KOLAR Document ID: 1280932

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 # 3842
Name: Larson Engineering, Inc. dba Larson Operating Company
Address 1: 562 W STATE RD 4
Address 2:
City: OLMITZ State: KS Zip: 67564 + 8561
Contact Person: Thomas Larson
Phone: (620) 653-7368
CONTRACTOR: License # 33935
Name: H. D. Drilling, LLC
Wellsite Geologist: Vern Schrag
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 #:

10/16/2015 Spud Date or Recompletion Date
10/26/2015 Date Reached TD
10/26/2015 Completion Date or Recompletion Date

API No.: 15-047-21652-00-00
Spot Description:
N2 - SW - NW - NW Sec. 7 Twp. 26 S. R. 20 ☐ East ☑ West
900 Feet from ☑ North / ☐ South Line of Section
330 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Edwards
Lease Name: Miller-Williams Well #: 1-7
Field Name:
Producing Formation: N/A
Elevation: Ground: 2246 Kelly Bushing: 2255
Total Vertical Depth: 4851 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 265 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: 21200 ppm Fluid volume: 1000 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: Whitetail Crude
Lease Name: Tammen C 2 License #: 31627
Quarter SW Sec. 30 Twp. 1 S. R. 23 ☐ East ☑ West
County: Hodgeman Permit #: D30374.0

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: 02/11/2016
☑ **Confidential Release Date:** 02/10/2018
☑ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 02/12/2016

Operator Name: Larson Engineering, Inc. dba Larson Operating Company Lease Name: Miller-Williams Well #: 1-7

Sec. 7 Twp. 26 S. R. 20 ☐ East ☑ West County: Edwards

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 *(Attach Additional Sheets)*	☑ Yes	☐ No	☐ Log	Formation (Top), Depth and Datum ☐ Sample
Samples Sent to Geological Survey	☑ Yes	☐ No	Name: Attached	Top: Attached Datum: Attached
Cores Taken	☐ Yes	☑ No		
Electric Log Run	☑ Yes	☐ No		
Geologist Report / Mud Logs	☐ Yes	☐ No		

List All E. Logs Run:

Dual Induction
Dual Comp Porosity
Microresistivity

CASING RECORD ☑ New ☐ 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
Surface	12.25	8.625	20	265	Class A	165	2% gel, 3% CC, 1/4#/sk flocele

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL: Top / Bottom
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD: Size: Set At: Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	Miller-Williams 1-7
Doc ID	1280932

Tops

Name	Top	Datum
Anhydrite	1311	+944
B Anhydrite	1334	+921
Heebner	3992	-1737
Lansing	4117	-1862
Stark Sh	4382	-2127
Pawnee	4602	-2347
Upper Cher Sh	4654	-2399
Lower Cher SH	4689	-2434
Miss Warsaw	4750	-2496

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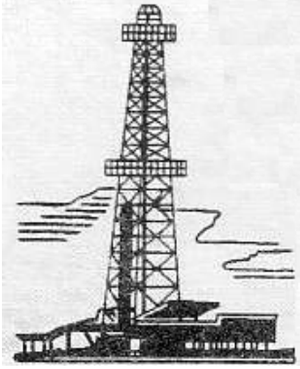
Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	20	265	Class A	165	2% gel, 3% CC, 1/4#/sk flocele



WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG
CONSULTANT GEOLOGIST

Scale 1:240 (5"=100') Imperial

Well Name:	**MILLER-WILLIAMS #1-7**		
Location:	**N2 SW NW NW SEC. 7-T26S-R20W**		
Licence Number:	**API: 15-047-21652**	**Region:**	**Edwards Co., KS**
Spud Date:	**October 16, 2015**	**Drilling Completed:**	**October 26, 2015**
Surface Coordinates:	**900' FNL & 330' FWL**		
Bottom Hole Coordinates:			
Ground Elevation (ft):	**2246'**	**K.B. Elevation (ft):**	**2255'**
Logged Interval (ft):	**3800' To: RTD**	**Total Depth (ft):**	**4850'**
Formation:	**D&A Mississippi**		
Type of Drilling Fluid:	**Chemical Premix (Displaced)**		

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR:

Company: Larson Engineering Inc.
Address: 562 West State Road 4
Olmitz, KS 67564-8561

DRILLING CONTRACTOR:

H. D. Drilling, LLC, Rig #3 (Co. Tools)

DP 4.5" XH (16.6#); DC 6-1/4" x 2-3/8" x 556', Kelly 41.00', Tool Joint 5.5" ; Bit: JZ-HA20Q, 7-7/8", standard jets 16-16-16; rpm 80, WOB 35k; Kelly Bushing 9' above ground level; LeWayne "Lew" Tresner (tool pusher).

CASING:

Set 8-5/8" casing at 264.79' KB

CIRCULATION SYSTEM:

Continental EMSCO D-300, duplex, 6 x 14, 58 spm, Chemical, premix, earth pits, displaced 3546, Mud-Co/Service Mud, Inc., Justin Whiting.

GAS DETECTION SYSTEM:

USB-1208LS-41, portable hot-wire, Delphian 3.0 volt catalytic bead conbustible gas detector.

OPEN HOLE LOGS:

DN, PE, DI (SP), MIL (stacked); No Sonic; 5" detail LTD-3950; 2" DI to suface casing; Weatherford Logging Services, Liberal, KS, Jeffrey Randle, Log total depth (4851') was one foot long to rotary total depth (4850').

DRILL STEM TEST #1:

Cherokee Lime: Interval: 4590-4705 (114'): Blow: weak surf. no build IFP, no RB, weak surf. died 2 min after second open; Times: 5-15-15-30; Recovery: 5' mud w/skim of oil (100%M); Pressures: HP: 2288-2239, SIP: 59-44, FP: 44-36, 37-32; BHT: 114 F; Trilobite Testing, Inc., Hays, KS, Ken Swinney.

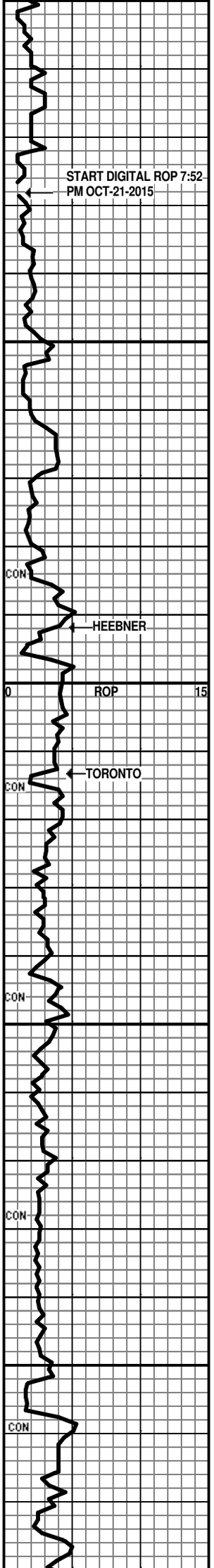
DRILL STEM TEST #2:

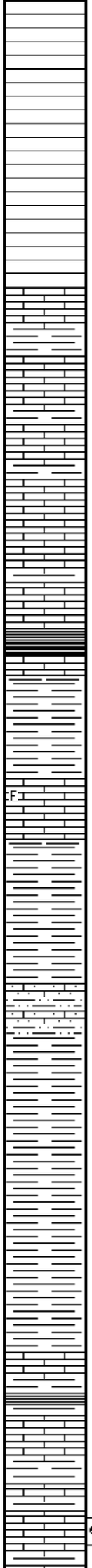
Mississippi Dolomite: Interval: 4701-4765 (64'): Blow BOB 2-1/2 min IFP, no RB, BOB 3 min FFP, no RB; Times: 5-15-15-30; Recovery: 887' gas & oil cut muddy salt water; Grindout: 5%G, 5%O, 70%W, 20%M; Rw 0.38 at 55 deg F, chloride 22k; Pressures: HP: 2325-2270, SIP: 1401-1361, FP: 124-215, 240-431; BHT: 126 F; Trilobite Testing, Inc., Hays, KS, Ken Swinney.

REMARKS

It was determined that this well should be plugged and abandoned.

ROP ROP (min/ft) Five Ten	DST	Lithology	Porosity and Show	Depth	Geological Descriptions	Total Gas TG (units) Fifty One
0 ROP 15						0 Hot-Wire 100
				3800		REFERENCE WELL: KIRSTING-WILLIAMS #1-1, 1-26s-21w. SAMPLES WERE REQUESTED BY STATE SURVEY AND SUBMITTED.
				3850		
				4000		





3950

LS: grayish-brown; vf-xtal; chalky, argill. in part; scattered fine vug porosity; dull fluor; N.S.

LS: md gray, brown, mottled; vf-xtal; poor porosity; N.S.

LS: lt grayish brown; mic-vf xtal; chalky in part; scattered fine vug porosity; dull fluor; N.S.

LS: md grayish brown; mic-vf xtal; shale specks; no visible porosity; N.S.

HEEBNER 3992 (-1737)

Shale: black; carbonaceous; 4010, 4020

LS: grayish brown; dense; indefinate; N.S.

4000

Shale: grays, trc lt-green & maroon;

LS: lt brown, less off-white; mic-vf xtal; no grains; sli incr mineral fluor.; soft chalk; poor porosity; N.S.; 4030, incr 4040.

DOUGLAS 4023 (-1768)

Shale: green, gray, greenish-gray;

SiltSt: green w/dark specks; mica; calcareous, reacts to acid; tight; N.S.; 4060.

