



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1232593
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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 SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- 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 ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

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
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1232593

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 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				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	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> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Pound 1-34
Doc ID	1232593

All Electric Logs Run

DIL
DUCP
MEL
BHCS



uex
Prod-MG

PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1002852	1718	08/11/2014
INVOICE NUMBER			
91564577			

Pratt (620) 672-1201
 B MURFIN DRILLING
 I PO Box: 288
 L RUSSELL
 L KS US 67665
 T
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Pound 1-34
 O LOCATION
 B COUNTY Stafford
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T
 E JOB CONTACT

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40753236	20920		Net - 30 days	09/10/2014

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 08/08/2014 to 08/08/2014				
0040753236				
171811025A Cement-New Well Casing/Pi 08/08/2014 Cement 8 5/8" Surface				
A-Con Blend Common	200.00	EA	13.68	2,736.00 T
Common Cement	200.00	EA	12.16	2,432.00 T
Celloflake	100.00	EA	2.81	281.20 T
Calcium Chloride	940.00	EA	0.80	750.12 T
"Top Rubber Cmt Plug, 8 5/8""	1.00	EA	171.00	171.00
"Baffle Plate Alum., 8 5/8"" (Blue)"	1.00	EA	129.20	129.20
Centralizer 8 5/8 x 12 1/4	2.00	EA	110.20	220.40
"Unit Mileage Chg (PU, cars one way)"	35.00	MI	3.23	113.05
Heavy Equipment Mileage	70.00	MI	5.32	372.40
"Proppant & Bulk Del. Chgs., per ton mil	658.00	EA	1.67	1,100.18
Depth Charge; 501'-1000'	1.00	EA	912.00	912.00
Blending & Mixing Service Charge	400.00	BAG	1.06	425.60
Plug Container Util. Chg.	1.00	EA	190.00	190.00
"Service Supervisor, first 6 hrs on ioc.	1.00	EA	133.00	133.00

USED FOR TC 103
 APPROVED [Signature]

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	9,966.15
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	443.25
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	10,409.40
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		

[Handwritten Signature]



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 11025 A

DATE _____ TICKET NO. _____

DATE OF JOB		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				LEASE				WELL NO.	
ADDRESS				COUNTY				STATE	
CITY				STATE				SERVICE CREW	
AUTHORIZED BY				JOB TYPE:					
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	(AM/PM)	TIME
						ARRIVED AT JOB		AM/PM	
						START OPERATION		AM/PM	
						FINISH OPERATION		AM/PM	
						RELEASED		AM/PM	
						MILES FROM STATION TO WELL	1/0		

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
1	1/2" Dia. PVC Pipe	50	200		3,600.00
2	1/2" Dia. PVC Pipe	25	200		1,800.00
3	1/2" Dia. PVC Pipe	25	100		270.00
4	1/2" Dia. PVC Pipe	25	100		270.00
5	1/2" Dia. PVC Pipe	15	1		217.00
6	1/2" Dia. PVC Pipe	15	1		170.00
7	1/2" Dia. PVC Pipe	15	2		290.00
8	1/2" Dia. PVC Pipe	15	15		418.00
9	1/2" Dia. PVC Pipe	15	10		450.00
10	1/2" Dia. PVC Pipe	15	100		1,800.00
11	1/2" Dia. PVC Pipe	15	1		1,200.00
12	1/2" Dia. PVC Pipe	15	1		300.00
13	1/2" Dia. PVC Pipe	15	1		200.00
14	1/2" Dia. PVC Pipe	15	1		170.00
SUB-TOTAL					9966.15

CHEMICAL / ACID DATA:			

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

SERVICE REPRESENTATIVE	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY:
------------------------	---------------------------------------------------------------------

(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO.



BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

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

34-22-12

FIELD SERVICE TICKET
1718 11025 A

DATE _____ TICKET NO. _____

DATE OF JOB: 8-8-2014		DISTRICT: PIG+KCS		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: murkin Drilling Co Inc				LEASE: Pound				WELL NO. 1-34	
ADDRESS:				COUNTY: Sts/Polk		STATE: KS			
CITY:				STATE:		SERVICE CREW: Dron, Ed, Aaron			
AUTHORIZED BY:				JOB TYPE: C/W/ surface					
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	(AM/PM)	TIME
27283	1						8-8	AM	5:30
3708	1						8-8	AM	5:30
20920	1						8-8	AM	7:30
70959	1						8-8	AM	8:30
19918	1						8-8	AM	9:30
						MILES FROM STATION TO WELL	40		

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: *[Signature]*
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
EP101	A-Con Blend Common	SK	200		3,606 00
EP100C	Common Cement	SK	200		3,200 00
EC102	Cellofibre	Lb	100		370 00
EC109	Calcium Chloride	Lb	940		987 00
EF105	Top Rubber Cement PLUS, 8 3/8	ES	1		225 00
EF253	BSF Pie Plate Aluminum, 8 3/8 (Blue)	ES	1		170 00
EF1773	Censitizer 8 3/8 x 12 1/4	ES	2		290 00
EF100	Unit mileage charge - pickup	Mi	35		148 75
EF101	Mech. Equipment - mileage	Mi	70		490 00
EF113	Bulk Delivery	Vol	658		1,447 60
EF101	Dredging Charge, 501-1000'	Yds	1		1,200 00
EF240	Blending & Mixing Service Charge	SK	400		560 00
EF504	Plus Container Utilization Charge	Job	1		250 00
EF503	Service Supervisor, Plus 8 hrs on loc	ES	1		175 00

CHEMICAL / ACID DATA:			

SUB TOTAL		116	9966.15
SERVICE & EQUIPMENT	%TAX ON \$		
MATERIALS	%TAX ON \$		
TOTAL			

SERVICE REPRESENTATIVE: <i>[Signature]</i>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: <i>[Signature]</i>
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(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO.

BASIC

energy services, L.P.

TREATMENT REPORT

Customer Mullin Drilling Co. Inc	Lease No.	Date 8-8-2014
Lease Pound	Well # J-34	
Field Order # 110025	Station P1st 1, 105	Casing 8 5/8
	Depth 645	County Stafford
Type Job CNW/SU/SPR	Formation 7D-643	State KS
		Legal Description 34-22-12

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
8 5/8				Pre Pad	Max		5 Min.	
Depth 645	Depth	From	To	Pad	Min		10 Min.	
Volume 41	Volume	From	To	Frac	Avg		15 Min.	
Max Press	Max Press	From	To		HHP Used		Annulus Pressure	
Well Connection	Annulus Vol.	From	To	Flush	Gas Volume		Total Load	
Plug Depth 602	Packer Depth	From	To					

Customer Representative JUAN TINOCO	Station Manager Kevin Gordley	Treater Darin Franklin
Service Units 27783 33708 20570 70955 19918		
Driver Names Darin Ed Ed Asion Asion		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
5:30 AM					On location / SSPQ meeting
					200s A-con Blana 3% O/C, 1/4 # cell/micro
					200s common 2% O/C, 1/4 # SK cell/micro
7:30 AM	200		3	6	Pump 3 bbls w/sr
	200		74	6	mix 200SK A-con Blana
	200		43	6	mix 200SK common
					Shut Down
					Release PWS
	200		38	5	Start Displacement
8:30 AM					Shut in
					Cement Circulate 10 bbls to pt
					Job Complete / Darin & crew
					Thank you!!!



PAGE 1 of 1	CUST NO 1002852	YARD # 1718	INVOICE DATE 08/19/2014
INVOICE NUMBER 91570227			

Pratt (620) 672-1201

B MURFIN DRILLING
I PO Box: 288
L RUSSELL
L KS US 67665
T
O ATTN: ACCOUNTS PAYABLE

WELL FILE

J LEASE NAME Pound 1-34
O LOCATION
B COUNTY Stafford
S STATE KS
I JOB DESCRIPTION Cement-New Well Casing/Pi
E JOB CONTACT

JOB #	EQUIPMENT #	PURCHASE ORDER NO.		TERMS	DUE DATE
40755752	19905			Net - 30 days	09/18/2014
For Service Dates: 08/14/2014 to 08/14/2014					
0040755752			QTY	U of M	UNIT PRICE
USED FOR <u>IC 103</u>					
APPROVED <u>[Signature]</u>					
17181120A Cement-New Well Casing/Pi 08/14/2014					
Cement 5 1/2" Longstring					
AA2 Cement		175.00	EA	12.75	2,231.26 T
60/40 POZ		50.00	EA	9.00	450.00 T
C-41P		42.00	EA	3.00	126.00 T
Salt		869.00	EA	0.37	325.87 T
Cement Friction Reducer		50.00	EA	4.50	225.00 T
C-44		165.00	EA	3.86	637.31 T
FLA-322		83.00	EA	5.62	466.87 T
Mud Flush		500.00	EA	1.13	562.50 T
Gilsonite		875.00	EA	0.50	439.69 T
Claymax KCL Substitute		5.00	EA	26.25	131.25 T
"Latch Down Plug & Baffle, 5 1/2" (Blue)"		1.00	EA	300.00	300.00
"Auto Fill Float Shoe 5 1/2" (Blue)"		1.00	EA	270.00	270.00
"Turbolizer, 5 1/2" (Blue)"		10.00	EA	82.50	825.00
Cement Scratchers Rotating Type		30.00	EA	37.50	1,125.00
"Unit Mileage Chg (PU, cars one way)"		35.00	MI	3.19	111.56
Heavy Equipment Mileage		70.00	MI	5.25	367.50
"Proppant & Bulk Del. Chgs., per ton mil		364.00	EA	1.65	600.60
Depth Charge; 3001-4000'		1.00	EA	1,620.00	1,620.00
Blending & Mixing Service Charge		225.00	BAG	1.05	236.25
Casing Swivel Rental		1.00	EA	150.00	150.00
Plug Container Util. Chg.		1.00	EA	187.50	187.50
"Service Supervisor, first 8 hrs on loc.		1.00	EA	131.25	131.25
PLEASE REMIT TO:		SEND OTHER CORRESPONDENCE TO:		SUB TOTAL	11,520.41
BASIC ENERGY SERVICES, LP		BASIC ENERGY SERVICES, LP		TAX	400.10
PO BOX 841903		801 CHERRY ST, STE 2100		INVOICE TOTAL	11,920.51
DALLAS, TX 75284-1903		FORT WORTH, TX 76102			



