	4517.00	
Recorder	0.00	8522	Outside	4517.00	
Perforations	25.00			4542.00	
Bullnose	3.00			4545.00	61.00 Bottom Packers & Anchor

Total Tool Length: 83.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Landmark Resources, LLC

33-16s-34w Scott, KS

4900 Woodway Dr Ste 880
Houston, TX 77056

Logan #1-33

Job Ticket: 64388

DST#: 2

ATTN: Terry McLeod

Test Start: 2018.01.13 @ 14:46:00

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: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud 100m (oil spots in tool)	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

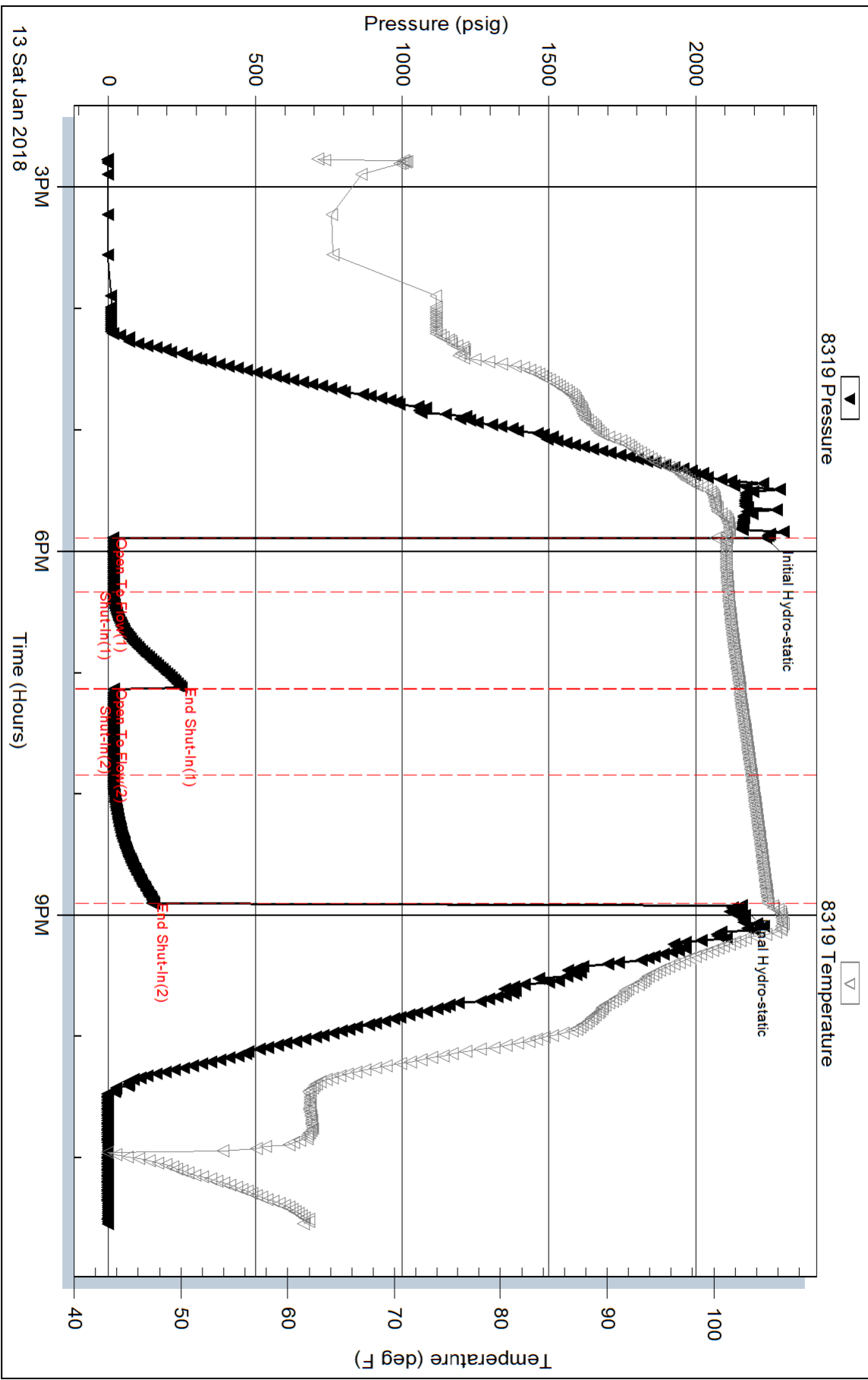
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

