

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	Griffin, Charles N.
Well Name	SPRINGER 1
Doc ID	1316525

All Electric Logs Run

DIL
CNL
CDL
Computer Processed Interpretation

Form	ACO1 - Well Completion
Operator	Griffin, Charles N.
Well Name	SPRINGER 1
Doc ID	1316525

Tops

Name	Top	Datum
Lecompton	3445	-1887
Elgin	3478	-1920
Heebner	3658	-2100
Lansing	3853	-2295
Stark	4230	-2672
Hush	4260	-2702
Base KC	4314	-2756
Mississippian	4402	-2844
Kinderhook	4600	-3042
Viola	4704	-3146
Simpson Sand	4797	-3239

Form	ACO1 - Well Completion
Operator	Griffin, Charles N.
Well Name	SPRINGER 1
Doc ID	1316525

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	4798-4805	Water/4" HEC	



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Charles N Griffin

34-32S-12W Barber

PO Box 347
Pratt, KS 67124

Springer 1

ATTN: Bruce Reed

Job Ticket: 57997

DST#: 1

Test Start: 2016.07.02 @ 23:11:22

GENERAL INFORMATION:

Formation: **Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:47:07

Time Test Ended: 08:06:22

Test Type: Conventional Bottom Hole (Initial)

Tester: Leal Cason

Unit No: 74

Interval: 4774.00 ft (KB) To 4806.00 ft (KB) (TVD)

Reference Elevations: 1558.00 ft (KB)

Total Depth: 4806.00 ft (KB) (TVD)

1553.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8525

Inside

Press @ Run Depth: 387.21 psig @ 4775.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.07.02

End Date: 2016.07.03

Last Calib.: 2016.07.03

Start Time: 23:11:23

End Time: 08:06:22

Time On Btm: 2016.07.03 @ 01:39:22

Time Off Btm: 2016.07.03 @ 04:34:22

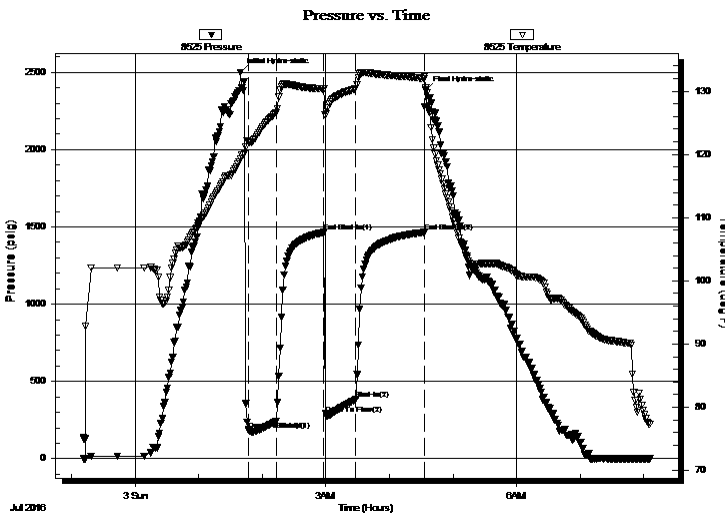
TEST COMMENT: IF: Strong Blow, BOB in 15 seconds, GTS in 10 minutes, Gauged Gas

IS: BOB Blow Back in 25 minutes

FF: Strong Blow, BOB in 10 seconds, GTS immediate, TSTM

FS: BOB Blow Back in 22 minutes

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2499.56	119.36	Initial Hydro-static
8	186.19	121.98	Open To Flow (1)
34	243.10	126.61	Shut-In(1)
79	1464.76	130.34	End Shut-In(1)
80	290.77	126.20	Open To Flow (2)
109	387.21	130.40	Shut-In(2)
174	1464.87	131.99	End Shut-In(2)
175	2384.09	130.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	2801 GIP	0.00
180.00	GOCM 20%G 10%O 70%M	1.42
1773.00	GSY Oil 10%G 90%O	24.87

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.38	27.00	151.66
Last Gas Rate	0.38	20.00	126.02
Max. Gas Rate	0.38	27.00	151.66