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 11120 A

34 27 12

DATE _____ TICKET NO. _____

DATE OF JOB 8-14-14		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 Mullis Drilling Co Inc		LEASE Pound		WELL NO # 34					
ADDRESS		COUNTY Stafford		STATE KS					
CITY		STATE		SERVICE CREW Scott, Edy, Cole					
AUTHORIZED BY Mack		JOB TYPE: 5 1/2 long string CNW							
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM PM	TIME
38970	1								
77686 14905	1					ARRIVED AT JOB	8-14-14	AM PM	4:00
76959 14918	1					START OPERATION	8-14-14	AM PM	10:20
						FINISH OPERATION	8-14-14	AM PM	11:15
						RELEASED	8-14-14	AM PM	12:00
						MILES FROM STATION TO WELL			

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SIGNED: Mack Puller
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP105	AA2 Cement	SK	175		7975 00
CP103	60/100 POZ	SK	50		600 00
CC105	C-41P	lb	42		168 00
CC111	Sc-H	lb	869		434 50
CC112	Cement Friction Reducer	lb	50		300 00
CC115	C-461	lb	165		849 75
CC129	FLA-322	lb	83		627 50
CC201	Gilsonite	lb	875		586 75
CE607	Wash Down Plug + Baffle 5 1/2	EA	1		400 00
CE1251	Auto-fill flow sleeve 5 1/2	EA	1		360 00
CE1651	Turbolizer 5 1/2	EA	10		1100 00
CE2007	Cement Scratchers Rotating Type	EA	30		1500 00
CC151	Mud Flush	Gal	500		750 00
C704	Claymax KCI Substitute	Gal	5		175 00
E100	Unit Mileage Pickups	MI	35		148 75
E101	Heavy Equipment Mileage	MI	70		490 00
E113	Project Equip Delivery	TM	364		800 80
CE204	Depth Charge 3000-4000'	Yds	1		2160 00
CE240	Blending + Mixing Charge	SK	225		315 00

SUB TOTAL

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

TOTAL

CHEMICAL / ACID DATA:			

SERVICE REPRESENTATIVE <u>Scott</u>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: <u>Mack Puller</u> (WELL OWNER OPERATOR CONTRACTOR OR AGENT)
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FIELD SERVICE ORDER NO.

Customer <i>Martin Drilling Co</i>	Lease No.	Date
Lease <i>Pound</i>	Well # <i>1-34</i>	<i>8-14-14</i>
Field Order # <i>11120</i>	Station <i>PRATT, KS</i>	Casing <i>5 1/2</i>
		Depth <i>3892</i>
Type Job <i>5 1/2 long string CNW</i>	Formation	County <i>Stafford</i>
		State <i>KS</i>
		Legal Description <i>34 22 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>				Pre Pad	Max		5 Min.	
Depth <i>3892</i>	Depth	From	To	Pad	Min		10 Min.	
Volume <i>90.45</i>	Volume	From	To	Frac	Avg		15 Min.	
Max Press <i>1500</i>	Max Press	From	To		HHP Used		Annulus Pressure	
Well Connection <i>5 1/2</i>	Annulus Vol.	From	To	Flush	Gas Volume		Total Load	
Plug Depth	Packer Depth	From	To					

Customer Representative <i>Mack</i>	Station Manager <i>Kevin Goidley</i>	Treater <i>Scott Graves</i>
Service Units <i>38970</i>	<i>77686</i>	<i>70959</i>
Driver Names <i>Scott</i>	<i>Edu</i>	<i>Cole</i>
	<i>19905</i>	<i>19918</i>

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>4:00</i>					<i>On location Safety Meeting Rig up</i>
<i>7:30</i>					<i>Rin float equipment</i>
<i>9:25</i>					<i>Turbobits on 1,3,5,7,9,11,13,15,17,19</i>
<i>10:20</i>	<i>200</i>		<i>3</i>	<i>4</i>	<i>Circulate well 50 minutes</i>
<i>10:22</i>	<i>250</i>		<i>12</i>	<i>4</i>	<i>Pump H2O spacer</i>
<i>10:25</i>	<i>250</i>		<i>3</i>	<i>4</i>	<i>Pump 500 gallons mud flush</i>
<i>10:28</i>	<i>400</i>		<i>44.56</i>	<i>5.3</i>	<i>Pump H2O spacer</i>
<i>10:37</i>					<i>Mix 175 SKS AA2 cement 15 ppv</i>
<i>10:40</i>					<i>Finished pumping AA2 shut down</i>
<i>10:40</i>	<i>0</i>		<i>5</i>	<i>5.5</i>	<i>Wash pump + lines</i>
<i>10:40</i>	<i>0</i>		<i>5</i>	<i>5.4</i>	<i>Drop plug</i>
<i>10:50</i>	<i>500</i>		<i>55</i>		<i>Start Displacement</i>
<i>10:58</i>	<i>600</i>		<i>33</i>		<i>lift pressure</i>
<i>10:59</i>	<i>1500</i>				<i>Plug landed</i>
<i>11:00</i>					<i>Increase pressure set plug</i>
<i>11:10</i>	<i>0</i>		<i>5</i>	<i>3</i>	<i>Release pressure</i>
<i>11:15</i>	<i>0</i>		<i>7</i>	<i>3</i>	<i>plug Port hole 20 SKS 60/40 pot</i>
					<i>plug mouse hole 30 SKS 60/40 pot</i>
					<i>shut down</i>
					<i>Job Complete</i>

Pound #1-34
 Daily Drilling Report
 Page Two
 8/12/14

Depth 3650'. Cut 225'. DT: None. CT: 15½ hrs. Dev.: None. **LKC I:** scat pr interool por, 3 pcs total w/vry pr show blk hvy oil & blk st, no odr. **LKC J Upper:** ls: fr interpartical & vuggy por, gd st & sat, GSFO & G on brk, ft odr on brk. **LKC J:** fn-medxtln, ool/ooc, pr-fr ooc por, barren, few scat pcs w/cpl minute ppts FO & scat pr lt ooc st, no odr. **LKC K:** fn-medxtln, sli chalky, scat pr vuggy por, tr pr dk st, cpl pcs w/tr show hvy dk brwn oil, few pcs fn-medxtln spar calcite w/scat pr med brwn st, VSS small ppts FO, no odr. **LKC L:** fn-medxtln, scat vpr-pr, vry fine, interxtln & scat vuggy por, pr - cpl pcs fr st, few pcs w/cpl sm globules FO w/sli oil sheen & few gas bubbles on brk, no odr. **DST #2 3458-3587 (LKC H-L):** 30-60-60-90. IF: wk blw, surf - 1". FF: wk blw, surf - 1". Rec.: 345'WCM (45%W, 55%M). HP: 1782-1704. FP: 22/107, 138/174. SIP: 1002-734. BHT: 112°. **Viola:** (Circ at 3650') chert: wh, fresh/partially-fully weathered, opaque, scat pr ppt por, pr spotty st w/ sat, SSFO & GSG on brk, ft odor; gold, pink/rose fresh, semi-trans - opaque.

8/13/14 Depth 3859'. Cut 209'. DT: None. CT: 14 hrs. Dev.: None. **DST #3 3561-3698 (Viola):** 30-60-60-90. IF: surf blow bldg to 9". FF: BOB in 5". FSI: 1" blow. REC: 970' GIP, 305' GOCM (30%O, 35%G, 35%M). HP: 1828-1778, FP: 33/74, 81/131. SIP: 1140-1107. BHT: 110°. **Arb:** sli sucrosic, scat pr intrxln por, NS.

8/14/14 RTD: 3910'. Cut 51'. DT: None. CT: 21¾ hrs. Dev.: 2° @ 3910'. HC @ 9:15AM 8/13. Pioneer logged 12:45PM - 2:00PM stopped @ 3810', TIH w/bit & circ 1¾ hrs then TOO H F/log. 8:15PM 8/13 - 12:00AM 8/14. LTD 3903. LD Pipe, will run csg.