4050

Shale: green, greenish-gray; silty;

Shale: as above;

Shale: as above;

4100

BROWN LIME 4099 (-1844)

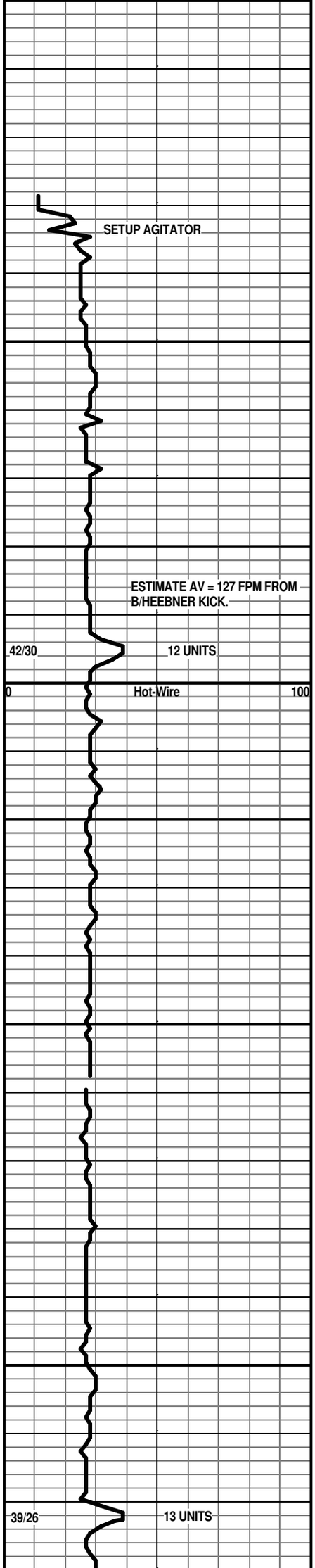
(Corrected Top)

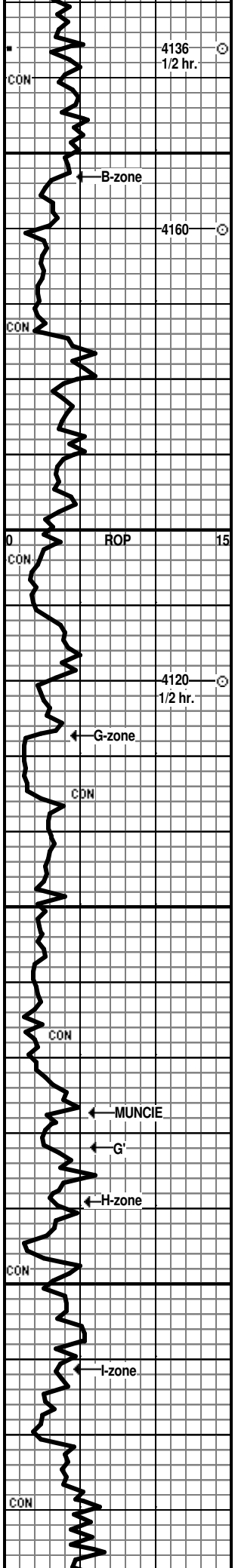
LS: lt grayish-brown w/scattered dark grains; dense; N.S., trc 4120.

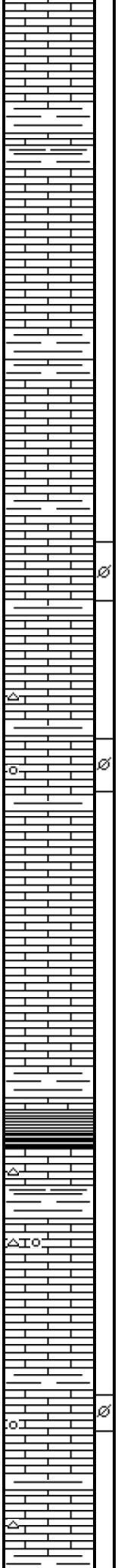
LANSING 4108 (-1853)

(Corrected Top)

LS: off-white to lt brown; mic-vf xtal; scattered grain; tiny points of HC fluor; scattered pin- point por.; no visible oil or gas; cuts on break; no dry stain or fluor; 1% 4136.







4150

4200

4250

4300

LS: lt grayish-brown; vf-xtal; dense, platey; dull fluor; trc opaq. chert; trc vug porosity; N.S.

Shale: grays;

LS: lt brown; mic-vf xtal; chalky; no grains; only dull fluor; N.S., 4160-30m.

LS: lt brown to gray; vf-xtal, w/scattered spar; trc anhydrite; only dull fluor; N.S.; 4180.

Shale: grays; calcareous;

LS: lt brown to gray; vf-xtal; sli fos-frag; dense; v-tight; N.S.

LS: as above;

LS: lt grayish-brown; vf-xtal; sli fos-frag; trc shells, nacreous; poor porosity; N.S.; 4220.

LS: lt brown, off white; mic-vf xtal; v-chalky, white-wash; no grains; tight; N.S.; 30m.

LS: lt brown to gray; vf-xtal; dense to chalky in part; opaq. chert; poor porosity; dull fluor; N.S.

LS: md-dk grayish-brown; vf-f-xtal; good oom porosity; dull fluor; N.S., much at 4250.

LS: lt brown; vf-xtal; dense; minor chalky; trc opaq. chert; poor porosity; N.S.

LS: lt grayish brown; vf-xtal; chalky in part; trc opaq. chert; poor porosity; N.S.

LS: as above; sli. gray mottled;

Shale: green, blocky; 4290.

MUNCIE CREEK 4277 (-2022)

Shale: black; carbonaceous; 4300.

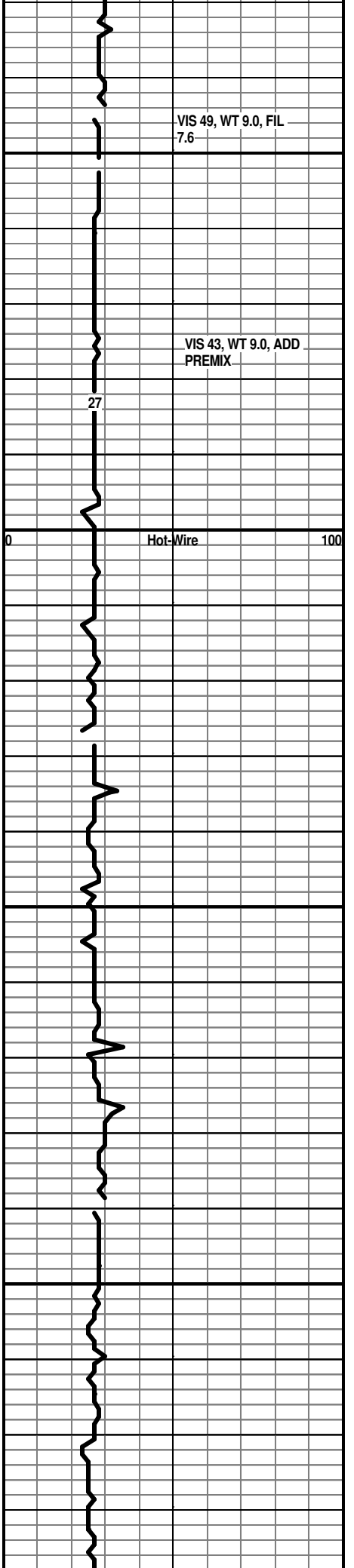
LS: dk grayish brown; trc lt brn contact; vf-xtal; dense; trc fusulinids; trc smokey, semi-opaq. chert; no visible porosity; N.S.

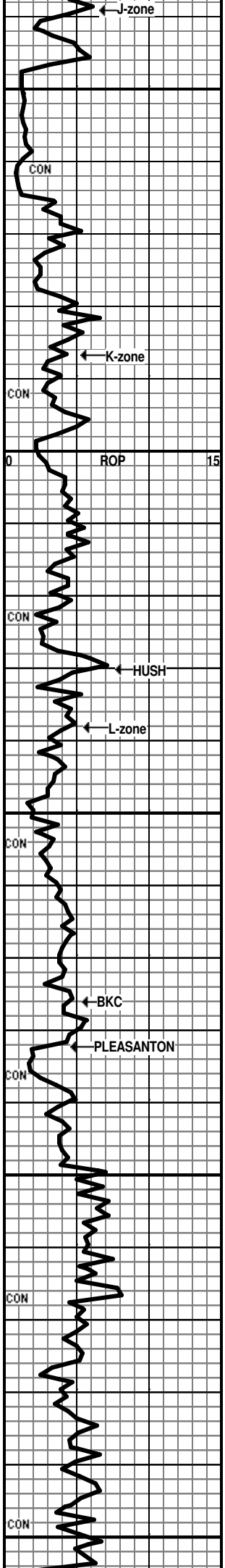
LS: lt grayish-brown; vf-xtal; trc sli fos, opaq. chert; fair oomoldic por.; dull fluor; N.S.

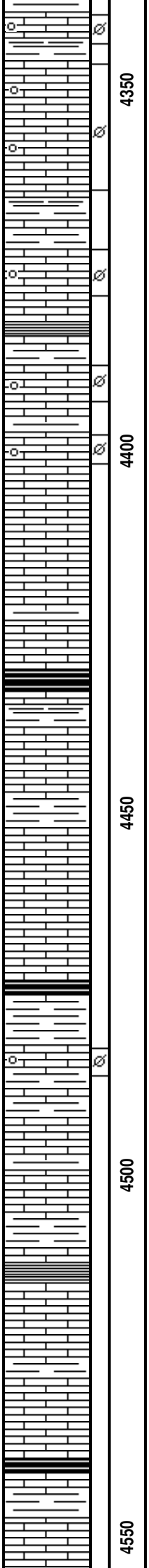
LS: lt brown to lt gray; vf-xtal; dense; sli fos; no visible porosity; N.S.