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Charles N Griffin

34-32S-12W Barber

PO Box 347
Pratt, KS 67124

Springer 1

Job Ticket: 57997

DST#: 1

ATTN: Bruce Reed

Test Start: 2016.07.02 @ 23:11:22

GENERAL INFORMATION:

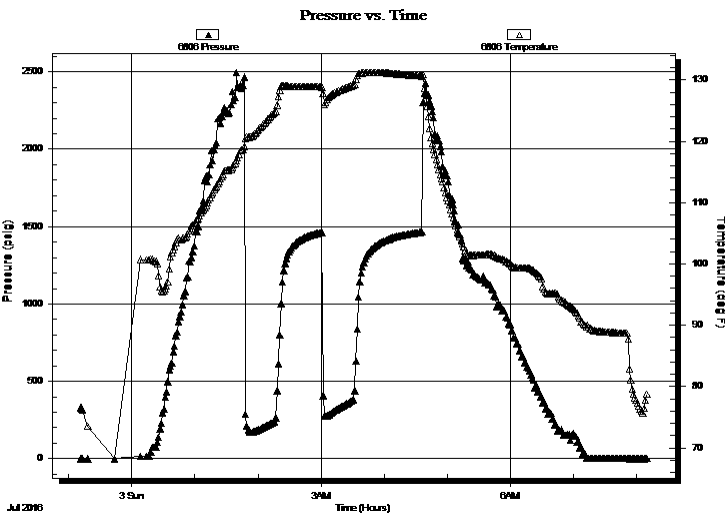
Formation: **Simpson**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 01:47:07
 Tester: Leal Cason
 Time Test Ended: 08:06:22
 Unit No: 74
 Interval: **4774.00 ft (KB) To 4806.00 ft (KB) (TVD)**
 Reference Elevations: 1558.00 ft (KB)
 Total Depth: 4806.00 ft (KB) (TVD)
 1553.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 5.00 ft

Serial #: 6806

Outside

Press @ Run Depth: psig @ 4775.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.07.02 End Date: 2016.07.03 Last Calib.: 2016.07.03
 Start Time: 23:11:23 End Time: 08:09:22 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Strong Blow, BOB in 15 seconds, GTS in 10 minutes, Gauged Gas
 IS: BOB Blow Back in 25 minutes
 FF: Strong Blow, BOB in 10 seconds, GTS immediate, TSTM
 FS: BOB Blow Back in 22 minutes



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	2801 GIP	0.00
180.00	GOCM 20%G 10%O 70%M	1.42
1773.00	GSY Oil 10%G 90%O	24.87

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.38	27.00	151.66
Last Gas Rate	0.38	20.00	126.02
Max. Gas Rate	0.38	27.00	151.66



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Charles N Griffin

34-32S-12W Barber

PO Box 347
Pratt, KS 67124

Springer 1

Job Ticket: 57997

DST#: 1

ATTN: Bruce Reed

Test Start: 2016.07.02 @ 23:11:22

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 11.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7500.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	2801 GIP	0.000
180.00	GOCM 20%G 10%O 70%M	1.423
1773.00	GSY Oil 10%G 90%O	24.871

Total Length: 1953.00 ft Total Volume: 26.294 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity w as 38 @ 80 degrees