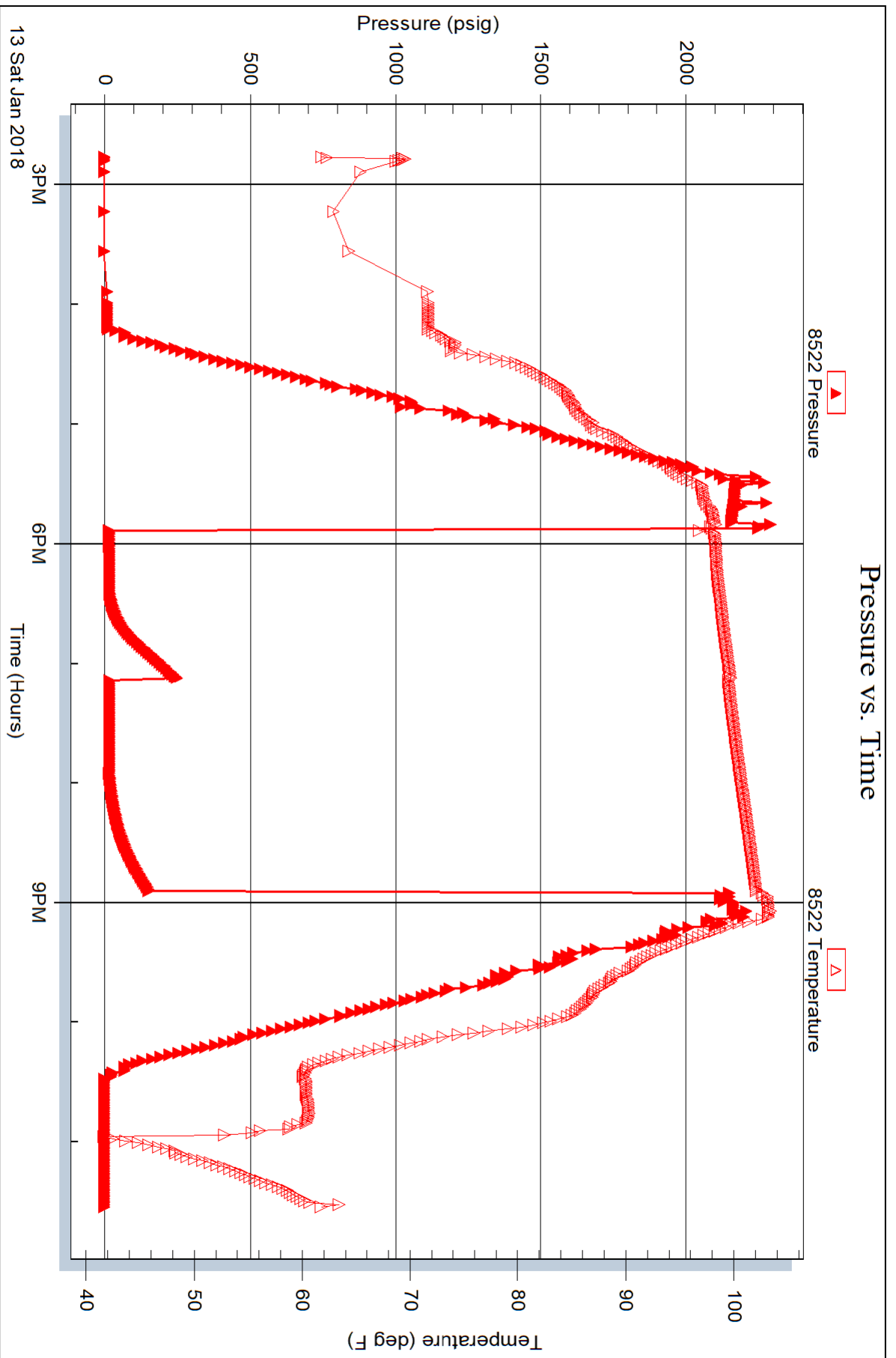


Serial #: 8522

Outside Landmark Resources, LLC

Logan #1-33

DST Test Number: 2





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64387**

Well Name & No. Logan # 1-33 Test No. 1 Date 1/12/2018
 Company Landmark Resources LLC Elevation 3143 KB 3138 GL
 Address 4900 Woodway Dr Ste 880 Houston, Tx 77056
 Co. Rep / Geo. Terry McLeod Rig LD
 Location: Sec. 8 Twp. 17s Rge. 33w Co. Scott State KS

Interval Tested 4266 - 4295 Zone Tested LKC F
 Anchor Length 29' Drill Pipe Run 4280 Mud Wt. 9.13
 Top Packer Depth 4261 Drill Collars Run 0 Vis 54
 Bottom Packer Depth 4266 Wt. Pipe Run 0 WL 8.0
 Total Depth 4295 Chlorides 3300 ppm System LCM 1#

Blow Description IF 1/2" blow
ISI No return
FF 1/2" blow
FST No return

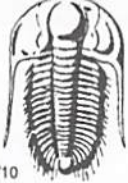
Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>MOA</u>			<u>100</u>	
	<u>oil spots in tool</u>				

Rec Total 10 BHT 103 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2137</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1845 1/11</u>
(B) First Initial Flow <u>12</u>	<input type="checkbox"/> Jars <u>—</u>	T-Started <u>2146</u>
(C) First Final Flow <u>14</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0141</u>
(D) Initial Shut-In <u>696</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>0456</u>
(E) Second Initial Flow <u>14</u>	<input type="checkbox"/> Hourly Standby <u>—</u>	T-Out <u>0725</u>
(F) Second Final Flow <u>14</u>	<input checked="" type="checkbox"/> Mileage <u>49 RT 36.75</u>	Comments <u>—</u>
(G) Final Shut-In <u>625</u>	<input type="checkbox"/> Sampler <u>—</u>	
(H) Final Hydrostatic <u>2136</u>	<input type="checkbox"/> Straddle <u>—</u>	
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Shale Packer <u>—</u>
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer <u>—</u>	<input type="checkbox"/> Ruined Packer <u>—</u>
Final Flow <u>66</u>	<input type="checkbox"/> Extra Recorder <u>—</u>	<input type="checkbox"/> Extra Copies <u>—</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby <u>—</u>	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility <u>—</u>	Total <u>1511.75</u>
	Sub Total <u>1511.75</u>	MP/DST Disc't <u>—</u>

Approved By _____ 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. **64388**

Well Name & No. Logan 1-33 Test No. 2 Date 1/13/2018
 Company Landmark Resources, LLC Elevation 3143 KB 3138 GL
 Address 4900 Woodway Dr Ste 880 Houston Tx 77056
 Co. Rep / Geo. Terry McLeod Rig LD
 Location: Sec. 8 Twp. 17s Rge. 33w Co. Scott State Ks

Interval Tested 4484 - 4545 Zone Tested Altamont - Altamont Lwr
 Anchor Length 61 Drill Pipe Run 4466 Mud Wt. 9.1
 Top Packer Depth 4479 Drill Collars Run 0 Vis 48
 Bottom Packer Depth 4484 Wt. Pipe Run 0 WL 7.2
 Total Depth 4545 Chlorides 5800 ppm System LCM 1H

Blow Description IF 1" blow
ISI No return.
FF No blow
FSI No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>nuo</u>				<u>100</u>
	<u>oil spots in tool</u>				