LS: lt brown; vf-xtal; fine-med. oolite; sli fos; chalky in part; poor int grain porosity; dull fluor; N.S., 4330, 4340.

LS: md-dk grayish brown; vf-xtal; soft chalk; opaq. to semi-trans., smokey chert; dense; no visible porosity; N.S., 4350.







LS: md brown; vf-xtal; fair oomoldic porosity; dull fluor; N.S.

LS: md-brown; vf-xtal; coarse oomoldic; good oomoldic porosity; dull fluor; N.S.; 4470.

LS: oomoldic as above;

LS: lt-md grayish brown; vf-xtal; peletal; sli fos; no visible porosity; N.S., 4390.

LS: md brown; vf-xtal; fine to med. oomoldic; fair porosity; dull fluor; N.S.

STARK SH 4382 (-2127)

LS: lt grayish brown; oolitic to oomoldic; poor to fair oomoldic porosity; dull fluor.; N.S.

LS: as above.

LS: lt grayish brown; vf-xtal; dense to chalky in part; opaq. chert; poor porosity; dull fluor; N.S.

LS: as above.

HUSHPUCKNEY 4430 (-2175)

Shale: black; carbonaceous; few chips 4450.

LS: lt brown; vf-xtal; dense to chalky in part; trc poor oomoldic porosity; dull fluor; N.S.

LS: lt brown; vf-xtal; dense; sli chalky in part; opaq. chert; trc even mineral fluor; N.S.

LS: as above.

Shale: black; carbonaceous; w/black chert; 4490.

LS: lt brown; vf-xtal; finely oolitic; rough textured; looks tight; dull fluor; N.S., 4500.

LS: lt brown to grayish brown; vf-xtal; dense, platey; trc opaq. chert; no visible porosity; N.S.

LS: as above.

Shale: green, gray;

Shale: dark grays;

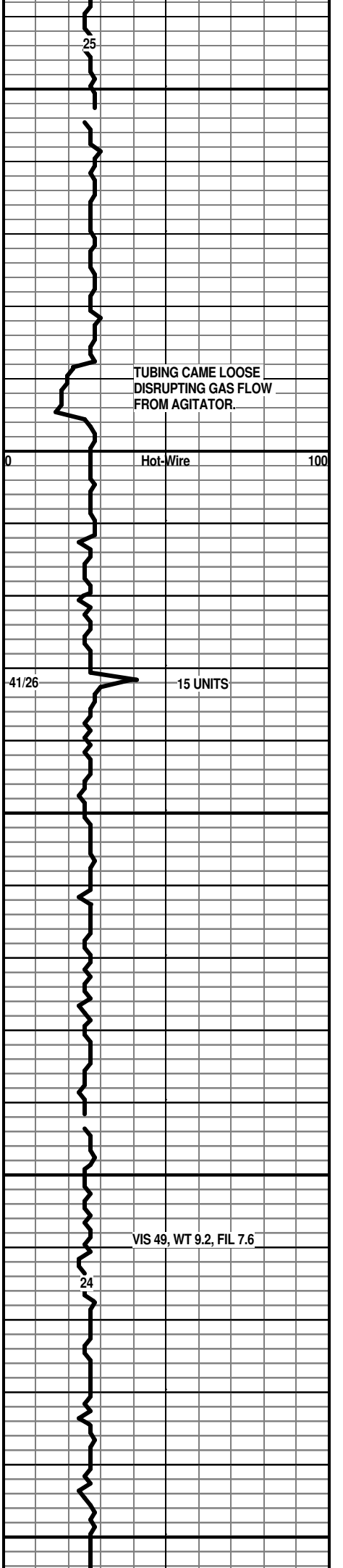
LS: lt-md grayish-brown; vf-xtal; dense, platey; trc smokey, semi-opaq chert; no visible por.; N.S.

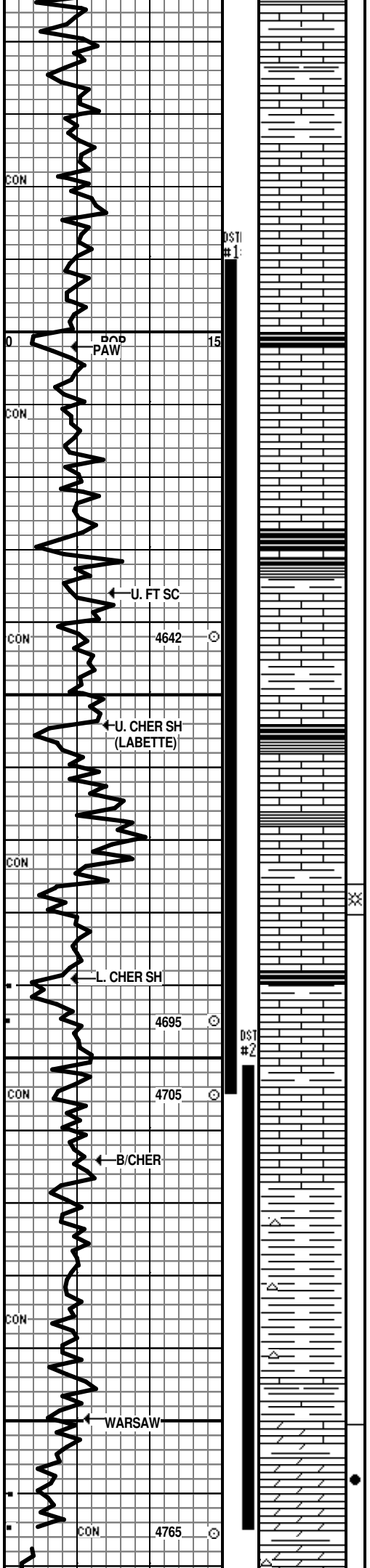
LS: as above w/minor green sh. & marl; N.S.

Shale: dk gray; indistinct;

Shale: maroon & green; 4560 washes red;

LS: lt brown; vf-xtal; dense, platey; sli chalky; no visible porosity; N.S.





4600

LS: as above w/minor soft chalk; N.S.

LS: lt brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S.

LS: as above.

LS: lt-md brown, grayish brown; vf-xtal; sli granular; chalky in part; poor int-gran. por.; N.S.

Shale: black; carbonaceous; 4620.

PAWNEE 4602 (-2347)
(Corrected Top)

LS: lt-md brown; vf-xtal; dense; N.S.

LS: lt-md brown; vf-xtal; dense; smokey chert; no visible porosity; N.S.

Shale: black; carbonaceous; gassy; gray-wash at 4640, 4642.

LS: lt-md brown; vf-xtal; poorly defined oolites are sli. darker than matrix; smokey chert; poor porosity; dull mineral fluor; no visible gas or oil; no dry stains;

4650

UPPER CHER. SH. 4654 (-2399)
(Corrected Top)

Shale: black; carbonaceous; >50% at 4670.

LS: lt-md brown; vf-xtal; dense, platey; no visible porosity; N.S.

LS: lt brown; vf-xtal; sli chalky; finely granular; tight int granular porosity; 1-2% HC fluor; show gas, v-sli S.O., crush cuts; str odor; poor dry stain at best; 4690, decr 4695.

LOWER CHER. SH. 4689 (-2434)
(Corrected Top)

LS: lt-md grayish brown; vf-xtal; dense; trace green siltst & marl; minor green shale; no visible porosity; N.S.

4700

LS: lt gray to grayish brown; mic-vf xtal; chalky; no visible porosity; N.S.

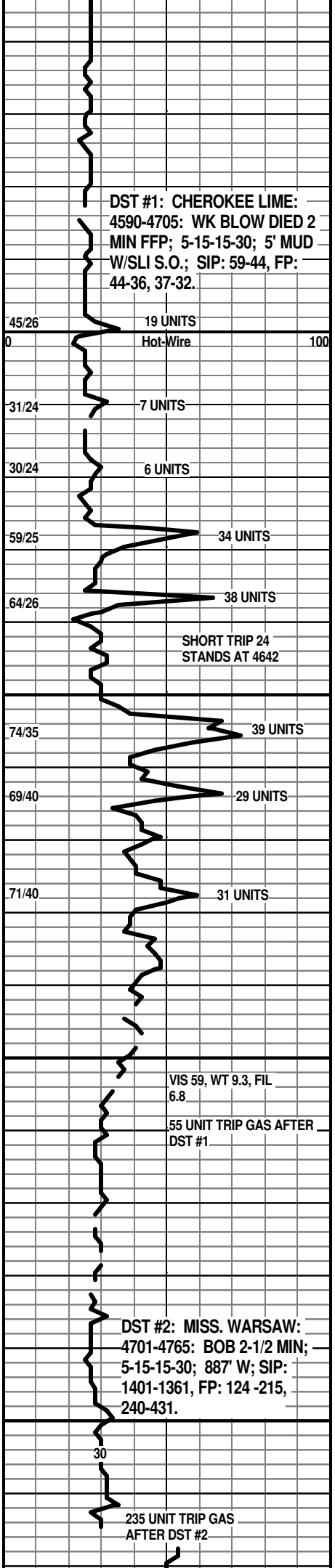
Shale: mostly greenish, gray, maroon, trc mottled; marly; minor oxidized chert; 4740.