8/15/14 RTD: 3910'. CT: 8hrs. Ran 88jts of 17# 5½" prod csg, set @ 3892'. B-E cmt w/175sxs of AA-2. PD @ 11:00AM 8/14. 30sxs RH, 20sxs MH. RR @ 3:00PM 8/14. FINAL REPORT

Pound #1-34 330' FSL 330' FEL Sec. 34-22S-12W 1842' KB							Rank OWWO #1-2 4620FSL 330FWL Sec. 2-23S-12W 1836' KB	
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	610	+1232	-3	609	+1233	-2	601	+1235
B/Anhydrite	632	+1210	-3	329	+1213	Flat	623	+1213
Stotler				2562	-720	Flat	2556	-720
Topeka	2801	-959	-4	2798	-956	-1	2791	-955
Heebner	3177	-1335	-6	3170	-1328	+1	3165	-1329
Lansing	3315	-1471	-5	3306	-1464	+2	3302	-1466
Stark	3531	-1689	-5	3525	-1683	+1	3520	-1684
BKC	3583	-1741	-4	3579	-1737	Flat	3573	-1737
Viola	3610	-1768	-4	3601	-1759	+5	3600	-1764
Simpson				3684	-1842	+61	3739	-1903
Arbuckle	3821	-1979	-4	3809	-1937	+8	3811	-1975
RTD	3910						3900	
LTD				3903			3894	



DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water Ste. 300
Wichita, KS 67202-1216

ATTN: Chuck Schmaltz

Pound #1-34

34-22s-12w Stafford,KS

Start Date: 2014.08.10 @ 23:21:37

End Date: 2014.08.11 @ 05:52:07

Job Ticket #: 54167 DST #: 1

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

Printed: 2014.08.14 @ 10:14:46



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
250 N. Water Ste. 300
Wichita, KS 67202-1216
ATTN: Chuck Schmalz

34-22s-12w Stafford,KS

Pound #1-34

Job Ticket: 54167

DST#: 1

Test Start: 2014.08.10 @ 23:21:37

GENERAL INFORMATION:

Formation: **LKC D-F**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:09:52
 Time Test Ended: 05:52:07
 Interval: **3351.00 ft (KB) To 3425.00 ft (KB) (TVD)**
 Total Depth: 3425.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Ryan Reynolds
 Unit No: 68
 Reference Elevations: 1842.00 ft (KB)
 1831.00 ft (CF)
 KB to GR/CF: 11.00 ft

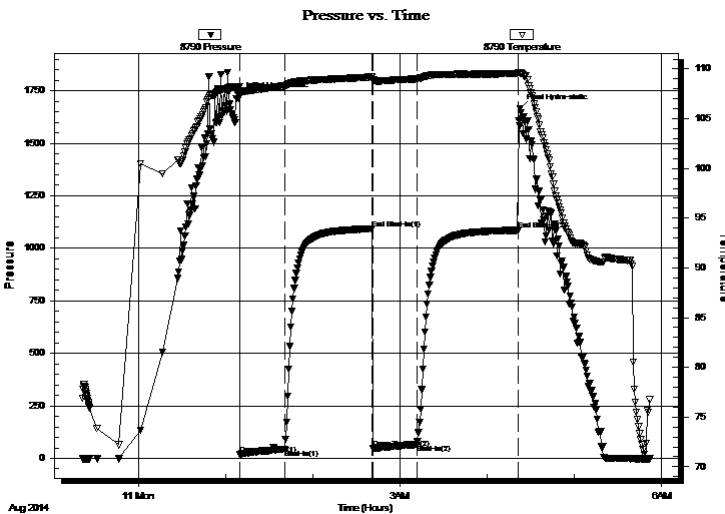
Serial #: 8790

Inside

Press@RunDepth: 65.81 psig @ 3358.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.08.10 End Date: 2014.08.11 Last Calib.: 2014.08.11
 Start Time: 23:21:42 End Time: 05:52:06 Time On Btm: 2014.08.11 @ 01:09:37
 Time Off Btm: 2014.08.11 @ 04:22:37

TEST COMMENT: 30 IF: Weak blow . surf. - 1"
 60 IS: No blow
 30 FF: Weak blow . No blow - surf.
 60 FSI: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1721.02	108.26	Initial Hydro-static
1	19.74	107.69	Open To Flow (1)
31	43.55	108.28	Shut-In(1)
91	1092.86	109.19	End Shut-In(1)
92	47.31	108.85	Open To Flow (2)
122	65.81	109.00	Shut-In(2)
192	1085.67	109.52	End Shut-In(2)
193	1663.89	109.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	Drig Mud 100% m	0.44
0.00	VSLI OsptdM in hyd. tool	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

34-22s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

Pound #1-34

Job Ticket: 54167

DST#: 1

ATTN: Chuck Schmaltz

Test Start: 2014.08.10 @ 23:21:37

Tool Information

Drill Pipe:	Length: 3078.00 ft	Diameter: 3.80 inches	Volume: 43.18 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 276.00 ft	Diameter: 2.25 inches	Volume: 1.36 bbl	Weight to Pull Loose: 69000.00 lb
			<u>Total Volume: 44.54 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 63000.00 lb
Depth to Top Packer:	3351.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	74.00 ft			
Tool Length:	101.00 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			3325.00	
Shut In Tool	5.00			3330.00	
Hydraulic tool	5.00			3335.00	
Jars	5.00			3340.00	
Safety Joint	2.00			3342.00	
Packer	5.00			3347.00	27.00 Bottom Of Top Packer
Packer	4.00			3351.00	
Stubb	1.00			3352.00	
Perforations	5.00			3357.00	
Change Over Sub	1.00			3358.00	
Recorder	0.00	8790	Inside	3358.00	
Recorder	0.00	8792	Outside	3358.00	
Drill Pipe	62.00			3420.00	
Change Over Sub	1.00			3421.00	
Perforations	1.00			3422.00	
Bullnose	3.00			3425.00	74.00 Bottom Packers & Anchor
Total Tool Length:	101.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.

34-22s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

Pound #1-34

Job Ticket: 54167

DST#: 1

ATTN: Chuck Schmaltz

Test Start: 2014.08.10 @ 23:21:37

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:

16200 ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 16200.00 ppm

Filter Cake: 0.04 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	Drlg Mud 100%m	0.443
0.00	VSLI OsptdM in hyd. tool	0.000

