

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

TICKET 031450

PAGE 1 OF 1

1. SERVICE LOCATIONS <u>Ness City KS</u>	WELL/PROJECT NO. <u>#2</u>	LEASE <u>Glaucus</u>	COUNTY/PARISH <u>Ness</u>	STATE <u>KS</u>	CITY <u>Utica</u>	DATE <u>5-1-18</u>	OWNER <u>Same</u>
2. TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR <u>Southwind Drilling</u>		RIG NAME/NO.	SHIPPED VIA <u>ET</u>	DELIVERED TO <u>Location</u>	ORDER NO.	
3. WELL TYPE <u>Oil</u>	WELL CATEGORY <u>Development</u>	JOB PURPOSE <u>Cement 8 7/8" Shallow Surface</u>	WELL PERMIT NO.		WELL LOCATION <u>Utica - 2 1/2 mi, E into</u>		
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UNIT PRICE	AMOUNT	
		LOC	ACCT	DF			U/M			
575		1			MILEAGE		30	mi	5 ⁰⁰	150 ⁰⁰
576 S		1			Pump Charge - Shallow Surface		1	job	875 ⁰⁰	875 ⁰⁰
325		1			Standard Cement		165	skts	13 ⁰⁰	2145 ⁰⁰
279		1			Bentonite Gel	2	3	1skts	30 ⁰⁰	90 ⁰⁰
278		1			Calcium Chloride	3	7	skts	40 ⁰⁰	280 ⁰⁰
276		1			Floccs	1/4	16	50 lbs	2 ⁵⁰	125 ⁰⁰
290		1			D-Air		2	gal	42 ⁰⁰	84 ⁰⁰
581		1			Service Charge Cement		165	skts	1 ⁷⁵	288 ⁷⁵
582		1			Minimum Drapage Charge		1	lea	250 ⁰⁰	250 ⁰⁰

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 William Lasson
 DATE SIGNED 5-1-18 TIME SIGNED 0815 A.M. P.M.

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

SURVEY	AGREE	UNDECIDED	DISAGREE
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?	<input type="checkbox"/> YES <input type="checkbox"/> NO		
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND			

PAGE TOTAL	4287 ⁷⁵
10% Disc	-428 ⁷⁸
30%	3858 ⁹⁷
NCS TAX 6.50/10	159 ³⁵
TOTAL	4018 ³²

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 5-1-18 PAGE NO. 1

CUSTOMER Larson Engineering WELL NO. #2 LEASE Glaves JOB TYPE Surface TICKET NO. #31450

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0700							on location 8 5/8" 20"
								8 5/8" on Bottom - Rig circulating
								RTD - 264' TP - 263'
	0735	4	5		✓	200		Pump 5 bbl water spacer
	0740	4 1/2	40		✓	200		mix 165 sks STD 2% Gel 3% cc 1/4" Fl @ 14.7 ppb
	0755	4 1/2	0		✓	100		Start Displacement
		4 1/2	8		✓	150		circulate cement to surface - *35 sks*
	0800	0	16 1/2		✓	200		Kick out pump - Shut in
								wash up truck
	0820							Job Complete

Thank You
Dave Preston Kirby



Services, Inc.

TICKET 031396

CHARGE TO: Loadm Engineering
 ADDRESS: _____
 CITY, STATE, ZIP CODE: _____

PAGE 1 OF 2

SERVICE LOCATIONS: KS
 WELL/PROJECT NO: #2 LEASE: Glades COUNTY/PARISH: Leads STATE: KS CITY: Utica DATE: 8 MAY 18 OWNER: _____
 TICKET TYPE: SERVICE SALES CONTRACTOR: _____ RIG NAME/NO.: 8 SHIPPED: YES DELIVERED TO: location ORDER NO.: _____
 WELL TYPE: oil WELL CATEGORY: subsurface JOB PURPOSE: Development comut long string 5 1/2" WELL PERMIT NO.: _____ WELL LOCATION: 11 - 16 - 216
 REFERRAL LOCATION: _____ INVOICE INSTRUCTIONS: _____