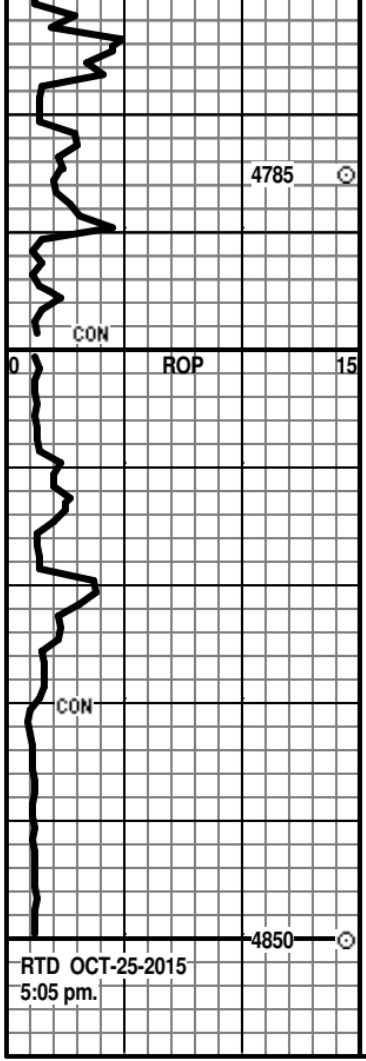
Shale, Chert and Marl as above. Trc. lt brown lime w/ green sh. contact;

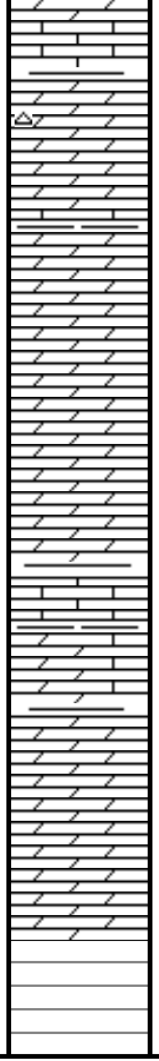
4750

MISS. WARSAW 4750 (-2496)

DOL: gray; f-m xtal, sucrosic in part; rough texture; scattered fine glauc.; minor glauc. lime; very little or no chert; 90% HC fluor; spotted wet stain & sli S.O., faint odor; spotted to even heavy dry stain.; diminished but str. dry fluor; few chips 4760, floods 4765 stop & circ.







4800

DOL: grayish-brown; f-xtal, lacks sucrosic texture; includes much geoidal quartz & trc opaq chert; glauc.; tight int xtal porosity; even min. fluor; trc drab stain at best; no show oil;

DOL: lt brown; f-xtal; much fos, semi-opaq. to opaq. chert; glauc.; decr geoidal qtz; tight int xtal por.; N.S., 4810.

DOL: lt brown; f-xtal; grayish-brown to lt brown mottled, micro-fos, opaq. chert; geoidal quartz; only trace glauc.; tight int xtal porosity; N.S.

DOL: as above.

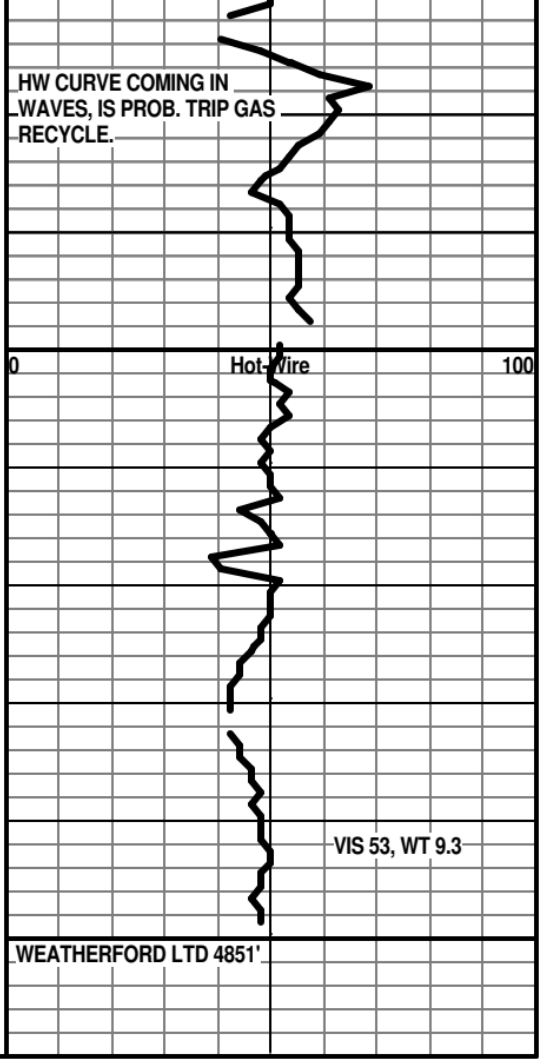
LS: lt-md brown; vf-xtal; dense; N.S.

DOL: lt brown to grayish brown, silty; f-xtal; sli glauc.; tight int xtal porosity; N.S.

DOL: lt-brown; f-xtal; much off-white, opaq. chert; minor gray-brown, mottled, micro-fos chert as above; looks tight; N.S.

4850

ROTARY TOTAL DEPTH 4850 (-2595)



SWIFT Services, Inc.

CHARGE TO: Larson Engineering
ADDRESS
CITY, STATE, ZIP CODE

TICKET 28860

PAGE 1 OF 1

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. Ness City KS	1-7	Miller-Williams	Edwards	KS	Offerle	16OCT16	
2.	TICKET TYPE ☐ SERVICE ☐ SALES	CONTRACTOR	RIG NAME/NO.	SHIPPED VIA	DELIVERED TO	ORDER NO.	
3.		HD	3		location		
4.	WELL TYPE	WELL CATEGORY	JOB PURPOSE		WELL PERMIT NO.	WELL LOCATION	
REFERRAL LOCATION		Development	cement surface pipe			7-26-20	
	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
575		1			MILEAGE YRK 110	70	mi			5 00	350 00
5765		1			Pump Charge	1	ea			800 00	800 00
325		1			STANDARD cement	165	sk			12 25	2021 25
279		1			Bentonite gel	2	%	~~3~~	sk	25 00	75 00
278		1			Calcium chloride	3	%	7	sk	40 00	280 00
276		1			Flocele			25	lb	2 25	56 25
581		1			service charge	165	sk			1 50	247 50
583		1			Drayage	~~1615~~ 176		566 48 ton miles		0 75	424 86

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY,** and **LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X

DATE SIGNED | TIME SIGNED ☐ A.M. ☑ P.M. 1930

REMIT PAYMENT TO:

SWIFT SERVICES, INC.
P.O. BOX 466
NESS CITY, KS 67560
785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?			
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			

ARE YOU SATISFIED WITH OUR SERVICE? ☐ YES ☐ NO

☐ CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL	4254 86
Edwards TAX 7.5%	182 44
TOTAL	4437 30

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR RBJ | APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 16 OCT 15 | PAGE NO.

CUSTOMER Larson Engineering | WELL NO. 1-7 | LEASE miller Williams | JOB TYPE cement surface pipe | TICKET NO. 28860

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
								165sk STANDARD cmt 2% gel 3%CC w/ ¼# Flocelle
								6 jts - 20" - 85# casing 264.79'
								TD 267
	1645							on loc TRK 110
	1719							start 85/8" x 20# casing in well
	1808							circulate well
	1818	3½	40				0	mix STD 2% 3% cmt @ 14.7 ppg 165sk
		3½	16				0	Displace w/ fresh H2O
								cement to surface
								{25 sk to pit}
	1845							close in 85/8
								wash up truck
								Rack up
	1920							job complete
								4 crew Ks
								Blaine, Flint & Jared

SWIFT Services, Inc.

CHARGE TO: Larson Engineering
ADDRESS
CITY, STATE, ZIP CODE

TICKET 29038

PAGE 1 OF 1

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. Ness City, KS	#1-7	Miller-Williams	Edwards	KS	Offerle	10-26-15	Same
2.	TICKET TYPE ☑ SERVICE ☐ SALES / CONTRACTOR: H-D Drilling	RIG NAME/NO. #3	SHIPPED VIA CT	DELIVERED TO: Location	ORDER NO.		
3.	WELL TYPE: Oil	WELL CATEGORY: PTA	JOB PURPOSE: Rotary Plug	WELL PERMIT NO.	WELL LOCATION: Offerle-4s, ½w, 1¼s, E into		
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
575		1			MILEAGE Trk # 112			70	mi	5 00	350 00
576 P		1			Pump Charge - PTA	1	job			800 00	800 00
328-4		1			60/40 Pozmix (4% Gel)			180	sks	10 25	1845 00
276		1			Flocele	¼	lb	50	lbs	2 25	112 50
290		1			D-Air			2	gal	42 00	84 00
581		1			Service Charge Cement			180	sks	1 50	270 00
583		1			Drayage	15176	lbs	531.16	TM	0 75	398 37

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY,** and **LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

x Barbara Treaster

DATE SIGNED: 10-26-15 TIME SIGNED: 0700 ☒ A.M. ☐ P.M.