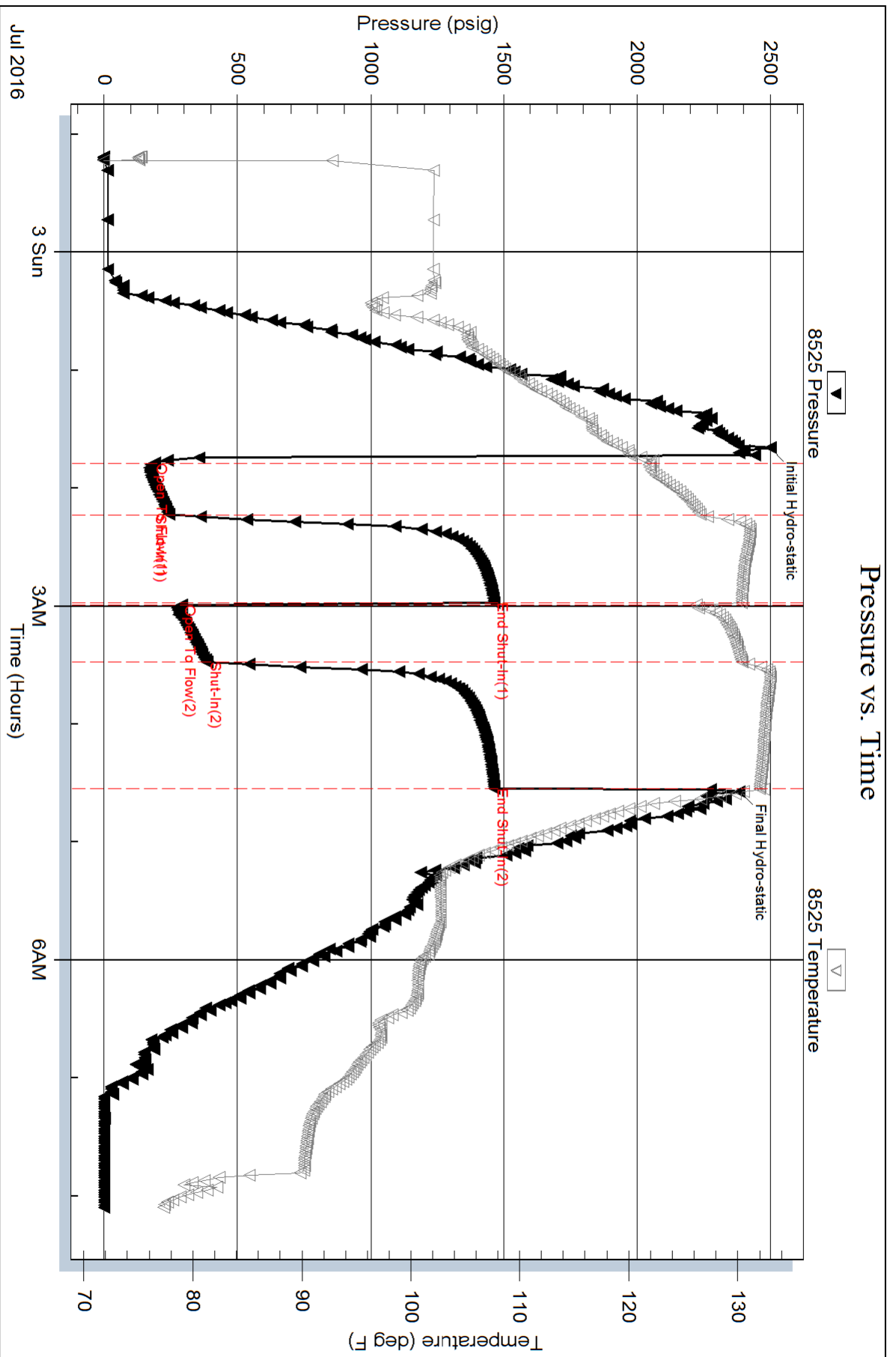
Serial #: 8525

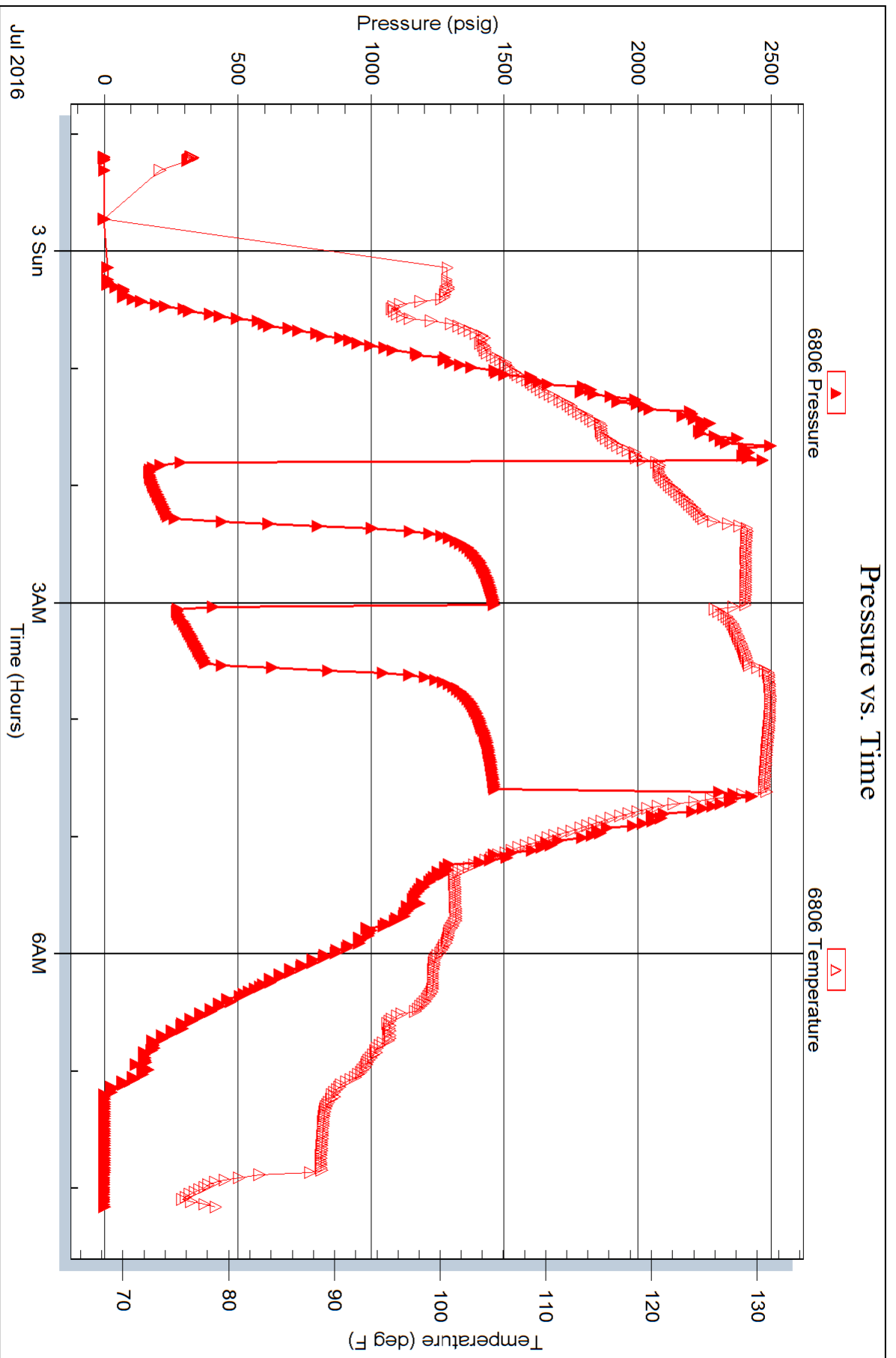
Inside

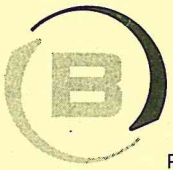
Charles N Griffin

Springer 1

DST Test Number: 1







BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

34-32-12

FIELD SERVICE TICKET
1718 13783 A

DATE _____ TICKET NO. _____

DATE OF JOB: 6/25/2016 DISTRICT: Prt 11, KS		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/> CUSTOMER ORDER NO.:							
CUSTOMER: Griffin Management		LEASE: Sprinser WELL NO. 1							
ADDRESS:		COUNTY: Barber STATE: KS							
CITY: STATE:		SERVICE CREW: Derrin J. Basler, M. Mugunze							
AUTHORIZED BY:		JOB TYPE: CNW / 8 5/8 SOI RSCC							
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	TIME
27463	1						6/25	AM	4:00
19860	1						6/25	AM	6:00
							6/25	AM	8:00
							6/25	AM	9:00
							6/25	AM	9:30
						MILES FROM STATION TO WELL	43		