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY.		UNIT		AMOUNT
		LOC	ACCT	DF			UM	UM	PRICE		
575					FRK 114	35	mi			5.00	1.75
578					Pump charge	1	ea			1300.00	1300.00
330					SMB cement	125	sk			16.25	2031.25
325					Standard cement (for 5 1/2")	100	sk			13.00	1300.00
284					colgead	580	lb		5.5k	35.00	175.00
283					subt	500	lb			0.20	100.00
292					hydrat-322	100	lb			8.00	800.00
277					5 1/2" pipe	700	lb			5.85	595.00
276					Fluore	20	lb			2.50	135.00

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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.

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

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

SURVEY: OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? YES NO
 WE UNDERSTOOD AND MET YOUR NEEDS? YES NO
 OUR SERVICE WAS PERFORMED WITHOUT DELAY? YES NO
 WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? YES NO
 ARE YOU SATISFIED WITH OUR SERVICE? YES NO
 CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL: 6591.25
 TAX: 17.61
 TOTAL: 7808.83

SWIFT OPERATOR: BSM APPROVAL: _____
 Thank You!



PO Box 466
 Ness City, KS 67560
 Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 31396

PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	ACCOUNTING LOC ACCT DR	TIME	CUSTOMER	DESCRIPTION	WELL	DATE	PAGE
				Laborn Engineering		Claves # 2	8 MAY 18	2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	ACCOUNTING LOC ACCT DR	TIME	DESCRIPTION	WELL		UNIT PRICE	AMOUNT
					QTY	U/M		
881		1		Wulf Lsk	520	gal	1.50	750.00
881		1		KCL Dyeoid	2	gal	25.00	50.00
419		1		Rotating head ventral	5 1/2	in	200.00	200.00

PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	ACCOUNTING LOC ACCT DR	TIME	DESCRIPTION	WELL	QTY	U/M	UNIT PRICE	AMOUNT
581		1		SERVICE CHARGE				1.75	393.75
583		1		MILEAGE CHARGE				0.65	351.05
				TOTAL WEIGHT	236.00				
				LOADED MILES	35				
				CUBIC FEET	413				
				TON MILES					

CONTINUATION TOTAL 1764.80

JOB LOG

SWIFT Services, Inc.

DATE 8 MAY 18 PAGE NO. 1

CUSTOMER *Laram Engineering* WELL NO. #2 LEASE *Glves* JOB TYPE *concrete long string* TICKET NO. 31396

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								125 sk SMD cement w/ 1/4" flocc
								100 EA-2 cement w/ Gibrite & 1/8" flocc
								5 1/2 x 15.5" casing 4628' shoe 4318
								PORT COLLAR 1997'
	0000							on loc TRK 114
	0115							Running 5 1/2" casing Drop ball - circulate - ROTATE
	0215	4	12				100	Pump 500 gal mud flush
		4	20				100	Pump 20 bbl KCL flush
			7					Plug RH - MH 80sk - 20sk (SMD cement)
	0233	4	38				100	MIX SMD cement 75sk
		4	23				100	MIX EA-2 cement 100sk @ 15.3 ppg
								Drop latch down plug wash out pump & line
	0258	6					200	Displace plug
		6	43				300	catch frame
		6	105				750	
	0315	6	109				1550	Land plug
								Release frame to truck - dried up
	0320							wash truck
								Rack up
	0350							job complete
								Thanks Blaine, Phil & Isaac