REMIT PAYMENT TO:

SWIFT SERVICES, INC.
P.O. BOX 466
NESS CITY, KS 67560
785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?			
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			

ARE YOU SATISFIED WITH OUR SERVICE? ☐ YES ☐ NO

☐ CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL	3859 87
Edwards TAX 7.5%	153 11
TOTAL	4012 98

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR: David Kuehn

APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 10-26-15 | PAGE NO. 1

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
Lacson Engineering	#1-7	Miller - Williams	Rotary Plug	29038

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS	C	PRESSURE (PSI)	CASING	DESCRIPTION OF OPERATION AND MATERIALS
	0600			DP		DP		on Location
								DP- 4½"x" hole @ 1334' Hole 7⅞"
								8⅝" - 267
								180 sks 60/40 poz 4% Gel w/¼# Flo
								Plug #1 - 1334'
	0745	4½	13	✓		←100		mix 50 sks 60/40 @ 13.04 ppg
		4½	15	✓		←100		Displace cement
								Plug #2 - 350'
	0840	4½	8	✓		150		mix 30 sks 60/40 @ 13.04 ppg
		4½	3	✓		150		Displace Cement
				✓				Plug #3 - 290'
	0850	4½	13	✓		150		mix 50 sks 60/40 @ 13.04 ppg
		4½	1	✓		150		Displace Cement
								Plug #4 - 60'
	0905	4½	5	✓		100		mix 20 sks 60/40 @ 13.04 ppg
		4½	½	✓		100		Displace Cement
								Plug #5 - RH
	0910	4½	8	✓		∅		mix 30 sks 60/40 @ 13.04 ppg
								* 180 sks total *
								Wash up truck
	0945							Job Complete
								Thank You
								Dave John Presston

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Incorperated**

562 West State Road 4
Olmitz, KS 67564+8561

ATTN: Vern Schrag

7-26s-20w Edwards,KS

Miller-Williams #1-17

Start Date: 2015.10.24 @ 10:57:00
End Date: 2015.10.24 @ 16:43:16
Job Ticket #: 61957 DST #: 1

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

Printed: 2015.10.26 @ 16:02:44

DRILL STEM TEST REPORT

Larson Engineering Incorperated

562 West State Road 4
Olmitz, KS 67564+8561

ATTN: Vern Schrag

Miller-Williams #1-17

7-26s-20w Edwards,KS

Job Ticket: 61957 **DST#: 1**

Test Start: 2015.10.24 @ 10:57:00

GENERAL INFORMATION:

Formation: **Cherokee**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:07:31
Time Test Ended: 16:43:16

Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 58

Interval: 4590.00 ft (KB) To 4704.00 ft (KB) (TVD)
Total Depth: 4704.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Fair

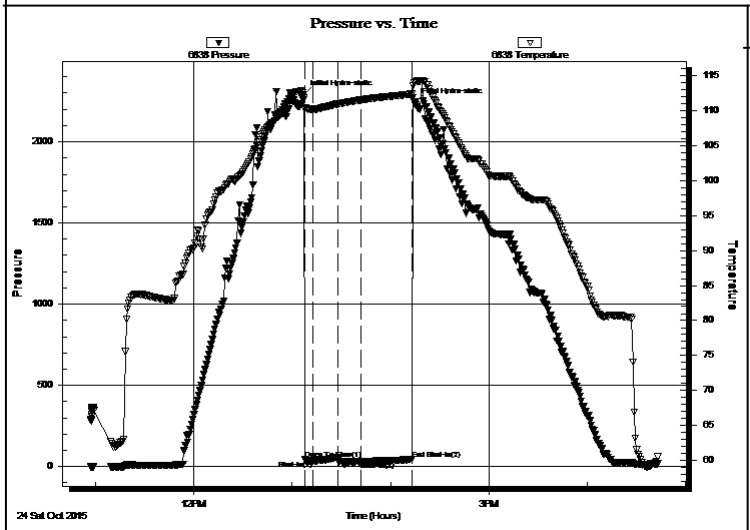
Reference Elevations: 2255.00 ft (KB)
2246.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 6838 **Inside**

Press@RunDepth: 32.84 psig @ 4699.79 ft (KB)
Start Date: 2015.10.24 End Date: 2015.10.24
Start Time: 10:57:01 End Time: 16:43:16

Capacity: 8000.00 psig
Last Calib.: 2015.10.24
Time On Btm: 2015.10.24 @ 13:07:01
Time Off Btm: 2015.10.24 @ 14:14:31

TEST COMMENT: IFP 5 Minutes Weak surface blow did not build
ISI 15 Minutes No blow back
FFP 15 Minutes Weak surface blow for 2 minutes then dead
FSI 30 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2288.98	111.57	Initial Hydro-static
1	44.21	110.15	Open To Flow (1)
6	36.20	110.13	Shut-In(1)
21	59.29	110.93	End Shut-In(1)
21	37.27	110.92	Open To Flow (2)
35	32.84	111.51	Shut-In(2)
66	44.33	112.33	End Shut-In(2)
68	2239.17	114.07	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud with skim of oil/Mud 100%	0.02

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering Incorperated

562 West State Road 4
Olmitz, KS 67564+8561

ATTN: Vern Schrag

Miller-Williams #1-17

7-26s-20w Edwards,KS

Job Ticket: 61957 **DST#: 1**

Test Start: 2015.10.24 @ 10:57:00

GENERAL INFORMATION:

Formation: **Cherokee**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:07:31
Time Test Ended: 16:43:16

Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 58

Interval: 4590.00 ft (KB) To 4704.00 ft (KB) (TVD)
Total Depth: 4704.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Fair

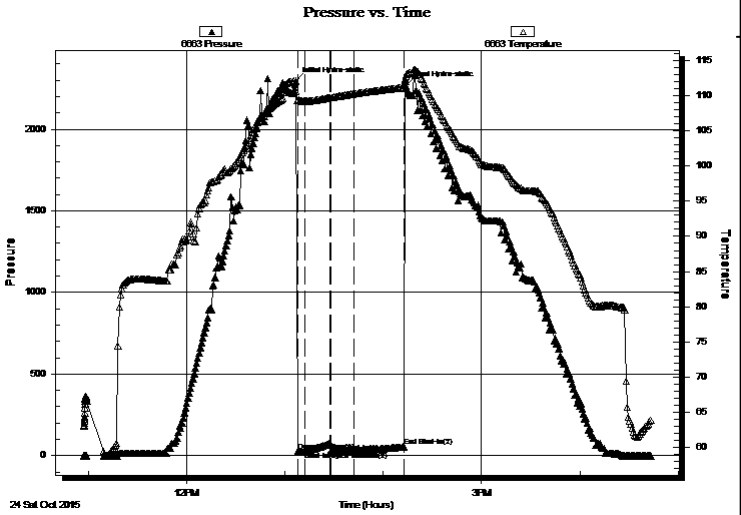
Reference Elevations: 2255.00 ft (KB)
2246.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 6663 **Outside**

Press@RunDepth: 54.26 psig @ 4700.79 ft (KB)
Start Date: 2015.10.24 End Date: 2015.10.24
Start Time: 10:57:01 End Time: 16:43:31

Capacity: 8000.00 psig
Last Calib.: 2015.10.24
Time On Btm: 2015.10.24 @ 13:06:46
Time Off Btm: 2015.10.24 @ 14:13:46

TEST COMMENT: IFP 5 Minutes Weak surface blow did not build
ISI 15 Minutes No blow back
FFP 15 Minutes Weak surface blow for 2 minutes then dead
FSI 30 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2294.91	110.65	Initial Hydro-static
1	24.04	109.33	Open To Flow (1)
6	25.66	109.20	Shut-In(1)
21	74.05	109.71	End Shut-In(1)
21	27.02	109.69	Open To Flow (2)
36	28.13	110.25	Shut-In(2)
66	54.26	111.14	End Shut-In(2)
67	2268.64	112.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud with skim of oil/Mud 100%	0.02

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Incorperated

562 West State Road 4
Olmitz, KS 67564+8561

ATTN: Vern Schrag

Miller-Williams #1-17

7-26s-20w Edwards,KS

Job Ticket: 61957 **DST#: 1**

Test Start: 2015.10.24 @ 10:57:00

Tool Information

Drill Pipe:	Length:	4456.00 ft	Diameter:	3.80 inches	Volume:	62.51 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	120.00 ft	Diameter:	2.25 inches	Volume:	0.59 bbl	
					Total Volume:	63.10 bbl	

Drill Pipe Above KB:	14.00 ft
Depth to Top Packer:	4590.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	113.79 ft
Tool Length:	141.79 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		67000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	62000.00 lb
	Final	62000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut-In Tool	5.00			4567.00		
Hydraulic tool	5.00			4572.00		
Jars	6.00			4578.00		
Safety Joint	2.00			4580.00		
Top Packer	5.00			4585.00		
Packer	5.00			4590.00	28.00	Bottom Of Top Packer
Anchor	5.00			4595.00		
Change Over Sub	0.75			4595.75		
Drill Pipe	94.29			4690.04		
Change Over Sub	0.75			4690.79		
Anchor	8.00			4698.79		
Recorder	1.00	6838	Inside	4699.79		
Recorder	1.00	6663	Outside	4700.79		
Bullnose	3.00			4703.79	113.79	Anchor Tool
Total Tool Length:	**141.79**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Incorperated

562 West State Road 4
Olmitz, KS 67564+8561

ATTN: Vern Schrag

Miller-Williams #1-17

7-26s-20w Edwards,KS

Job Ticket: 61957 **DST#: 1**

Test Start: 2015.10.24 @ 10:57:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	59.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4400.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