Rec Total 10 BHT 105 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2239</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1315</u>
(B) First Initial Flow <u>16</u>	<input type="checkbox"/> Jars <u>—</u>	T-Started <u>1446</u>
(C) First Final Flow <u>17</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1750</u>
(D) Initial Shut-In <u>251</u>	<input checked="" type="checkbox"/> Circ Sub <u>NC</u>	T-Pulled <u>2050</u>
(E) Second Initial Flow <u>17</u>	<input type="checkbox"/> Hourly Standby <u>—</u>	T-Out <u>2332</u>
(F) Second Final Flow <u>17</u>	<input checked="" type="checkbox"/> Mileage <u>49 RT x 2</u> 73.50	Comments <u>p/v Tool</u>
(G) Final Shut-In <u>155</u>	<input type="checkbox"/> Sampler <u>—</u>	<u>0600 1/15</u>
(H) Final Hydrostatic <u>2156</u>	<input type="checkbox"/> Straddle <u>—</u>	<input type="checkbox"/> Ruined Shale Packer <u>—</u>
	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer <u>—</u>
	<input type="checkbox"/> Extra Packer <u>—</u>	<input type="checkbox"/> Extra Copies <u>—</u>
	<input type="checkbox"/> Extra Recorder <u>—</u>	Sub Total <u>0</u>
	<input type="checkbox"/> Day Standby <u>—</u>	Total <u>1548.50</u>
	<input type="checkbox"/> Accessibility <u>—</u>	MP/DST Disc't <u>—</u>
	Sub Total <u>1548.50</u>	

Initial Open 30
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 60

Approved By _____ Our Representative [Signature]

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3013A Y Road
Madison, KS 66860
Ph: 620-437-2661
Fax: 620-437-2881



HURRICANE SERVICES INC

104 Prairie Plaza Parkway
Garnett, KS 66032
Ph: 785-448-3100
Fax: 785-448-3102

FED ID# 48-1214033
MC ID# 165290

Remit to: Hurricane Services, Inc.
250 N. Water, Suite 200
Wichita, KS 67202

Customer:

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

91730

Invoice Date: 1/5/2018
Invoice #: 0036197
Lease Name: LOGAN
Well #: 1-33
County: SCOTT

Date/Description	HRS/QTY	Rate	Total
Ticket 100866 Surface New well	0.000	0.000	0.00
Heavy Eq Mileage	100.000	2.438	243.75
Light Eq Mileage	50.000	1.125	56.25
Ton Mileage	457.000	0.975	445.58
Cement Pump	1.000	712.500	712.50
60/40 Pozmix cement ML	185.000	12.188	2,254.69
Bentonite Gel ML	348.000	0.225	78.30
Calcium chloride ML	522.000	0.750	391.50
Wooden 8 5/8 ML	1.000	81.000	81.00

RECEIVED

FEB 13 ENT'D

PA.

52732
13,243.33

Net Invoice 4,263.57
Sales Tax: (8.50%) 198.53
Total 4,462.10

All invoices are due upon receipt. Interest at the rate of 1 1/2% per month may be charged on all invoices not paid within 30 days from date of invoice.

WE APPRECIATE YOUR BUSINESS!



250 N. Water, Ste 200 - Wichita, Ks 67202

HURRICANE SERVICES INC

104 Prairie Plaza Parkway - Garnett, Ks 66032

Customer: Landmark Resources Inc. Customer Name: Rick Wilson Ticket No.: 100866
Address: 1616 S.Voss Rd.Ste 600 Contractor: LD Drilling Date: 1/5/2018
City, State, Zip: Houston,Tx. 77057 Job type: Surface Well Type: Oil
Service District: Great Bend, Ks. ML Well Details: Sec 33 Twp: 16S R: 34W
Well name & No. Logan # 1-33 Well Location: Scott City County: Scott State: Kansas
Equipment # Driver Equipment # Driver Equipment # Driver TRUCK CALLED AM PM TIME
231 Cody ARRIVED AT JOB AM PM 10:00
241 Garrett START OPERATION AM PM 11:15
25 Brad FINISH OPERATION AM PM 12:15
28 Todd RELEASED AM PM 12:30
MILES FROM STATION TO WELL 50

Product/Service Code Description Unit of Measure Quantity List Price/Unit Gross Amount Net Amount
C001 Heavy Equip. One Way mi 100.00 \$3.25 \$325.00 \$243.75
C002 Light Equip. One Way mi 50.00 \$1.50 \$75.00 \$56.25
C003 Ton Mileage - One way mi 457.00 \$1.30 \$594.10 \$445.58
C019 Cement Pump ea 1.00 \$950.00 \$950.00 \$712.50
CP006 Regular - Class A Cement sack 185.00 \$16.25 \$3,006.25 \$2,254.69
CP016 Bentonite Gel lb 348.00 \$0.30 \$104.40 \$78.30
CP017 Calcium - Chloride lb 522.00 \$1.00 \$522.00 \$391.50
CP057 Wooden 8 5/8" ea 1.00 \$108.00 \$108.00 \$81.00

TERMS: Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts may pay interest on the balance past due at the rate of 1 1/2% per month or the maximum allowable by applicable state or federal laws if such laws limit interest to a lesser amount.

Gross: \$ 5,684.75 Net: \$4,263.56
Total Taxable \$ - Tax Rate:
Frac and Acid service treatments designed with intent to increase production on newly drilled or existing wells are not taxable. Sale Tax: \$ -
Total: \$ 4,263.56

Date of Service: 1/5/2018
HSI Representative: Todd Seba

Customer Comments:
DISCLAIMER NOTICE:
This technical data is presented in good faith, but no warranty is given by and H.S.I. assumes no liability for advice or recommendations made concerning results to be obtained from the use of any product or service.