Total Length: 90.00 ft Total Volume: 0.443 bbl

Num Fluid Samples: 0

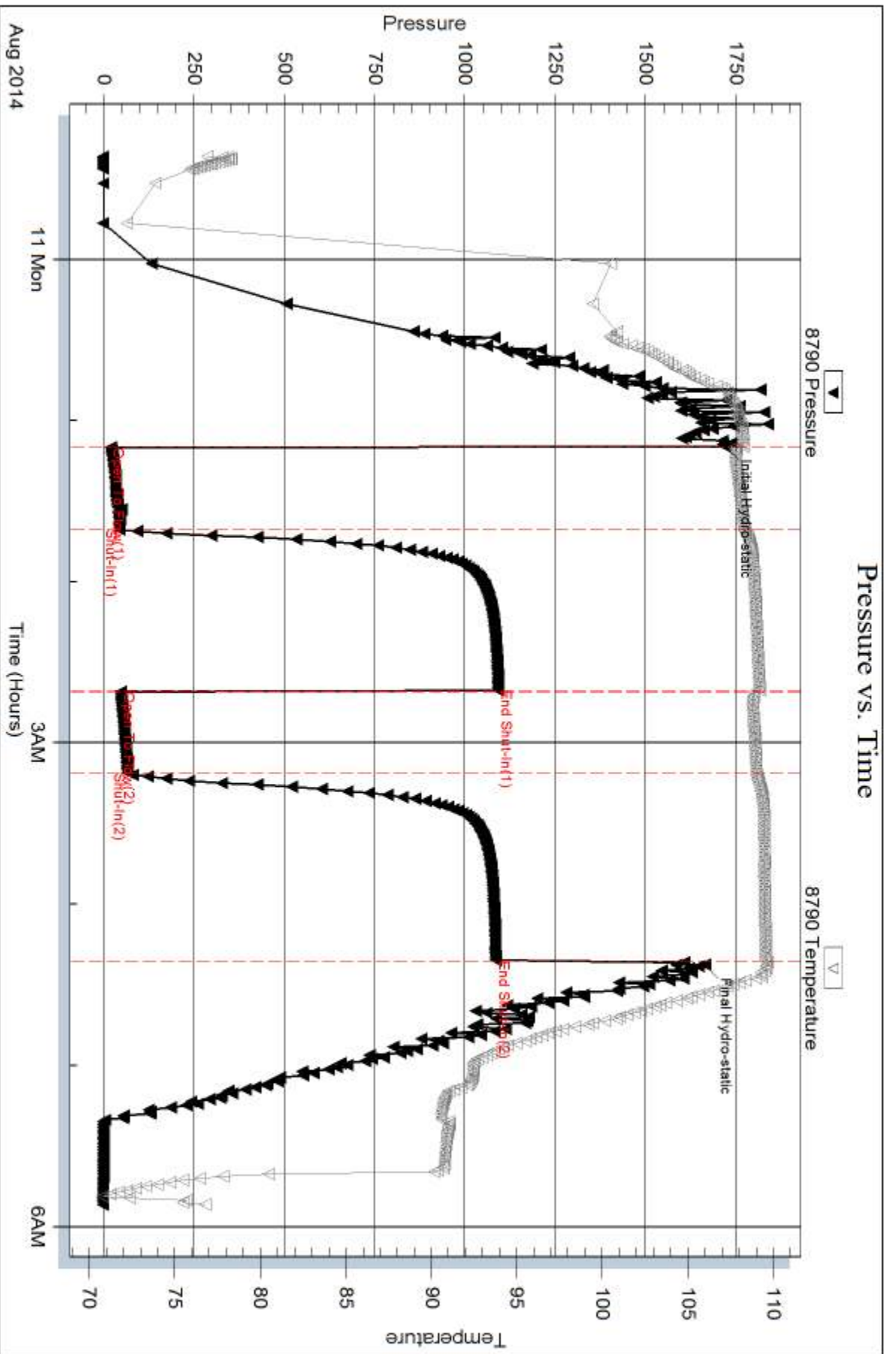
Num Gas Bombs: 0

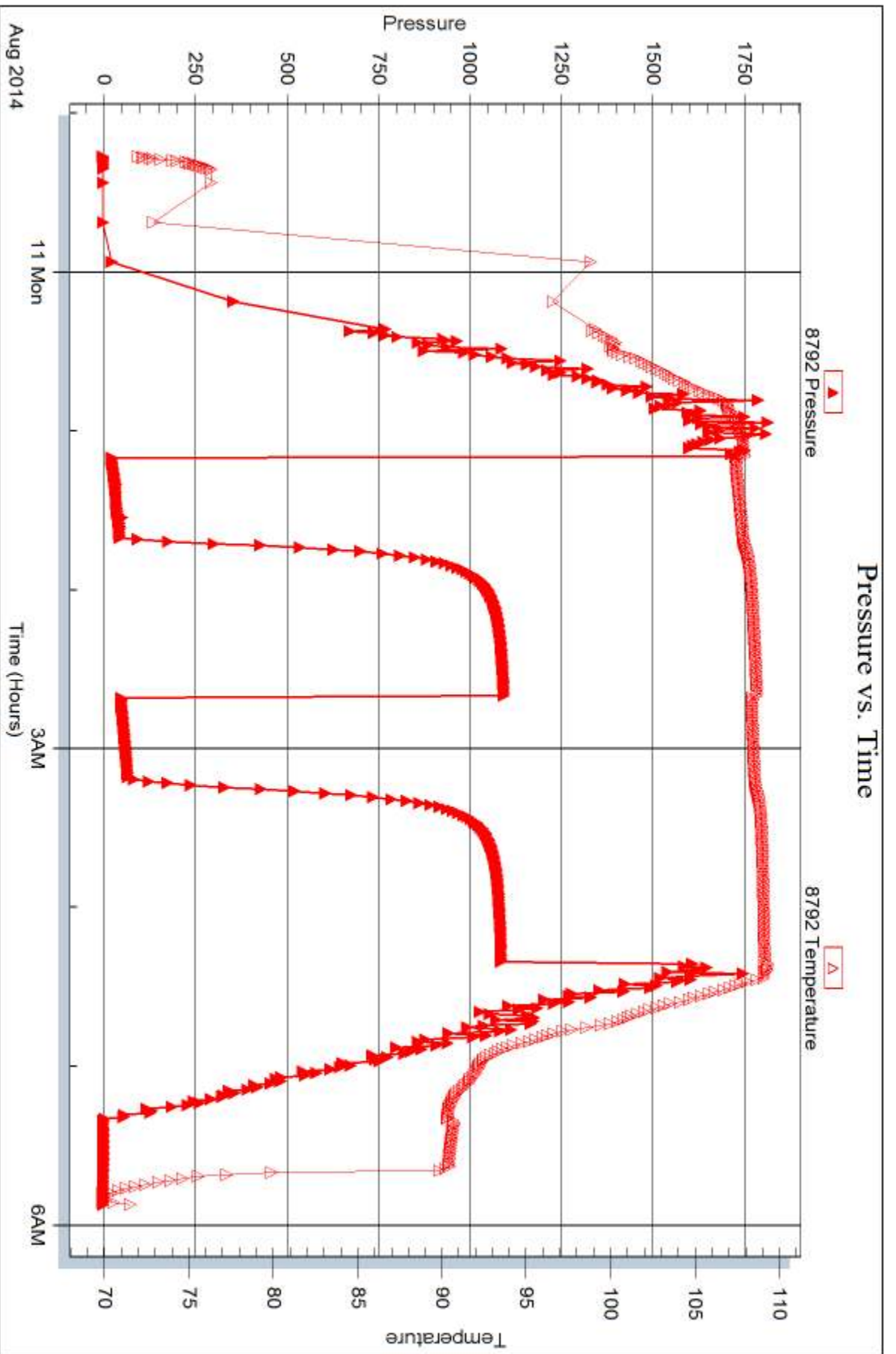
Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water Ste. 300
Wichita, KS 67202-1216

ATTN: Chuck Schmaltz

Pound #1-34

34-22s-12w Stafford,KS

Start Date: 2014.08.11 @ 19:12:53

End Date: 2014.08.12 @ 02:26:23

Job Ticket #: 54168 DST #: 2

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

Printed: 2014.08.14 @ 10:14:25



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
 250 N. Water Ste. 300
 Wichita, KS 67202-1216
 ATTN: Chuck Schmaltz

34-22s-12w Stafford,KS

Pound #1-34

Job Ticket: 54168 **DST#: 2**

Test Start: 2014.08.11 @ 19:12:53

GENERAL INFORMATION:

Formation: **LKC H-L**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 20:42:08
 Time Test Ended: 02:26:23
 Interval: **3458.00 ft (KB) To 3587.00 ft (KB) (TVD)**
 Total Depth: 3587.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ryan Reynolds
 Unit No: 68
 Reference Elevations: 1842.00 ft (KB)
 1831.00 ft (CF)
 KB to GR/CF: 11.00 ft

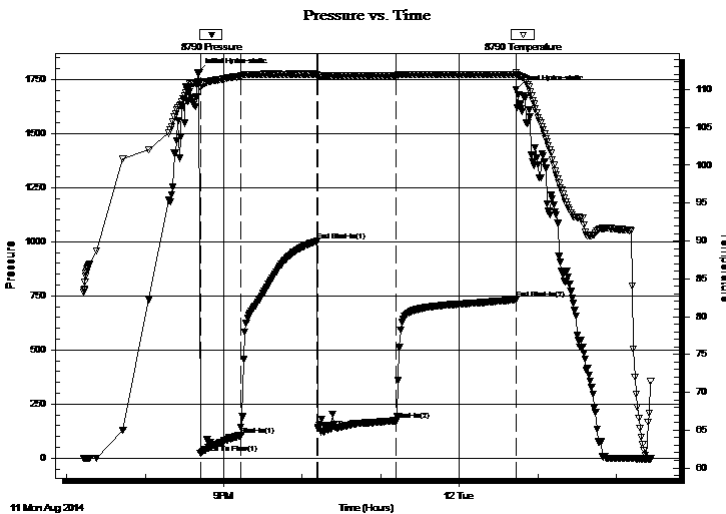
Serial #: 8790

Inside

Press@RunDepth: 173.71 psig @ 3466.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.08.11 End Date: 2014.08.12 Last Calib.: 2014.08.12
 Start Time: 19:12:58 End Time: 02:26:22 Time On Btm: 2014.08.11 @ 20:40:23
 Time Off Btm: 2014.08.12 @ 00:43:23

TEST COMMENT: IF: Weak blow . Surf. - 1"
 IS: No blow
 FF: Weak blow . Surf. - 1"
 FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1782.12	111.07	Initial Hydro-static
2	22.02	110.30	Open To Flow (1)
33	106.58	111.81	Shut-In(1)
91	1002.27	112.03	End Shut-In(1)
92	137.71	111.79	Open To Flow (2)
152	173.71	111.86	Shut-In(2)
243	733.95	111.94	End Shut-In(2)
243	1704.00	112.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
345.00	WCM 45%w , 55%m	2.33

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

34-22s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

Pound #1-34

Job Ticket: 54168

DST#: 2

ATTN: Chuck Schmaltz

Test Start: 2014.08.11 @ 19:12:53

Tool Information

Drill Pipe:	Length: 3173.00 ft	Diameter: 3.80 inches	Volume: 44.51 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 276.00 ft	Diameter: 2.25 inches	Volume: 1.36 bbl	Weight to Pull Loose: 73000.00 lb
			<u>Total Volume: 45.87 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 64500.00 lb
Depth to Top Packer:	3459.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	128.00 ft			
Tool Length:	155.00 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			3433.00	
Shut In Tool	5.00			3438.00	
Hydraulic tool	5.00			3443.00	
Jars	5.00			3448.00	
Safety Joint	2.00			3450.00	
Packer	5.00			3455.00	27.00 Bottom Of Top Packer
Packer	4.00			3459.00	
Stubb	1.00			3460.00	
Perforations	5.00			3465.00	
Change Over Sub	1.00			3466.00	
Recorder	0.00	8790	Inside	3466.00	
Recorder	0.00	8792	Outside	3466.00	
Drill Pipe	95.00			3561.00	
Change Over Sub	1.00			3562.00	
Perforations	22.00			3584.00	
Bullnose	3.00			3587.00	128.00 Bottom Packers & Anchor
Total Tool Length:	155.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.