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: _____
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT		
CP100	Common	SK	180		2,880 00		
CC109	Calcium Chloride	Lb	346		357 00		
CC102	Cement	Lb	46		170 00		
E100	Unit mileage Charge - Pickups, Spools, etc.	M.	35		137 50		
E101	Heavy Equipment Mileage	M.	70		525 00		
F113	Proppant and Bulk Delivery Charge, per ton	Ton	298		743 75		
CF200	Depth Charge: 0-500	4hr	1		1,000 00		
CF240	Blends & Mixing Service Charge	SK	180		252 00		
S003	Service Supervisor, first 8 hrs on loc.	ES	1		175 00		
					SUB TOTAL	6,260 45	
					SERVICE & EQUIPMENT	%TAX ON \$	
					MATERIALS	%TAX ON \$	
					DISCOUNT	TOTAL	3,505 85

CHEMICAL / ACID DATA:			

SERVICE REPRESENTATIVE: _____	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: _____ (WELL OWNER-OPERATOR CONTRACTOR OR AGENT)
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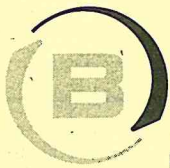
FIELD SERVICE ORDER NO. _____

Customer G. Kevin Management	Lease No.	Date 6/25/2014
Lease Spencer	Well # 1	
Field Order # 13783	Station P1922, KS	Casing 8 5/8
		Depth 304
Type Job CNW/ 8 5/8	Formation TD-304	County Borger
		State KS
		Legal Description 34-32-12

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
8 5/8							
Depth 304	Depth	From	To	Pre Pad	Max		5 Min.
Volume 19 1/4	Volume	From	To	Pad	Min		10 Min.
Max Press	Max Press	From	To	Frac	Avg		15 Min.
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth 284	Packer Depth	From	To	Flush Freshwater	Gas Volume		Total Load

Customer Representative SYD	Station Manager Kevin Gotaler	Treater Dustin Franklin
Service Units 92911 27463 84980 19860		
Driver Names Dustin Basler McGuire		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
6:00pm					ON location / Safety meeting 180 SIC common 290cc + 1/4 H Cell Chlorine 15.6 pps, 1,200 v. 1.2, S. 23 w. 1.2
8:00pm	200		3	4	Pipe on bottom & Break circulation
	200		39	4	Pump 3 bbls water
	200		18	4	mix 180 SIC cement
9:00pm					Displace 18 bbls water
					shut in
					Cement bit circulation
					Job complete / Dustin & crew Thank you!!



BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

FIELD SERVICE TICKET
1718 13830 A

DATE _____ TICKET NO. _____

DATE OF JOB <u>7-4-16</u> DISTRICT _____		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/> CUSTOMER ORDER NO.:								
CUSTOMER <u>Guffin Management</u>		LEASE <u>Springer</u>		WELL NO. <u>1</u>						
ADDRESS _____		COUNTY <u>Barber</u>		STATE <u>Ks</u>						
CITY _____ STATE _____		SERVICE CREW <u>Scott, Jake, Matt</u>								
AUTHORIZED BY <u>Chuck Guffin</u>		JOB TYPE: <u>NEW - LOW STRENGTH</u>								
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
<u>77468</u>	<u>x</u>					ARRIVED AT JOB	<u>7/4/16</u>			<u>12:00</u>
<u>73768</u>	<u>x</u>					START OPERATION	<u>7/4/16</u>			<u>6:40</u>
						FINISH OPERATION	<u>7/4/16</u>			<u>7:30</u>
						RELEASED	<u>7/4/16</u>			<u>8:30</u>
						MILES FROM STATION TO WELL _____				