CUSTOMER AUTHORIZED AGENT

TREATMENT REPORT



HURRICANE SERVICES INC

Customer: Landmark Res. Inc.	Date: 1/5/2018	Ticket No.: 100866
Field Rep: Rick Wilson		
Address:		
City, State:		
County, Zip:		

Field Order No.: 100866	Open Hole:	Perf Depths (ft)	Perfs
Well Name: Logan # 1-33	Casing Depth: 265'		
Location: Scott City	Casing Size: 8 5/8 23 LB		
Formation:	Tubing Depth:		
Type of Service: Surface	Tubing Size:		
Well Type: Oil	Liner Depth:		
Age of Well: New	Liner Size:		
Packer Type:	Liner Top:		
Packer Depth:	Liner Bottom:		
Treatment Via: Casing	Total Depth: 268'		
		Total Perfs	0

TIME	INJECTION RATE		PRESSURE		REMARKS	PROP (lbs)	HCL (gls)	FLUID (bbls)
	FLUID	N2/CO2	STP	ANNULUS				
6:00 PM					Called Out			
9:30 PM					On Location W/Trucks			
					Hold Safety Meeting Spot & Set Up Trucks			
					TD= 268' TP= 265' SJ= 30' Run 6 Jt's 8 5/8 23 LB Csg.			
10:30 PM					Start Casing			
11:14 PM					Casing On Bottom			
11:25 PM					Hook Up To Casing & Break Circulation W/Rig			
11:40 PM	4.0		140.0		Start Pumping H2O			15.00
	4.0		150.0		Start Mix & Pump 185 Sk 2% Gel 3% CC			47.00
	4.0		150.0		Start Displacement			15.00
12:00 AM			150.0		Shut Down Close Vavle on Casing			
					Good Circulation Thru Job			
					Circulate 15 Sacks To Pit			
					Wash Up Truck & Rack Up Truck			
					Off Location			
					Thank You			
					Please Call Again			
					Todd Brad Cody Garett			
TOTAL:						-	-	77.00

SUMMARY

Max Fl. Rate	Avg Fl. Rate	Max PSI	Avg PSI
4.0	4.0	150.0	147.5

PRODUCTS USED

185 Sacks Common 2% Gel 3% CC

Treater: Todd Seba

Customer: Rick Wilson



BJ Services, LLC

Invoice

DATE 31-Jan-2018

Page 1 of 2

Number: 1006124

Bill-to Address LANDMARK RESOURCES INC 4900 Woodway Drive. Ste. 880 Houston, TX 77056 USA		Ship-to Address Logan 1-33 KS USA	Amount Due: 19,872.70 Terms of Payment: Net 30 days Payment Due Date: 02-Mar-2018 Terms of Delivery: Delivered at Place Mode of Transport: TruckCarrier-Truck Sales Cust. Rep.: Field Cust. Rep.: jason walker Field Ticket No.: FT-02796-W4M7N70202-38449 Job Type: Long String Service Line: Cementing Customer ID: 20071480
Well Data		Contact Information	
Well Name: Logan 1-33 State / Country: Kansas / United States API/UWI No.: 15-171-21214 BJ Well Ref. No.: W15406006	BJ Services, LLC 712 S. Country Estates Road Liberal, KS 67901 USA Contact: Melissa Clifton Email ID: melissa.clifton@bjservices.com Tel: (304) 508-2687		

Additional Information

BJ District:		AFE Number:	
Quotation Ref.: QUO-02610-M9V6M2		Purch. order no.:	
Service Start Date: 16-Jan-2018		Coding:	
Service End Date: 16-Jan-2018			

Invoice Summary

Total Sales	53,992.23
Total Service	59,436.00
Gross Revenue	113,428.23
Discount	93,555.53
Subtotal	19,872.70
Tax*	0.00
Final Amount(USD)	19,872.70

Notes

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Remittance Instructions

Please remit USD checks to: BJ Services LLC, PO BOX 733585, Dallas, TX, 75373-3585.
 Wire Transfers to JP Morgan Chase Bank, ABA #021000021, Swift Code: CHASUS33, Account No.: 100073888.
 ACH payments to: JP Morgan Chase Bank, ABA #111000614, Account No.: 100073888.
 Please email remittance advices to ARremittance@BJSERVICES.COM.



BJ Services, LLC

Invoice

DATE 31-Jan-2018

Page 2 of 2

Number: 1006124

Item	Material	Description	Tax	Quantity	UOM	Book Price	Discount(%)	Net Unit Price	Extended Price (USD)
000010	S-100066	Cement pump charge, Additional Hours	0.00	13.00	hr	2,720.00	92%	217.60	2,828.80
000020	S-100053	Cement pump charge, 5,001-6,000 feet/1,501 - 1,800 m	0.00	1.00	6/hr	7,032.00	92%	562.56	562.56
000030	S-100074	Multiple stage cementing	0.00	1.00	JOB	4,680.00	92%	374.40	374.40
000040	S-100004	Cement Crew Mobilization- Demobilization Fee	0.00	1.00	ea	10,880.00	92%	870.40	870.40
000050	S-100001	Mileage - vehicle heavy weight	0.00	50.00	mi	18.96	92%	1.52	75.84
000060	S-100002	Mileage - vehicle light weight	0.00	50.00	mi	10.72	92%	0.86	42.88
000070	L017421	Latch Down Plug & Assembly, 5-1/2 in.	0.00	1.00	ea	660.00	72%	184.80	184.80
000080	L013391	FLOAT SHOE 5-1/2 - 8rd	0.00	1.00	ea	560.00	72%	156.80	156.80
000090	L017348	STAGE TOOL,CEM,5-1/2"N80,8RD-L	0.00	1.00	ea	11,495.00	72%	3,218.60	3,218.60
000100	L017116	Collars and Cement Baskets, 5-1/2 in.	0.00	2.00	ea	395.00	72%	110.60	221.20
000110	L017215	CENTRALIZERS / TURBOLIZERS, 5-1/2 in.	0.00	15.00	ea	195.00	72%	54.60	819.00
000120	L100318	CEMENT EXTENDER, GYPSUM, A-10	0.00	776.00	lb	0.72	72%	0.20	156.44
000130	L100404	SALT,SODIUM CHLORIDE FINE EVAP	0.00	919.00	lb	1.04	72%	0.29	267.61
000140	L488735	IntegraGuard BOND IIA Concentrate	0.00	24.00	gal	159.60	72%	44.69	1,072.51
000150	L488168	CEMENT, ASTM TYPE I	0.00	405.00	SK	44.11	72%	12.35	5,002.07
000160	L100120	EXTENDER, BENTONITE	0.00	3,206.00	lb	2.08	72%	0.58	1,867.17
000170	L488015	FLUID LOSS, FL-52	0.00	71.00	lb	23.28	72%	6.52	462.81
000180	L415082	IntegraSeal KOL	0.00	750.00	lb	1.20	72%	0.34	252.00
000190	L101196	Foam Preventer, FP-25	0.00	21.00	lb	7.12	72%	1.99	41.87
000200	L100295	IntegraSeal CELLO	0.00	107.00	lb	5.76	72%	1.61	172.57
000210	L100317	CEMENT, FLY ASH (POZZOLAN)	0.00	170.00	SK	25.68	72%	7.19	1,222.37