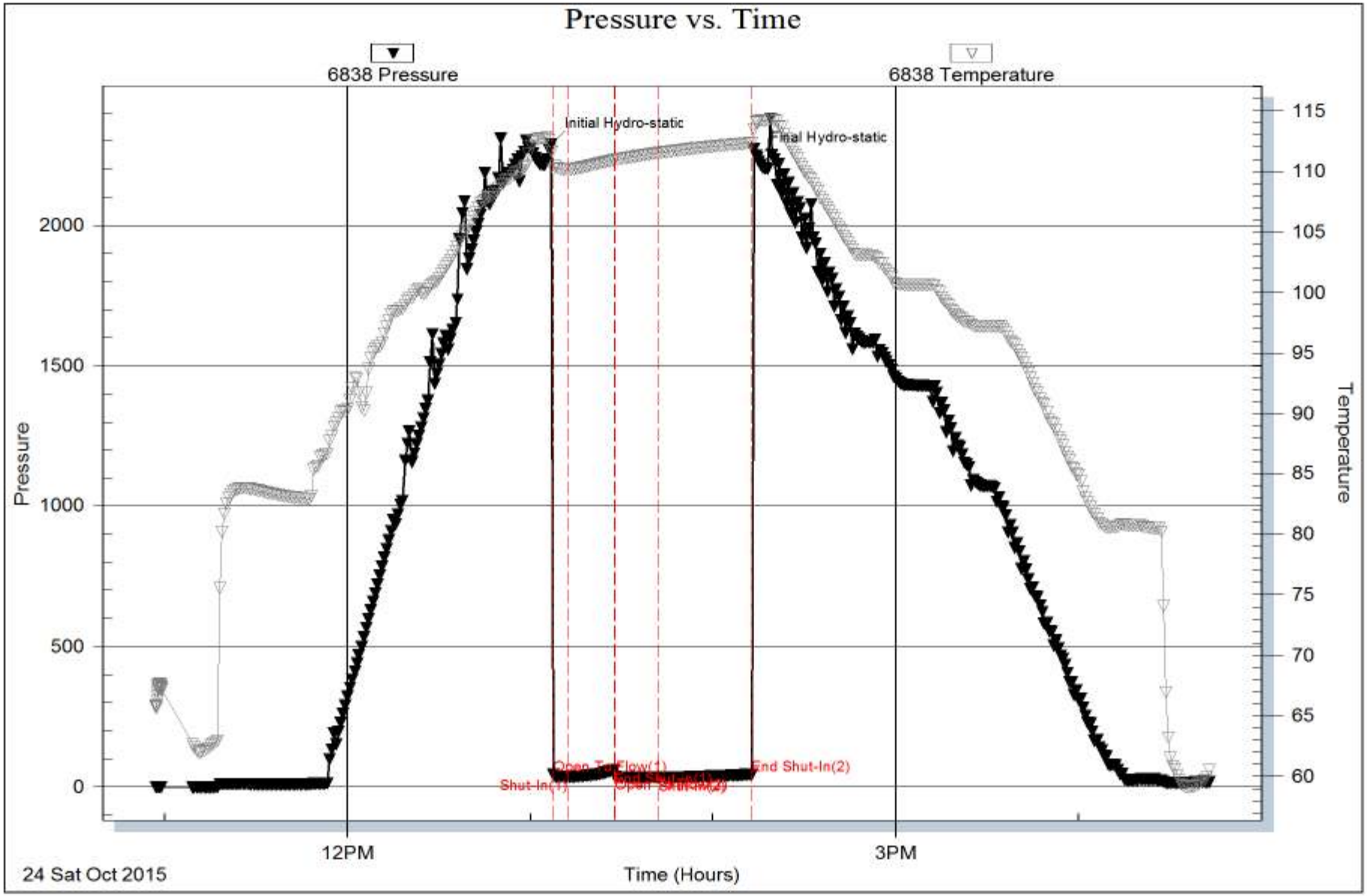
Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w ith skim of oil/Mud 100%	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

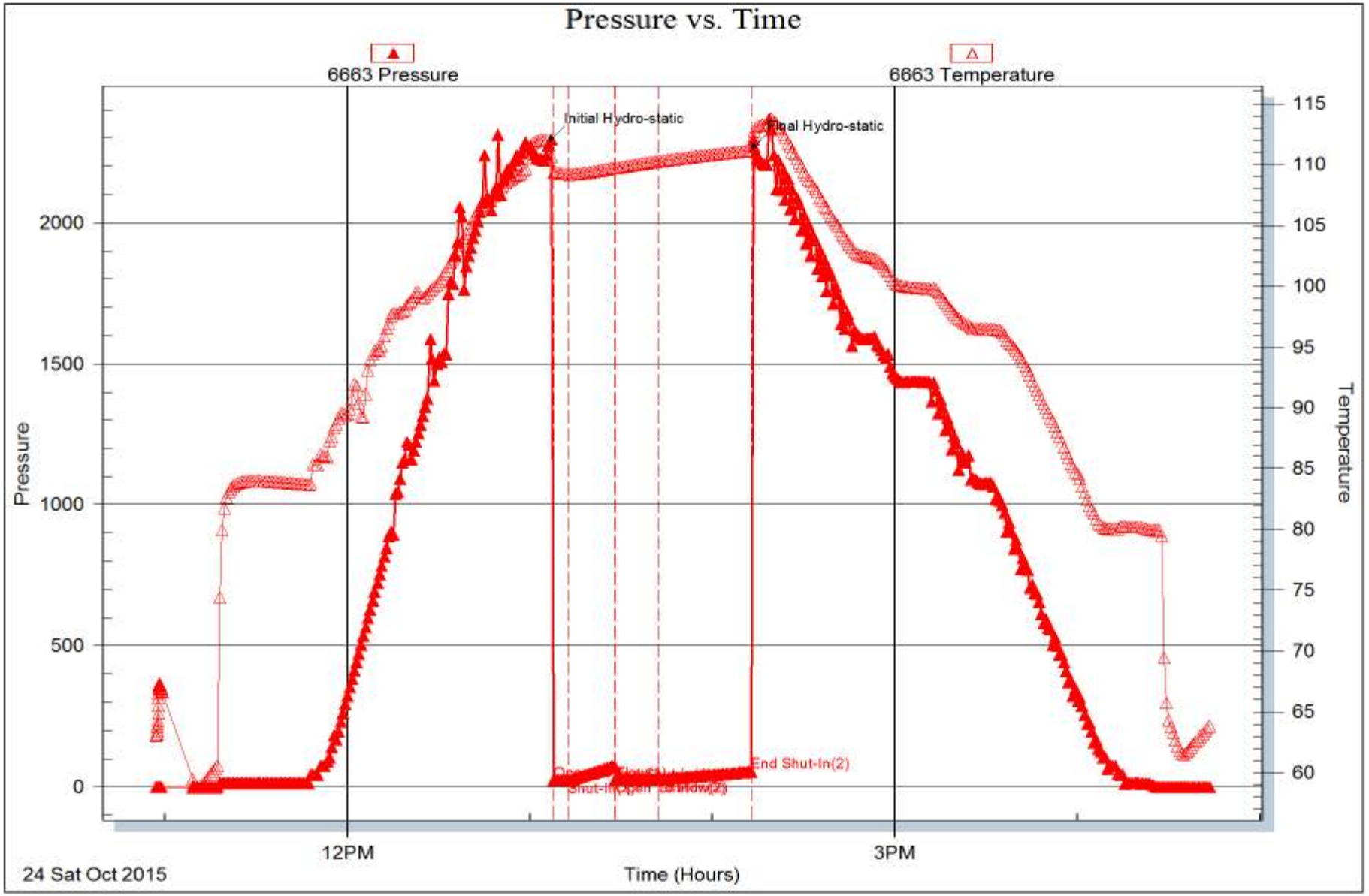
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6838 **Inside** Larson Engineering Incorperated 7-26s-20w Edwards,KS DST Test Number: 1



Trilobite Testing, Inc Ref. No: 61957 Printed: 2015.10.26 @ 16:02:45

Serial #: 6663 **Outside** Larson Engineering Incorperated 7-26s-20w Edwards,KS DST Test Number: 1



Trilobite Testing, Inc Ref. No: 61957 Printed: 2015.10.26 @ 16:02:46

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Incorperated**

562 West State Road 4
Olmitz, KS 67564+8561

ATTN: Vern Schrag

7-26s-20w Edwards,KS

Miller-Williams #1-17

Start Date: 2015.10.25 @ 03:35:00
End Date: 2015.10.25 @ 09:47:01
Job Ticket #: 61958 DST #: 2

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

Printed: 2015.10.26 @ 15:31:35

DRILL STEM TEST REPORT

Larson Engineering Incorperated

562 West State Road 4
Olmitz, KS 67564+8561

ATTN: Vern Schrag

Miller-Williams #1-17

7-26s-20w Edwards,KS

Job Ticket: 61958 **DST#: 2**

Test Start: 2015.10.25 @ 03:35:00

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:49:31
Time Test Ended: 09:47:01

Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 58

Interval: 4701.00 ft (KB) To 4765.00 ft (KB) (TVD)
Total Depth: 4765.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Fair

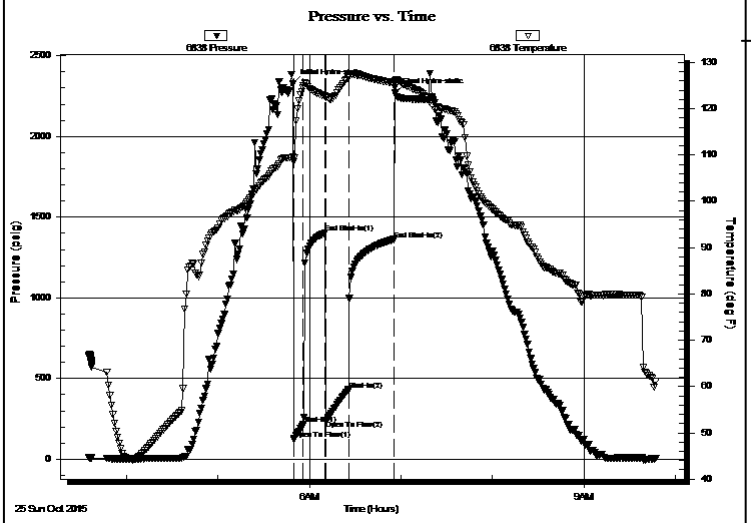
Reference Elevations: 2255.00 ft (KB)
2246.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 6838 **Inside**