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

TICKET 031515

PAGE 1 OF 1

SERVICE LOCATIONS 1. <u>Ness City KS</u>	WELL/PROJECT NO. <u>#2</u>	LEASE <u>Glaucus</u>	COUNTY/PARISH <u>Ness</u>	STATE <u>KS</u>	CITY <u>Utica</u>	DATE <u>5-11-18</u>	OWNER <u>1</u>	
2.	TICKET TYPE <input checked="" type="checkbox"/> SERVICE SALES	CONTRACTOR <u>Wild West Well Service</u>	RIG NAME/NO. <u>41</u>	SHIPPED VIA <u>CT</u>	DELIVERED TO <u>Location</u>	ORDER NO.		
3.	WELL TYPE <u>Oil</u>	WELL CATEGORY <u>Development</u>	JOB PURPOSE <u>Cement 5 1/2" Port Collar</u>	WELL PERMIT NO.		WELL LOCATION <u>Utica - 2 1/2 mi E. into</u>		
4.	REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE			30	mi	5.00	150.00
576 D		1			Pump Change - Port Collar			1	job	1300.00	1300.00
330		1			SMD Cement			170	sls	16.25	2762.50
276		1			Floccle	4	1lb	50	lbs	2.50	125.00
290		1			D-Air			2	gal	42.00	84.00
581		1			Service Charge Cement			225	sls	1.75	393.75
583		1			Drayage	22350	lbs	335.25	TM	00.85	284.96

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

X

DATE SIGNED 5-11-18 TIME SIGNED 1115 A.M. P.M.

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

SURVEY	AGREE	UNDECIDED	DISAGREE	PAGE TOTAL	5100.21
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				102.00	-510.02
WE UNDERSTOOD AND MET YOUR NEEDS?				JNY	4590.19
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				Ness	4590.19
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				Tax 0	173.83
ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO				TOTAL	4764.02
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND					

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

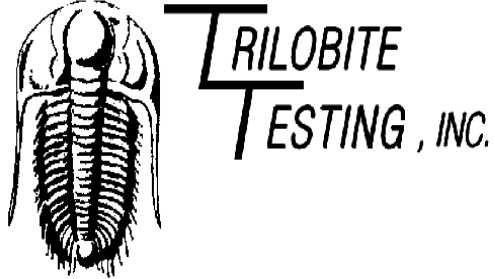
SWIFT Services, Inc.

DATE 5-11-18 PAGE NO. 1

CUSTOMER Larson Engineering WELL NO. #2 LEASE Glauers JOB TYPE Port Collar TICKET NO. #31515

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0945							on location 2 3/8" x 5 1/2"
								P.G. - 1998'
	1005	0	0		✓		1000	Pressure Test *Hold*
								Open P.G.
	1010	2 1/2	4		✓		250	Injection Rate
	1015	3 1/2	95		✓		400	mix 170 sks SMD 1/4" Flo @ 11.2 ppg Circulate cement to surface - 20 sks
	1040	3 1/2	7		✓		500	Displace Cement
	1045	0	0		✓		1000	Close P.G. Test *Hold*
								Run 5 Jts
	1055	3	20		✓		300	Reverse Clean
								Wash up truck
								170 sks SMD 1/4" Flo total
								20 sks to pit
	1130							Job Complete

Thank You
Dave Preston Kirby



DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

562 W. State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

Glaves #2

11-16s-26w Ness,KS

Start Date: 2018.05.06 @ 19:52:00

End Date: 2018.05.07 @ 02:45:00

Job Ticket #: 64005 DST #: 1

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

Printed: 2018.05.08 @ 13:55:25



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering, Inc.

11-16s-26w Ness, KS

562 W. State Rd 4
Olmitz, KS 67564

Glaves #2

Job Ticket: 64005

DST#: 1

ATTN: Vern Schrag

Test Start: 2018.05.06 @ 19:52:00

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:01:40

Time Test Ended: 02:45:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Cade Gerhard

Unit No: 65

Interval: 4464.00 ft (KB) To 4545.00 ft (KB) (TVD)

Reference Elevations: 2620.00 ft (KB)

Total Depth: 4545.00 ft (KB) (TVD)

2610.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8653

Inside

Press@RunDepth: 352.85 psig @ 4468.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.06

End Date:

2018.05.07

Last Calib.: 2018.05.07

Start Time: 19:52:01

End Time:

02:45:00

Time On Btm: 2018.05.06 @ 22:01:20

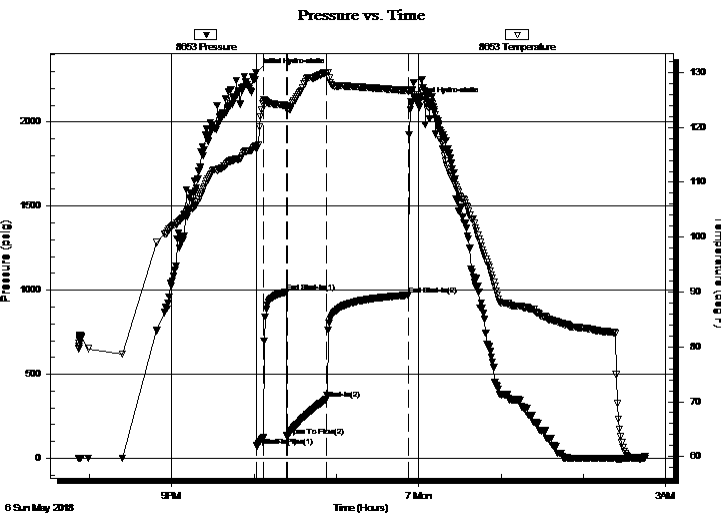
Time Off Btm: 2018.05.06 @ 23:54:20

TEST COMMENT: IF- 5- 1" blow ; built to 15"; BOB in 5 min

ISI- 15- No blow back

FF- 30- BOB in 6 min; Built to 55"

FSI- 60- No blow back



PRESSURE SUMMARY

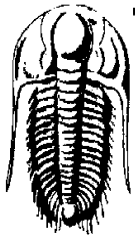
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2295.06	116.62	Initial Hydro-static
1	73.75	116.16	Open To Flow (1)
6	123.66	124.60	Shut-In(1)
23	987.54	123.97	End Shut-In(1)
23	130.53	123.62	Open To Flow (2)
52	352.85	129.99	Shut-In(2)
112	970.58	126.71	End Shut-In(2)
113	2118.87	126.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
375.00	GOMCW 20%G 30%O 40%W 10%M	5.26
120.00	GOWCM 40%G 20%O 20%W 20%M	1.68
250.00	HOCM 10%G 40%O 50%M	3.51

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering, Inc.
562 W. State Rd 4
Olmitz, KS 67564
ATTN: Vern Schrag

11-16s-26w Ness, KS

Glaves #2

Job Ticket: 64005

DST#: 1

Test Start: 2018.05.06 @ 19:52:00

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:01:40

Time Test Ended: 02:45:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Cade Gerhard

Unit No: 65

Interval: 4464.00 ft (KB) To 4545.00 ft (KB) (TVD)

Total Depth: 4545.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2620.00 ft (KB)

2610.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8646 Outside

Press@RunDepth: psig @ 4468.00 ft (KB)

Start Date: 2018.05.06

End Date:

2018.05.07

Start Time: 19:52:01

End Time:

02:45:00

Capacity: 8000.00 psig

Last Calib.:

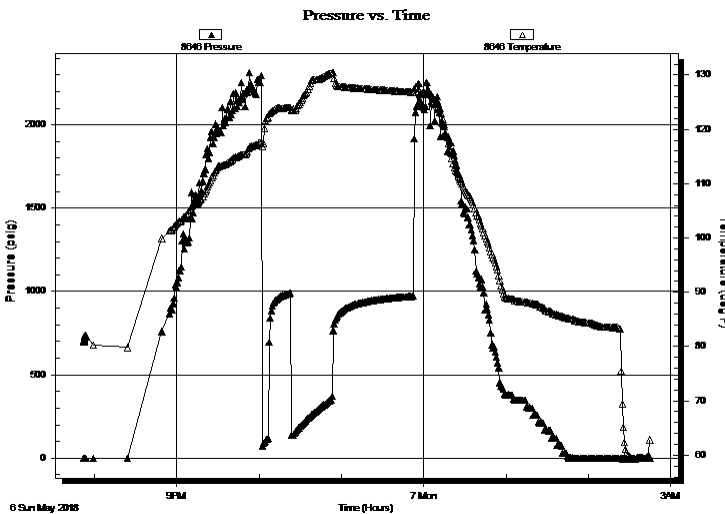
2018.05.07

Time On Btm:

Time Off Btm:

TEST COMMENT: IF- 5- 1" blow ; built to 15"; BOB in 5 min
IS- 15- No blow back
FF- 30- BOB in 6 min; Built to 55"
FS- 60- No blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
375.00	GOMCW 20%G 30%O 40%W 10%M	5.26
120.00	GOWCM 40%G 20%O 20%W 20%M	1.68
250.00	HOCM 10%G 40%O 50%M	3.51

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

11-16s-26w Ness, KS

562 W. State Rd 4
Olmitz, KS 67564

Glaves #2

Job Ticket: 64005

DST#: 1

ATTN: Vern Schrag

Test Start: 2018.05.06 @ 19:52:00

Tool Information

Drill Pipe:	Length: 4447.00 ft	Diameter: 3.80 inches	Volume: 62.38 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: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 120000.0 lb
			<u>Total Volume: 62.38 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	4464.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	95.00 ft			
Tool Length:	118.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4442.00	
Shut In Tool	5.00			4447.00	
Hydraulic tool	5.00			4452.00	
Safety Joint	3.00			4455.00	
Packer	5.00			4460.00	23.00 Bottom Of Top Packer
Packer	4.00			4464.00	
Stubb	1.00			4465.00	
Perforations	3.00			4468.00	
Recorder	0.00	8653	Inside	4468.00	
Recorder	0.00	8646	Outside	4468.00	
Perforations	13.00			4481.00	
Change Over Sub	1.00			4482.00	
Drill Pipe	63.00			4545.00	
Perforations	10.00			4555.00	
Change Over Sub	1.00			4556.00	
Bullnose	3.00			4559.00	95.00 Bottom Packers & Anchor
Total Tool Length:	118.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

11-16s-26w Ness,KS

562 W. State Rd 4
Olmitz, KS 67564

Glaves #2

Job Ticket: 64005

DST#: 1

ATTN: Vern Schrag

Test Start: 2018.05.06 @ 19:52:00

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:

30000 ppm

Viscosity: 76.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
375.00	GOMCW 20%G 30%O 40%W 10%M	5.260
120.00	GOWCM 40%G 20%O 20%W 20%M	1.683
250.00	HOCM 10%G 40%O 50%M	3.507

Total Length: 745.00 ft Total Volume: 10.450 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