34-22s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

Pound #1-34

Job Ticket: 54168

DST#: 2

ATTN: Chuck Schmaltz

Test Start: 2014.08.11 @ 19:12:53

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:

79000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 13800.00 ppm

Filter Cake: 0.04 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
345.00	WCM 45%w , 55%m	2.325

Total Length: 345.00 ft Total Volume: 2.325 bbl

Num Fluid Samples: 0

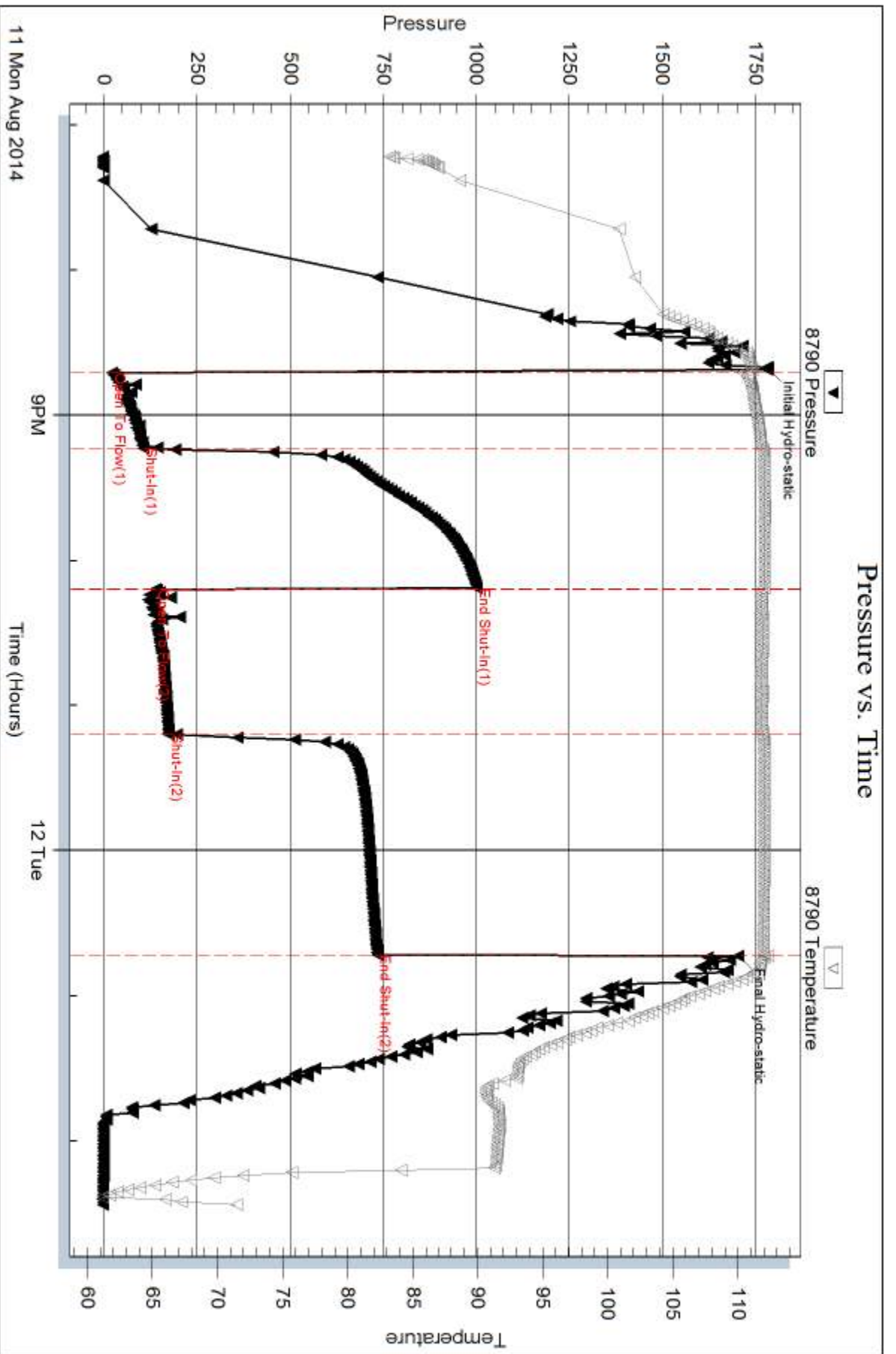
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

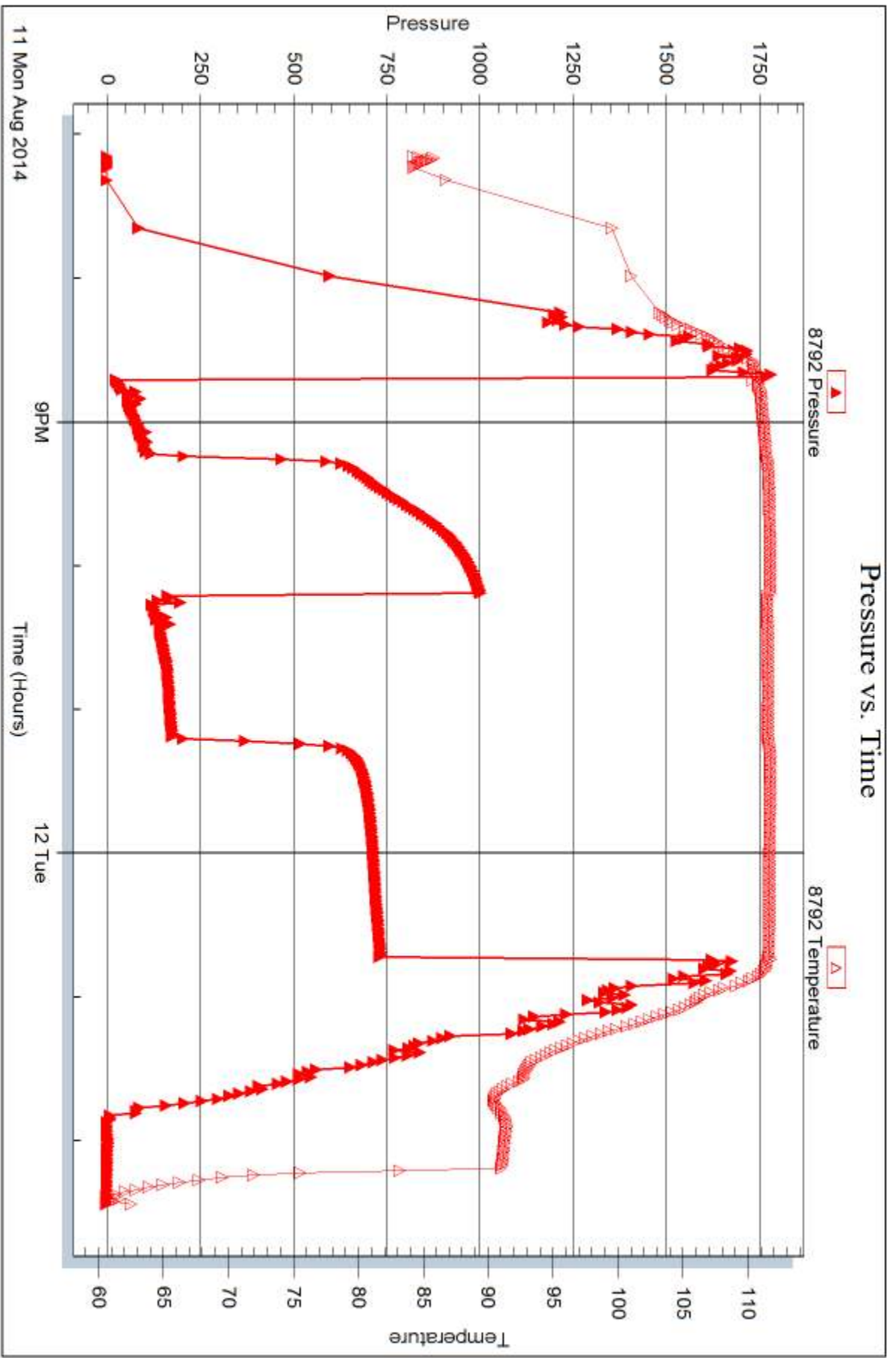


Serial #: 8792

Outside Murfin Dtg. Co., Inc.

Pound #1-34

DST Test Number: 2



Triobike Testing, Inc

Ref. No: 54168

Printed: 2014.08.14 @ 10:14:26



DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water Ste. 300
Wichita, KS 67202-1216

ATTN: Chuck Schmaltz

Pound #1-34

34-22s-12w Stafford,KS

Start Date: 2014.08.12 @ 11:41:21

End Date: 2014.08.12 @ 19:27:21

Job Ticket #: 54169 DST #: 3

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

Printed: 2014.08.14 @ 10:13:44



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
 250 N. Water Ste. 300
 Wichita, KS 67202-1216
 ATTN: Chuck Schmaltz

34-22s-12w Stafford,KS

Pound #1-34

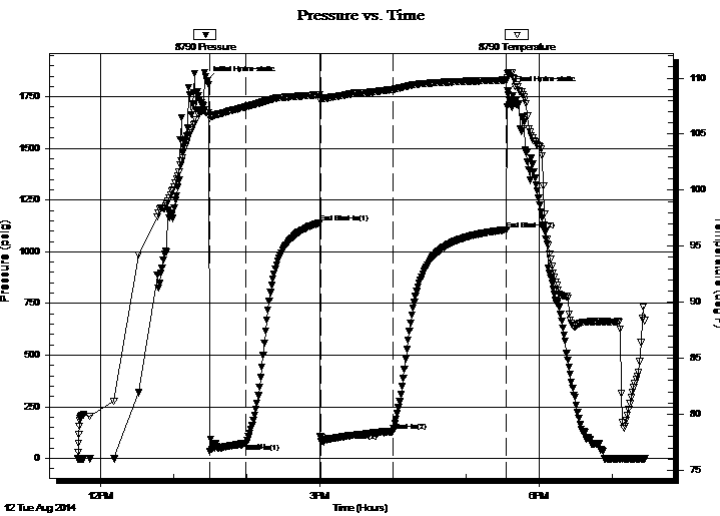
Job Ticket: 54169 **DST#: 3**
 Test Start: 2014.08.12 @ 11:41:21

GENERAL INFORMATION:

Formation: **Viola**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:29:36
 Time Test Ended: 19:27:21
 Interval: **3561.00 ft (KB) To 3698.00 ft (KB) (TVD)**
 Total Depth: 3698.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ryan Reynolds
 Unit No: 68
 Reference Elevations: 1842.00 ft (KB)
 1831.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8790 Inside
 Press@RunDepth: 130.67 psig @ 3568.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.08.12 End Date: 2014.08.12 Last Calib.: 2014.08.12
 Start Time: 11:41:26 End Time: 19:27:20 Time On Btm: 2014.08.12 @ 13:27:36
 Time Off Btm: 2014.08.12 @ 17:34:21