Press@RunDepth: 431.35 psig @ 4760.80 ft (KB)
Start Date: 2015.10.25 End Date: 2015.10.25
Start Time: 03:35:01 End Time: 09:47:01

Capacity: 8000.00 psig
Last Calib.: 2015.10.25
Time On Btm: 2015.10.25 @ 05:49:16
Time Off Btm: 2015.10.25 @ 06:56:16

TEST COMMENT: IFP 5 Minutes BOB in 2 minutes 45 seconds
ISI 15 Minutes No blow back
FFP 15 Minutes BOB in 3 minutes
FSI 30 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2325.29	109.52	Initial Hydro-static
1	124.32	108.52	Open To Flow (1)
7	215.04	124.58	Shut-In(1)
21	1401.19	122.76	End Shut-In(1)
22	240.07	122.39	Open To Flow (2)
37	431.35	126.73	Shut-In(2)
66	1361.78	125.61	End Shut-In(2)
67	2270.90	126.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
887.00	GOMCW Gas 5% Oil 5% Mud 20% Water	11.35

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering Incorperated

562 West State Road 4
Olmitz, KS 67564+8561

ATTN: Vern Schrag

Miller-Williams #1-17

7-26s-20w Edwards,KS

Job Ticket: 61958 **DST#: 2**

Test Start: 2015.10.25 @ 03:35:00

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:49:31
Time Test Ended: 09:47:01

Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 58

Interval: 4701.00 ft (KB) To 4765.00 ft (KB) (TVD)
Total Depth: 4765.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Fair

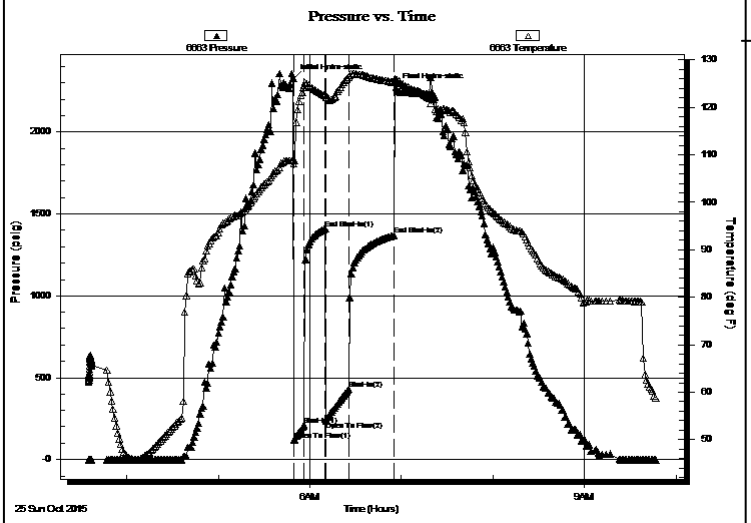
Reference Elevations: 2255.00 ft (KB)
2246.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 6663 **Outside**

Press@RunDepth: 1369.22 psig @ 4761.80 ft (KB)
Start Date: 2015.10.25 End Date: 2015.10.25
Start Time: 03:35:01 End Time: 09:47:01

Capacity: 8000.00 psig
Last Calib.: 2015.10.25
Time On Btm: 2015.10.25 @ 05:49:16
Time Off Btm: 2015.10.25 @ 06:56:16

TEST COMMENT: IFP 5 Minutes BOB in 2 minutes 45 seconds
ISI 15 Minutes No blow back
FFP 15 Minutes BOB in 3 minutes
FSI 30 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2324.17	108.86	Initial Hydro-static
1	117.37	108.10	Open To Flow (1)
7	206.81	124.17	Shut-In(1)
21	1410.81	122.44	End Shut-In(1)
22	235.70	122.04	Open To Flow (2)
37	430.97	126.40	Shut-In(2)
66	1369.22	125.24	End Shut-In(2)
67	2271.61	125.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
887.00	GOMCW Gas 5% Oil 5% Mud 20% Water	11.35

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Incorperated

562 West State Road 4
Olmitz, KS 67564+8561

ATTN: Vern Schrag

Miller-Williams #1-17

7-26s-20w Edwards,KS

Job Ticket: 61958 **DST#: 2**

Test Start: 2015.10.25 @ 03:35:00

Tool Information

Drill Pipe:	Length:	4583.00 ft	Diameter:	3.80	inches	Volume:	64.29	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	120.00 ft	Diameter:	2.25	inches	Volume:	0.59	bbl	
						Total Volume:	64.88	bbl	

Drill Pipe Above KB:	30.00 ft
Depth to Top Packer:	4701.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	63.80 ft
Tool Length:	91.80 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		70000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	64000.00 lb
	Final	66000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut-In Tool	5.00			4678.00		
Hydraulic tool	5.00			4683.00		
Jars	6.00			4689.00		
Safety Joint	2.00			4691.00		
Top Packer	5.00			4696.00		
Packer	5.00			4701.00	28.00	Bottom Of Top Packer
Anchor	5.00			4706.00		
Change Over Sub	0.75			4706.75		
Drill Pipe	31.30			4738.05		
Change Over Sub	0.75			4738.80		
Anchor	21.00			4759.80		
Recorder	1.00	6838	Inside	4760.80		
Recorder	1.00	6663	Outside	4761.80		
Bullnose	3.00			4764.80	63.80	Anchor Tool
Total Tool Length:	**91.80**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Incorperated

562 West State Road 4
Olmitz, KS 67564+8561

ATTN: Vern Schrag

Miller-Williams #1-17

7-26s-20w Edwards,KS

Job Ticket: 61958 **DST#: 2**

Test Start: 2015.10.25 @ 03:35:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	22000 ppm
Viscosity:	59.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.80 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4400.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
887.00	GOMCW Gas 5% Oil 5% Mud 20% Water 70%	11.349

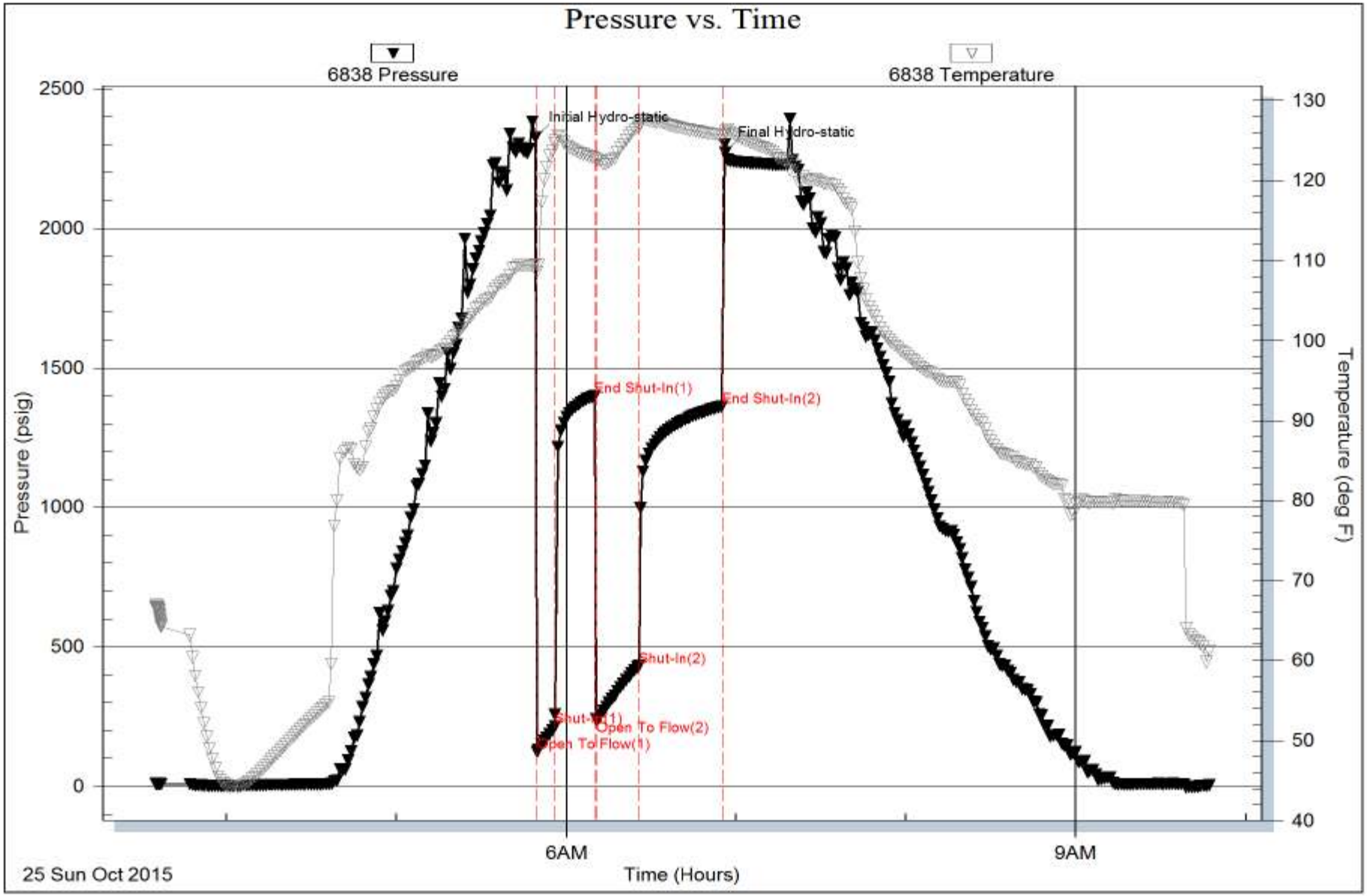
Total Length: 887.00 ft Total Volume: 11.349 bbl