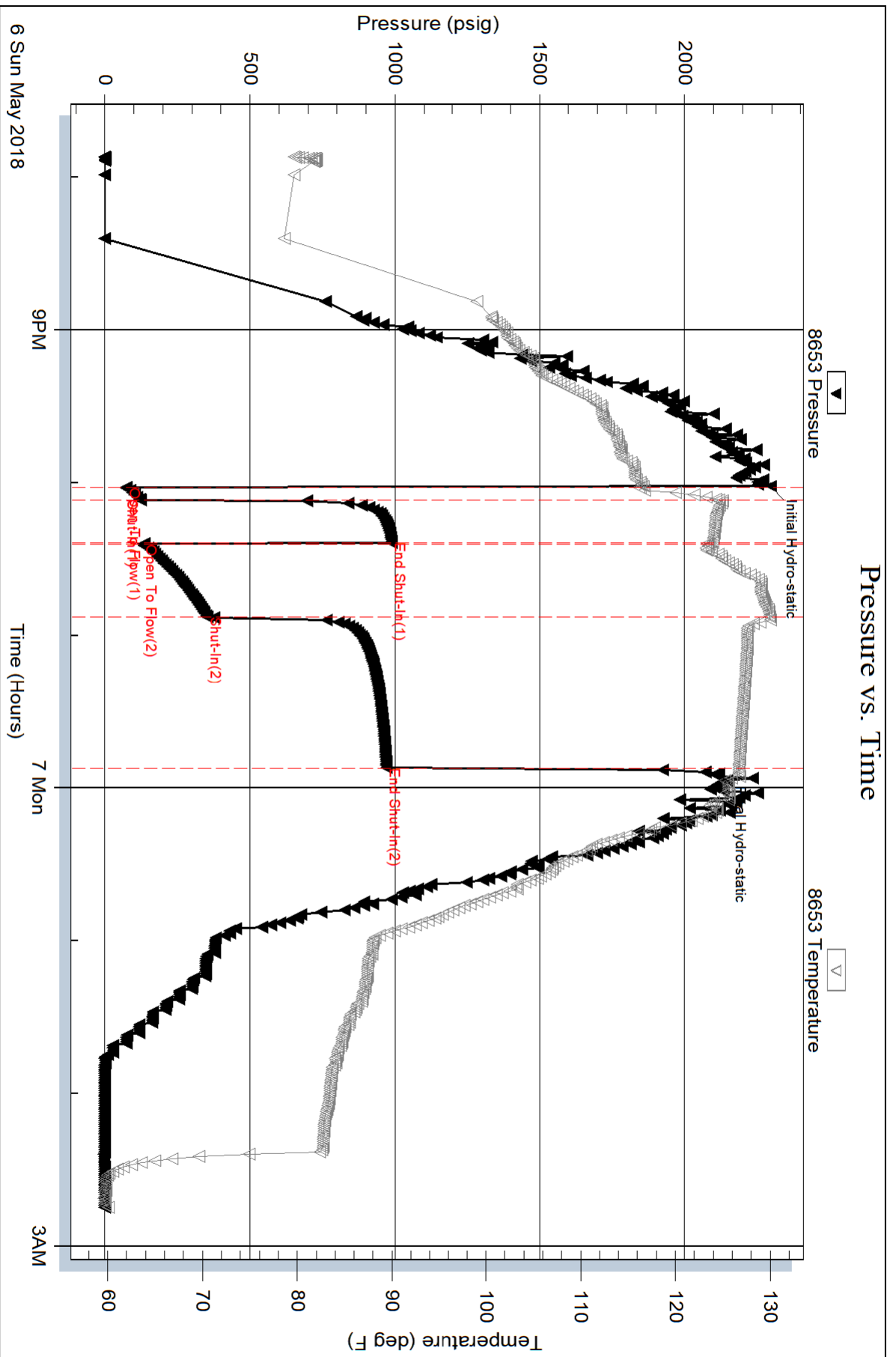
Serial #:

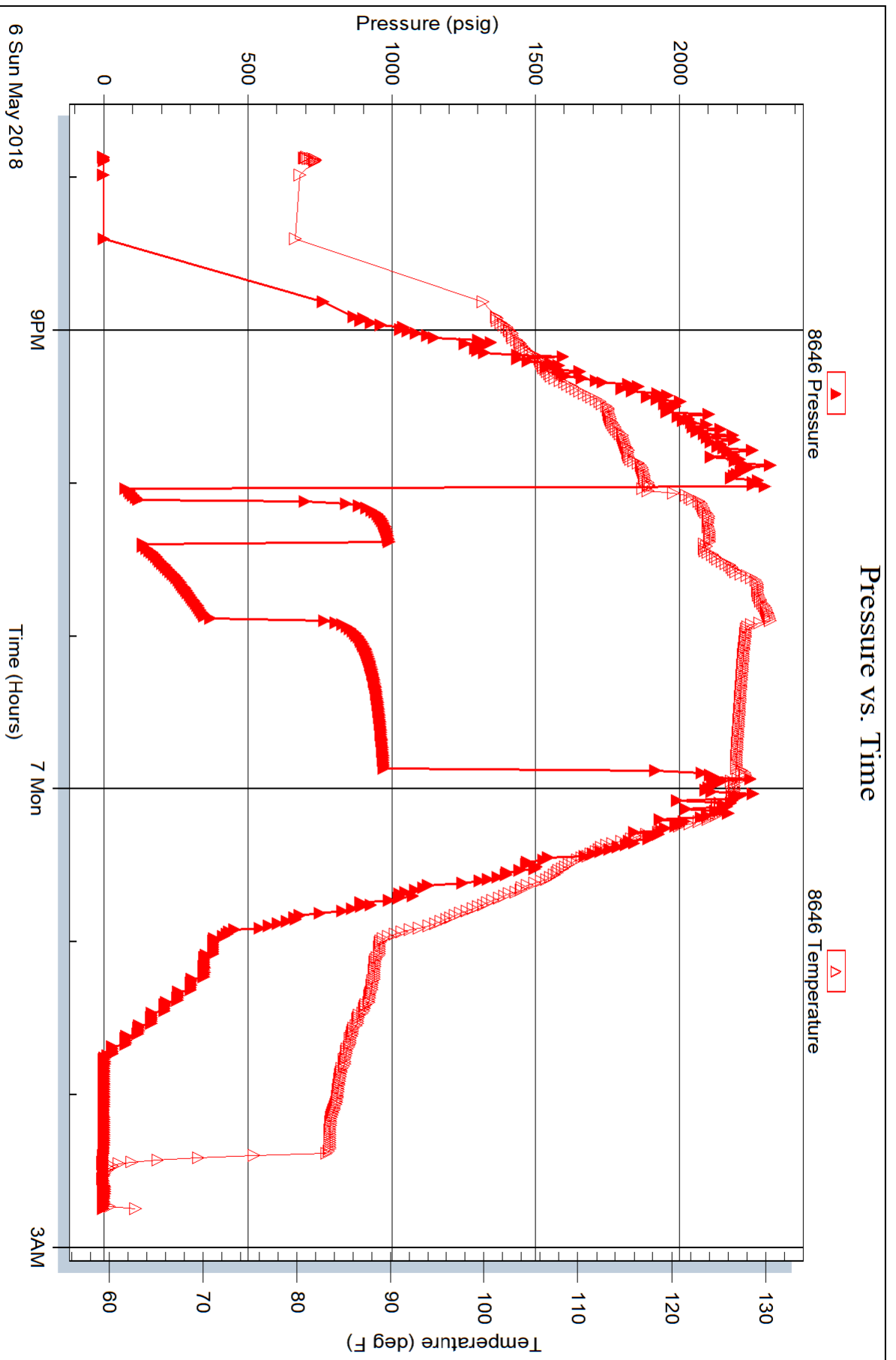
Laboratory Name:

Laboratory Location:

Recovery Comments: LCM-1

.36 @60 deg







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64005

Well Name & No. Galax #2 Test No. 1 Date 5-06-18
 Company Larson Engineering, Inc. Elevation 2670 KB 2610 GL
 Address 562 W. State RD 4 Olmitz, KS 67564
 Co. Rep / Geo. Vern Schrag Rig Southwind #8
 Location: Sec. 11 Twp N16S Rge. 26W Co. Ness State KS

Interval Tested 4464-4545 Zone Tested Mississippi
 Anchor Length 81 Drill Pipe Run 4447 Mud Wt. 9.2
 Top Packer Depth 4459 Drill Collars Run - Vis 76
 Bottom Packer Depth 4464 Wt. Pipe Run - WL 8.0
 Total Depth 4545 Chlorides 3000 ppm System LCM 1
 Blow Description IF - 1" Blow Built to 15"; BOB in 5 min
IST - NO Blow Back
FF - BOB in 6 min; Built to 55"
FSL - NO Blow Back