TEST COMMENT: IF: Good blow . surf. - 9"
 IS: No blow
 FF: Strong blow . BOB @ 5min.
 FS: Weak 1" BB



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1827.85	106.90	Initial Hydro-static
2	33.30	106.43	Open To Flow (1)
32	74.20	107.45	Shut-In(1)
93	1139.55	108.51	End Shut-In(1)
94	81.42	108.23	Open To Flow (2)
153	130.67	108.98	Shut-In(2)
246	1106.81	109.83	End Shut-In(2)
247	1778.11	110.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
305.00	GOCM 35%g, 30%o, 35%m	1.76
0.00	970' GIP	0.00

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

34-22s-12w Stafford,KS

250 N. Water Ste. 300
Wichita, KS 67202-1216

Pound #1-34

Job Ticket: 54169

DST#: 3

ATTN: Chuck Schmaltz

Test Start: 2014.08.12 @ 11:41:21

Tool Information

Drill Pipe:	Length: 3268.00 ft	Diameter: 3.80 inches	Volume: 45.84 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 276.00 ft	Diameter: 2.25 inches	Volume: 1.36 bbl	Weight to Pull Loose: 83000.00 lb
			<u>Total Volume: 47.20 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 65500.00 lb
Depth to Top Packer:	3561.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	137.00 ft			
Tool Length:	164.00 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			3535.00	
Shut In Tool	5.00			3540.00	
Hydraulic tool	5.00			3545.00	
Jars	5.00			3550.00	
Safety Joint	2.00			3552.00	
Packer	5.00			3557.00	27.00 Bottom Of Top Packer
Packer	4.00			3561.00	
Stubb	1.00			3562.00	
Perforations	5.00			3567.00	
Change Over Sub	1.00			3568.00	
Recorder	0.00	8790	Inside	3568.00	
Recorder	0.00	8792	Outside	3568.00	
Drill Pipe	95.00			3663.00	
Change Over Sub	1.00			3664.00	
Perforations	31.00			3695.00	
Bullnose	3.00			3698.00	137.00 Bottom Packers & Anchor
Total Tool Length:	164.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.
250 N. Water Ste. 300
Wichita, KS 67202-1216
ATTN: Chuck Schmaltz

34-22s-12w Stafford,KS
Pound #1-34
Job Ticket: 54169 **DST#: 3**
Test Start: 2014.08.12 @ 11:41:21

Mud and Cushion Information

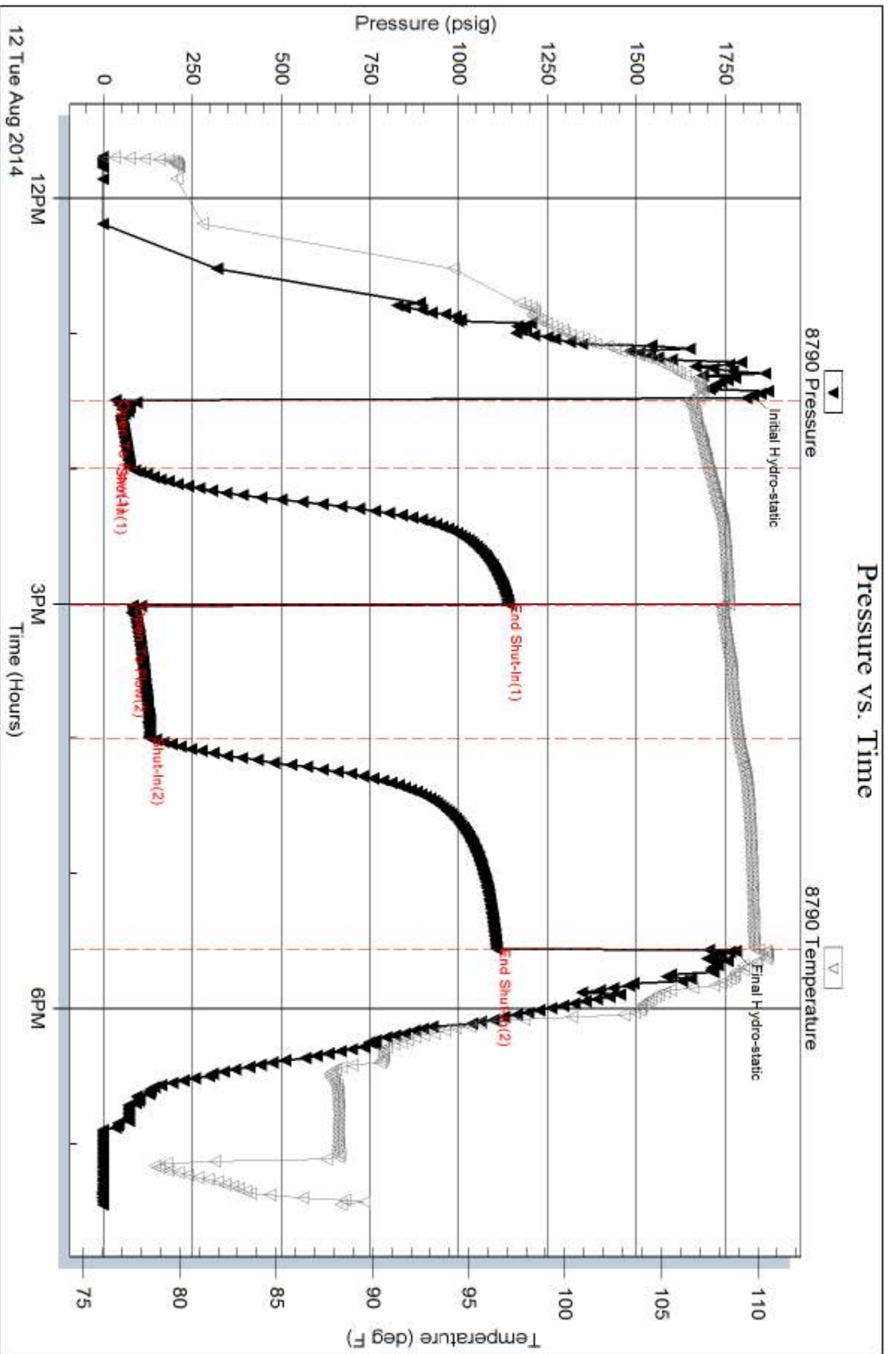
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity:	18000 ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 10.19 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 18000.00 ppm			
Filter Cake: 0.04 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
305.00	GOCM 35%g, 30%o, 35%m	1.764
0.00	970' GIP	0.000

Total Length: 305.00 ft Total Volume: 1.764 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none
 Laboratory Name: Laboratory Location:
 Recovery Comments:

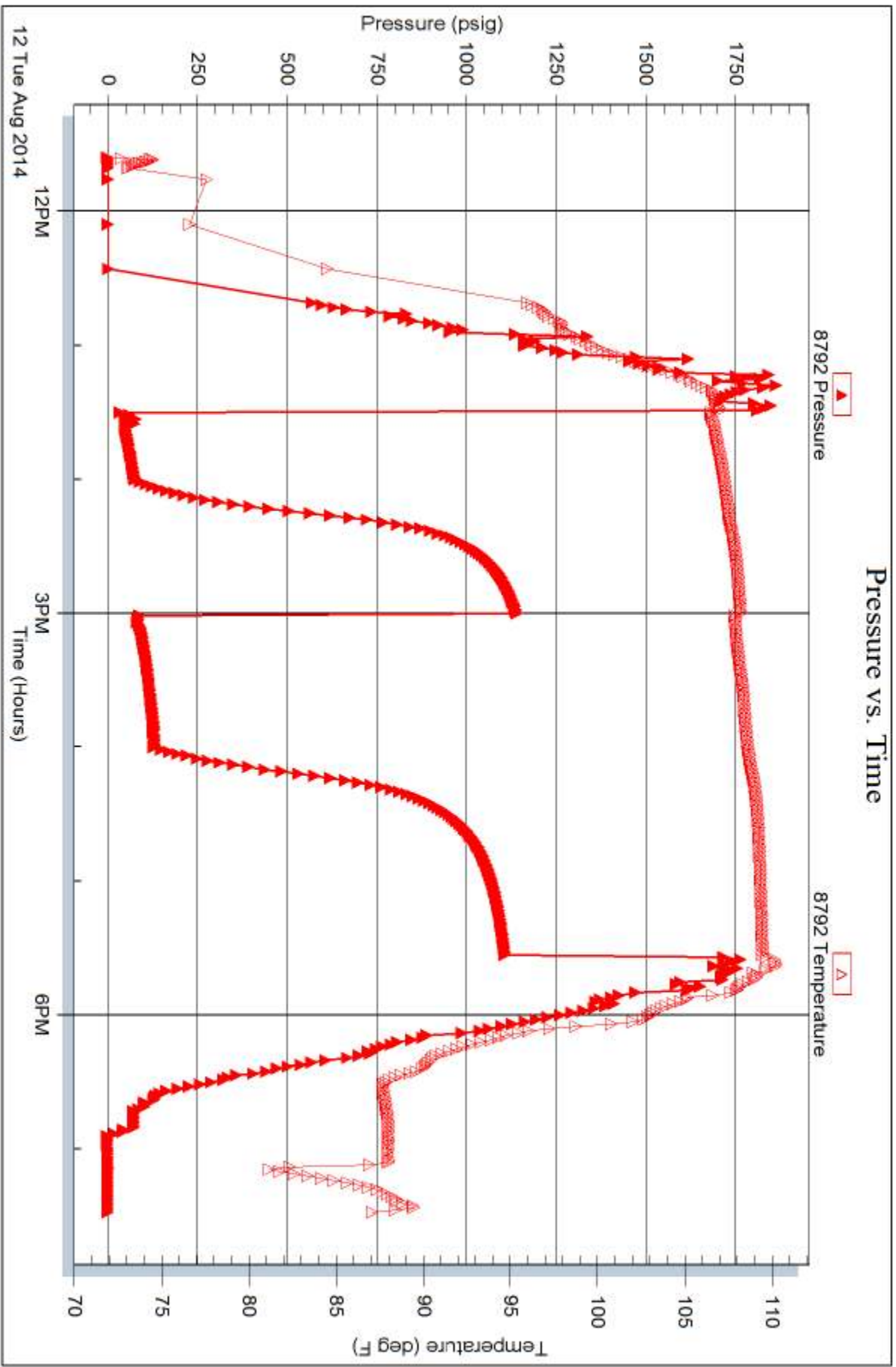


Serial #: 8792

Outside Murfin Drtg. Co., Inc.