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

Laboratory Name: Laboratory Location:

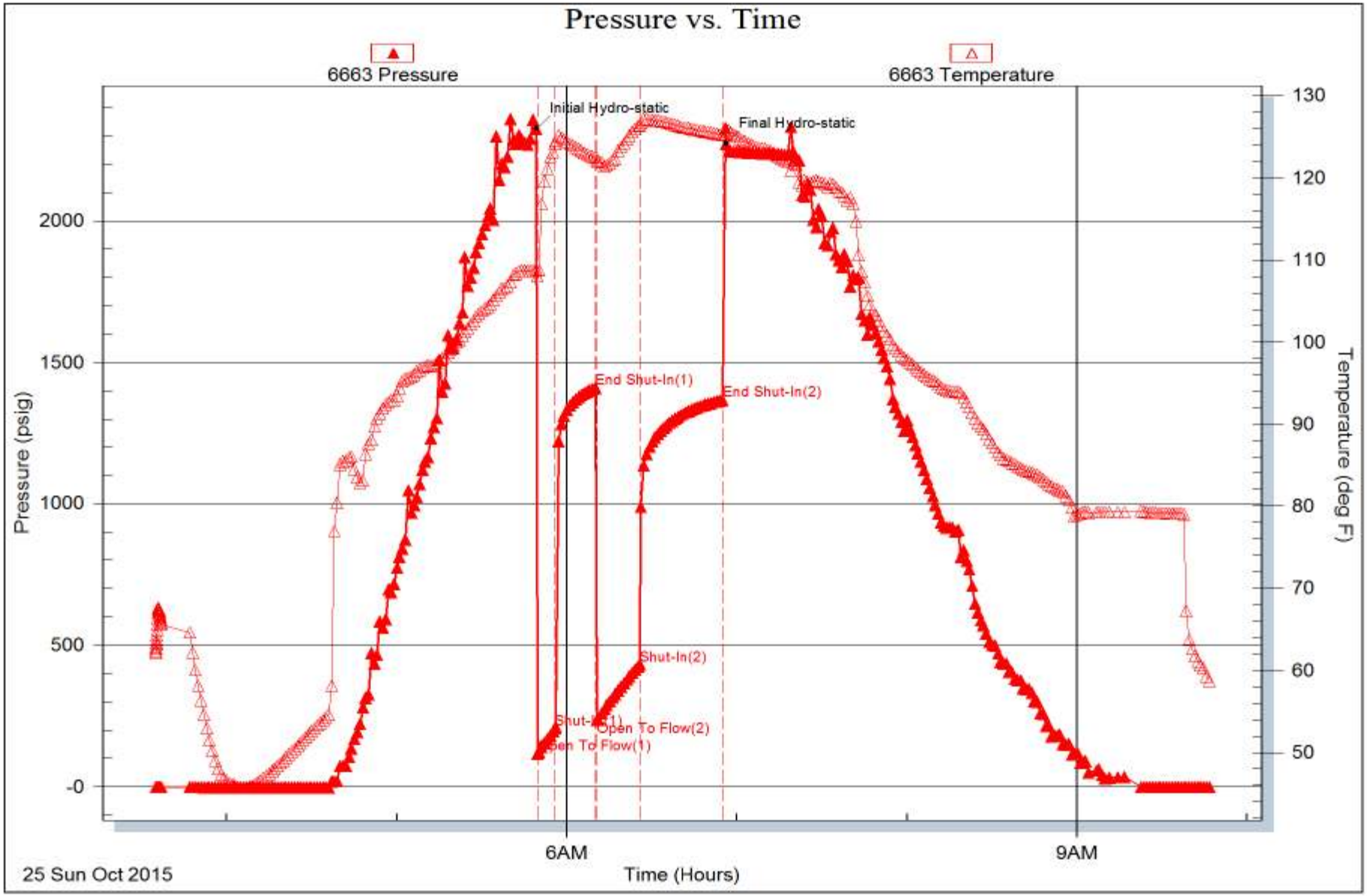
Recovery Comments:

Serial #: 6838 **Inside** Larson Engineering Incorperated 7-26s-20w Edwards,KS DST Test Number: 2



Trilobite Testing, Inc Ref. No: 61958 Printed: 2015.10.26 @ 15:31:39

Serial #: 6663 **Outside** Larson Engineering Incorperated 7-26s-20w Edw ards,KS DST Test Number: 2



Trilobite Testing, Inc Ref. No: 61958 Printed: 2015.10.26 @ 15:31:39

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 61957

Well Name & No. Miller-Williams #1-17 Test No. 1 Date 24 OCT 15

Company Larson Engineering Incorporated Elevation 2255 KB 2246 GL

Address 562 West State Highway 4 Olmitz, Kansas 67564+8561

Co. Rep / Geo. Vern Schrag Rig HD Rig #3

Location: Sec. 7 Twp. 26S Rge. 20W Co. Ford State KS

Interval Tested 4590-4704 Zone Tested Cherokee

Anchor Length 114 Drill Pipe Run 4456 Mud Wt. 9.3

Top Packer Depth 4585 Drill Collars Run 120 Vis 59

Bottom Packer Depth 4590 Wt. Pipe Run — WL 6.8

Total Depth 4704 Chlorides 4400 ppm System LCM 1#

Blow Description Weak blow at surface, no build

No blow back

Weak blow at surface for 2 minutes then dead

No blow back

Rec 5	Feet of Mud with skim of oil	%gas	%oil	%water	100 %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 114 Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic 2288

(B) First Initial Flow 44

(C) First Final Flow 36

(D) Initial Shut-In 59

(E) Second Initial Flow 37

(F) Second Final Flow 32

(G) Final Shut-In 44

(H) Final Hydrostatic 2239

Initial Open 5

Initial Shut-In 15

Final Flow 15

Final Shut-In 30

- ☑ Test 1150
- ☑ Jars 250
- ☑ Safety Joint 75
- ☐ Circ Sub
- ☐ Hourly Standby
- ☑ Mileage 124
- ☐ Sampler
- ☐ Straddle
- ☐ Shale Packer
- ☐ Extra Packer
- ☐ Extra Recorder
- ☐ Day Standby
- ☐ Accessibility

Sub Total 1599

T-On Location 9:30 am

T-Started 10:57 am

T-Open 1:08 pm

T-Pulled 2:13 pm

T-Out 4:42 pm

Comments

- ☐ Ruined Shale Packer
- ☐ Ruined Packer
- ☐ Extra Copies

Sub Total 0

Total 1599

MP/DST Disc't

Approved By Vern C Schrag 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.

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 61958

Well Name & No. Miller Williams #1-17 Test No. 2 Date 25 OCT 15

Company Larson Engineering Incorporated Elevation 2255 KB 2246 GL

Address 562 West State Road 4 Olmitz, Kansas 67564+8561

Co. Rep / Geo. Vern Schrag Rig HD Rig #3

Location: Sec. 7 Twp. 26S Rge. 20W Co. Ford State KS

Interval Tested 4701-4765 Zone Tested Mississippi

Anchor Length 64 Drill Pipe Run 4583 Mud Wt. 9.35

Top Packer Depth 4696 Drill Collars Run 120 Vis 59

Bottom Packer Depth 4701 Wt. Pipe Run — WL 6.8

Total Depth 4765 Chlorides 4400 ppm System LCM 1#

Blow Description Strong blow / Blow built to bottom of bucket in 2 minutes 45 seconds
No blow back
Strong blow / Blow built to bottom of bucket in 3 minutes
No blow back

Rec 887	Feet of Gas & 0.1 Cut Muddy Water	5 %gas	5 %oil	70 %water	20 %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 887 BHT 126 Gravity ____ API RW .38 @ 55 °F Chlorides 22,000 ppm

(A) Initial Hydrostatic 2325	☑ Test 1150	T-On Location 2:37 am
(B) First Initial Flow 124	☑ Jars 250	T-Started 3:35 am
(C) First Final Flow 215	☑ Safety Joint 75	T-Open 5:40 am
(D) Initial Shut-In 1401	☐ Circ Sub	T-Pulled 6:45 am
(E) Second Initial Flow 240	☐ Hourly Standby	T-Out
(F) Second Final Flow 431	☑ Mileage 124	Comments
(G) Final Shut-In 1361	☐ Sampler	
(H) Final Hydrostatic 2270	☐ Straddle	☐ Ruined Shale Packer
	☐ Shale Packer	☐ Ruined Packer
Initial Open ~~35~~ 5	☐ Extra Packer	☐ Extra Copies
Initial Shut-In 15	☐ Extra Recorder	Sub Total 0
Final Flow 15	☐ Day Standby	Total 1599
Final Shut-In 30	☐ Accessibility	MP/DST Disc't
	Sub Total 1599	

Approved By Vernon C Schrag Our Representative