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: X Andrew
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT	
CP105	AA7 Cement	SK	150		2550 00	
CP105	60/40 P02	SK	30		360 00	
CC107	Celluloflax	lb	38		140 60	
CC111	Sol	lb	703		351 50	
CC112	Cement Friction Reducer	lb	71		476 86	
CC116	Mag Chem 10CR	lb	423		1147 10	
CC201	Gilsonite	lb	750		502 50	
CF607	Witch clamp Plug + Baffle	Ec	1		400 00	
CF1251	Auto fill Float Shoe	Ec	1		360 00	
CF1651	Turboliners	Ec	6		660 00	
CF1901	5 1/2 Basket	Ec	1		290 00	
C704	Clay max KCl Subst.	Gal	4		140 00	
CC151	Mud flush	Gal	500		750 00	
F100	Unit Mileage Pickups	MI	35		157 50	
F101	Heavy Equipment Mileage	MI	70		525 86	
F113	Truck & Bulk Delivery	TM	292		736 63	
CF205	Drill Charge 400' - 500'	4hrs	1		7520 86	
CF240	Spending & Mixing Charge	SK	180		752 00	
CE504	Plug Containers	Job	1		250 00	
5003	Service Supervisor	Ec	1		175 00	
					SUB-TOTAL	17687 83

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$
MATERIALS	%TAX ON \$

TOTAL 5,834 10
hg

SERVICE REPRESENTATIVE <u>[Signature]</u>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: <u>X Andrew</u> (WELL OWNER OPERATOR CONTRACTOR OR AGENT)
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FIELD SERVICE ORDER NO. _____

Customer <i>Griffin Management</i>	Lease No.	Date <i>7/4/16</i>
Lease <i>Springer</i>	Well # <i>1</i>	
Field Order # <i>13870A</i>	Station <i>Pratt KS</i>	Casing <i>5 1/2</i>
Type Job <i>5 1/2 Long string</i>	Depth	County <i>Butcher</i>
	Formation	State <i>KS</i>
		Legal Description <i>34-32-12</i>

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
<i>5 1/2</i>							
Depth <i>4887</i>	Depth	From	To	Pre Pad	Max		5 Min.
Volume <i>116</i>	Volume	From	To	Pad	Min		10 Min.
Max Press <i>2000</i>	Max Press	From	To	Frac	Avg		15 Min.
Well Connection <i>5 1/2</i>	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative <i>Chuck Griffin</i>	Station Manager <i>Kevin Gordley</i>	Treater <i>Scott Graves</i>
Service Units <i>38950, 27463, 19903, 75768</i>		
Driver Names <i>Scott, Tube, Matt</i>		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>12:00</i>					<i>On location Safety Meeting Rig up</i>
<i>3:00</i>					<i>Run Float Equipment Basket #1</i>
					<i>Centralizers # 3, 4, 5, 6, 7, 8</i>
<i>5:30</i>					<i>Break Circulation</i>
<i>6:40</i>	<i>150</i>		<i>16</i>	<i>4.2</i>	<i>Pump H70 Spacer</i>
<i>6:41</i>	<i>200</i>		<i>15</i>	<i>4.7</i>	<i>Pump Mud flush 500 gallons</i>
<i>6:44</i>	<i>200</i>		<i>10.12</i>	<i>4.7</i>	<i>Pump H70 Spacer</i>
<i>6:45</i>	<i>750</i>		<i>5</i>	<i>5</i>	<i>Mix 150 sks AAC 15.3 ppw</i>
<i>6:50</i>			<i>36.33</i>		<i>Shut down</i>
<i>6:50</i>					<i>Wash pump + lines clean</i>
<i>6:51</i>					<i>Release Plug</i>
<i>6:51</i>	<i>100</i>			<i>5</i>	<i>Start Displacement</i>
<i>7:13</i>	<i>300</i>		<i>85</i>	<i>5</i>	<i>1.11 Pressure</i>
<i>7:19</i>	<i>500</i>		<i>21</i>	<i>3.5</i>	<i>Reduce Rate</i>
<i>7:24</i>	<i>1000</i>		<i>10</i>	<i>3.5</i>	<i>Plug landed</i>
<i>7:24</i>	<i>1500</i>				<i>Pressure up on Plug</i>
<i>7:24</i>					<i>Shut down Pressure hold</i>
<i>7:25</i>	<i>0</i>			<i>0</i>	<i>Release Pressure NO Returns</i>
<i>7:30</i>	<i>0</i>		<i>8</i>	<i>3</i>	<i>Plug Redhole 30 sks 60/40 P02</i>
					<i>Job Complete</i>