*Tax amount listed is inclusive of applicable:

- State and local Sales Taxes, or
- New Mexico Gross Receipts Tax, or
- Texas Well Services Reimbursement 2.42%

FIELD TICKET

PRJ1003125
SO000005456

Client LANDMARK RESOURCES INC

Well Logan 1-33

Job Description Long String

Date January 16, 2018

Field Ticket # FT-02796-W4M7N70202-38449



Field Ticket # FT-02796-W4M7N70202-38449

Credit Approval #

Client LANDMARK RESOURCES INC

Purchase Approval #

4900 Woodway Drive. Ste. 880,
Houston, 77056

Invoice #

Field Rep Aldo Espinoza Galindo

Well Logan 1-33

**Field Client
Rep**

Well API # 15-171-21214

District Liberal, KS

Well Type

Job Type Long String

Well Classification

Job Depth (ft) 5,000.00

County USA

**Gas Used On
Job** No

State/Province KS

Field

Lease

FIELD TICKET

Client LANDMARK RESOURCES INC

Well Logan 1-33

Job Description Long String

Date January 16, 2018



Field Ticket # FT-02796-W4M7N70202-38449

MATERIALS

Product Code	Description	UNITS	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
L100318	CEMENT EXTENDER, GYPSUM, A-10	LB	776.0000	\$0.72	\$558.72	72.00	\$156.44
L100404	SALT, SODIUM CHLORIDE, A-5	LB	919.0000	\$1.04	\$955.76	72.00	\$267.61
L488735	IntegraGuard BOND IIA Concentrate	GAL	24.0000	\$159.60	\$3,830.40	72.00	\$1,072.51
L488168	CEMENT, ASTM TYPE I	SK	405.0000	\$44.11	\$17,864.55	72.00	\$5,002.07
L100120	EXTENDER, BENTONITE	LB	3,206.0000	\$2.08	\$6,668.48	72.00	\$1,867.17
L488015	FLUID LOSS, FL-52	LB	71.0000	\$23.28	\$1,652.88	72.00	\$462.81
L415082	IntegraSeal KOL	LB	750.0000	\$1.20	\$900.00	72.00	\$252.00
L100156	FOAM PREVENTER, FP-11	LB	21.0000	\$7.12	\$149.52	72.00	\$41.87
L100295	IntegraSeal CELLO	LB	107.0000	\$5.76	\$616.32	72.00	\$172.57
L100317	CEMENT, FLY ASH (POZZOLAN)	SK	170.0000	\$25.68	\$4,365.60	72.00	\$1,222.37
L017215	CENTRALIZERS / TURBOLIZERS, 5-1/2 in.	EA	15.0000	\$195.00	\$2,925.00	72.00	\$819.00
L017116	Collars and Cement Baskets, 5-1/2 in.	EA	2.0000	\$395.00	\$790.00	72.00	\$221.20
L014007	Float Shoe - circulating diff. type, 5-1/2 in.	EA	1.0000	\$560.00	\$560.00	72.00	\$156.80
L017421	Latch Down Plug & Assembly, 5-1/2 in.	EA	1.0000	\$660.00	\$660.00	72.00	\$184.80
L017348	STAGE TOOL, CEM, 5-1/2" N80, BRD-L	EA	1.0000	\$11,495.00	\$11,495.00	72.00	\$3,218.60
Product Material Subtotal:					\$53,992.23		\$15,117.82

SERVICES

Product Code	Description	UNITS	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
S-100004	Cement Crew Mobilization- Demobilization Fee	EA	1.00	\$10,880.00	\$10,880.00	92.00	\$870.40
S-100053	Cement pump charge, 5,001-6,000 feet/1,501 -	6/HR	1.00	\$7,032.00	\$7,032.00	92.00	\$562.56

FIELD TICKET

Client LANDMARK RESOURCES INC

Well Logan 1-33

Job Description Long String

Date January 16, 2018

Field Ticket # FT-02796-W4M7N70202-38449



		1,800 m					
S-100066	Cement pump charge, Additional Hours	HR	13.00	\$2,720.00	\$35,360.000	92.00	\$2,828.800
S-100001	Mileage - vehicle heavy weight	MI	50.00	\$18.96	\$948.000	92.00	\$75.840
S-100002	Mileage - vehicle light weight	MI	50.00	\$10.72	\$536.000	92.00	\$42.880
S-100074	Multiple stage cementing	JOB	1.00	\$4,680.00	\$4,680.000	92.00	\$374.400
				Service Subtotal:	\$59,436.00		\$4,754.88

FIELD TICKET

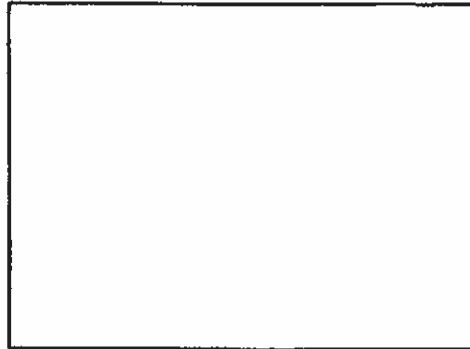
Client LANDMARK RESOURCES INC
Well Logan 1-33
Job Description Long String
Date January 16, 2018



Field Ticket # FT-02796-W4M7N70202-38449

FIELD ESTIMATES

TOTAL GROSS AMOUNT \$113,428.230
TOTAL % DISC 82.480%
TOTAL NET AMOUNT \$19,872.700



Arrive Location
Client Rep.