Pound #1-34

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 54169

Printed: 2014.08.14 @ 10:13:45



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54167

Well Name & No. Pound 1-34 Test No. 1 Date 8-10-14
 Company Murfin Drilg. Co., Inc. Elevation 1842 KB 1831 GL
 Address 250 N. Water Ste. 300 Wichita, KS 67202-1216
 Co. Rep / Geo. Chuck Schmutz Rig Murfin 21
 Location: Sec. 34 Twp. 22s. Rge. 12w Co. Stafford State KS

Interval Tested 3351-3425 Zone Tested Trans. "D-F"
 Anchor Length 74 Drill Pipe Run 3078 Mud Wt. 9.4+
 Top Packer Depth 3346 Drill Collars Run 276 Vis 62
 Bottom Packer Depth 3351 Wt. Pipe Run ∅ WL 10.2
 Total Depth 3425 Chlorides 16,200 ppm System LCM 1#
 Blow Description IF: Weak blow. Surf. - 1" ISI: No blow
FF: Weak blow: No blow - Surf. FSI: No blow.

Rec	Feet of	%gas	%oil	%water	%mud
90	Dry mud			100	
	(VSLI OSpkdM in hyd. tool)				

Rec Total 90 BHT 109 Gravity n/c API RW n/c @ n/c °F Chlorides 16,200 ppm
 (A) Initial Hydrostatic 1721 Test 1150 T-On Location 2130
 (B) First Initial Flow 20 Jars 250 T-Started 2322
 (C) First Final Flow 44 Safety Joint 75 T-Open 0110
 (D) Initial Shut-In 1093 Circ Sub _____ T-Pulled 0410
 (E) Second Initial Flow 47 Hourly Standby _____ T-Out 0552
 (F) Second Final Flow 66 Mileage 74 114.70
 (G) Final Shut-In 1086 Sampler _____
 (H) Final Hydrostatic 1664 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1589.70

MP/DST Disc't _____
 Total 1589.70

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

Approved By [Signature] Our Representative Ryan Reynolds

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54168

Well Name & No. Pound 1-34 Test No. 2 Date 8-12-14
 Company Murfin Drilling Co. Inc. Elevation 1842 KB 1831 GL
 Address 250 N. Water Ste. 300 Wichita, KS 67202-1216
 Co. Rep / Geo. Chuck Schmalz Rig Murfin 21
 Location: Sec. 34 Twp. 22s. Rge. 12w. Co. Stafford State KS

Interval Tested 3459-3587 Zone Tested Lans. "H-L"
 Anchor Length 128' Drill Pipe Run 3173 Mud Wt. 9.3
 Top Packer Depth 3454 Drill Collars Run 276 Vis 48
 Bottom Packer Depth 3459 Wt. Pipe Run Ø WL 8.0
 Total Depth 3587 Chlorides 13,800 ppm System LCM 1/2#
 Blow Description IF: Weak blow. surf. - 1" ISI: No blow
FF: Weak blow. surf. - 1" FSI: No blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>345</u>	<u>WCM</u>			<u>45</u>	<u>55</u>
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 345 BHT 112 Gravity N/C API RW -12 @ 64 °F Chlorides 79000 ppm

(A) Initial Hydrostatic <u>1782</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1830</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1913</u>
(C) First Final Flow <u>107</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2042</u>
(D) Initial Shut-In <u>1002</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>0043</u>
(E) Second Initial Flow <u>138</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0226</u>
(F) Second Final Flow <u>174</u>	<input checked="" type="checkbox"/> Mileage <u>74</u> <u>114.70</u>	Comments
(G) Final Shut-In <u>734</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1704</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>1589.70</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1589.70</u>	

Approved By [Signature] Our Representative Ryan Reynolds

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54169

Well Name & No. Pound 1-34 Test No. 3 Date 8-12-14
 Company Murfin Drilling Co. Inc. Elevation 1842 KB 1831 GL
 Address 250 N. Water Ste. 300 Wichita, KS 67202-1216
 Co. Rep / Geo. Chuck Schmalz Rig Murfin 21
 Location: Sec. 34 Twp. 22S Rge. 12W Co. Stafford State KS

Interval Tested 3561-3698 Zone Tested Viola
 Anchor Length 137 Drill Pipe Run 3268 Mud Wt. 9.5
 Top Packer Depth 3556 Drill Collars Run 276 Vis 53
 Bottom Packer Depth 3561 Wt. Pipe Run Ø WL 10.2
 Total Depth 3698 Chlorides 18000 ppm System LCM Trc
 Blow Description IF: Good blow. surf. - 9" ISI: No blow
FF: Strong blow. BoB @ 5 min. FSI: Weak 1" BB

Rec	Feet of	%gas	%oil	%water	%mud
<u>970</u>	<u>GIP</u>				
<u>305</u>	<u>GOCM</u>	<u>35</u>	<u>30</u>	<u>35</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 305 BHT 110 Gravity w/c API RW w/c @ w/c °F Chlorides 18000 ppm

(A) Initial Hydrostatic	<u>1828</u>	<input checked="" type="checkbox"/> Test	<u>1150</u>	T-On Location	<u>1130</u>
(B) First Initial Flow	<u>33</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>	T-Started	<u>1141</u>
(C) First Final Flow	<u>74</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>1330</u>
(D) Initial Shut-In	<u>1140</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>1731</u>
(E) Second Initial Flow	<u>81</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>1927</u>
(F) Second Final Flow	<u>131</u>	<input checked="" type="checkbox"/> Mileage	<u>74</u> <u>114.70</u>	Comments	
(G) Final Shut-In	<u>1107</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>1778</u>	<input type="checkbox"/> Straddle			

Initial Open 30 Shale Packer Ruined Shale Packer
 Initial Shut-In 60 Extra Packer Ruined Packer
 Final Flow 60 Extra Recorder Extra Copies
 Final Shut-In 90 Day Standby Sub Total 0
 Accessibility Total 1589.70
 Sub Total 1589.70 MP/DST Disc't

Approved By

Our Representative

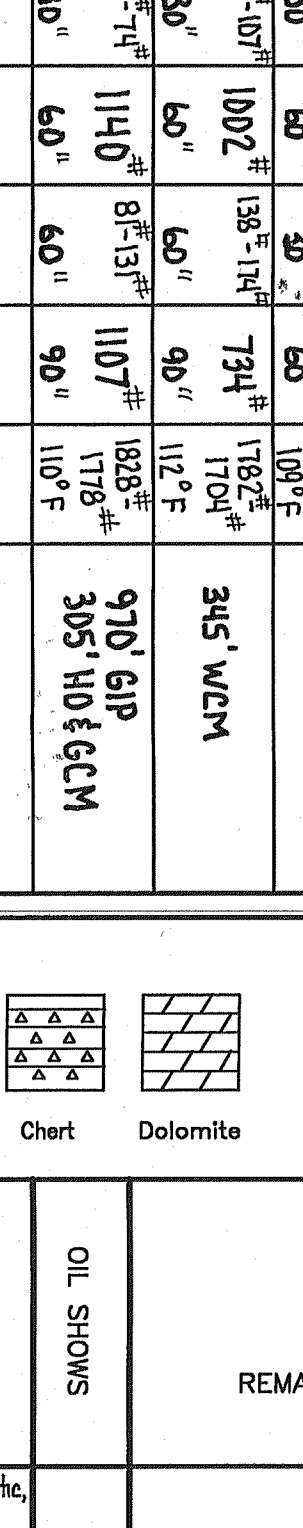
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CHARLES SCHMALTZ

CONSULTING GEOLOGIST
WICHITA, KANSAS

REPORT
LOG

COMPANY: MUREIN DRILLING CO.
WELL: # 1-34 POUND
MUREIN METER
LOCATION: 330' FSL 330' FEL



SECTION	24	THICK	22.5	REF	12 W
COUNTY	STAFFORD				
STATE	KANSAS				
API #	15-185-23678				
APPROVED BY	MUREIN DRILLING CO.				
DATE	JULY 2014				
OPERATOR	MUREIN DRILLING CO.				
CONTRACT NO.	13 AUG 2014				
DATE	JULY 2014				
RECORDS	CASSIN RECORDS				
TRAIL DEPTH LOG	3910'				

FORMATION	TOPS & STRUCTURAL POSITION
ANHYDRITE - TOP	608
ANHYDRITE - BASE	631
TOPEKA	2801
OREAD	3075
HEEBNER	3177
TORONTO	3194
DDUGLAS	3212
STARK	3531
BKC	3583
VIOLA	3610
LTD 3903	
RTD 3910	