Company: Charles N. Griffin
 Address: PO Box 347
 Pratt, KS 67124

Contact Geologist:
 Contact Phone Nbr:
 Well Name: #1 Springer
 Location: Section 34-32S-12W
 Pool:
 State: Kansas

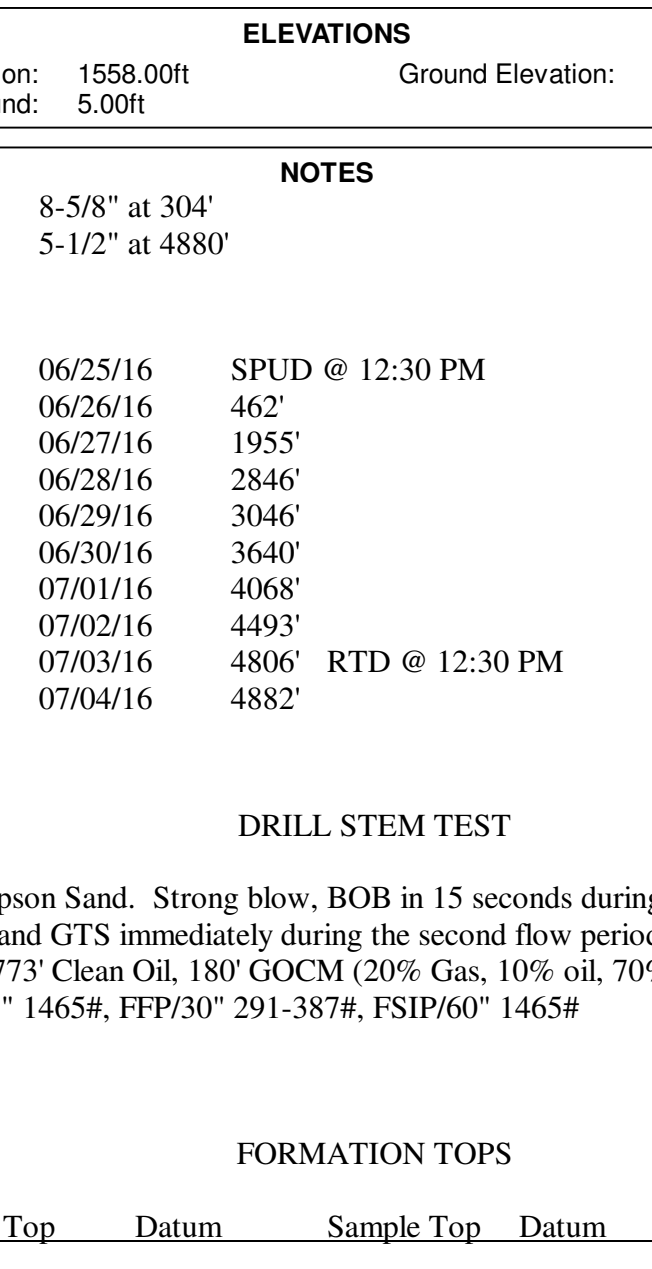
API: 15-007-24303
 Field: Toni-Mike
 County: USA

Scale 1:240 Imperial
 Well Name: #1 Springer
 Surface Location: Section 34-32S-12W
 Bottom Location: 15-007-24303
 License Number: API:
 Spud Date: 6/25/2016
 Region: Barber County
 Drilling Completed: 7/3/2016
 Surface Coordinates:
 Bottom Hole Coordinates:
 Ground Elevation: 1553.00ft
 K.B. Elevation: 1558.00ft
 Logged Interval: 3400.00ft To: 4882.00ft
 Total Depth: 4882.00ft
 Formation:
 Drilling Fluid Type: Chemical (MudCo)

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude:
 N/S Co-ord:
 EW Co-ord:
 Latitude:

LOGGED BY



Company: TerraTech Energy Service LLC.
 Address: 1632 S. West St. Suite 12
 Wichita, KS 67208