Service Order

I authorize work to begin per service instructions in accordance with the terms and conditions printed on the following pages of this form and represent that I have authority to accept and sign this order.

Service receipt

I certify that the materials and services listed were received and all services performed in a workmanlike manner.

BJ REPRESENTATIVE
Aldo Espinoza Galindo

CLIENT AUTHORIZED AGENT

Jason Walker

Customer Name LANDMARK RESOURCES INC
 Well Name LOGAN 1-33
 Job Type Two-Stage Cement

District Liberal
 Supervisor ALDO ESPINOZA
 Engineer EDGAR



Seq No.	Start Date/Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	1/16/2018 2:00	Mobilization	Arrive on Location	Cement Pump Truck						ON LOCATION
2	300AM	Operational	Rig Up							RIG UP
3		StandBy	Customer							CREW PULLING DRILL PIPE
4	700AM	Operational								RUN FLOAT TOOLS
5	1200PM		CASING ON BOTTOM							CASING ON BOTTOM
6	210PM		SAFETY MEETING							SAFETY MEETING
7	220PM		PRESSURE TEST				0.3		2500	PRESSURE TEST LINES
8	222PM		MUD FLUSH			8.4	4	12	200	12 BBL MUD FLUSH
9	229PM		SLURRY			14.5	5	42	140	150 SK / 42 BBL SLURRY AT 14.5 #
10	239PM		WASH PUMP			8.34	3	20		WASH PUMPING LINES TO PIT
11	242PM		DROP PLUG							DROP PLUG
12	243PM		START DISPLACING			8.34	4		20	START DISPLACEMENT
13	247PM						5	20	20	20 BBL GONE
14	251PM						5	20	20	40 BBL GONE
15	256PM		SLOW DOWN				3	20	30	50 BBL SLOW DOWN TO GO TRHU TOOL
16	257PM		SWAP TO MUD			9	5	6	30	56 BBL SWAP TO MUD
17	301PM						5	24	300	80 BBL GONE
18	306PM		SLOW DOWN				3	20	420	100 BBL SLOW DOWN TO LAND PLUG
19	310PM		BUMP PLUG				2.5	14.5	600-1100	114.5 BUMP PLUG
20	312PM		CHECK FLOATS						0	CHECK FLOATS--- FLOATS HOLDING
21	314PM		DROP TOOL							DROP OPENING TOOL
22	332PM		OPEN TOOL				1	2	750	OPEN TOOL, BRAKE CIRCULATION
23	334PM		WASH TANKS							WASH DISPLACEMENT TANKS
24	340PM		SWAP TO RIG							SWAP TO RIG
25										
26			SECOND STAGE							SECOND STAGE
27	744PM		MUD FLUSH			8.4	4	12	70	12 BBL MUD FLUSH
28	750PM		RAT HOLE			12	2	19	10	CEMENT RAT HOLE
29	755PM		SLURRY			12	5	147	100	375 SK / 147 BBL SLURRY AT 12 #
30	828PM		WASH LINES				3	20		WASH PUMPING LINES TO PIT
31	838PM					8.34		20		20 BBL GONE
32	841PM							10		30 BBL GONE
33	845PM		SLOW DOWN					18		48 BBL SLOW DOWN TO LAND PLUG
34	855PM		BUMP PLUG					10		58 BBL BUMP PLUG
35										AFTER SEVERAL ATEMPTS DUE TO A LEAK ON CIRCULATING HEAD
36										NO CEMENT BACK TO SURFACE
37	930PM		RIG DOWN							RIG DOWN
38	1030PM		LEAVE LOCATION							LEAVE LOCATION
39										THANKS
40										
41										

Cementing Treatment



Start Date	1/16/2018	Well	Logan 1-33
End Date	1/16/2018	County	
Client	LANDMARK RESOURCES INC	State/Province	KS
Client Field Rep		API	15-171-21214
Service Supervisor		Formation	
Field Ticket No.		Rig	
District	Liberal, KS	Type of Job	Long String

WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)	Grade	Thread
Previous Casing	8.10	8.63	24.00	260.00	260.00			
Open Hole	7.88			5,000.00	5,000.00	0.00		
Casing	4.95	5.50	15.50	4,856.00	5,000.00		J-55	lrc
Open Hole	7.88			2,450.00	2,450.00	84.25		

Shoe Length (ft): 43

HARDWARE

Bottom Plug Used?	No	Tool Type	DV Tool
Bottom Plug Provided By		Tool Depth (ft)	2,440.00
Bottom Plug Size		Max Tubing Pressure - Rated (psi)	
Top Plug Used?	Yes	Max Tubing Pressure - Operated (psi)	
Top Plug Provided By	BJ	Max Casing Pressure - Rated (psi)	4,800.00
Top Plug Size	5.500	Max Casing Pressure - Operated (psi)	3,500.00
Centralizers Used	Yes	Pipe Movement	Rotation
Centralizers Quantity	14.00	Job Pumped Through	Manifold
Centralizers Type	Bow	Top Connection Thread	lrc
Landing Collar Depth (ft)	4,856	Top Connection Size	5.5