NO	SIZE	MAKE	TYPE	DEPTH OUT	FEET	HOURS	PIPE STOPS
1	1 1/4"	HTC	VM4	613'	643'	7 1/4	DEVIATION CORRECTS 0.1° @ 1082'; 0.3° @ 3025'; 2.1° @ 1822'; 0.1° @ 3010'; 2.1° @ 2382'; 0.3°
2	7/8"	HTC	DP506	2100'	2057'	18	
3	7/8"	HTC	G202C	3910'	1210'	38	

DATE	TIME	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	
8-7	11:18	NO	DATE	TIME	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	
8-8	6:13	4	8-10	3:16	DD 6	94.62	104.36	114.16	123.96	134	144	154	164	174	184	194	204	214	224	234	
8-9	1:20	5	8-11	5:07	DD 6	93.48	103.18	112.88	122.58	132	142	152	162	172	182	192	202	212	222	232	
8-10	3:12	6	8-12	3:53	DD 6	85.53	95.23	104.93	114.63	124	134	144	154	164	174	184	194	204	214	224	
8-11	3:12	7	8-13	3:17	DD 6	84.5	94.2	103.9	113.6	123	133	143	153	163	173	183	193	203	213	223	
8-12	3:52	8																			
8-13	3:59	9																			

FORMATION <th>TOPEKA</th> <th>OREAD</th> <th>HEEBNER</th> <th>TORONTO</th> <th>DDUGLAS</th> <th>STARK</th> <th>BKC</th> <th>VIOLA</th> <th>LTD 3903</th> <th>RTD 3910</th>	TOPEKA	OREAD	HEEBNER	TORONTO	DDUGLAS	STARK	BKC	VIOLA	LTD 3903	RTD 3910
NO	1	2	3	4	5	6	7	8	9	10
DEPTH	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150

DEPTH	DRILLING TIME	REMARKS
2700	5"	sh: lt grey, grey, mica, calc, sh, dolomite, w/ ls-tan, fm-med xtn, dense
2710	10"	ls: tan, grey, fm-med xtn, detrital, foss, no vis of, no show
2720	15"	ls: tan, brown, grey, fm-med xtn, foss, (fusifid's), ls: grey, vfm xtn, shaley, dolomite
2730	20"	ls: as above, w/ dolo: vfm xtn, shaley, sh: grey, green-grey, silty
2740	25"	ls: tan, lt. brown, fm-med xtn, foss, vsh ool, no vis of, no show
2750	30"	sh: grey, lt. grey, silty, scat ls med-silt; few clusters ss: grey, vfm xtn, well sorted, friable, pr intergranular, NS
2760	35"	sh: lt grey, grey, silty, micaceous
2770	40"	sh: as above
2780	45"	ls: tan, grey, sh-tan, fm-med xtn, granular, foss, no vis of, no show
2790	50"	ls: tan, lt. brown, fm-med xtn, granular, chalky in part, scat pr inter xtn of, NS
2800	55"	ls: as above, w/ ls: lt grey, fxtln, shi chalky, few pcs brown, fxtln, dense
2810	60"	ls: tan, tan, grey, fxtln, soft, fly granular, scat pr inter xtn of, no show
2820	65"	ls: off wh, tan, grey, fm- some med-xtn, silty, foss, no vis of, no show
2830	70"	ls: as above, w/ few pcs ls: dk brown fm-med xtn, dense; sh: grey
2840	75"	sh: grey, w/ scat ls inclusions
2850	80"	sh: grey, calc, chalky in part
2860	85"	sh: as above, w/ considerable ss: lt grey, vfm, fng, granular, well sorted, friable, mica, pr intergranular of, NS
2870	90"	ls: tan, brown, fm-med xtn, silty, foss, no vis of, no show
2880	95"	ls: tan, grey, sh-tan, vfm-med xtn, foss granular in part, no vis of, no show
2890	100"	ls: off wh, tan, fm-med xtn, silty, foss, calcitic, few pcs w/ pr inter xtn of, NS
2900	105"	ls: as above, w/ ls: grey, med xtn, foss, mottled, no vis of, no show
2910	110"	ls: brown, grey, med xtn, foss, granular, mottled, no vis of, no show
2920	115"	ls: as above, few pcs dolo; grey, vfm xtn, shaley, no vis of, NS
2930	120"	ls: off wh, tan, grey, fm-med xtn, chalky, no vis of, no show
2940	125"	ls: off wh, grey, fm-med xtn, foss, chalky in part, scat pr vuggy of, NS
2950	130"	ls: grey, tan, brown, vfm-med xtn, silty, foss, no vis of, no show
2960	135"	ls: off wh, tan, lt. grey, fm-med xtn, silty, foss, mottled, scat pr inter-xtn of, no show
2970	140"	ls: as above, silty chalky, w/ sh: lt grey, grey
2980	145"	ls: off wh, lt. grey, fm-med xtn, silty chalky, silty, foss, no vis of, no show
2990	150"	ls: lt. grey, tan, fxtln, silty, foss, silty ool, scat pr vuggy of, no show
3000	155"	ls: as above, silty chalky, no show
3010	160"	ls: off wh, tan, grey, fm-med xtn, foss, silty ool, app pr few pcs of vuggy of, no show
3020	165"	ls: as above, w/ wh chalk, no show
3030	170"	ls: off wh, lt. grey, tan, fxtln, silty, foss, tr ool, scat pr vuggy of, scat foss, no show
3040	175"	ls: as above, chalky in part
3050	180"	ls: off wh, tan, fm-med xtn, foss, scat fr-gd vuggy & foss of, no show
3060	185"	sh: grey, lt. grey
3070	190"	ls: tan, brown, grey, fm-med xtn, silty, foss, some mottled, pr inter xtn & vuggy of, no show
3080	195"	ls: as above, no show
3090	200"	ls: as above, few pcs vry finely ool, no show
3100	205"	ls: tan, lt. grey, fm-med xtn, granular in part, silty, foss, scat fr-gd inter xtn & vuggy of, no show
3110	210"	ls: as above, dec in of, w/ ls: grey, lt. brown, fm-med xtn, dense
3120	215"	ls: tan, brown, grey, fm-med xtn, silty, foss, most dense, scat pr fr inter xtn & vuggy of, no show
3130	220"	ls: as above, no show
3140	225"	ls: tan, lt. brown, vfm- some med xtn, silty, foss, silty chalky, w/ ls: brown, med xtn, dense
3150	230"	ls: as above, w/ ls: off wh, lt. grey, fxtln, chalky
3160	235"	ls: tan, lt. brown, vfm-fxtln, v silty, foss, no vis of, no show; w/ wh, shaly
3170	240"	ls: as above
3180	245"	sh: black, dk grey
3190	250"	ls: tan, brown, dk grey, vfm-fxtln, dense, w/ sh: grey, green-grey
3200	255"	ls: tan, brown, dk brown, fm-med xtn, no vis of, no show
3210	260"	ls: tan, lt. brown, fm- some med xtn, silty, foss, silty granular, few pcs w/ pr inter xtn of, no show
3220	265"	sh: grey, green-grey, brown, rust
3230	270"	sh: lt. grey, grey-green, brown, rust, v silty
3240	275"	sh: as above: grey sh, silty dolomite
3250	280"	sh: as above
3260	285"	sh: lt. grey - med grey, silty, silty some brown
3270	290"	sh: as above
3280	295"	sh: lt. grey, grey, mica, calc, silty
3290	300"	sh: as above
3300	305"	sh: grey, silty micaceous
3310	310"	sh: as above
3320	315"	ls: dk brown, some grey, tan, fm-med xtn, silty, foss, dense
3330	320"	ls: as above, w/ sh: grey, some brown, rust
3340	325"	sh: as above, silty micaceous
3350	330"	ls: tan, brown, fm-med xtn, v silty, foss, silty, foss, few pcs w/ vpr inter xtn of, no show
3360	335"	ls: as above, w/ few pcs med xtn, silty, foss, scat pr inter xtn & vuggy of, pr spots dk fm-med xtn, no show, few pcs dk, wh, grey, fresh, opaque
3370	340"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3380	345"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3390	350"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3400	355"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3410	360"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3420	365"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3430	370"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3440	375"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3450	380"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3460	385"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3470	390"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3480	395"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3490	400"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3500	405"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3510	410"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3520	415"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3530	420"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3540	425"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3550	430"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3560	435"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3570	440"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3580	445"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3590	450"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3600	455"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3610	460"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3620	465"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3630	470"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3640	475"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3650	480"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3660	485"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3670	490"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3680	495"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3690	500"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3700	505"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3710	510"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3720	515"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3730	520"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3740	525"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3750	530"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3760	535"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3770	540"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3780	545"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3790	550"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3800	555"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3810	560"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3820	565"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3830	570"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3840	575"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3850	580"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3860	585"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3870	590"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3880	595"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3890	600"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3900	605"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3910	610"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3920	615"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3930	620"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3940	625"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3950	630"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3960	635"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3970	640"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3980	645"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
3990	650"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque
4000	655"	ls: tan, brown, grey, mostly fxtln, silty, chalky, no vis of, scat med xtn, scat pr inter xtn of, no show, few pcs dk, wh, grey, fresh, opaque

DEPTH	DRILLING TIME	REMARKS
2700	5"	sh: lt grey, grey, mica, calc, sh, dolomite, w/ ls-tan, fm-med xtn, dense
2710	10"	ls: tan, grey, fm-med xtn, detrital, foss, no vis of, no show
2720	15"	ls: tan, brown, grey, fm-med xtn, foss, (fusifid's), ls: grey, vfm xtn, shaley, dolomite
2730	20"	ls: as above, w/ dolo: vfm xtn, shaley, sh: grey, green-grey, silty
2740	25"	