Phone Nbr: 316-617-3959
 Logged By: Geologist Name: Bruce Reed

CONTRACTOR

Contractor: WW Drilling
 Rig #: 4
 Rig Type: mud rotary
 Spud Date: 6/25/2016
 TD Date: 7/3/2016
 Rig Release: 7/4/2016
 Time: 12:30 PM
 Time: 12:30 PM
 Time: 7:30 AM

ELEVATIONS

K.B. Elevation: 1558.00ft
 K.B. to Ground: 5.00ft
 Ground Elevation: 1553.00ft

NOTES

Surface Casing: 8-5/8" at 304'
 Production Casing: 5-1/2" at 4880'

Daily Penetration:
 06/25/16 SPUD @ 12:30 PM
 06/26/16 462'
 06/27/16 1955'
 06/28/16 2846'
 06/29/16 3046'
 06/30/16 3640'
 07/01/16 4068'
 07/02/16 4493'
 07/03/16 4806' RTD @ 12:30 PM
 07/04/16 4882'

DRILL STEM TEST

DST #1 4774'-4806'. Simpson Sand. Strong blow, BOB in 15 seconds during the initial flow period, GTS in 10". BOB and GTS immediately during the second flow period, TSTM. Recovered: 2,801 GIP, 1,773 Clean Oil, 180' GOCM (20% Gas, 10% oil, 70% mud). IFP/30" 186-243#, ISIP/45" 1465#, FFP/30" 291-387#, FSP/60" 1465#

FORMATION TOPS

Formation	Log Top	Datum	Sample Top	Datum	Comparison*
Lecompton	3445'	-1887	3443'	-1885	-7
Elgin	3478'	-1920	3476'	-1918	-7
Hebner	3658'	-2100	3658'	-2100	-7
Lansing	3853'	-2295	3854'	-2296	-6
Stark	4230'	-2672	4231'	-2673	-4
Hush	4260'	-2702	4260'	-2702	-5
Base KC	4314'	-2756	4313'	-2755	-4
Mississippian	4402'	-2844	4402'	-2844	-7
Kinderhook	4600'	-3042	4597'	-3039	-9
Viola	4704'	-3146	4705'	-3147	-9
Simpson Sand	4797'	-3239	4795'	-3237	-4

*Reference well: Charles N. Griffin, #1 Jazmyne, SE NE SW Section 34-32S-12W, Barber County, Kansas

ROCK TYPES

Colprim
 shale, gry
 Carbon Sh
 Ss

ACCESSORIES

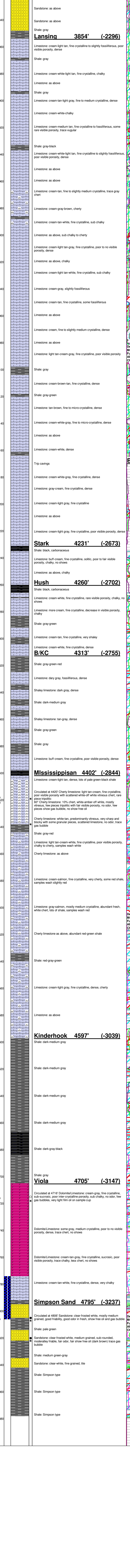
MINERAL
 • Sandy
 • Chert/White
 # Argillaceous/Shale

OTHER SYMBOLS

Oil Show
 • Good Show
 • Fair Show
 • Poor Show
 • Spotted or Trace
 • Questionable Sm
 D Dead Oil Sm
 * Fluorescence
 # Gas

DST
 • DST Int
 • DST all
 • Core
 I tail pipe

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Depth 3640' Mud Weight 9.0 Funnel Viscosity 58 API Filtrate 10 Chloride 8,000

Depth 4081' Mud Weight 9.5 Funnel Viscosity 53 API Filtrate 11.2 Chloride 9,000

Bit Trip 4171'

Depth 4507' Mud Weight 9.4 Funnel Viscosity 46 API Filtrate 7.50 Chloride 7,500

Depth 4806' Mud Weight 9.5 Funnel Viscosity 53 API Filtrate 12.2 Chloride 7,500