CIRCULATION PRIOR TO JOB

Cementing Treatment



Well Circulated By	Rig	Solids Present at End of Circulation	No
Circulation Prior to Job	Yes	10 sec SGS	
Circulation Time (min)	3.00	10 min SGS	
Circulation Rate (bpm)	5.00	30 min SGS	
Circulation Volume (bbls)	300.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	No	Gas Present	No
Mud Density In (ppg)	9.00	Gas Units	
Mud Density Out (ppg)	9.00		
PV Mud In			
PV Mud Out			
YP Mud In			
YP Mud Out			

TEMPERATURE

Ambient Temperature (°F)	-6.00	Slurry Cement Temperature (°F)	55.00
Mix Water Temperature (°F)	40.00	Flow Line Temperature (°F)	60.00

BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	1st Stage Spacer	8.4000					12.0000
Spacer / Pre Flush / Flush	2nd Stage Spacer	8.4000					12.0000
Tail Slurry	2nd Stage Cement	12.0000	2.2054	12.57	375	750.0000	133.4000
Tail Slurry	1st Stage Cement	14.5000	1.6049	7.34	150	250.0000	44.4000
Top-Out / Scavenger Slurry	Mouse Hole Plug	12.0000	2.2054	12.57	50	111.0000	19.8000

Cementing Treatment



Displacement Final	1st Stage Displacement	8.3400			0.0000	119.0000
Displacement Final	2nd Stage Displacement	8.3400			0.0000	58.3000

Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	1st Stage Spacer	IntegraGuard BOND IIA Concentrate	1.0000	GPB
Spacer / Pre Flush / Flush	2nd Stage Spacer	IntegraGuard BOND IIA Concentrate	1.0000	GPB
Tail Slurry	2nd Stage Cement	CEMENT, ASTM TYPE I	60.0000	PCT
Tail Slurry	2nd Stage Cement	EXTENDER, BENTONITE	8.0000	BWOB
Tail Slurry	2nd Stage Cement	CEMENT, FLY ASH (POZZOLAN)	40.0000	PCT
Tail Slurry	2nd Stage Cement	IntegraSeal CELLO	0.2500	LBS/SK
Tail Slurry	1st Stage Cement	CEMENT, ASTM TYPE I	100.0000	PCT
Tail Slurry	1st Stage Cement	CEMENT EXTENDER, GYPSUM, A-10	5.5000	BWOB
Tail Slurry	1st Stage Cement	EXTENDER, BENTONITE	2.0000	BWOB
Tail Slurry	1st Stage Cement	FLUID LOSS, FL-52	0.5000	BWOB
Tail Slurry	1st Stage Cement	SALT, SODIUM CHLORIDE, A-5	10.0000	BWOB
Tail Slurry	1st Stage Cement	IntegraSeal KOL	5.0000	LBS/SK
Tail Slurry	1st Stage Cement	FOAM PREVENTER, FP-11	0.1400	LBS/SK
Top-Out / Scavenger Slurry	Mouse Hole Plug	CEMENT, ASTM TYPE I	60.0000	PCT
Top-Out / Scavenger Slurry	Mouse Hole Plug	EXTENDER, BENTONITE	8.0000	BWOB
Top-Out / Scavenger Slurry	Mouse Hole Plug	IntegraSeal CELLO	0.2500	LBS/SK
Top-Out / Scavenger Slurry	Mouse Hole Plug	CEMENT, FLY ASH (POZZOLAN)	40.0000	PCT

TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
	1st Stage Spacer	0.00	12.00			

Cementing Treatment



	1st Stage Displacement	0.00	119.00		
	2nd Stage Spacer	0.00	12.00		
	2nd Stage Cement	0.00	133.40		
	2nd Stage Displacement	0.00	58.30		

	Min	Max	Avg
Pressure (psi)	0.00	4,000.00	600.00
Rate (bpm)	1.00	6.00	4.00

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	2.00
Calculated Displacement Volume (bbls)	114.50	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	114.50	Amount of Spacer to Surface	
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amount Bled Back After Job	2.00
Bump Plug Pressure (psi)	1,200.00	Total Volume Pumped (bbls)	380.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement returns During Job	None	Lost Circulation During Cement Job	No

CEMENT PLUG

Bottom of Cement Plug?	No	Wiper Balls Used?	No
Wiper Ball Quantity		Plug Catcher	No
Number of Plugs			

SQUEEZE

Injection Rate (bpm)	Fluid Density (ppg)
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Cementing Treatment



Injection Pressure (psi)

ISIP (psi)

Type of Squeeze

FSIP (psi)

Operators Max SQ Pressure (psi)

COMMENTS

Treatment Report

Job Summary

first stage pumped 12 bbl mud flush
42.7 bbl slurry at 14.5 #
wash pumping lines to pit
drop latch down plug
displace 56 bbl water and 58.5 bbl mud
bump plug 600 -1200
drop opening tool give 25 min to fall
open tool 750 psi, brake circulation
second stage
12 bbl mud flush
147 bbl slurry at 12 #
drop plug (closing tool)
bump plug 2500 psi over
done



Bill-to Address LANDMARK RESOURCES INC 4900 Woodway Drive, Ste. 880 Houston, TX 77056 USA <p style="text-align: center; font-size: 2em; color: blue;">73550</p>	Ship-to Address Logan 1-33 KS USA	Amount Due: 5,941.55 Terms of Payment: Net 30 days Payment Due Date: 14-Mar-2018 Terms of Delivery: Delivered at Place Mode of Transport: TruckCarrier-Truck Sales Cust. Rep.: Jason Walker Field Cust. Rep.: Jason Walker Field Ticket No.: FT-03492-S0W8W10202-83784 Job Type: Squeeze-Block - New Well Service Line: Cementing Customer ID: 20071480	
Well Data		Contact Information	
Well Name: Logan 1-33 State / Country: Kansas / United States API/UWI No: 15-171-21214 BJ Well Ref. No: W15406006		BJ Services, LLC 712 S. Country Estates Road Liberal, KS 67901 USA Contact: Melissa Clifton Email ID: melissa.clifton@bjsservices.com Tel: (304) 508-2687	