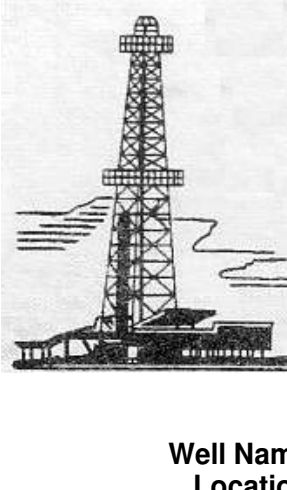
Rec	Feet of	%gas	%oil	%water	%mud
<u>375</u>	<u>GOMCW</u>	<u>20</u>	<u>30</u>	<u>40</u>	<u>10</u>
<u>120</u>	<u>GOWCM</u>	<u>40</u>	<u>20</u>	<u>20</u>	<u>20</u>
<u>250</u>	<u>HOCM</u>	<u>10</u>	<u>40</u>	<u>50</u>	<u>0</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 745 BHT 177° Gravity 1.036 @ 60 °F Chlorides 30,000 ppm
 (A) Initial Hydrostatic 2295 Test 1150 T-On Location 18:40
 (B) First Initial Flow 2295 73 Jars 0 T-Started 19:52
 (C) First Final Flow 123 Safety Joint 75 T-Open 22:01
 (D) Initial Shut-In 987 Circ Sub 0 T-Pulled 23:53
 (E) Second Initial Flow 987 130 Hourly Standby 0 T-Out 02:40
 (F) Second Final Flow 352 Mileage 136 RT 104rt
 (G) Final Shut-In 970 Sampler 0
 (H) Final Hydrostatic 2118 Straddle 0 Ruined Shale Packer 0
 Shale Packer 0 Ruined Packer 0
 Extra Packer 0 Extra Copies 0
 Extra Recorder 0 Sub Total 0
 Day Standby 0 Total 1329
 Accessibility 0 MP/DST Disc't 0
 Sub Total 1329

Approved By _____

Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged or 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.



WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG
CONSULTANT GEOLOGIST



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

Well Name: GLAVES #2
Location: NW NE NW SW SEC 11-16S-26W
Licence Number: API: 15-135-26001
Spud Date: May 1, 2018
Surface Coordinates: 1140' FNL & 1800' FWL

Region: Ness Co., KS
Drilling Completed: May 7, 2018

Bottom Hole Coordinates:
Ground Elevation (ft): 2610' K.B. Elevation (ft): 2620'
Logged Interval (ft): 3800' To: RTD Total Depth (ft): 4624'
Formation: 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:

Southwind Drilling Co., Rig #8

DP 4.5" XH (16.6#); DC 6-1/4" x 2-3/8" x 489.27', Kelly 40.00', Tool Joint 5.5" ; Bit: Varel HE29H, 7-7/8", standard jets 14-14-14; rpm 60-70, WOB 35k; Kelly Bushing 10' above ground level; Bill Sanders (tool pusher).

CASING:

Ran 6 jts new 8-5/8" 20# R3 STC 8rd csg. Tallied 250', set @ 263' KB.

5-1/2" 15.5# R3 LTC 8rd csg. Tallied 4630.58', set @ 4627' KB.

CIRCULATION SYSTEM:

Continental EMSCO D-375, duplex, 6 x 14, 58 spm, 320 gpm, Chemical, premix, displaced 3795', earth pits, MudCo/Service Mud, Inc., Jason Whiting

GAS DETECTION SYSTEM:

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

OPEN HOLE LOGS:

DN, DI (SP), ML, No Sonic; 5" detail LTD-3600; 2" DI to surface casing; Pioneer Wireline, Hays, KS, Log total depth (4629') was five feet long to rotary total depth (4624').

DRILL STEM TESTS:

Trilobite Testing, Inc., Hays, KS, Paul Simpson, Cade Gerhard.