Additional Information

BJ District: Quotation Ref.: QUO-06355-P7V5C4 Service Start Date: 07-Feb-2018 Service End Date: 07-Feb-2018	AFE Number: Purch. order no.: Coding:
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Invoice Summary

Total Sales	2,621.50
Total Service	15,436.00
Gross Revenue	18,057.50
Discount	12,115.95
Subtotal	5,941.55
Tax*	0.00
Final Amount(USD)	5,941.55

Notes

Pd.
\$ 5,941.55

FEB 21 2018

Remittance Instructions

Please remit USD checks to: BJ Services LLC, PO BOX 733585, Dallas, TX, 75373-3585.
 Wire Transfers to: JP Morgan Chase Bank, ABA #021000021, Swift Code: CHASUS33, Account No.: 100073888.
 ACH payments to: JP Morgan Chase Bank, ABA #111000614, Account No.: 100073888.
 Please email remittance advices to ARremittance@BJSERVICES.COM.



Item	Material	Description	Tax	Quantity	UOM	Book Price	Discount(%)	Net Unit Price	Extended Price (USD)
000010	S-100048	Cement pump charge, 0-1,000 feet/ 0-300 m	0.00	1.00	4/hr	3,072.00	70%	921.60	921.60
000020	S-100004	Cement Crew Mobilization- Demobilizaton Fee	0.00	1.00	ea	10,880.00	70%	3,264.00	3,264.00
000030	S-100002	Mileage - vehicle light weight	0.00	50.00	mi	10.72	70%	3.22	160.80
000040	S-100001	Mileage - vehicle heavy weight	0.00	50.00	mi	18.96	70%	5.69	284.40
000050	L488168	CEMENT, ASTM TYPE I	0.00	50.00	SK	44.11	50%	22.06	1,102.75
000060	L499632	RETARDER, SUGAR, GRANULAR	0.00	100.00	lb	4.16	50%	2.08	208.00

*Tax amount listed is inclusive of applicable:
• State and local Sales Taxes, or
• New Mexico Gross Receipts Tax, or
• Texas Well Services Reimbursement 2.42%.

FIELD TICKET

PRJ1003826
SO000006746

Client LANDMARK RESOURCES INC
Well Logan 1-33
Job Description Squeeze-Block - New Well
Date February 07, 2018



Field Ticket # FT-03492-S0W8W10202-83784

Field Ticket # FT-03492-S0W8W10202-83784 **Credit Approval #**
Client LANDMARK RESOURCES INC **Purchase Approval #**
4900 Woodway Drive. Ste. 880, **Invoice #**
Houston, 77056

Field Rep	Erik Chavez	Well	Logan 1-33
Field Client Rep	Jason Walker	Well API #	15-171-21214
District	Liberal, KS	Well Type	
Job Type	Squeeze-Block - New Well	Well Classification	
Job Depth (ft)	165.00	County	USA
Gas Used On Job	No	State/Province	KS
		Field	
		Lease	

FIELD TICKET

Client LANDMARK RESOURCES INC
Well Logan 1-33
Job Description Squeeze-Block - New Well
Date February 07, 2018



Field Ticket # FT-03492-S0W8W10202-83784

MATERIALS

Product Code	Description	UOM	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
L488168	CEMENT, ASTM TYPE I	SK	50.0000	\$44.11	\$2,205.50	50.00	\$1,102.75
L499632	RETARDER, SUGAR, GRANULAR	LB	100.0000	\$4.16	\$416.00	50.00	\$208.00
Product Material Subtotal:					\$2,621.50		\$1,310.75

SERVICES

Product Code	Description	UOM	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
S-100004	Cement Crew Mobilization-Demobilization Fee	EA	1.00	\$10,880.00	\$10,880.000	70.00	\$3,264.000
S-100048	Cement pump charge, 0-1,000 feet/ 0-300 m	4/HR	1.00	\$3,072.00	\$3,072.000	70.00	\$921.600
S-100001	Mileage - vehicle heavy weight	MI	50.00	\$18.96	\$948.000	70.00	\$284.400
S-100002	Mileage - vehicle light weight	MI	50.00	\$10.72	\$536.000	70.00	\$160.800
Service Subtotal:					\$15,436.00		\$4,630.80

FIELD TICKET

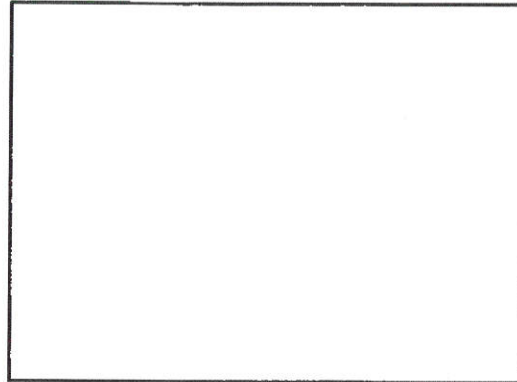
Client LANDMARK RESOURCES INC
Well Logan 1-33
Job Description Squeeze-Block - New Well
Date February 07, 2018



Field Ticket # FT-03492-S0W8W10202-83784

FIELD ESTIMATES

TOTAL GROSS AMOUNT \$18,057.500
TOTAL % DISC 67.096%
TOTAL NET AMOUNT \$5,941.550



Arrive Location
Client Rep.

Service Order

I authorize work to begin per service instructions in accordance with the terms and conditions printed on the following pages of this form and represent that I have authority to accept and sign this order.

Service receipt

I certify that the materials and services listed were received and all services performed in a workmanlike manner.

BJ REPRESENTATIVE

Erik Chavez

CLIENT AUTHORIZED AGENT

Jason Walker